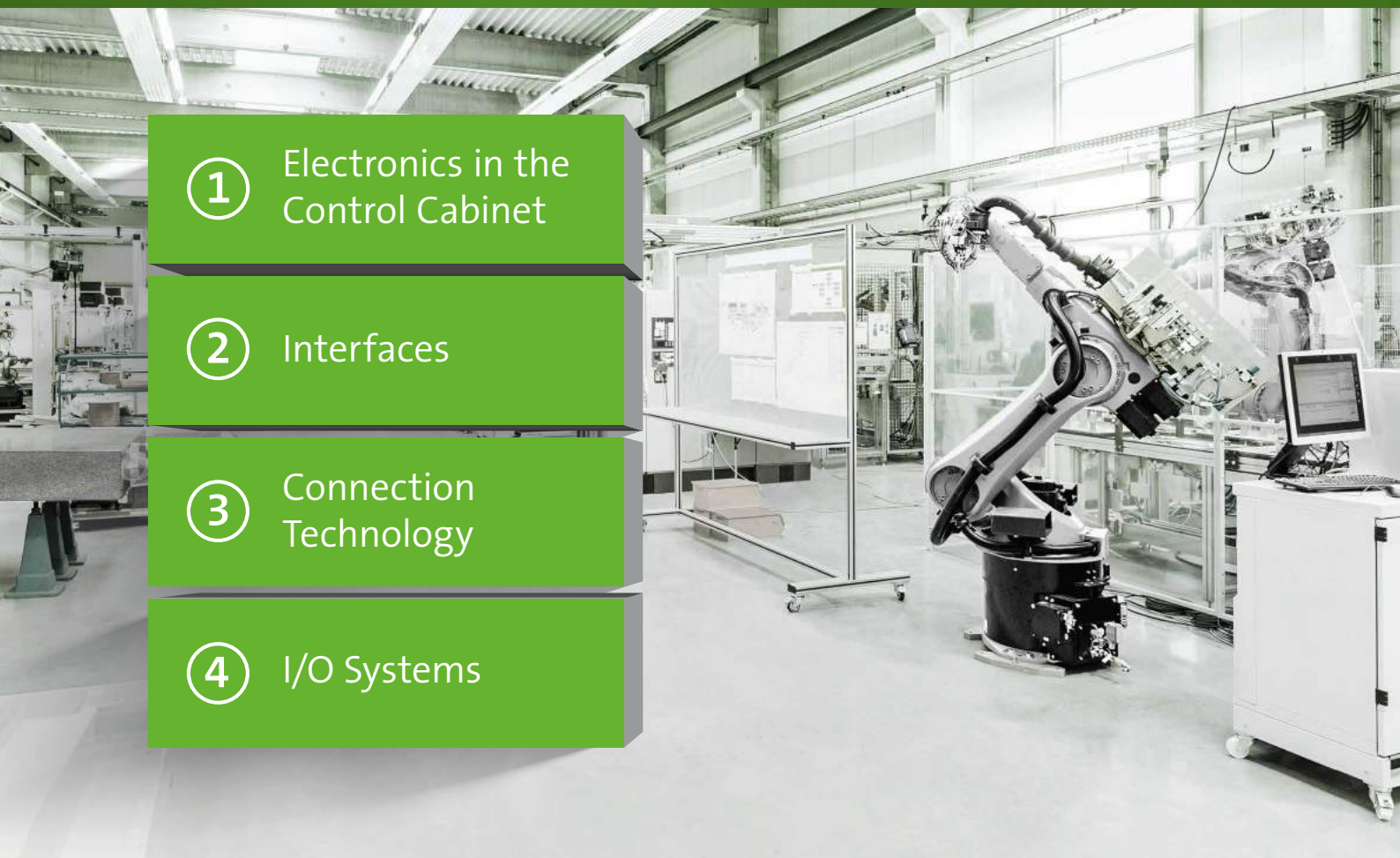
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GENERAL CATALOG



1 Electronics in the Control Cabinet

2 Interfaces

3 Connection Technology

4 I/O Systems

GENERAL CATALOG

Note:

With this new main catalog, all information contained in previous brochures/catalogs expires. All drawings, diagrams, indications of weight, dimensions, ratings or other details printed in this catalog are only binding when specifically agreed upon.

Murrelektronik reserves the right to changes and modifications. The customer is responsible for using the components and units that they ordered in the way they are designed.

The information in this brochure has been compiled with the utmost care. Liability for the correctness, completeness and topicality of the information is restricted to gross negligence.

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Falkenstr. 3, D-71570 Oppenweiler

www.murrelektronik.com

With compliments:

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MURRELEKTRONIK GOES EVEN GREENER!



Being sustainable and respecting nature are part of our core values here. That's why we print our catalogs on uncoated paper which is produced without any solvents, chlorine and is environmentally friendly. Our supply chain is also an environmentally friendly production process.

We, here at Murrelektronik, are proud to say we act responsibly and protect the environment.

FSC www.fsc.org
MIX
Papier aus verantwortungsvollen Quellen
FSC® C004229

1 ELECTRONICS IN THE CONTROL CABINET

1.1 Transformers / Rectified Power Supplies
1.2 Power Supply Units
1.3 UPS-Systems / Buffer- / Redundancy Modules
1.4 Intelligent Power Distribution
1.5 Converters / Rectifiers
1.6 Control Cabinet Power Outlets
1.7 EMC Filters
1.8 EMC Suppressors
1.9 Relays / Safety Relays
1.10 Optocouplers / Semiconductors
1.11 Switches
1.12 Active Interface Technology
1.13 Passive Interface Technology
1.14 Eurocard Holders / Control Modules



2 INTERFACES

2.1 Front Panel Interfaces
2.2 Control Cabinet Interfaces / Cable Entry Systems
2.3 Hybrid Fieldbus Coupling
2.4 Lighting Elements
2.5 Control Devices
2.6 Modular Connection Systems (Modlink Vario)
2.7 Heavy Duty Connectors (Modlink Heavy)



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3 CONNECTION TECHNOLOGY

3.1 M8 Round Plug Connectors
3.2 M12 Round Plug Connectors
3.3 T-couplers M8, M12, 7/8“
3.4 Flange Connectors
3.5 MQ12 Round Plug Connectors
3.6 Fieldbus Connectors
3.7 Plug Connectors for Food & Beverage
3.8 Mobile Applications
3.9 M23 Round Plug Connectors
3.10 Round Plug Connectors Power
3.11 TPE Series – The North American standard
3.12 Valve Connectors
3.13 Technical Appendix Cables



4 I/O SYSTEMS

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4.2 Cube20
4.3 Cube20S
4.4 MVK Metal
4.5 SOLID67
4.6 Impact67
4.7 IO-Link Devices
4.8 MASI Control Cabinet
4.9 MASI Field Installation
4.10 MASI Installation Technology
4.11 M8 Distribution Systems
4.12 M12 Distribution Systems (Metal)
4.13 M12 Distribution Systems (Plastic)





26 BRANCH OFFICES AND 5 PRODUCTION PLANTS

Oppenweiler
Production Fieldbus Systems

Stollberg, Germany
Production of Connectors

Stod, Czech Republic
Production of Interface, Switch Mode Power Supplies, Transformers

Shanghai, China
Production for the Asian markets






STAY CONNECTED – REPRESENTED ON ALL CONTINENTS WORLDWIDE

The company was founded in 1975 by Franz Hafner

Over 2,700 employees, including 250 sales reps and customer service center technicians

Top student training is very important for Murrelektronik. Each year we offer apprenticeships in technical and commercial areas, as well as in logistics.







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MURRELEKTRONIK
FIGURES & FACTS

Atlanta, USA
Production of Connectors



MURRELEKTRONIK IS YOUR PARTNER...

- Over 65,000 products available to order conveniently in our online shop
- Subdivided into four product fields:
  - **Electronics in the Control Cabinet**
  - **Interfaces**
  - **Connection Technology**
  - **I/O Systems**
- For industries and market segments as for example:
  - **Machine Tools**
  - **Machine Building and Plant Engineering**
  - **Assembly and Handling Technology**
  - **Food and Beverage**
  - **Automotive Industry**
  - **Warehousing and Logistics**
  - **Robotic**
- Founded in Oppenweiler, Germany, in 1975
- Family-owned company



CUSTOMER LOYALTY WITH INDIVIDUAL AND COMPETENT ON-SITE HELP

MURRELEKTRONIK OFFER VALUABLE BENEFITS

- Over 250 sales reps
- On-site support
- 5 international warehouses
- 1 million products in stock

- Murrelektronik Express Service

mex
More service

MURRELEKTRONIK
YOUR BENEFITS



International approvals for flexible applications worldwide

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MURRELEKTRONIK
QUALITY



MURRELEKTRONIK STANDS FOR QUALITY

- In-house test center and EMC lab for tested and accredited products
- Individual and competent on-site advice and support
- No use of hazardous materials
- Complies with RoHS requirements
- First-class design and production quality
- Systematic and sustainable quality management according to DIN EN ISO 9001

Tested and accredited: In-house test center and EMC laboratory



Endurance tests under extreme conditions



Product testing begins at the beginning of the project





connec+ivity®
by Murrelektronik

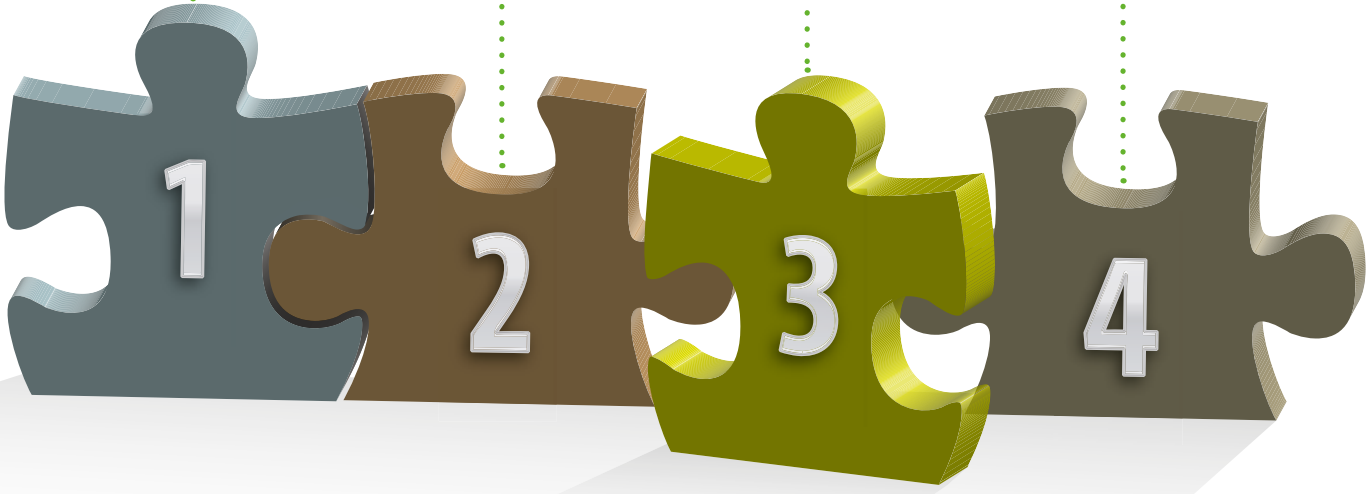
THE BACK BONE OF YOUR MACHINE AND SYSTEM INSTALLATIONS

ASSESSING STATUS
- On-site analysis
- Exchanging the basic documentation
- Discussing the current status

CREATING A CONCEPT
- Customer-specific requirements
- Industry-specific requirements
- Several concept options

SELECTING THE DESIGN
- Concept overview
- Analyzing advantages and disadvantages
- Bills of materials

PROJECT SUPPORT
- E-plan and CAD data
- Electronic catalog data (BMEcat)
- Setup support





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CONNECTIVITY
BY MURRELEKTRONIK

CONNECTIVITY MEANS INDIVIDUAL SOLUTIONS

- Best advice increases your competitive advantage
- Decrease your budget significantly
- We optimize your machine and system installation
- Highly skilled, specially trained staff
- Individual system solutions
- Consistent from a single source

SYSTEM ADVICE
WITH CONNECTIVITY CITY



Go from the industry overview to your application ...



... to the appropriate products.



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1 ELECTRONICS IN THE CONTROL CABINET

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1 ELECTRONICS IN THE CONTROL CABINET

Transformers / Rectified Power Supplies		1.1
Power Supply Units		1.2
UPS-Systems / Buffer- / Redundancy Modules		1.3
Intelligent Power Distribution		1.4
Converters / Rectifiers		1.5
Control Cabinet Power Outlets	*An overview of this product range can be found in our online shop*	1.6
EMC Filters		1.7
EMC Suppressors		1.8
Relays / Safety Relays		1.9
Optocouplers / Semiconductors		1.10
Switches		1.11
Active Interface Technology	*An overview of this product range can be found in our online shop*	1.12
Passive Interface Technology	*An overview of this product range can be found in our online shop*	1.13
Eurocard Holders / Control Modules	*An overview of this product range can be found in our online shop*	1.14



TRANSFORMERS / RECTIFIED POWER SUPPLIES

- **Approvals for the global market**
- **Flexible and versatile**
- **Customized solutions**

MTS, MST, MET OR MTL – THE RIGHT TRANSFORMER FOR EVERY APPLICATION

Different situations require different voltages. Transformers have to be just as flexible as the application. Murrelektronik's range provides you with the flexibility you need!

No matter if it's an isolation transformer, control transformer, or safety transformer – we have the right solution for any application. Murrelektronik's transformers are reliable, safe and their approvals and voltage ranges make them ideal for worldwide use.

BASIC FUNCTIONS

Rectified power supplies galvanically separate input and output. They convert mains voltage into Protected Extra Low Voltage. The electronic unit rectifies and smooths the voltage.

Rectified power supplies are designed for a frequency of 50/60 Hz. Their slow reaction prevents voltage spikes from being passed from the mains side to the output, which would interfere with peripheral devices.

They have fixing brackets with keyholes that ensure easy wall mounting. Models for DIN-rail mounting are available for applications up to 5 A.

Transformers



MTS – Isolation class T 40/B

• Nominal power rating:	40...250 VA
• Input voltage:	230, 400 V AC or multi voltage (±15 V AC)
• Output voltage:	24 V AC or 230 V AC
• Ambient temperature:	40 °C

Page 1.1.1



MST – Isolation class T 40/B

• Nominal power rating:	320...1000 VA
• Input voltage:	230, 400 V AC or multi voltage
• Output voltage:	24 V AC or 230 V AC
• Ambient temperature:	40 °C

Page 1.1.4



MTL – Isolation class T 60/B

• Nominal power rating:	25...2500 VA
• Input voltage:	230/400 V AC ±15 V AC
• Output voltage:	2 × 24 V AC or 2 × 115 V AC
• Ambient temperature:	60 °C

Page 1.1.7

Single-phase, single/two-phase, smoothed (Rectified Power Supplies)



MEN

• Input voltage:	115/230 V AC and 230/400 V AC ±15 V AC reconnectable
• Output voltage:	24 V DC SELV
• Output current:	1.0/2.5/5/7.5/10/15/20 A

Page 1.1.8



MTPS

• Input voltage:	230/400 V AC ±15 V AC reconnectable
• Output voltage:	24 V DC SELV
• Output current:	0.5/1/2/4/6/10 A

Page 1.1.12

Three-phase, smoothed (Rectified Power Supplies)



MPL

• Input voltage:	3 × 400 V AC ±5% reconnectable 3 × 208...520 V AC
• Output voltage:	24 V DC SELV
• Output current:	5...60 A

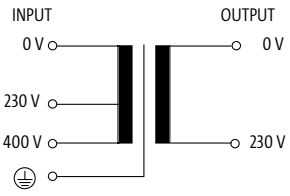
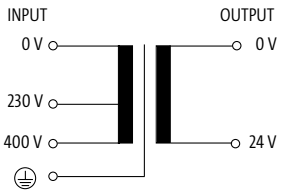
Page 1.1.13

1-/2-phase

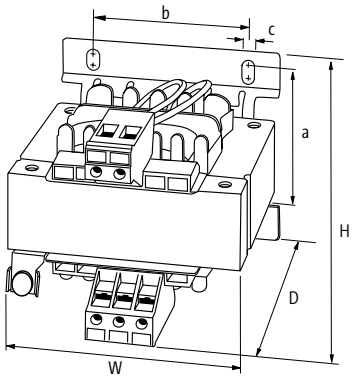
– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: cULus

	MTS	**MTS**	**MTS**	**MTS**
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
40 VA	79×78×93/0.8	**86346**	79×78×93/0.8	**6686346**	79×78×93/0.8	**86340**	79×78×93/0.8	**6686340**
63 VA	79×78×93/1.2	**86347**	79×78×93/1.2	**6686347**	79×78×93/1.2	**86341**	79×78×93/1.2	**6686341**
100 VA	86×84×98/2.0 – GL	**86348**	86×84×98/2.0	**6686348**	86×84×98/2.0 – GL	**86342**	86×84×98/2.0	**6686342**
160 VA	101×96×106/2.7 – GL	**86349**	101×96×106/2.7	**6686349**	101×96×106/2.7 – GL	**86343**	101×96×106/2.7	**6686343**
250 VA	102×96×108/3.5 – GL	**86351**	102×96×108/3.5	**6686351**	102×96×108/3.5 – GL	**86345**	102×96×108/3.5	**6686345**
Input								
Input voltage	230/400 V AC							
Frequency	50...60 Hz							
Output								
Output voltage	230 V AC				24 V AC (SELV)			
Output rating	40 VA							
General data								
Test isolation voltage	4 kV (prim./sec.)							
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0				EN 61558-1, EN 61558-2-6, EN 62041 category 0			
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)							
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)							
Dimension drawing								



Notes	
	GL-Approval from 100 VA and with screw terminals.

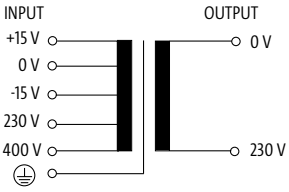
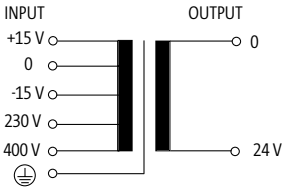
TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

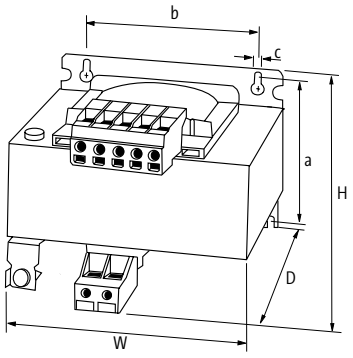
– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals: cULus

	MTS+	**MTS+**	**MTS+**	**MTS+**
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
40 VA	79×78×93/0.8	**86366**	79×78×93/0.8	**6686366**	79×78×93/0.8	**86360**	79×78×93/0.8	**6686360**
63 VA	79×78×93/1.2	**86367**	79×78×93/1.2	**6686367**	79×78×93/1.2	**86361**	79×78×93/1.2	**6686361**
100 VA	86×84×98/2.0 – GL	**86368**	86×84×98/2.0	**6686368**	86×84×98/2.0 – GL	**86362**	86×84×98/2.0	**6686362**
160 VA	101×96×106/2.7 – GL	**86369**	101×96×106/2.7	**6686369**	101×96×106/2.7 – GL	**86363**	101×96×106/2.7	**6686363**
250 VA	102×96×108/3.5 – GL	**86371**	102×96×108/3.5	**6686371**	102×96×108/3.5 – GL	**86365**	102×96×108/3.5	**6686365**
Input								
Input voltage	230/400 ±15 V AC							
Frequency	50...60 Hz							
Output								
Output voltage	230 V AC				24 V AC (SELV)			
Output rating	40 VA							
General data								
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0				EN 61558-1, EN 61558-2-6, EN 62041 category 0			
Test isolation voltage	4 kV (prim./sec.)							
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)							
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)							
Dimension drawing								



Notes
GL-Approval from 100 VA and with screw terminals.

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

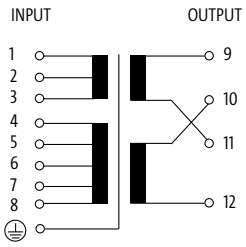
Approvals: cULus

MTS Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC
Screw terminals

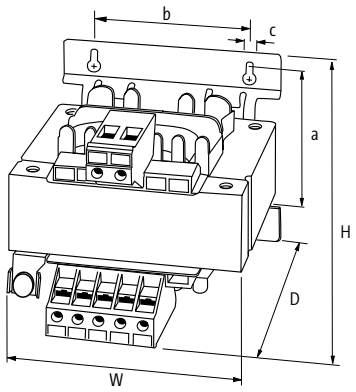


Circuit diagram



Order Data	H×W×D/kg	Art-No.
25 VA	90×78×102/0.7	**86140**
40 VA	88×78×93/1.1	**86141**
63 VA	97×78×93/1.4	**86142**
100 VA	105×84×98/2.0 – GL	**86143**
160 VA	101×96×106/2.7 – GL	**86144**
Input		
Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA	
General data		
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Long-hole mounting or DIN-rail mountable TH35 (EN 60715)	
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)	

Dimension drawing



Notes

GL-Approval from 100 VA and with screw terminals.

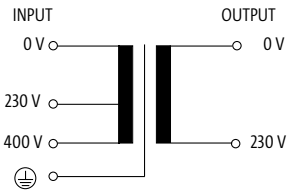
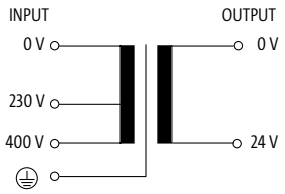
TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

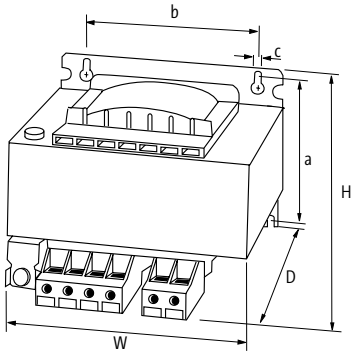
– INPUT: 230/400 V AC

– Isolation class T 40/B

Approvals: cULus

	MST	**MST**	**MST**	**MST**
	OUTPUT: 230 V AC Screw terminals	OUTPUT: 230 V AC Spring clamp terminals	OUTPUT: 24 V AC Screw terminals	OUTPUT: 24 V AC Spring clamp terminals
				
Circuit diagram				
				

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
320 VA	92×120×122/4.2 – GL	**86306**	92×120×122/4.2	**6686306**	92×120×122/4.2 – GL	**86326**	92×120×122/4.2	**6686326**
400 VA	104×120×123/5.2 – GL	**86307**	104×120×123/5.2	**6686307**	104×120×123/5.2 – GL	**86327**	104×120×123/5.2	**6686327**
500 VA	108×135×134/6.5 – GL	**86308**	108×135×134/6.5	**6686308**	108×135×134/6.5 – GL	**86328**		
630 VA	113×150×145/7.7 – GL	**86309**	113×150×145/7.7	**6686309**	113×150×145/7.7 – GL	**86329**		
800 VA	129×150×145/10.1 – GL	**86310**	129×150×145/10.1	**6686310**	136×150×149/10.1 – GL	**86330**		
1 000 VA	128×174×160/12.3 – GL	**86311**	128×174×160/12.3	**6686311**	133×174×165/12.3 – GL	**86331**		
Input								
Input voltage	230/400 V AC							
Frequency	50...60 Hz							
Output								
Output voltage	230 V AC				24 V AC (SELV)			
Output rating	320 VA							
General data								
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0				EN 61558-1, EN 61558-2-6, EN 62041 category 0			
Test isolation voltage	4 kV (prim./sec.)							
Mounting method	Key-hole mounting							
Temperature range	-20...+40 °C (storage temperature -40...+80 °C)							
Dimension drawing								



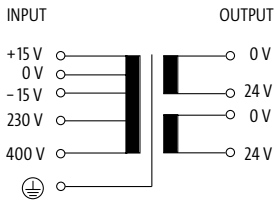
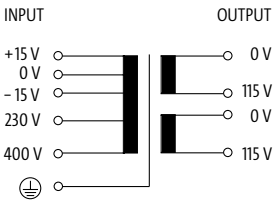
Notes

1-/2-phase

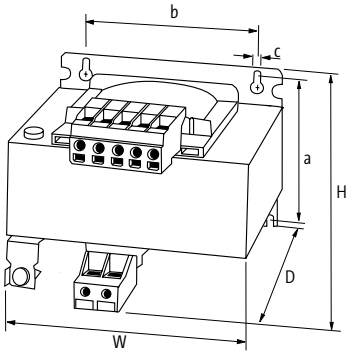
– INPUT: 230/400 ±15 V AC

– Isolation class T 40/B

Approvals:

	MST+	MST+
	OUTPUT: 24 V AC, 48 V AC Screw terminals	OUTPUT: 115 V AC, 230 V AC Screw terminals
		
Circuit diagram		
		

Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
630 VA	121×150×165/8.0	**86463**	113×150×146/8.2	**86483**
1 000 VA	156×150×197/13.5	**86464**	156×150×146/13.5	**86484**
1 600 VA	168×174×222/19.5	**86465**	168×174×163/19.5	**86485**
2 500 VA	182×192×242/27.0	**86466**	182×192×196/27.0	**86486**
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	630 VA			
General data				
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0			
Test isolation voltage	5.8 kV (prim./sec.)			
Mounting method	Key-hole mounting			
Temperature range	-20...+40 °C, no condensation			
Dimension drawing				



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– INPUT: 208...550 V AC

– Isolation class T 40/B

Approvals:

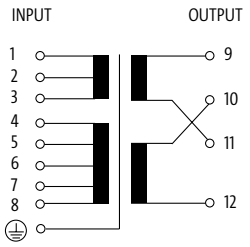
MST Multi

OUTPUT: 1 × 230, 1 × 115, 2 × 115 V AC

Screw terminals

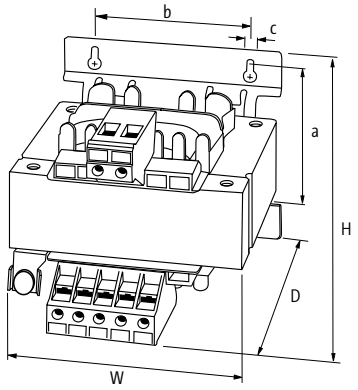


Circuit diagram



Order Data	H×W×D/kg	Art-No.
250 VA	104×120×122/4.0	**86145**
320 VA	115×135×132/5.8	**86146**
400 VA	115×135×132/6.2	**86147**
500 VA	138×135×135/5.8	**86148**
800 VA	156×150×150/7	**86150**
1 000 VA	128×174×160/12.3	**86151**
1 600 VA	168×174×163/7	**86152**
2 000 VA	185×192×185/10	**86153**
2 500 VA	200×195×217/10	**86154**
3 000 VA	250×197×193/29.5	**86155**
5 000 VA	248×197×250/9	**86157**
Input		
Input voltage	208, 230, 380, 400, 420, 440, 460, 480, 500, 525, 550 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	250 VA	
General data		
Standards	EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Test isolation voltage	4 kV (prim./sec.)	
Mounting method	Key-hole mounting	
Temperature range	-20...+40 °C (storage temperature -20...+80 °C)	

Dimension drawing



Notes

1-/2-phase

– INPUT: 230/400 ±15 V AC

– Isolation class T 60/B

Approvals: cULus GL

MTL

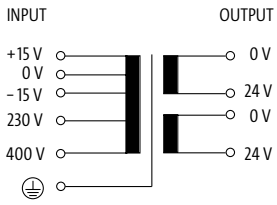
OUTPUT: 24 V AC, 48 V AC
Screw terminals



MTL

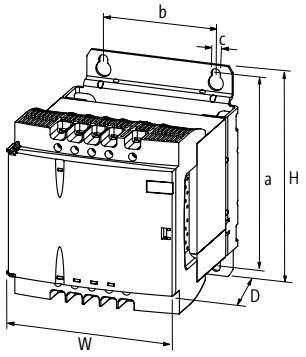
OUTPUT: 115 V AC, 230 V AC
Screw terminals

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
25 VA	108×87×98/1.1	**86450**	108×87×98/1.1	**86470**
40 VA	108×87×104/1.4	**86451**	108×87×104/1.4	**86471**
63 VA	108×87×116/2.0	**86452**	108×87×116/2.0	**86472**
100 VA	108×87×139/2.9	**86453**	108×87×139/2.9	**86473**
160 VA	153×123×128/4.4	**86454**	153×123×128/4.4	**86474**
250 VA	153×123×142/5.7	**86455**	153×123×142/5.7	**86475**
320 VA	153×123×160/7.2	**86456**	153×123×160/7.2	**86476**
Technical Data				
LED display	LED (green) for input voltage			
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	1 × 24, 1 × 48, 2 × 24 V AC		1 × 230, 1 × 115, 2 × 115 V AC	
Output rating	25 VA			
General data				
Test isolation voltage	5.1 kV (prim./sec.)		4 kV (prim./sec.)	
Standards	EN 61558-2-4, EN 61558-2-6, EN 62041 category 0		EN 61558-1, EN 61558-2-4, EN 62041 category 0	
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting			
Temperature range	-20...+60 °C, no condensation			

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

Single-phase

– OUTPUT: 24 V DC (SELV)

Approvals: cULus cULus Listed

MEN

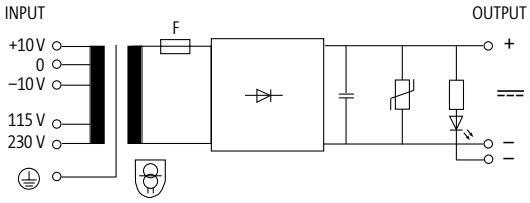
INPUT: 115/230 V AC



MEN

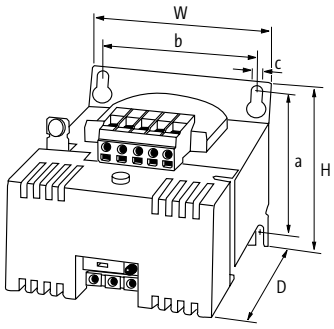
INPUT: 115/230 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	**85360**	64×78×120/1.3	**8985360**
24 V DC/2.5 A	83×84×124/2.1	**85361**	83×84×124/2.1	**8985361**
24 V DC/5 A	95×96×136/3.0	**85362**	95×96×136/3.0	**8985362**
24 V DC/7.5 A	103×105×151/5.6	**85363**		
Input				
Input voltage	115/230 V AC ±10 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			

Dimension drawing



Notes

Single-phase

– OUTPUT: 24 V DC (SELV)

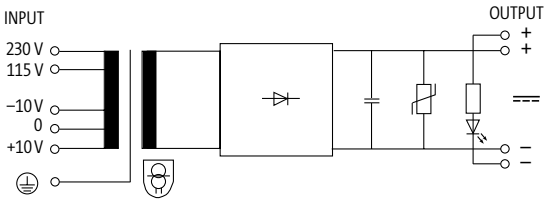
Approvals: cULus cULus Listed

MEN

INPUT: 115/230 V AC

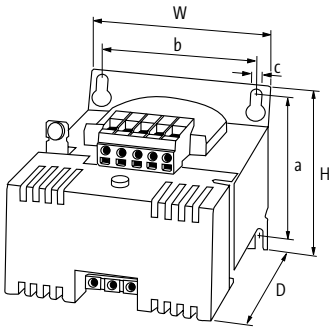


Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	**85364**
24 V DC/15 A	139×135×182/8.2	**85355**
24 V DC/20 A	127×174×214/12.8	**85356**
Input		
Input voltage	115/230 V AC ±10 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	

Dimension drawing



Notes

TRANSFORMERS / RECTIFIED POWER SUPPLIES

1-/2-phase

– OUTPUT: 24 V DC (SELV)

Approvals: cULus cULus Listed

MEN

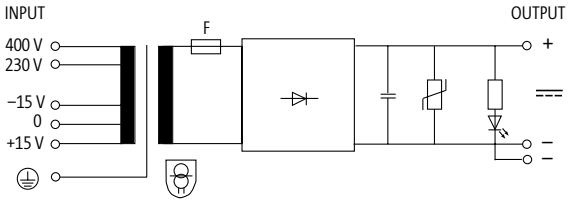
INPUT: 230/400 V AC



MEN

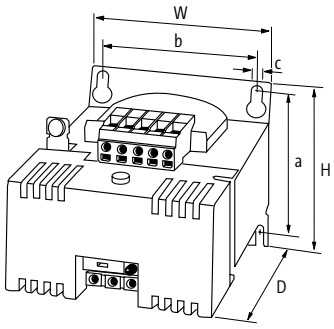
INPUT: 230/400 V AC
with MES DIN-rail adapter

Circuit diagram



Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/1 A	64×78×120/1.3	**85349**	64×78×120/1.3	**8985349**
24 V DC/2.5 A	83×84×124/2.1	**85350**	83×84×124/2.1	**8985350**
24 V DC/5 A	95×96×136/3.0	**85351**	95×96×136/3.0	**8985351**
24 V DC/7.5 A	103×105×151/5.6	**85357**		
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting		DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting	
Temperature range	-20...+60 °C, no condensation			

Dimension drawing



Notes

1-/2-phase

– OUTPUT: 24 V DC (SELV)

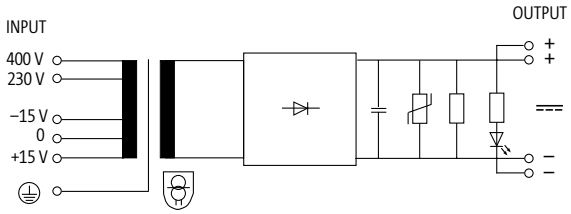
Approvals:

MEN

INPUT: 230/400 V AC

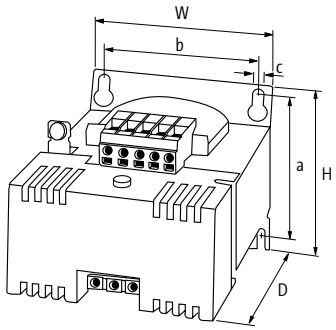


Circuit diagram



Order Data	H×W×D/kg	Art-No.
24 V DC/10 A	113×120×160/6.0	**85352**
24 V DC/15 A	139×135×182/8.2	**85353**
24 V DC/20 A	127×174×214/12.8	**85354**
Input		
Input voltage	230/400 ±15 V AC	
Frequency	50...60 Hz	
Output		
Output voltage	24 V DC (SELV)	
Ripple	max. 5 %rms	
Output filter	LED, VDR and smoothing capacitor	
General data		
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2	
Mounting method	Key-hole mounting	
Temperature range	-20...+60 °C, no condensation	

Dimension drawing



Notes

1-/2-phase

– OUTPUT: 24 V DC (SELV)

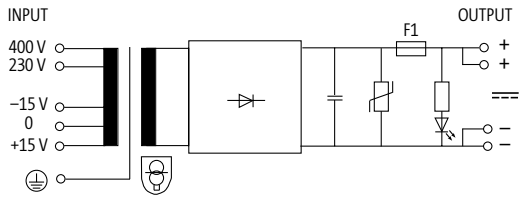
Approvals: cULus cULus Listed

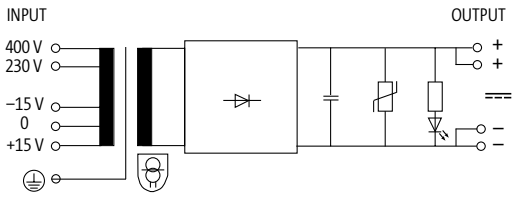
MTPS

INPUT: 230/400 V AC



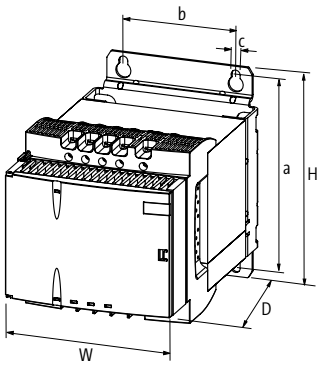
Circuit diagram





Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/0.5 A	108×87×124/1.3	**85400**		
24 V DC/1 A	108×87×124/1.3	**85401**		
24 V DC/2 A	108×87×142/2.0	**85402**		
24 V DC/4 A	108×87×165/2.9	**85403**		
24 V DC/6 A	153×123×153/4.9	**85404**		
24 V DC/10 A			153×123×185/7.7	**85405**
Input				
Input voltage	230/400 ±15 V AC			
Frequency	50...60 Hz			
LED display	LED (green) for input voltage			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 5 %rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Temperature range	-20...+60 °C, no condensation			
Mounting method	DIN-rail mountable TH35-15 (EN 60715) or for key-hole mounting		Key-hole mounting	

Dimension drawing



Notes

3-phase

– OUTPUT: 24 V DC (SELV)

Approvals: cULus Listed

MPL

INPUT: 3 × 400 V AC, ±5% reconnectable

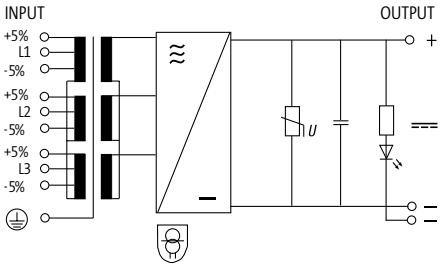


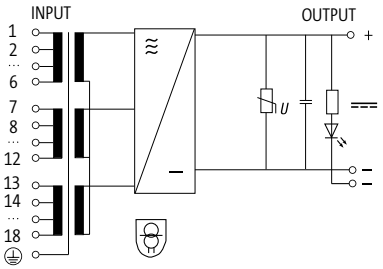
MPL Multi

INPUT: 3 × 208...520 V AC

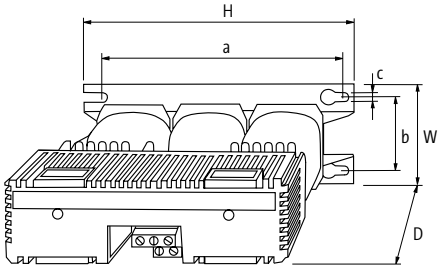


Circuit diagram





Order Data	H×W×D/kg	Art-No.	H×W×D/kg	Art-No.
24 V DC/5 A	125×73×153/2.9 – cURus	**85921**		
24 V DC/7.5 A	185×78×188/4.4 – cURus	**85923**		
24 V DC/10 A	185×78×188/4.5 – cURus	**85925**	185×93×188/6.6	**85953**
24 V DC/15 A	220×82×208/8.2 – cURus	**85927**	220×82×208/7.5	**85954**
24 V DC/20 A	220×103×213/10.5 – cURus	**85929**		
24 V DC/25 A	220×103×213/11.0 – cURus	**85931**	220×103×213/11.1 – cURus	**85955**
24 V DC/30 A	240×107×250/13.5 – cURus	**85933**		
24 V DC/40 A	280×124×313/17.8 – cURus	**85935**	280×124×313/17.9 – cURus	**85956**
24 V DC/50 A	280×134×313/20.9 – cURus	**85937**	280×134×313/20.9 – cURus	**85957**
24 V DC/60 A	280×154×313/26.1 – cURus	**85939**		
Input				
Input voltage	3 × 400 V AC ±5%		3 × 208...520 V AC	
Frequency	50...60 Hz			
Output				
Output voltage	24 V DC (SELV)			
Ripple	max. 2%rms			
Output filter	LED, VDR and smoothing capacitor			
General data				
Standards	EN 61558-2-6, EN 62041 category I, EN 55011 B, EN 61000-3-2			
Mounting method	Key-hole mounting			
Temperature range	-20...+55 °C, for any mounting position at vertical wall, no condensation			
Dimension drawing				



Notes



SWITCHING POWER SUPPLIES
EMPARRO® – SIMPLY THE BEST

- **Efficiency up to 96%**
- **150% Power Boost for 4 seconds**

EMPARRO® – THE SWITCHING POWER SUPPLY WITH MAXIMUM EFFICIENCY

- Efficiency up to 96%
- 150% Power Boost for four seconds
- Metal housing with optimum EMC characteristics
- Derating only at +60 °C
- Reduced width
- Long bridging time in case of a power failure
- More than 30 variants – the solution for many applications

Competitive comparison of Emparro®

The comparison based on the same input current shows: Emparro (on the left) releases



significantly less heat than conventional switching power supplies. The devices remain cooler and protect the neighboring components. This results in alonger service life.

Switching power supplies



Emparro®
- Single-phase, two-phase, three-phase
- Spring clamp terminal
- AS-Interface

Page 1.2.1



Emparro® HD
- Single-phase
- Robust design

Page 1.2.4



Emparro®67 IO-Link
- Single-phase
- IP67
- IO-Link
- Preventive diagnostics

Page 1.2.8



Evolution/Evolution+
- Two-phase, three-phase
- Extended temperature range from -25...+70 °C
- Approvals for worldwide use

Page 1.2.10



ECO-Rail-2
- Single-phase
- Useful and flexible

Page 1.2.16



PICCO
- Single-phase
- 16 variants
- 12 V or 24 V outputs
- 10 W, 30 W, 60 W or 100 W

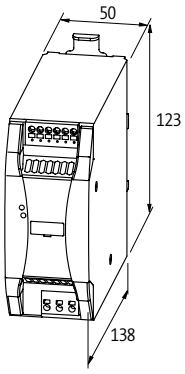
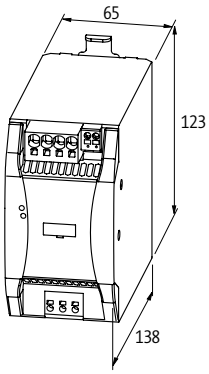
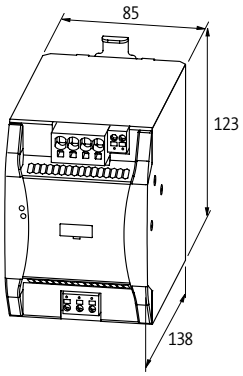
Page 1.2.18

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals: cULus Listed, DNV·GL

	Emparro® OUTPUT: 24...28 V DC Current: 5 A	**Emparro®** OUTPUT: 24...28 V DC Current: 10 A	**Emparro®** OUTPUT: 24...28 V DC Current: 20 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/5 A (for DIN-Rail)	**85440**		
24 V DC/5 A (for screwing)	**85702**		
24 V DC/10 A (for DIN-Rail)		**85441**	
24 V DC/10 A (for screwing)		**85703**	
24 V DC/20 A (for DIN-Rail)			**85442**
24 V DC/20 A (for screwing)			**85704**
Input			
Input voltage	85...265 V AC/90...250 V DC		90...265 V AC/90...250 V DC
Input current	1.3 A (100 V AC); 0.61 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.2 A (100 V AC); 2.2 A (240 V AC)
Inrush current after 1 ms	max. 5.5 A (230 V AC)	max. 13 A	max. 23 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.96 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable		
Power Boost	Iout N × 150% (min. 4 s)		
Output current	5 A	10 A	20 A
Mains failure bridging time	min. 30 ms (100 V AC); 5 A (24 V DC)	min. 30 ms (100 V AC); 10 A (24 V DC)	min. 30 ms (100 V AC); 20 A (24 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.7% (110 V AC); 94.5% (230 V AC)	92.8% (110 V AC); 94.3% (230 V AC)	91.7% (110 V AC); 94.1% (230 V AC)
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			
			
Notes			

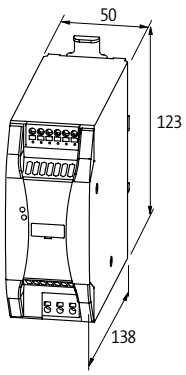
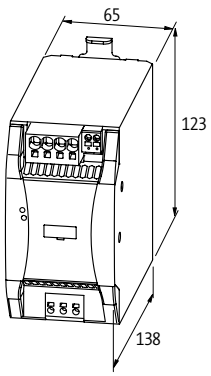
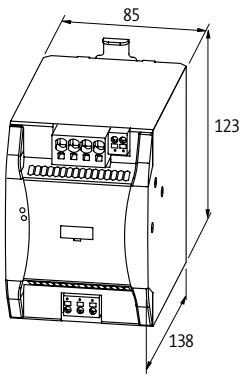
POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– Alarm contact

Approvals: cULus Listed, DNV·GL

	Emparro® OUTPUT: 48...56 V DC Current: 2.5 A	**Emparro®** OUTPUT: 48...56 V DC Current: 5 A	**Emparro®** OUTPUT: 48...56 V DC Current: 10 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
48 V DC/2.5 A (for DIN-Rail)	**85437**		
48 V DC/2.5 A (for screwing)	**85722**		
48 V DC/5 A (for DIN-Rail)		**85438**	
48 V DC/5 A (for screwing)		**85723**	
48 V DC/10 A (for DIN-Rail)			**85439**
48 V DC/10 A (for screwing)			**85724**
Input			
Input voltage	85...265 V AC/90...250 V DC		
Input current	1.2 A (100 V AC); 0.6 A (240 V AC)	2.6 A (100 V AC); 1.1 A (240 V AC)	5.1 A (100 V AC); 2.4 A (240 V AC)
Inrush current after 1 ms	max. 3.5 A (230 V AC)	max. 5.5 A (230 V AC)	max. 11 A (230 V AC)
Power factor	0.87 (230 V AC)	0.95 (230 V AC)	0.94 (230 V AC)
Frequency	50...60 Hz		
Input fuse (internal)	6.3 A (T)		10 A (T)
Output			
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable		
Power Boost	Iout N × 150% (min. 4 s)		
Output current	2.5 A	5 A	10 A
Mains failure bridging time	min. 30 ms (100 V AC); 2.5 A (48 V DC)	min. 30 ms (100 V AC); 5 A (48 V DC)	min. 30 ms (100 V AC); 10 A (48 V DC)
Ripple	max. 50 mVrms		
Spikes	max. 200 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit		
Parallel usage/serial usage	max. 5 units/max. 2 units		
General data			
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47		
Relative humidity	5...95%, no condensation		
Protection	IP20		
Efficiency	92.8% (110 V AC); 94.6 % (230 V AC)	93.7% (110 V AC); 95.1% (230 V AC)	95%
Connection	Push-In spring clamp terminals		
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)		
Dimension drawing			
			
Notes			

Single-phase

– Short-circuit and overload protected

– Alarm contact

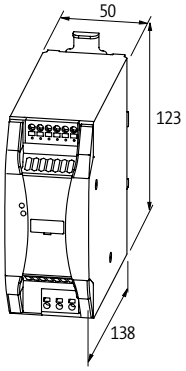
Approvals:

Emparro®

OUTPUT: 12...15 V DC
Current: 10 A



Order Data		Art-No.
12 V DC/10 A (for DIN-Rail)		85434
12 V DC/10 A (for screwing)		85712
Input		
Input voltage	85...265 V AC/90...250 V DC	
Input current	1.2 A (100 V AC); 0.6 A (230 V AC)	
Inrush current after 1 ms	max. 10 A (230 V AC)	
Power factor	0.88 (230 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable	
Power Boost	Iout N × 150% (min. 4 s)	
Output current	10 A	
Mains failure bridging time	min. 30 ms (100 V AC); 10 A (12 V DC)	
Ripple	max. 50 mVrms	
Spikes	max. 200 mV p-p	
Unit protection	Short-circuit and overload protected	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 5 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	91.4% (110 V AC); 93.2% (230 V AC)	
Connection	Push-In spring clamp terminals	
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)	
Dimension drawing		



Notes	

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

– IP20

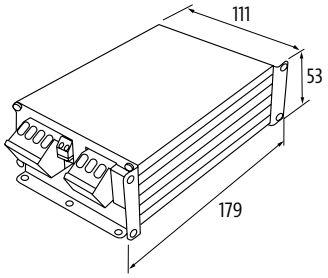
– rugged design

Emparro® HD

OUTPUT: 24...28 V DC
Current: 10 A



Order Data		Art-No.
24 V DC/10 A		85449
Input		
Input voltage	90...265 V AC/90...370 V DC	
Input current	1.1 A (240 V AC)	
Inrush current after 1 ms	max. 7 A (240 V AC)	
Power factor	0.91 (230 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	15 A (min. 5 s)	
Output current	10 A	
Mains failure bridging time	min. 35 ms (100 V AC); 10 A (24 V DC)	
Ripple	max. 30 mVrms	
Spikes	max. 300 mV p-p	
Unit protection	Short-circuit and overload protected	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	93.5% (115 V AC); 94.2% (230 V AC)	
MTBF	1 000 000 h	
Connection	Spring clamp terminals	
Mounting method	screw fixing	
Temperature range	-40...+50 °C, ...+80 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	

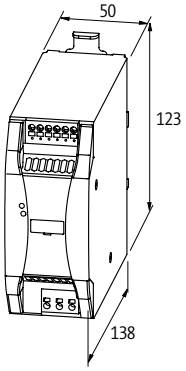
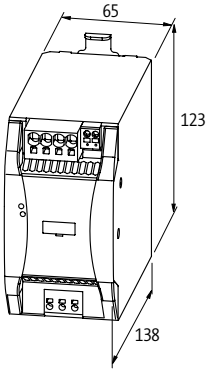
MURR ELEKTRONIK
stay connected

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals: cULus Listed, cULus, DNV·GL

	Emparro® OUTPUT: 24...28 V DC Current: 5 A	**Emparro®** OUTPUT: 24...28 V DC Current: 10 A
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/5 A (for DIN-Rail)	**85690**	
24 V DC/5 A (for screwing)	**85695**	
24 V DC/5 A (varnished board)	**87690**	
24 V DC/10 A (for DIN-Rail)		**85691**
24 V DC/10 A (for screwing)		**85696**
24 V DC/10 A (varnished board)		**87691**
Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)	0.75 A (3 × 360 V AC); 0.55 A (3 × 500 V AC)
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)	max. 9.0 A (3 × 500 V AC)
Power factor	0.61 (3 × 400 V AC)	0.66 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	Iout N × 150% (min. 5 s)	
Output current	3.7 A (70 °C); 5.0 A (60 °C); 6.0 A (45 °C)	12 A (45 °C); 10 A (60 °C); 7 A (70 °C)
Mains failure bridging time	min. 25 ms (3 × 360 V AC); 5 A (24 V DC)	min. 45 ms (3 × 500 V AC); 10 A (24 V DC)
Ripple	max. 20 mVrms	
Spikes	max. 50 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.2% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		
		
Notes		

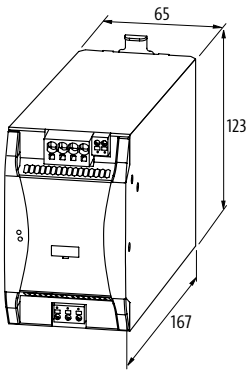
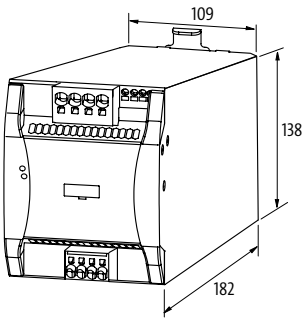
POWER SUPPLY UNITS

2-/3-phase

– Short-circuit and overload protected

– Alarm contact

Approvals:

	Emparro® OUTPUT: 24...28 V DC Current: 20 A	**Emparro®** OUTPUT: 24...28 V DC Current: 40 A
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/20 A (for DIN-Rail)	**85692**	
24 V DC/20 A (for screwing)	**85697**	
24 V DC/20 A (varnished board)	**87692**	
24 V DC/40 A (for DIN-Rail)		**85693**
24 V DC/40 A (for screwing)		**85698**
24 V DC/40 A (varnished board)		**87693**
Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	3 × 324...572 V AC/480...745 V DC
Input current	1.3 A (3 × 360 V AC); 1.0 A (3 × 500 V AC)	2.3 A (3 × 360 V AC); 1.6 A (3 × 500 V AC)
Inrush current after 1 ms	max. 13 A (3 × 500 V AC)	max. 14 A (3 × 500 V AC)
Power factor	0.65 (3 × 500 V AC)	0.88 (3 × 500 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Power Boost	Iout N × 150% (min. 5 s)	
Output current	15 A (70 °C); 20 A (60 °C); 24 A (45 °C)	30 A (70 °C); 40 A (60 °C); 48 A (45 °C)
Mains failure bridging time	min. 40 ms (3 × 500 V AC)	
Ripple	max. 20 mVrms	
Spikes	max. 90 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	94.8% (3 × 400 V AC); 94.5% (3 × 480 V AC)	93.7% (3 × 400 V AC); 93.5% (3 × 480 V AC)
Connection	Push-In spring clamp terminals	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		
		
Notes		

MURR ELEKTRONIK
stay connected

2-/3-phase

– AS-Interface

– Short-circuit and overload protected

– Alarm contact

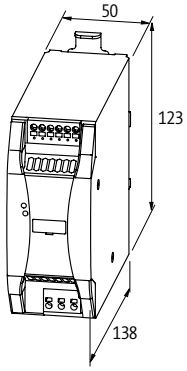
Approvals: c UL us Listed, c TÜV us, ASI

Emparro®

OUTPUT: 30...32 V DC



Order Data		Art-No.
30.5 V DC/4 A		**85383**
Input		
Input voltage	3 × 324...572 V AC/450...745 V DC	
Input current	0.45 A (3 × 360 V AC); 0.3 A (3 × 500 V AC)	
Inrush current after 1 ms	max. 9.5 A (3 × 500 V AC)	
Power factor	0.61 (3 × 400 V AC)	
Frequency	50...60 Hz	
Input fuse (internal)	3 × 6.3 A (T)	
Output		
Output voltage	30.5 V DC (SELV), ±1%; 30...32 V adjustable	
Power Boost	Iout N × 150% (min. 5 s)	
Output current	4.8 A (45 °C); 4.0 A (60 °C); 2.9 A (70 °C)	
Mains failure bridging time	min. 20 ms (3 × 360 V AC); 5 A (24 V DC)	
Ripple	max. 20 mVrms	
Spikes	max. 50 mV p-p	
Unit protection	Short-circuit and overload protected, permanently by 20% (to 45 °C)	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	
Connection	Push-In spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-40...+70 °C, ...+70 °C derating (storage temperature -40...+85 °C)	
Dimension drawing		



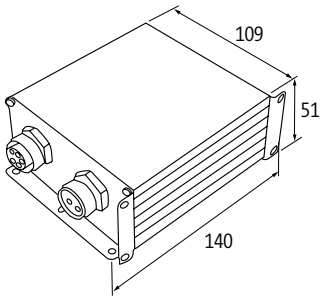
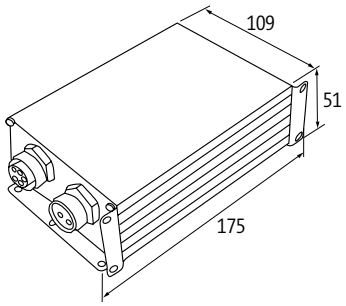
Notes	

POWER SUPPLY UNITS

Single-phase

– IP67

Approvals: c UL us Listed

	Emparro®67 OUTPUT: 24 V DC Current: 4 A	**Emparro®67** OUTPUT: 24 V DC Current: 8 A
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/4 A	**9000-11112-1962020**	
24 V DC/8 A		**9000-11112-2062020**
Input		
Input voltage	90...265 V AC/90...265 V DC	
Input current	1.1 A (100 V AC); 0.5 A (240 V AC)	2.1 A (100 V AC); 0.9 A (240 V AC)
Inrush current after 1 ms	max. 8.9 A (230 V AC)	max. 7 A (230 V AC)
Power factor	0.98 (230 V AC)	0.95 (230 V AC)
Connection	7/8" male, 3-pole	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±2%	
Power Boost	Iout N × 150% (min. 4 s)	
Output current	4 A	8 A
Connection	7/8" (female), 5-pole	
Mains failure bridging time	min. 45 ms (230 V AC); 4 A (24 V DC)	min. 35 ms (230 V AC); 8 A (24 V DC)
Ripple	max. 20 mVrms	max. 30 mVrms
Spikes	max. 100 mV p-p	max. 300 mV p-p
Unit protection	Short-circuit, overload and temperature	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	max. 3 units/max. 2 units	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2	
Relative humidity	4...100%	
Protection	IP67	
Efficiency	91.7% (115 V AC); 92.4% (230 V AC)	93.5% (115 V AC); 94.2% (230 V AC)
Mounting method	screw fixing	
Temperature range	-40...+60 °C, ...+70 °C derating (storage temperature -40...+80 °C)	
Dimension drawing		
		
Notes		

MURR ELEKTRONIK
stay connected

Single-phase

– Over current protection device

– 2×MICO 7/8" IOL

– Preventive Diagnostic

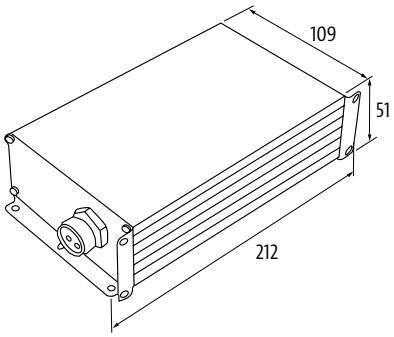
IO-Link

Emparro®67 Hybrid

OUTPUT: 24...28 V DC
Current: 10 A



Order Data		Art-No.
24 V DC/10 A		**85676**
Input		
Input voltage	90...265 V AC/90...265 V DC	
Input current	1.1 A (230 V AC)	
Inrush current after 1 ms	max. 7 A (230 V AC)	
Power factor	0.88 (230 V AC)	
Connection	7/8" male, 3-pole	
Frequency	50...60 Hz	
Input fuse (internal)	6.3 A (T)	
Output		
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable	
Output current	max. 8 A (per channel), max. 10 A (total)	
No. of channels	2×MICO (Over current protection device)	
Connection	7/8" (female), 5-pole	
Mains failure bridging time	min. 20 ms (230 V AC)	
Ripple	max. 10 mVrms	
Spikes	max. 150 mV p-p	
Unit protection	Short-circuit, overload and temperature	
LED display	LED (green): OK; LED (red): overload, overheating or short-circuit	
Parallel usage/serial usage	no	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	4...100%	
Protection	IP67	
Efficiency	91.6% (115 V AC); 92.8% (230 V AC)	
MTBF	430 000 h	
Mounting method	screw fixing	
Temperature range	-25...+50 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	
	For an explanation of MICO features, see the chapter Intelligent Power Distribution

POWER SUPPLY UNITS

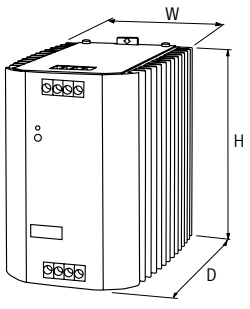
2-/3-phase

– stable output voltage

– Short-circuit and overload protected

Approvals: cULus Listed, DNV·GL

	Evolution OUTPUT: 22...28 V DC Current: 5 A		**Evolution** OUTPUT: 22...28 V DC Current: 10 A	
				
Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
24 V DC/5 A	132×83×98/1.0	**85000**		
24 V DC/10 A			132×93×114/1.3	**85001**
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 10 A		3 × 10 A (T)	
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	86% (3 × 360 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes				

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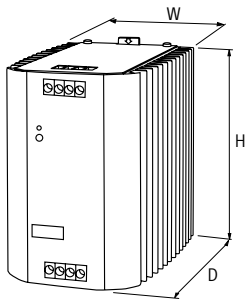
2-/3-phase

– stable output voltage

– Short-circuit and overload protected

Approvals: cULus Listed, DNV·GL

	Evolution OUTPUT: 22...28 V DC Current: 20 A		**Evolution** OUTPUT: 22...28 V DC Current: 40 A	
				
Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
24 V DC/20 A	132×113×136/2.0	**85002**		
24 V DC/40 A			132×164×142/3.0	**85004**
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		–	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes

POWER SUPPLY UNITS

2-/3-phase

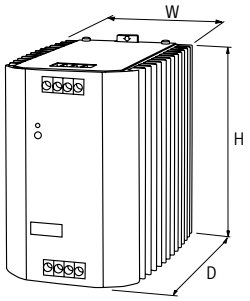
– stable output voltage

– Short-circuit and overload protected

– Varnished board

Approvals: c UL us Listed, DNV·GL

	Evolution+ OUTPUT: 22...28 V DC Current: 5 A		**Evolution+** OUTPUT: 22...28 V DC Current: 10 A	
				
Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
24 V DC/5 A	132×83×98/1.0	**85640**		
24 V DC/10 A			132×93×114/1.2	**85641**
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 0.45 A		3 × 0.8 A	
Inrush current after 1 ms	max. 10 A		max. 15 A	
Frequency	50...60 Hz			
Primary fusing external	3 × 10 A (T)			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	5 A (+55 °C); 3 A (+70 °C)		10 A (+55 °C); 6.5 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 30 ms (400 V AC)		min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47			
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	86% (3 × 400 V AC); 86% (3 × 520 V AC)		90% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				



Notes				

POWER SUPPLY UNITS

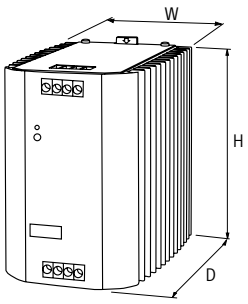
2-/3-phase

– stable output voltage

– Short-circuit and overload protected

– Varnished board

Approvals: cULus Listed, DNV·GL

	Evolution+ OUTPUT: 22...28 V DC Current: 20 A		**Evolution+** OUTPUT: 22...28 V DC Current: 40 A	
				
Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
24 V DC/20 A	132×113×136/2.0	**85642**		
24 V DC/40 A			132×164×142/3.0	**85644**
Input				
Input voltage	3 × 324...572 V AC/480...745 V DC			
Input current	3 × 1.3 A		3 × 2.4 A	
Inrush current after 1 ms	max. 19 A		–	
Frequency	50...60 Hz			
Primary fusing external	max. 3 × 20 A			
Output				
Output voltage	24 V DC (SELV), ±1%; 22...28 V adjustable			
Output current	20 A (+55 °C); 15.8 A (+70 °C)		40 A (+55 °C); 30 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)			
Mains failure bridging time	min. 19 ms (400 V AC)			
Ripple	max. 50 mVrms			
Spikes	max. 100 mV p-p			
LED display	LED (green): OK; LED (red): overload			
Parallel usage/serial usage	max. 5 units/max. 2 units			
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55011 A, EN 61000-3-2, SEMI F47		EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2, SEMI F47	
Relative humidity	5...95%, no condensation			
Protection	Varnished board			
Protection	IP20			
Efficiency	90% (3 × 400 V AC); 89% (3 × 520 V AC)		91% (3 × 400 V AC); 90% (3 × 520 V AC)	
Connection	Screw terminals			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)			
Dimension drawing				
				
Notes				

POWER SUPPLY UNITS

2-/3-phase

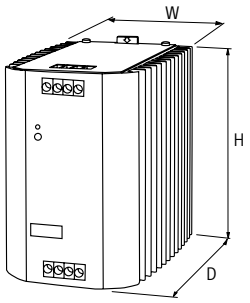
– stable output voltage

– Short-circuit and overload protected

– Varnished board

Approvals: UL Listed

	Evolution+ OUTPUT: 48...56 V DC Current: 5 A		**Evolution+** OUTPUT: 48...56 V DC Current: 10 A		**Evolution+** OUTPUT: 48...56 V DC Current: 20 A	
						
Order Data	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**	**H×W×D/kg**	**Art-No.**
48 V DC/5 A	132×93×114/1.4	**85009**				
48 V DC/10 A			132×113×136/2.0	**85010**		
48 V DC/20 A					132×164×142/3.0	**85011**
Input						
Input voltage	3 × 324...572 V AC/480...745 V DC					
Input current	3 × 0.8 A		3 × 1.3 A		3 × 1.9 A	
Inrush current after 1 ms	max. 9 A		max. 23 A		–	
Frequency	50...60 Hz					
Primary fusing external	max. 3 × 20 A					
Output						
Output voltage	48 V DC (SELV), ±1%; 48...56 V adjustable					
Output current	5 A (+55 °C); 3.73 A (+70 °C)		10 A (+55 °C); 8 A (+70 °C)		20 A (+55 °C); 15 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)					
Mains failure bridging time	min. 17 ms (400 V AC)		min. 24 ms (400 V AC)		min. 17 ms (400 V AC)	
Ripple	max. 50 mVrms					
Spikes	max. 100 mV p-p					
LED display	LED (green): OK; LED (red): overload					
Parallel usage/serial usage	max. 5 units/no					
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm					
General data						
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2					
Relative humidity	5...95%, no condensation					
Protection	Varnished board					
Protection	IP20					
Efficiency	91.3% (3 × 360 V AC); 90.5% (3 × 520 V AC)		92.3% (3 × 360 V AC); 91% (3 × 520 V AC)		92.5% (3 × 360 V AC); 90.5% (3 × 520 V AC)	
Connection	Screw terminals					
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)					
Dimension drawing						



Notes

2-/3-phase

– stable output voltage

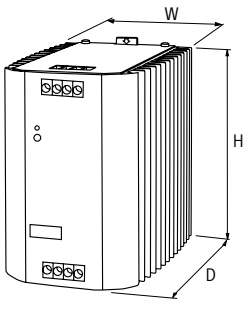
– Short-circuit and overload protected

Evolution

OUTPUT: 12...13.5 V DC
Current: 20 A



Order Data	H×W×D/kg	Art-No.
12 V DC/20 A	132×93×114/1.3	**85016**
Input		
Input voltage	3 × 324...572 V AC/480...745 V DC	
Input current	3 × 0.8 A	
Inrush current after 1 ms	max. 15 A	
Frequency	50...60 Hz	
Primary fusing external	3 × 10 A (T)	
Output		
Output voltage	12 V DC (SELV), ±1%; 12...13.5 V adjustable	
Output current	20 A (+55 °C); 15.8 A (+70 °C)	
Power Boost	Iout N × 150% (min. 4 s)	
Mains failure bridging time	min. 19 ms (400 V AC)	
Ripple	max. 50 mVrms	
Spikes	max. 100 mV p-p	
LED display	LED (green): OK; LED (red): overload	
Parallel usage/serial usage	max. 5 units/max. 4 units	
Alarm output	electronic relay max. 30 V DC/0.1 A, group alarm	
General data		
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2	
Relative humidity	5...95%, no condensation	
Protection	IP20	
Efficiency	89% (3 × 400 V AC); 88% (3 × 520 V AC)	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		



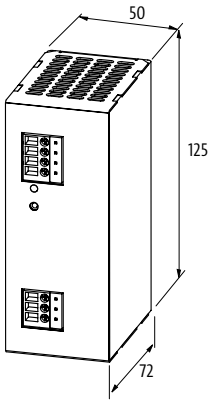
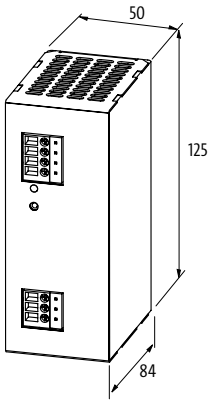
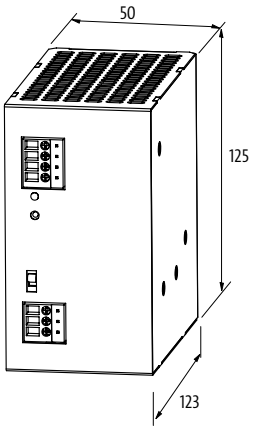
Notes

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

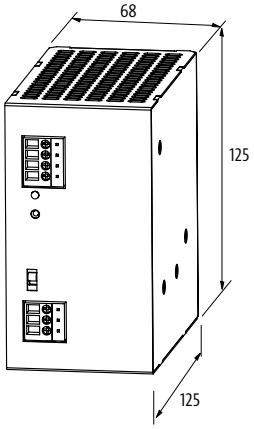
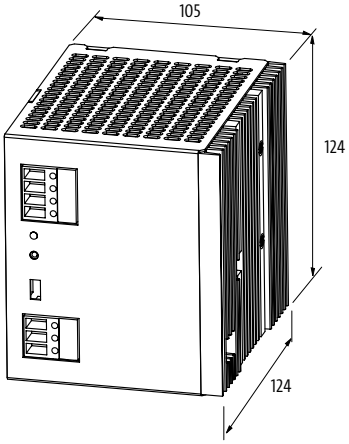
Approvals: cULus cULus Listed

	Eco-Rail-2 OUTPUT: 23...28 V DC Current: 1.3 A	**Eco-Rail-2** OUTPUT: 23...28 V DC Current: 2.5 A	**Eco-Rail-2** OUTPUT: 23...28 V DC Current: 5 A
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/1.3 A	**85131**		
24 V DC/2.5 A		**85132**	
24 V DC/5 A			**85133**
Input			
Input voltage	100...240 V AC		
Input current	0.7 A (100 V AC); 0.4 A (240 V AC)	1.3 A (100 V AC); 0.6 A (240 V AC)	2.4 A (100 V AC); 1.2 A (240 V AC)
Inrush current after 1 ms	max. 10 A (230 V AC)	max. 20 A (230 V AC)	
Frequency	50...60 Hz		
Input fuse (internal)	2 A (T)	4 A (T)	5 A (T)
Output			
Output voltage	24 V DC ±1%; 23...28 V adjustable		
Output current	1.3 A (+40 °C); 1.0 A (+55 °C)	2.5 A (+40 °C); 2.0 A (+55 °C)	5 A (+40 °C); 4 A (+55 °C)
Mains failure bridging time	min. 23 ms (115 V AC); min. 130 ms (230 V AC)	min. 20 ms (115 V AC); min. 100 ms (230 V AC)	min. 45 ms (115 V AC); min. 45 ms (230 V AC)
Ripple	max. 10 mVrms		
Spikes	max. 50 mV p-p		
Unit protection	Short-circuit and overload protected		
LED display	LED (green) for output voltage		
Parallel usage/serial usage	no/yes (max. 2 units)		
General data			
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2		
Relative humidity	20...90%, no condensation		
Protection	IP20		
Efficiency	83% (115 V AC); 84% (230 V AC)	84% (115 V AC); 85% (230 V AC)	87% (115 V AC); 88% (230 V AC)
Connection	Screw terminals		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+40 °C, ...+55 °C derating (storage temperature -20...+85 °C)		
Dimension drawing			
			
Notes			

Single-phase

– Short-circuit and overload protected

Approvals: cULus cULus Listed

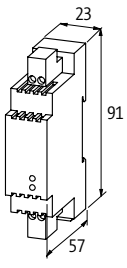
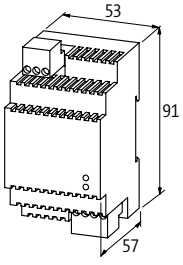
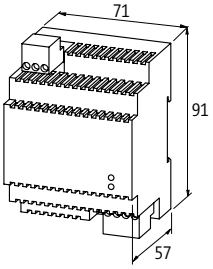
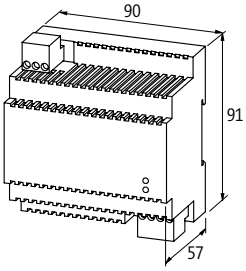
	Eco-Rail-2 OUTPUT: 23...28 V DC Current: 10 A	**Eco-Rail-2** OUTPUT: 23...28 V DC Current: 20 A
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/10 A	**85135**	
24 V DC/20 A		**85137**
Input		
Input voltage	90...132 V AC/173...264 V AC	
Input current	4.3 A (100 V AC); 2.1 A (240 V AC)	7.8 A (100 V AC); 4.0 A (200 V AC)
Inrush current after 1 ms	max. 18 A (230 V AC)	max. 40 A (230 V AC)
Frequency	50...60 Hz	
Input fuse (internal)	5 A (T)	12 A (T)
Output		
Output voltage	24 V DC ±1%; 23...28 V adjustable	
Output current	10 A (+40 °C); 7.5 A (+55 °C)	20 A (+40 °C); 16 A (+55 °C)
Mains failure bridging time	min. 12 ms (115 V AC); min. 30 ms (230 V AC)	min. 15 ms (115 V AC); min. 20 ms (230 V AC)
Ripple	max. 10 mVrms	max. 50 mVrms
Spikes	max. 50 mV p-p	max. 100 mV p-p
Unit protection	Short-circuit and overload protected	
LED display	LED (green) for output voltage	
Parallel usage/serial usage	no/yes (max. 2 units)	
General data		
Standards	EN 60950-1, EN 61204-3, EN 61000-3-2	
Relative humidity	20...90%, no condensation	
Protection	IP20	
Efficiency	86% (115 V AC); 87% (230 V AC)	89% (115 V AC); 90% (230 V AC)
Connection	Screw terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+40 °C, ...+55 °C derating (storage temperature -20...+85 °C)	
Dimension drawing		
		
Notes		

POWER SUPPLY UNITS

Single-phase

– Short-circuit and overload protected

Approvals: cULus cULus Listed

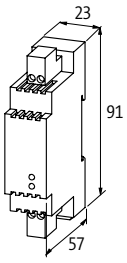
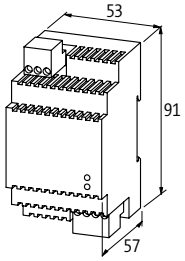
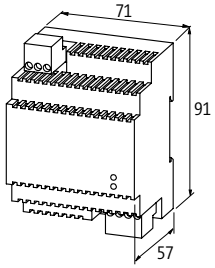
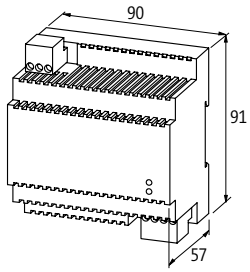
	Picco OUTPUT: 24...28 V DC Current: 0.42 A	**Picco** OUTPUT: 24...28 V DC Current 1.25 A	**Picco** OUTPUT: 24...28 V DC Current: 2.5 A	**Picco** OUTPUT: 24...28 V DC Current: 4.2 A
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
Screw terminals	**87011**	**87013**	**87015**	**87017**
Spring clamp plug-in terminals	**87111**	**87113**	**87115**	**87117**
Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1.1 A (115 V AC); 0.6 A (230 V AC)	1.7 A (115 V AC); 1 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	24 V DC (SELV), ±1%; 24...28 V adjustable			
Output current	0.42 A (+50 °C); 0.042 A (+70 °C)	1.25 A (+50 °C); 0.125 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.2 A (+50 °C); 0.42 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	79% (110 V AC); 80% (230 V AC)	86% (110 V AC); 88% (230 V AC)		
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				
				
Notes				

MURR ELEKTRONIK
stay connected

Single-phase

– Short-circuit and overload protected

Approvals: cULus cULus Listed

	Picco OUTPUT: 12...15 V DC Current: 0.85 A	**Picco** OUTPUT: 12...15 V DC Current: 2.5 A	**Picco** OUTPUT: 12...15 V DC Current: 4.5 A	**Picco** OUTPUT: 12...15 V DC Current: 6 A
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
Screw terminals	**87012**	**87014**	**87016**	**87018**
Spring clamp plug-in terminals	**87112**	**87114**	**87116**	**87118**
Input				
Input voltage	100...240 V AC/120...370 V DC			
Input current	0.2 A (115 V AC); 0.12 A (230 V AC)	0.6 A (115 V AC); 0.4 A (230 V AC)	1 A (115 V AC); 0.58 A (230 V AC)	1.3 A (115 V AC); 0.75 A (230 V AC)
Inrush current after 1 ms	max. 30 A	max. 40 A	max. 60 A	
Frequency	50...60 Hz			
Primary fusing external	max. 10 A		max. 16 A	max. 10 A
Output				
Output voltage	12 V DC (SELV), ±1%; 12...15 V adjustable			
Output current	0.85 A (+50 °C); 0.085 A (+70 °C)	2.5 A (+50 °C); 0.25 A (+70 °C)	4.5 A (+50 °C); 0.45 A (+70 °C)	6 A (+50 °C); 0.6 A (+70 °C)
Mains failure bridging time	10...25 ms (115 V AC)			
Ripple	max. 20 mVrms			
Spikes	max. 100 mV p-p			
Unit protection	Short-circuit and overload protected			
LED display	LED (green) for output voltage			
Parallel usage/serial usage	max. 5 units/max. 2 units			
General data				
Standards	EN 60950-1, EN 61204-3, EN 55022 B, EN 61000-3-2			
Relative humidity	20...90%, no condensation			
Protection	IP20			
Efficiency	86% (110 V AC); 88% (230 V AC)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+50 °C, ...+60 °C derating (storage temperature -25...+85 °C)			
Dimension drawing				
				
Notes				

POWER SUPPLY UNITS

Mounting accessories			Art-No.
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**DIN-Rail Clip**		
	DIN-rail mountable TH35 (EN 60715)		**85148**



UPS SYSTEMS / BUFFER / REDUNDANCY MODULES

- **Stable power supply**
- **Protection of processes**
- **Increase of machine availability**

UPS MODULE OR BUFFER MODULE ON THE BASIS OF CAPACITORS?

The UPS module Emparro ACCUcontrol is the right solution if a longer power failure have to be bridged without having to deal with failures and downtimes in production. Thanks to the externally connected lead battery, even a bridging time of several hours is possible.

Emparro Cap works based on ultra condensers, is maintenance-free for its entire service life and is the right solution if a certain amount of power is required to shut machines and control systems down in a structured manner.

Project matrix

	Seconds		Minutes						Hours			
Load current	**1**	**16**	**1**	**2**	**5**	**10**	**15**	**30**	**1**	**3**	**5**	**10**
0.5 A	●	●	●	●	●	●	●	●	●	●	●	●
1 A	●	●	●	●	●	●	●	●	●	●	●	●
2 A	●	●	●	●	●	●	●	●	●	●	●	●
5 A	●	●	●	●	●	●	●	●	●	●	●	
10 A	●	●	●	●	●	●	●	●	●			
15 A	●	●	●	●	●	●	●	●	●			
20 A	●	●	●	●	●	●	●	●				
40 A	●	●	●	●	●	●	●					

- ● MB Cap 20 A/0.2 s
- ● MB Cap Ultra 3 A/7 s
- ● MB Cap Ultra 10 A/38 s
- ● Emparro Cap 20 A/1.0 s
- ● MB Cap Ultra 20 A/16 s
- ● MB Cap Ultra 40 A/3.6 s
- ● Emparro ACCUControl 20 A
- ● Emparro ACCUControl 40 A

UPS systems / Buffer / Redundancy modules



UPS systems
- Predictive Maintenance
- Mini USB for connection to an industrial PC

Page 1.3.1



Buffer modules
- Maintenance-free ultra capacitors
- Buffer time more than 1 second at full load of 20 A
- Metal housing

Page 1.3.2



Buffer modules
- Maintenance-free ultra capacitors

Page 1.3.3



Redundancy modules

Page 1.3.6

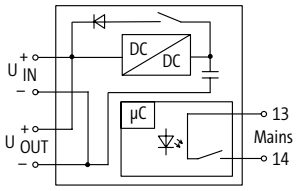
UPS systems	Emparro® ACCUcontrol	Emparro® ACCUcontrol
Approvals: c UL us Listed		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/20 A	**85414**	
24 V DC/40 A		**85415**
Technical Data		
Sensor type	KTY 81-210 (Art.No. 89600)	
Battery type	Lead battery (max. 40 Ah, sealed)	
Input		
Input voltage	21.6...30 V DC (buffer operation)	
Input current	max. 23 A	max. 43 A
Loading current	2 A	
Output		
Output voltage	27.7...19.2 V DC	
Output current	max. 20 A	max. 40 A
Control inputs		
Input voltage shutdown (SH)	24 V DC (6...45 V DC), potential free	
Control outputs		
Battery (BAT OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
Input voltage (Uin OK)	min. 5 V DC, 1 mA; max. 30 V DC, 100 mA	
General data		
Connection	Push-In Spring clamp terminals, Mini-USB	
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	
Temperature range	-25...+45 °C	
Dimension drawing		
Notes		
	The required batteries can be found at the end of chapter 1.3.	

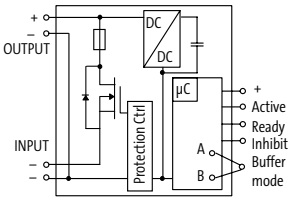
UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

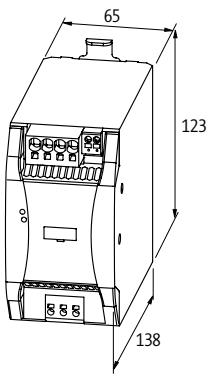
Buffer modules	Emparro® Cap 20/24 1.0s 1.0 s (20 A); 40 s (1 A)	Emparro® Cap 20/48 0.1s 0.1 s (20 A); 2 s (1 A)
Approvals: c UL us Listed		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/20 A	**85458**	
48 V DC/20 A		**85459**
Input		
Input voltage	21.6...26.4 V DC	46...56 V DC (SELV/PELV)
Input current	20 A	60 mA
Inrush current	max. 25 A	–
Protection of voltage spikes	–	max. 72 V DC
Loading time	max. 75 s	20...45 s
Loading current	max. 3 A	max. 500 mA
Output		
Output voltage	25.5...19 V DC ±2%	48 V DC (46...56 V DC)
Output current	max. 20 A	
Current limit	65 A	26 A
Buffer time	1.0 s (20 A); 40 s (1 A)	0.1 s (20 A); 2 s (1 A)
Parallel circuit	possible	
Ripple	–	max. 200 mV p-p
General data		
Standards	EN 61000-6-2, EN 61000-6-4	EN 61000-6-2, EN 61000-6-3, EN 55022 B
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)	DIN-rail mountable TH35 (EN 60715)
Efficiency	90%	99%
Temperature range	-40...+60 °C (storage temperature -40...+60 °C)	-25...+60 °C, ...+70 °C derating (storage temperature -40...+85 °C)
Dimension drawing		
Notes		

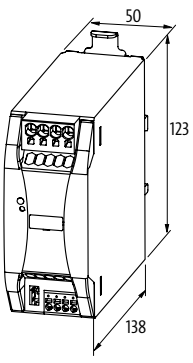












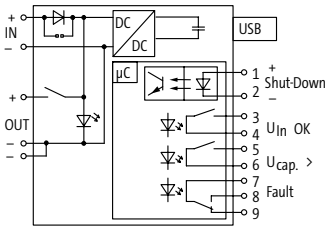
Buffer modules	MB Cap Ultra 3/24 7s 7 s (3 A); 21 s (1 A)	MB Cap Ultra expansion module 3/24 12s 12 s (3 A); 36 s (1 A)
Approvals: c UL us Listed		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/3 A	**85460**	use with Art.-No. 85460 **85462**
Input		
Input voltage	20.4...26.4 V DC	0...26.4 V DC
Input current	3 A	
Loading time	min. 25 s	–
Output		
Output voltage	23 V DC ±2%	0...26.4 V DC
Output current	max. 3 A (+60 °C)	
Buffer time	7 s (3 A); 21 s (1 A)	12 s (3 A); 36 s (1 A)
General data		
Standards	EN 60950, EN 50178, SELV/PELV	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Efficiency	90%	
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)	
Dimension drawing		
Notes		

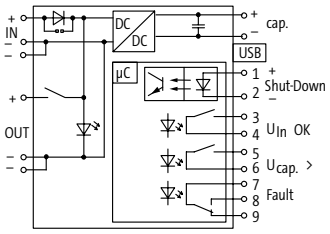
Buffer modules	MB Cap Ultra 10/24 38s 38 s (10 A); 380 s (1 A)	MB Cap Ultra 20/24 16s 16 s (20 A); 320 s (1 A)	MB Cap Ultra 40/24 3.6s 3.6 s (40 A); 170 s (1 A)
Approvals: c UL us Listed			
Circuit diagram			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 A	**85467**		
24 V DC/20 A		**85468**	
24 V DC/40 A			**85469**
Input			
Input voltage	10.5...15 V DC; 24...27 V DC	24...29 V DC	21.6...26.4 V DC
Input current	10 A	20 A	40 A
Inrush current	max. 35 A/2 ms	max. 36.5 A/2 ms	max. 36.5 A
Loading time	typ. 100 s; max. 210 s	typ. 40 s; max. 500 s	typ. 140 s; max. 300 s
Output			
Output voltage	11.3 V DC ±4%; 23.3 V DC ±2%	23.3 V DC ±2%	25.5...19 V DC ±2%
Output current	max. 10 A (+60 °C)	max. 20 A (+60 °C)	max. 40 A (+60 °C)
Buffer time	38 s (10 A); 380 s (1 A)	16 s (20 A); 320 s (1 A)	3.6 s (40 A); 170 s (1 A)
General data			
Standards	EN 60950, EN 50178, SELV/PELV	EN 60950-1, EN 61204-3, EN 55011 A	EN 61000-6-2, EN 61000-6-4
Mounting method	DIN-rail mountable TH35-7.5/TH35-15 (EN 60715)		
Efficiency	90%		
Temperature range	-20...+60 °C (storage temperature -20...+60 °C)		
Dimension drawing			
Notes			

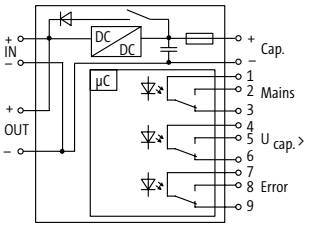


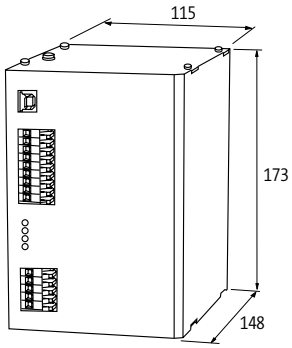


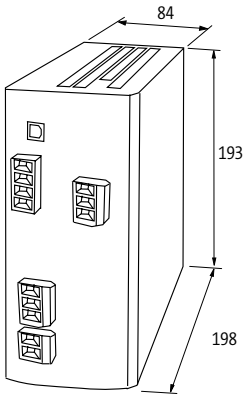


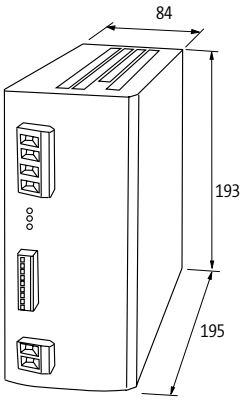












Buffer modules

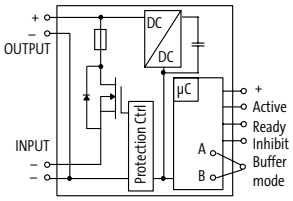
MB Cap 20/24 0.2s

0.2 s (20 A); 4 s (1 A)



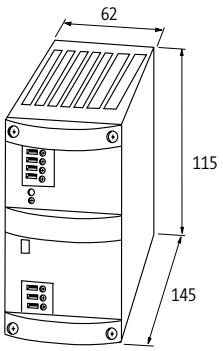
Approvals: c UL us Listed

Circuit diagram

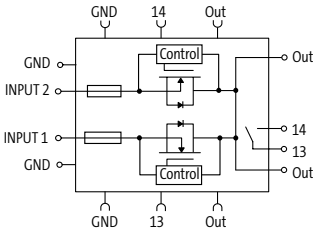
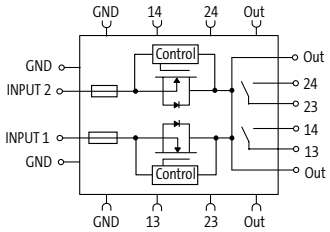
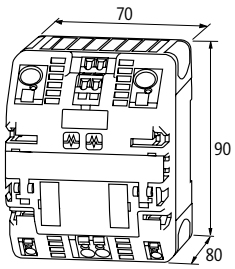


Order Data		Art-No.
24 V DC/20 A		85394
Input		
Input voltage	23...30 V DC (SELV/PELV)	
Input current	85 mA	
Protection of voltage spikes	max. 35 V DC	
Loading time	20...45 s	
Loading current	max. 500 mA	
Output		
Output voltage	24 V DC (22...28 V DC)	
Output current	max. 20 A (+70 °C)	
Current limit	26 A	
Buffer time	0.2 s (20 A); 4 s (1 A)	
Ripple	max. 200 mV p-p	
Parallel circuit	possible	
General data		
Standards	EN 61000-6-2, EN 61000-6-3, EN 55022 B, EN 60950-1, SELV	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Efficiency	95%	
Temperature range	0...+70 °C (storage temperature -25...+85 °C)	

Dimension drawing



Notes

Redundancy modules	MB Redundancy Balance 2 × 20/24	MB Redundancy Balance 2 × 20/24 Auto-Balancing (50/50)
Approvals: cULus Listed, DNV·GL		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/2 × 20 A/1 × 40 A	**85495**	**85496**
Input		
Input voltage	24 V DC (18...30 V DC)	
Input current	2 × 20 A	
Total current	max. 40 A	
Invers-polarity protection	max. 30 V DC	
Auto-Balancing (50/50)	no	yes
Output		
Output voltage	24 V DC (18...30 V DC)	
Output current	26 A (-25...+40 °C)	
LED display	LED (red/green)	
Parallel usage/serial usage	2 units: 40 A (-25...+60 °C); 52 A (-25...+40 °C)/-	
Alarm output	potential free (relay contact) for input voltage	potential free (relay contact) for input voltage/load distribution
General data		
Standards	EN 61000-6-2, EN 61000-6-3	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Relative humidity	5...95%, no condensation	
Efficiency	99.5%	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		
		
Notes		

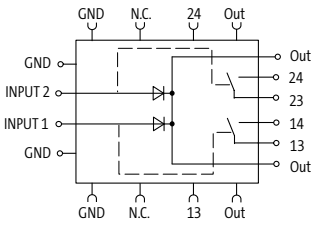
Redundancy modules

MB Diode



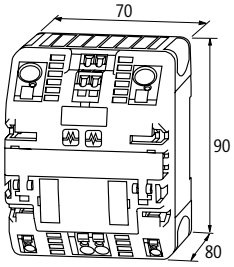
Approvals: c UL us Listed

Circuit diagram



Order Data		Art-No.
24 V DC/2 × 20 A/1 × 40 A		85396
Input		
Input voltage	24 V DC (21...30 V DC)	
Input current	2 × 20 A/1 × 40 A	
Total current	max. 40 A	
Invers-polarity protection	internal protection against reverse polarization up to 60 V DC	
Auto-Balancing (50/50)	no	
Output		
Output voltage	24 V DC (21...30 V DC)	
Output current	20 A (-25...+55 °C); 40 A (-25...+40 °C)	
Overload	at 20 A +50% for 4 s	
LED display	LED (green)	
Alarm output	potential free per channel (relay contact)	
General data		
Standards	EN 61000-6-2, EN 61000-6-3	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Relative humidity	5...95%, no condensation	
Power loss	U (approx. 0.5 V) × I	
Efficiency	97%	
Connection	Spring clamp terminals	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+55 °C (storage temperature -25...+85 °C)	

Dimension drawing



Notes

UPS-SYSTEMS / BUFFER- / REDUNDANCY MODULES

Accessories			Art-No.
	**Lead battery** 1.2 Ah 96×69×105 mm/2 kg	for Emparro® ACCUcontrol	**89550**
	**Lead battery** 7 Ah 115×174.5×159 mm/2.32 kg	for Emparro® ACCUcontrol	**89552**
	**Lead battery** 12 Ah 115×240.5×159 mm/3.7 kg	for Emparro® ACCUcontrol	**89553**
	**Lead battery** 17 Ah 170×155×182 mm/18 kg	for Emparro® ACCUcontrol	**89554**
	**Lead battery** 24 Ah 137×335×200 mm/20 kg	for Emparro® ACCUcontrol	**89555**



MICO
INTELLIGENT POWER DISTRIBUTION

- **Monitor**
- **Detect**
- **React**

FIRST CLASS POWER DISTRIBUTION

MICO is the intelligent power distribution module from Murrelektronik for 24 V DC. It monitors currents, indicates when approaching the maximum load and make targeted circuit isolations during overload or short circuit conditions. This makes sure systems run at maximum capacity.

- Convenient handling – installation without tools
- Diagnosis on location or via the controller
- Patented tripping characteristics for optimal switch-off time

Mico Pro®



Mico Pro® PM
- Power module
- Cover plate included
- Cumulative signal output

Page 1.4.1



Mico Pro® PD
- Potential distributor
- Multiplication of secured channels or potentials

Page 1.4.1



Mico Pro® fix
- Preset current ranges
- Preventive diagnostics

Page 1.4.2



Mico Pro® flex
- Adjustable current ranges
- Channels with remote switch on/off function
- Preventive diagnostics

Page 1.4.3

MICO



MICO+
- Adjustable current ranges
- Channels with remote switch on/off function
- Preventive diagnostics

Page 1.4.4



MICO
- Adjustable current ranges
- Channels with remote switch on function
- Group alarm output

Page 1.4.6



MICO BASIC
- Preset current ranges
- Small size

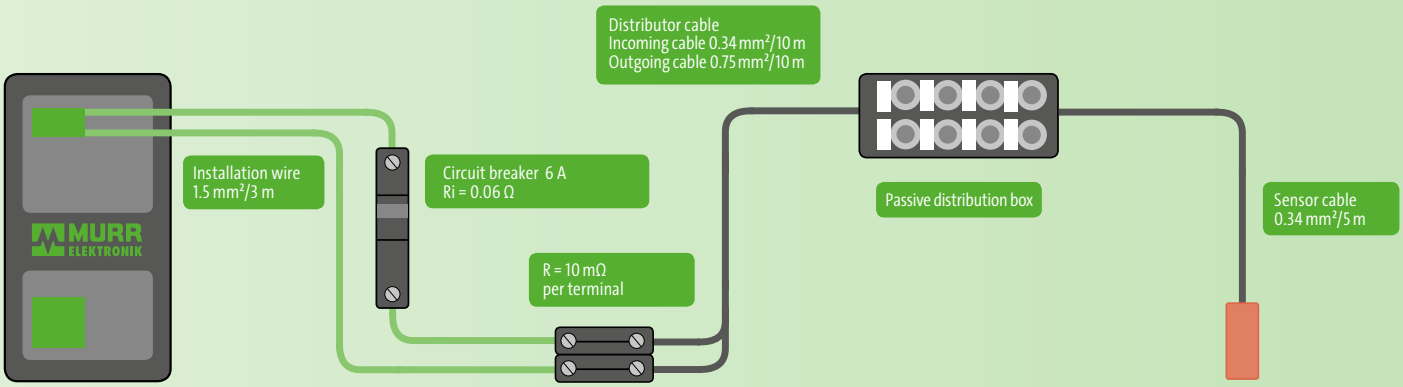
Page 1.4.10



MICO FUSE
- Socket for glass tube fuses 5 × 20 mm

Page 1.4.13

EXAMPLE: Why don't circuit breakers trigger reliably in a 24 V DC system?



Specific resistance of copper (ρ) = 0.0178 (Ω × mm² /m)

Wire resistance:	$R=$	$\frac{(\rho) \times l}{A}$	$=$	$\frac{0.0178 \times (2 \times 3\ m)}{1.5\ mm^2}$	$= 0.07\ \Omega$
Distributor cable resistance:	$R=$	$\frac{(\rho) \times l}{A}$	$=$	$\frac{0.0178 \times (2 \times 10\ m)}{(0.34 + 0.75\ mm^2)/2}$	$= 0.65\ \Omega$
Sensor cable resistance:	$R=$	$\frac{(\rho) \times l}{A}$	$=$	$\frac{0.0178 \times (2 \times 5\ m)}{0.34\ mm^2}$	$= 0.52\ \Omega$
Inner resistance of circuit breaker and connection terminals					$= 0.08\ \Omega$
Total loop resistance					$= 1.32\ \Omega$

Calculation of maximum possible current flow (limited by loop resistance)

$$I = \frac{U}{R} = \frac{24\ V}{1.32\ \Omega} = \underline{\underline{18.18\ A}}$$

Required tripping current of the 6 A circuit breaker Type C

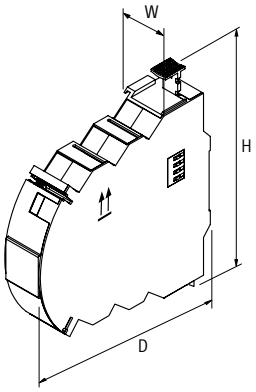
$14 \times I_{Nenn} = 14 \times 6\ A = \underline{84\ A}$

Tripping current		Max. current flow
84 A	>	18.18 A

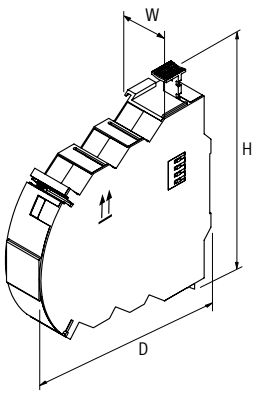
Over current protection device

– Power supplies

Approvals:

	Mico Pro® PM 24 V DC/40 A Power module Cover plate included	**Mico Pro® PD 2×12** Potential distributor 1 channel (×11)	**Mico Pro® PD 2×2×06** Potential distributor 2 channels per (×5)
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
40 A	**9000-41190-0000000**		
20 A		**9000-41000-0000212**	
2 × 20 A			**9000-41000-0002206**
Input			
Operating voltage	12 V DC; 24 V DC (9...30 V DC)	12 V DC, 24 V DC	
Total current	max. 40 A	max. 20 A	max. 2 × 20 A
Output			
Parallel usage/serial usage	-/Selectivity in 2 levels	–	
Control inputs			
Input voltage (ON)	9...30 V DC	–	
Impulse length (ON)	"high" 120 ms	–	
Input voltage (CTRL)	9...30 V DC	–	
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms	–	
Control outputs			
Early warning (90%)	max. 30 V AC/DC	–	
Group alarm output	max. 30 V AC/DC	–	
Connections (IN)			
Connection	Bridge system		
Connections (OUT)			
Connection	Push-In spring clamp terminals		
Cross section (rigid)	0.75...16 mm² (AWG 20...4)	0.2...2.5 mm² (AWG 24...14)	
Cross section (flex)	0.75...16 mm² (AWG 20...4)	0.2...2.5 mm² (AWG 24...14)	
General data			
Protection	IP20		
Bridging concept	Bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)		
Dimensions H × W × D	130×24×114 mm		
Dimension drawing			
			
Notes			

Over current protection device – preset current ranges Approvals:	Mico Pro® fix 1 channel	Mico Pro® fix 1 channel	Mico Pro® fix 2 channels	Mico Pro® fix 4 channels
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
2 A	**9000-41011-0200000**		**9000-41012-0200000**	**9000-41014-0200000**
4 A	**9000-41011-0400000**		**9000-41012-0400000**	**9000-41014-0400000**
6 A	**9000-41011-0600000**		**9000-41012-0600000**	**9000-41014-0600000**
8 A	**9000-41011-0800000**			
10 A	**9000-41011-1000000**			
16 A		**9000-41011-1600000**		
Input				
Operating voltage	12 V DC; 24 V DC (9...30 V DC)			
Total current	max. 40 A			
Output				
No. of channels	1		2	4
Inrush capacity	max. 30 mF			
Tolerance	0...+20%			
Parallel usage/serial usage	-/Selectivity in 2 levels			
Control inputs				
Input voltage (ON)	via power module			
Impulse length (ON)	via power module			
Input voltage (CTRL)	via power module			
Impulse length (CTRL)	via power module			
Control outputs				
Group alarm output	via power module			
Early warning (90%)	via power module			
Connections (IN)				
Connection	Bridge system			
Connections (OUT)				
Connection	Push-In spring clamp terminals			
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)			
Cross section (flex)	0.2...4 mm² (AWG 24...12)			
General data				
Protection	IP20			
Bridging concept	Bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)			
Dimensions H × W × D	130×8×114 mm	130×12×114 mm		130×24×114 mm
Dimension drawing				



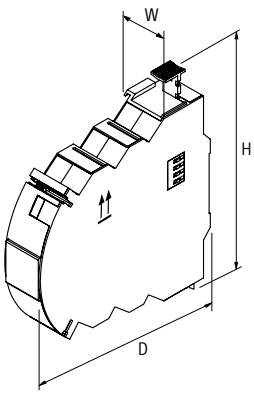
Over current protection device

– adjustable current ranges

– channel-specific messages

Approvals:

	Mico Pro® flex 1 channel	**Mico Pro® flex** 1 channel	**Mico Pro® flex** 2 channels	**Mico Pro® flex** 4 channels
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
1, 2, 3, 4, 5, 6, 7, 8, 9, 10 A	**9000-41091-0101000**		**9000-41092-0101000**	**9000-41094-0101000**
11, 12, 13, 14, 15, 16, 17, 18, 19, 20 A		**9000-41091-1102000**		
Input				
Operating voltage	12 V DC; 24 V DC (9...30 V DC)			
Total current	max. 40 A			
Output				
No. of channels	1		2	4
Inrush capacity	max. 30 mF			
Tolerance	0...+20%	-5...+15 %	0...+20%	
Parallel usage/serial usage	-/Selectivity in 2 levels			
Control inputs				
Input voltage (ON)	9...30 V DC			
Impulse length (ON)	"high" 120 ms			
Input voltage (CTRL)	9...30 V DC			
Impulse length (CTRL)	OFF "high" 40/400 ms, ON "high" 20/200 ms			
Control outputs				
Group alarm output	via power module			
Early warning (90%)	like operating voltage - max. 20 mA, via power module			
Connections (IN)				
Connection	Bridge system			
Connections (OUT)				
Connection	Push-In spring clamp terminals			
Cross section (rigid)	0.2...2.5 mm² (AWG 24...14)			
Cross section (flex)	0.2...4 mm² (AWG 24...12)			
General data				
Protection	IP20			
Bridging concept	Bridge set (max. 40 A)			
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-25...+55 °C (storage temperature -40...+80 °C)	-25...+50 °C (storage temperature -40...+80 °C)	-25...+55 °C (storage temperature -40...+80 °C)	
Dimensions H × W × D	130×8×114 mm	130×12×114 mm		130×24×114 mm
Dimension drawing				



Notes	

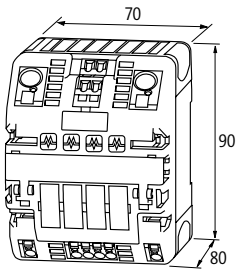
Over current protection device

– adjustable current ranges

– early warning (90%)

Approvals:

	MICO+ 4.4	**MICO+ 4.6**
	4 channels	4 channels
		
Order Data	**Art-No.**	**Art-No.**
1 A, 2 A, 3 A, 4 A	NEC Class 2 **9000-41084-0100400**	
1 A, 2 A, 4 A, 6 A		**9000-41084-0100600**
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersinked rotary switch, sealed	1 A, 2 A, 4 A, 6 A, by countersinked rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	
Control inputs		
Input voltage (ON)	10...30 V DC	
Remote start (OFF)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 2 × 1.5 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

Over current protection device

– adjustable current ranges

– early warning (90%)

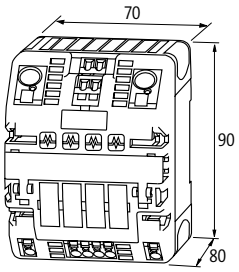
Approvals:

MICO+ 4.10

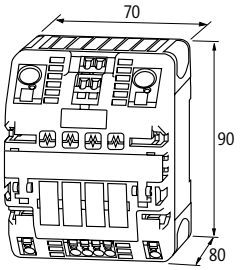
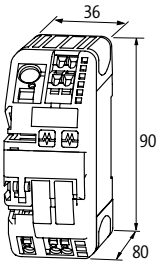
4 channels



Order Data	Art-No.
4 A, 6 A, 8 A, 10 A	9000-41084-0401000
Input	
Operating voltage	24 V DC (18...30 V DC)
Output	
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)
Control inputs	
Input voltage (ON)	10...30 V DC
Remote start (OFF)	10...30 V DC
Impulse length (ON)	min. 20 ms
Control outputs	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
Early warning (90%)	max. 20 mA; high: one channel over 90%; low: all channels under 90%
General data	
Connection	Spring clamp terminals
Input terminals	2 × 16 mm²
Output terminals	per output 2 × 1.5 mm²
Alarm terminals	2.5 mm²
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)
Dimension drawing	

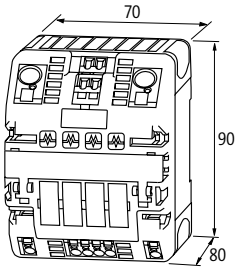
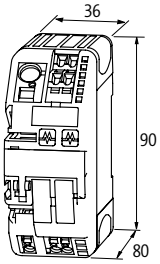


Notes

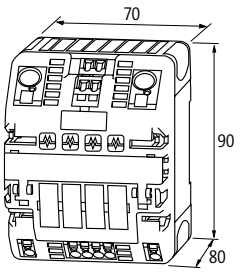
Over current protection device	MICO 4.4 4 channels	MICO 2.4 2 channels
Approvals: Class 2 UL1310/NEC 725, c UL us Listed, c SP us		
Order Data	**Art-No.**	**Art-No.**
1 A, 2 A, 3 A, 4 A	DNV-GL **9000-41034-0100400**	cURus **9000-41042-0100400**
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A, by countersinked rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)	
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	potential free 30 V AC/DC, 100 mA	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	1 × 16 mm²
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		
		
Notes		

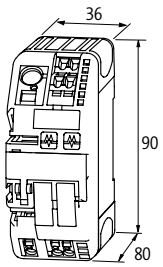
Over current protection device

Approvals:

	MICO 4.6		**MICO 2.6**	
	4 channels		2 channels	
				
Order Data		**Art-No.**		**Art-No.**
1 A, 2 A, 4 A, 6 A	DNV-GL	**9000-41034-0100600**	cURus	**9000-41042-0100600**
Input				
Operating voltage	24 V DC (18...30 V DC)			
Output				
Current adjustment	1 A, 2 A, 4 A, 6 A, by countersinked rotary switch, sealed			
Inrush capacity	max. 20 mF (per channel)			
Control inputs				
Input voltage (ON)	10...30 V DC			
Impulse length (ON)	min. 20 ms			
Control outputs				
Group alarm output	potential free 30 V AC/DC, 100 mA			
General data				
Connection	Spring clamp terminals			
Input terminals	2 × 16 mm²		1 × 16 mm²	
Output terminals	per output 1 × 4 mm²			
Alarm terminals	2.5 mm²			
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)		one side, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	0...+55 °C (storage temperature -40...+80 °C)			
Dimension drawing				
				
Notes				

Over current protection device	MICO 4.10 4 channels	MICO 2.10 2 channels
Approvals:		
Order Data	**Art-No.**	**Art-No.**
4 A, 6 A, 8 A, 10 A	DNV-GL **9000-41034-0401000**	cURus **9000-41042-0401000**
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed	
Inrush capacity	max. 20 mF (per channel)	
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	potential free 30 V AC/DC, 100 mA	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	1 × 16 mm²
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		
Notes		





MURR ELEKTRONIK
stay connected

Over current protection device

Approvals:

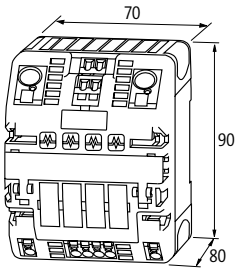
MICO 4.4.10 ACTUATOR-SENSOR



MICO 4.10 SPEED START

4 channels
optimized start-up behavior

Order Data	Art-No.	Art-No.
1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A	**9000-41034-0101000**	
4 A, 6 A, 8 A, 10 A		**9000-41034-0401005**
Input		
Operating voltage	24 V DC (18...30 V DC)	
Output		
Current adjustment	1 A, 2 A, 3 A, 4 A; 4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed	4 A, 6 A, 8 A, 10 A, by countersinked rotary switch, sealed
Inrush capacity	max. 20 mF (per channel)	max. 30 mF (per channel)
Control inputs		
Input voltage (ON)	10...30 V DC	
Impulse length (ON)	min. 20 ms	
Control outputs		
Group alarm output	potential free 30 V AC/DC, 100 mA	
General data		
Connection	Spring clamp terminals	
Input terminals	2 × 16 mm²	
Output terminals	per output 1 × 4 mm²	
Alarm terminals	2.5 mm²	
Bridging concept	two sides, with spring clamp terminals or bridge set (max. 40 A)	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+80 °C)	
Dimension drawing		



Notes

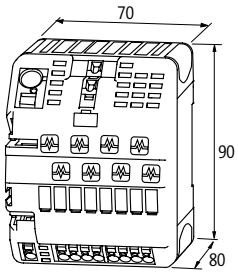
INTELLIGENT POWER DISTRIBUTION

Over current protection device

– preset current ranges

Approvals:

	MICO BASIC 8.2	MICO BASIC 8.4	MICO BASIC 8.6
	8 channels	8 channels	8 channels
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
2 A	NEC Class 2 **9000-41068-0200000**		
4 A		NEC Class 2 **9000-41068-0400000**	
6 A			**9000-41068-0600000**
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	2 A	4 A	6 A
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
General data			
Input terminals	1 × 16 mm²		
Output terminals	per output 1 × 4 mm²		
Alarm terminals	2.5 mm²		
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)		
Connection	Spring clamp terminals		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



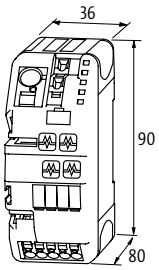
Notes

Over current protection device

– preset current ranges

Approvals:

	MICO BASIC 4.2	**MICO BASIC 4.4**	**MICO BASIC 4.6**
	4 channels	4 channels	4 channels
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
2 A	NEC Class 2 **9000-41064-0200000**		
4 A		NEC Class 2 **9000-41064-0400000**	
6 A			**9000-41064-0600000**
Input			
Operating voltage	24 V DC (18...30 V DC)		
Output			
Current adjustment	2 A	4 A	6 A
Inrush capacity	max. 20 mF (per channel)		
Control inputs			
Input voltage (ON)	10...30 V DC		
Impulse length (ON)	min. 20 ms		
Control outputs			
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON		
General data			
Connection	Spring clamp terminals		
Input terminals	1 × 16 mm²		
Output terminals	per output 1 × 4 mm²		
Alarm terminals	2.5 mm²		
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)		
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	0...+55 °C (storage temperature -40...+80 °C)		
Dimension drawing			



Notes

Over current protection device

– preset current ranges

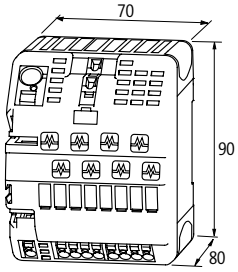
Approvals: Class 2 UL1310/NEC 725 c SP us

MICO BASIC 5.2/3.6

8 channels



Order Data	Art-No.
5 × 2 A; 3 × 6 A	9000-41068-0200600
Input	
Operating voltage	24 V DC (18...30 V DC)
Output	
Current adjustment	5 × 2 A; 3 × 6 A
Inrush capacity	max. 20 mF (per channel)
Control inputs	
Input voltage (ON)	10...30 V DC
Impulse length (ON)	min. 20 ms
Control outputs	
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON
General data	
Connection	Spring clamp terminals
Input terminals	1 × 16 mm²
Output terminals	per output 1 × 4 mm²
Alarm terminals	2.5 mm²
Bridging concept	one side, with spring clamp terminals or bridge set (max. 40 A)
Mounting method	DIN-rail mountable TH35 (EN 60715)
Temperature range	0...+55 °C (storage temperature -40...+80 °C)
Dimension drawing	



Notes

Socket for glass tube fuses

Approvals: cULus cCSAus

MICO FUSE 24 LED

8 channels

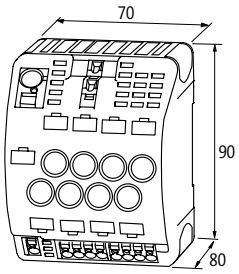


MICO FUSE 250

8 channels



Order Data	Art-No.	Art-No.
24 V DC	**9000-41078-0600001**	
max. 250 V AC/DC		**9000-41078-0600002**
Technical Data		
Operating voltage	24 V DC (18...30 V DC)	max. 250 V AC/DC
Operating current	max. 6 A (40 °C)	
Total current	max. 40 A	
Control outputs		
Group alarm output	max. 20 mA; high: all channels ON; low: not all channels ON	–
General data		
Connection	Spring clamp terminals	
Input terminals	1 × 16 mm²	
Output terminals	1 × 0.5...4 mm²	
Alarm terminals	2.5 mm²	–
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-25...+55 °C	
Dimension drawing		



Notes

INTELLIGENT POWER DISTRIBUTION

Accessories			Art-No.
	**Bridge system**		
		Quantity: 1 piece	**9000-41034-0000002**
		Quantity: 10 pcs.	**9000-41034-0000001**
	Shortened buttons		
		Quantity: 4 pcs.	**9000-41034-0000003**
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	KMR 5 × 10 (white) MICO BASIC, MICO FUSE, Mico Pro®	(64 pieces/4 plates)	**996078**
	**Glass automotive fuse**		
	2 A (T)		**9000-41078-0000002**
	4 A (T)		**9000-41078-0000004**
	6 A (T)		**9000-41078-0000006**
	Fuse cap		
		Quantity: 8 pcs.	**9000-41078-0000010**

Accessories Mico Pro®			Art-No.
	**Plug-In-Link 2 × blue**		
	Length: 500 mm		**9000-41000-0000000**
	**Plug-In-Link 2 × red**		
	Length: 500 mm		**9000-41000-0000001**
	**Plug-In-Link 1 × blue, 1 × red**		
	Length: 500 mm		**9000-41000-0000002**
	**Cover plate**		
	1 Set (left/right)		**9000-41000-0000006**



CONVERTERS / RECTIFIERS

- **Compact design**
- **Galvanic separation**
- **Switch mode models**

SMALL VOLTAGE CONVERTERS

Voltages in control systems often have to be converted. The DC/DC converters in the MDD series do this perfectly! It doesn‘t matter if you need 5, 10, 12 or 24 volts – Murrelektronik has the right product.

If there is only AC voltage available, the NG rectifier series can convert into DC voltage.
All models can be conveniently mounted in the control cabinet on DIN rail.

AC/DC and DC/DC Converters



MDD, GLS, GSS, NG, NT
• Output current range: 0.5...4 A

Page 1.5.1

Rectifiers



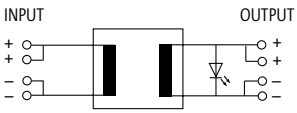
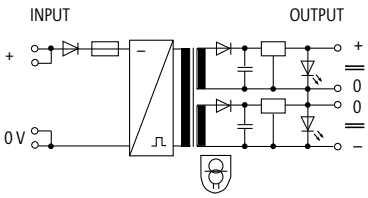
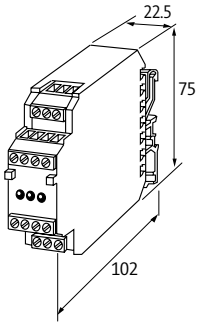
NG
• Output current range: 2.6...10 A

Page 1.5.3

MURR ELEKTRONIK
stay connected

Swiched mode

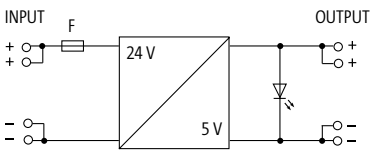
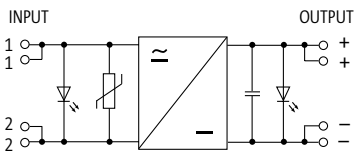
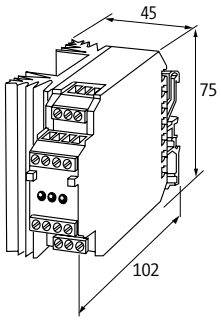
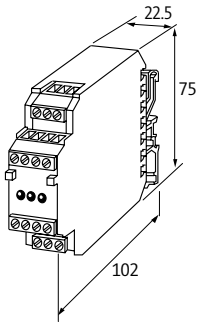
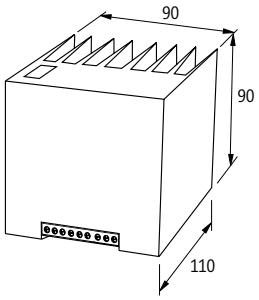
– with galvanic isolation

	MDD	**MDD**	**MDD**	**MDD**	**MDD**
	OUTPUT: 24 V DC Current: 0.3 A	OUTPUT: 12 V DC Current: 0.7 A	OUTPUT: 5 V DC Current: 1.5 A	OUTPUT: ±10 V DC Current: 2 × 0.25 A	OUTPUT: ±15 V DC Current: 2 × 0.25 A
					
Circuit diagram					
					
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/0.3 A	**85655**				
12 V DC/0.7 A		**85656**			
5 V DC/1.5 A			**85657**		
±10 V DC/2 × 250 mA				**85658**	
±15 V DC/2 × 250 mA					**85659**
Input					
Input voltage	24 V DC				
Input current	0.6 A			0.85 A	
Input fuse (external)	2 A (T)			–	
Input fuse (internal)	1.5 A (T)				
Output					
Output fuse	short-circuit and overload protected, restart after overload by removing power supply				
Output voltage	24 V DC (SELV), ±2%	12 V DC (SELV), ±2%	5 V DC (SELV), ±2%	±10 V DC (SELV), ±5%	±15 V DC (SELV), ±5%
Output current	max. 0.3 A	max. 0.7 A	max. 1.5 A	max. 2 × 250 mA	
Ripple	max. 0.2 %rms				
General data					
Standards	EN 61204-3				
Test isolation voltage	4 kV (input/output)				
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)				
Temperature range	0...+50 °C, no condensation				
Dimension drawing					
					
Notes					

CONVERTERS / RECTIFIERS

DC/DC converters

AC/DC converters

	GLS	**GSS**	**NT**
	OUTPUT regulated: 5 V DC Current: 1.2 A	OUTPUT switched mode: 5 V DC Current: 4 A	OUTPUT: 5...35 V DC Current: 3.5 A
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
5 V DC/1.2 A	**85600**		
5 V DC/4 A		**85650**	
5...35 V DC/3.5 A			**85660**
Input			
Input voltage	24 V DC (+10 -15%)	15...40 V DC	10...32 V AC/12...42 V DC
Input current	1.2 A	1.04 A (24 V DC); max. 1.7 A	max. 3 A
Input fuse (internal)	2 A (T)		6.3 A (T)
Frequency	–		50...60 Hz
Output			
Output voltage	5 V DC (SELV), ±5%		5...35 V DC (SELV), Uout-max. = Uin -5 V
Output current	max. 1.2 A	max. 4 A	max. 3.5 A
Ripple	max. 0.2 %rms		max. 300 mVrms
Output fuse	short-circuit protected		
General data			
Mounting method	DIN-rail mountable TH35 (EN 60715)		
Temperature range	-20...+60 °C, no condensation		
Dimension drawing			
			
Notes			

MURR ELEKTRONIK
stay connected

Rectifier modules

– Single-phase

– IP00

NG 2

INPUT: max. 41 V AC



NG 5

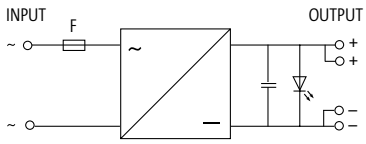
INPUT: max. 41 V AC

NG 10

INPUT: 29 V AC

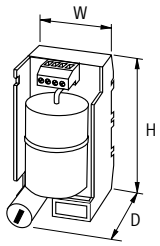


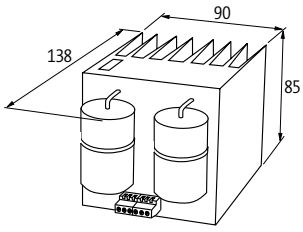
Circuit diagram



Order Data	H×W×D	Art-No.	H×W×D	Art-No.	H×W×D	Art-No.
24 V DC/2.6 A	86×45×92 mm	**85700**				
24 V DC/5 A			90×68×87 mm	**85710**		
24 V DC/10 A						**85730**
Input						
Input voltage	max. 5...44 V AC				29 V AC	
Input current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Frequency	45...65 Hz				50...60 Hz (or as additional smoothing for DC)	
Input fuse (external)	–		8 A (T), 5 × 20 mm		16 A (T), 5 × 20 mm	
Input fuse (internal)	3.15 A (T), 5 × 20 mm		–			
Output						
Output voltage	U-IN × 1.16/max. 60 V DC				U-IN × 1.16/39 V DC	
Output current	max. 2.6 A; 1.8 A (+60 °C)		max. 5 A; 4 A (+60 °C)		max. 10 A	
Ripple	max. 5 %rms					
Output filter	smoothed with smoothing capacitor and LED					
General data						
Mounting method	DIN-rail mountable TH35 (EN 60715)					
Temperature range	-20...+60 °C					

Dimension drawing





Notes



MODLINK MSVD – CONTROL CABINET POWER OUTLETS

- **Safe**
- **Easy to install**
- **Meet international standards**

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Using components temporarily in the control cabinet require right power outlets.
Murrelektronik has the right tools: a wide range of power outlets for different countries.

Control Cabinet Power Outlets



German standard (VDE)
- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



French standard (UTE)
- For DIN-rail mounting acc. to EN 60715
- With screw terminals or spring clamp terminals

An overview of this product range can be found in our online shop



American standard (NEMA 5-15)
- For DIN-rail mounting acc. to EN 60715
- With screw terminals
- LED display

An overview of this product range can be found in our online shop



Different international standards
- For DIN-rail mounting acc. to EN 60715

An overview of this product range can be found in our online shop



EMC FILTERS
FOR MAXIMUM SAFETY

- **Meets EMC guidelines**
- **Increases interference protection**
- **Decreases interference emissions**

KEEP IT SAFE – EVEN IN THE CONTROL CABINETS

Mains filters are used to reduce interference without affecting the supply. Murrelektronik's filters decrease incoming interference, which can affect sensitive equipment, and also decrease outgoing interference from the equipment they are connected to, which could damage the mains supply. Typical sources of continuous interference are switch mode power supplies, motors and phase controllers.

These sources are made up of inductive and capacitive components and work the best when their impedance is matched to the source of the interference. In regards to grounding, it's important to have a low impedance. Ideally, the filter should be as close as possible to the point where the cable enters the cabinet. If that's not possible, then shielded cables should be used between the filter and the entry point. Ground straps should be as short as possible and connection surfaces should be free from paint, etc.

Single-phase



MEF Emparro® 1/1 – one-stage
- Operating voltage: max. 265 V AC/DC
- Nominal current: 20 A

Page 1.7.1



MEF 1/2 SY and MEF 1/2 AS – two-stage
- Operating voltage: max. 250 V AC/DC, 0...60 Hz
- Nominal current: 10...16 A

Page 1.7.2

Three-phase



MEF 3/1 N – one-stage
- Operating voltage: max. 3 × 440 V AC
- Nominal current: 3...20 A

Page 1.7.5



MEF 3/1 N HD – one-stage
- Operating voltage: max. 3 × 500 V AC
- Nominal current: 10...135 A

Page 1.7.6



MEF 3/1 and MEF 3/2 – one and two-stage
- Operating voltage: max. 3 × 500 V AC/3 × 600 V AC
- Nominal current: 8...180 A

Page 1.7.7

MURR ELEKTRONIK
stay connected

1-phase, 1-stage

– DIN-rail mountable

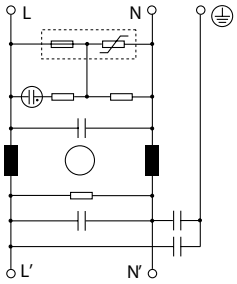
Approvals: c UL us

MEF Emparro® 1/1

wide attenuation spectrum

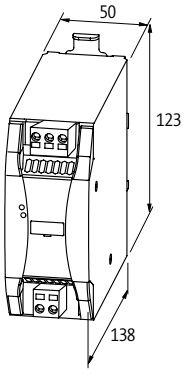


Circuit diagram



Order Data	Art-No.
20 A	**10701**
Technical Data	
Operating voltage	85...265 V AC/100...230 V DC
Operating frequency	50...60 Hz
Consumption	max. 1 mA (250 V AC)
Connection cross section	1.5...10 mm² single core (AWG 16...8); 1.5...6 mm² multiple core (AWG 16...10)
General data	
Climatic category	Environment class (EN 60721)
Connection	Push In terminals
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



Notes

1-phase, 1-stage

– DIN-rail mountable

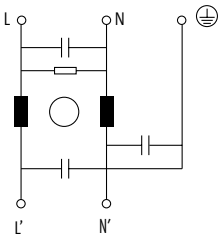
Approvals: cULus

MEF 1/1

for universal applications



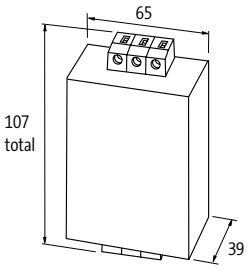
Circuit diagram



Order Data	Art-No.
10 A	**10415**
20 A	**10416**

Technical Data	
Operating voltage	max. 250 V AC/300 V DC
Operating frequency	50...60 Hz
Consumption	max. 5 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)
General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)

Dimension drawing



Notes

MURR ELEKTRONIK
stay connected

1-phase, 2-stage

– DIN-rail mountable

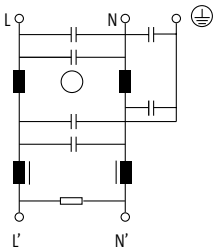
Approvals: c UL us

MEF 1/2 SY

against symmetrical interferences

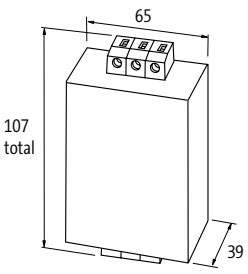


Circuit diagram



Order Data		Art-No.
1 A		**10460**
2 A		**10461**
3 A		**10462**
4 A		**10463**
6 A		**10464**
16 A		**10466**
Technical Data		
Operating voltage	max. 250 V AC/300 V DC	
Operating frequency	50...60 Hz	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Consumption	max. 5 mA (250 V AC)	
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Description		
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.	
Application	symmetrical interferences: units with high repetitions of the switching processes, - switch mode P.S.U.s, - phase angle controller, - supply of universal motors, - behind transformers	

Dimension drawing



Notes

EMC FILTERS

1-phase, 2-stage

– DIN-rail mountable

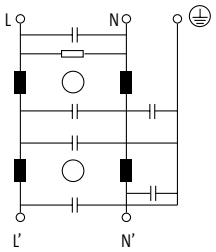
Approvals: cULus

MEF 1/2 AS

against asymmetrical interferences

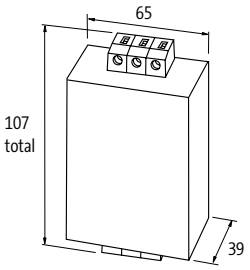


Circuit diagram



Order Data		Art-No.
3 A		**10470**
6 A		**10471**
10 A		**10472**
Technical Data		
Operating voltage	max. 250 V AC/300 V DC	
Operating frequency	50...60 Hz	
Consumption	max. 5 mA (250 V AC)	
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)	
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)	
General data		
Climatic category	25/085/21 (EN 60068-1)	
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)	
Connection	Screw connection, touch protected	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Description		
Functional description	The single phase 2-stage EMC filters MEF 1/2 are used in the range 0.1...30 MHz to suppress cable carried interference on mains and control cables. The best filter performance is achieved by using short connection wires (suggestion: earth connection < 10 cm) and the largest possible diameter. The EMC filters work bi-directionally (in both directions). The filters are for demanding applications. The filters are designed for use with fixed modules. One step of the filter is always for the suppression of asymmetrical interferences (magnetically compensated suppression). The second step is, dependant on application for symmetrical or asymmetrical interferences.	
Application	asymmetrical interferences: - units with high switching frequency and repetition, - switch mode P.S.U.s, - in DC mains, - in front of transformers, - for frequency inverters	

Dimension drawing



Notes

MURR ELEKTRONIK
stay connected

3-phase, 1-stage

– DIN-rail mountable

– with neutral

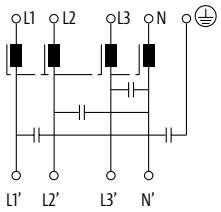
Approvals: c UL us

MEF 3/1 N

for universal applications



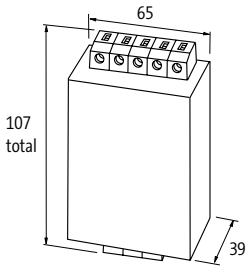
Circuit diagram



Order Data	Art-No.
3 A	**10510**
6 A	**10511**
10 A	**10512**
20 A	**10513**

Technical Data	
Operating voltage	max. 4 × 440 V AC
Operating frequency	50...60 Hz
Consumption	max. 3 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Connection cross section	0.2...6 mm² single core (AWG 24...9); 0.2...4 mm² multiple core (AWG 24...11)
General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	2.7 kV (L - N), 2 s; 2.1 kV (L - L), 2 s (EN 60939-2)
Connection	Screw connection, touch protected
Mounting method	DIN-rail mountable TH35 (EN 60715)
Description	
Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-C-S, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.

Dimension drawing



Notes

EMC FILTERS

3-phase, 1-stage

– with neutral

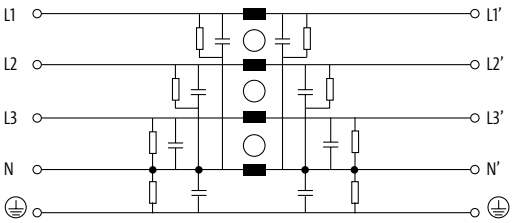
Approvals:

MEF 3/1 N HD

with increased damping



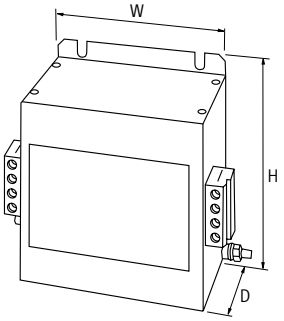
Circuit diagram



Order Data	H×W×D/kg	Art-No.
10 A	153×130×100/1.0	**10571**
18 A	153×130×100/1.0	**10572**
36 A	153×130×100/1.1	**10574**
72 A	153×118×125/1.6	**10575**
100 A	170×180×140/3.4	**10577**
135 A	170×180×140/4.5	**10578**

Technical Data	
Connection cross section	0.2...10 mm² single core (AWG 24...7); 0.2...6 mm² multiple core (AWG 24...9)
Operating voltage	max. 3 × 500 V AC
Operating frequency	50...60 Hz
Consumption	max. 15 mA (250 V AC)
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
General data	
Mounting method	screw fixing, M6
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L -L), 2 s
Description	
Functional description	The 3-phase and one-stage EMC filters MEF 3/1 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-S, TN-C-S, and TT networks. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that regularly appear with electronically controlled three phase units through mains influences.

Dimension drawing



Notes

MURR ELEKTRONIK
stay connected

3-phase, 1-stage

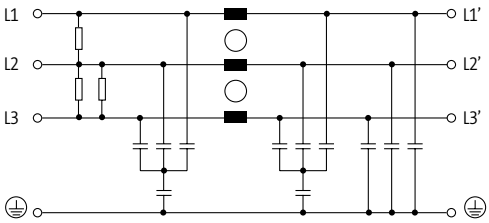
– Space saving book form

MEF 3/1



Approvals: c UL us

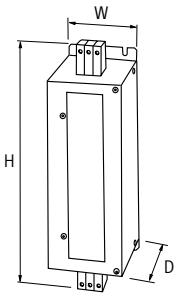
Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	250×90×100/1.3	**10531**
16 A	250×90×100/1.3	**10532**
25 A	250×90×100/1.3	**10533**
36 A	250×90×100/1.5	**10534**
50 A	250×90×100/1.7	**10535**
80 A	270×85×135/2.2	**10537**
110 A	270×90×150/3.2	**10538**
180 A	380×120×170/5.1	**10539**

Technical Data	
Operating voltage	max. 3 × 600 V AC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 10 mA (250 V AC)
Connection cross section	0.2...10 mm² single core (AWG 24...7); 0.2...6 mm² multiple core (AWG 24...9)
General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L -L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing
Description	
Functional description	The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.

Dimension drawing



Notes

EMC FILTERS

3-phase, 2-stage

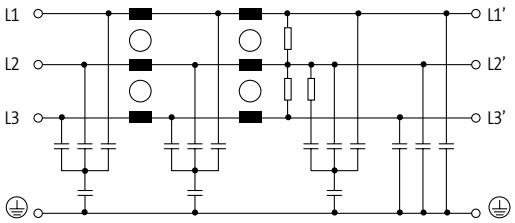
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Approvals:

MEF 3/2



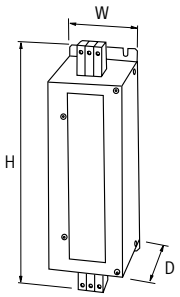
Circuit diagram



Order Data	H×W×D/kg	Art-No.
8 A	226×50×140/1.7	**10550**
12 A	226×50×140/1.7	**10551**
16 A	226×50×140/1.7	**10552**
25 A	226×50×140/1.7	**10553**
36 A	226×50×140/1.7	**10554**
50 A	295×70×177/3.7	**10555**
80 A	295×70×177/5.1	**10556**

Technical Data	
Operating voltage	max. 3 × 500 V AC
Operating frequency	50...60 Hz
Overload current	18 × (IN t) max. 0.5 ms; 1.5 × (IN t) max. 1 min. (1 × per hour)
Consumption	max. 15 mA (250 V AC)
Connection cross section	0.2...10 mm² single core (AWG 24...7); 0.2...6 mm² multiple core (AWG 24...9)
General data	
Climatic category	25/085/21 (EN 60068-1)
Test isolation voltage	3.3 kV (L - N), 2 s; 3.1 kV (L -L), 2 s
Connection	Screw connection, touch protected
Mounting method	screw fixing
Description	
Functional description	The 3-phase and 1-/2-stage EMC filters MEF 3/1-3/2 are used in the range 0.1...30 MHz and dampen interferences found in cables from the mains, supply units and control systems. They are suitable for TN-C-mains. The best results are obtained with short connection cables (suggestion: earth connection < 10 cm) of the largest possible cross-section. The EMC filters are bi-directional. They reduce symmetrical and asymmetrical interferences that often occur with frequency converters and switch mode power supplies.

Dimension drawing



Notes



EMC SUPPRESSORS
SMALL DEVICE, BIG IMPACT

- **Meets EMC guidelines**
- **Reduces voltage peaks**
- **Prevents coil short circuits**

MURRELEKTRONIK SOLVES YOUR INTERFERENCE PROBLEMS

- Optimum interference results by adjusting your inductive load
- Prefabricated modules make it easy to install – reliably mounted every time
- Prevents operative failures and outages and increases availability
- Long service life of contacts and switching elements lower maintenance costs

THE RIGHT SUPPRESSION FOR ALL STANDARD INDUCTIVE LOADS

For Contactors

- Integrated system solutions for all standard contactors
- Universal suppressors for contactors or relays that snap in or stick to the mounting surface

For Motors

- Suppression directly next to the interference source or inside the motor terminal box
- Motor connector has 10 poles and an earth connection point with integrated suppressor module and pre-wired cable
- Integrated system solutions for direct connection to the contactor
- Universal suppressors snap in next to the motor contactor

For Valves

- Suppressors are simply mounted between valve base and valve plug instead of the flat gasket

EMC Suppressors



For Contactors
ABB, General Electric, Eaton, Omron, Rockwell A. B., Schneider-Telemecanique, Siemens

Universal Suppressors

Page 1.8.1



For Motors – Installation on the Motor
RC 3 U, RC 3 R, RC 3 ST

Page 1.8.12



For Motors – Installation in the Cabinet
RC 3 BUR, HRC 3 AS, RC 3 RT

Page 1.8.15



For Valves
Form A, B, BI, C, CI

Page 1.8.17

EMC SUPPRESSORS

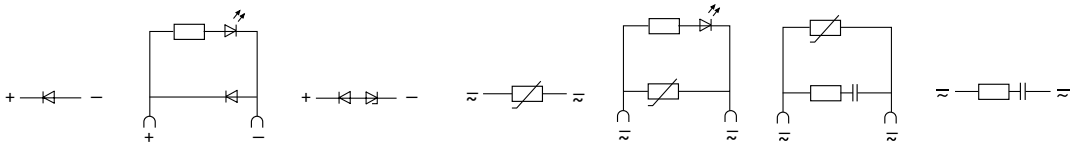
Suppressors for contactors

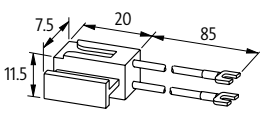
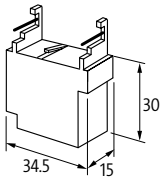
ABB ASEA BROWN BOVERI

Approvals: cULus

	BC	A 16	A 110
			

Circuit diagram



Appropriate contactors					
		B 6, BC 6, VB 6, KC 6		A 9...A 16	A 26...A 110
Order Data			**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression	Approval		Approval	Approval
24...240 V DC	Diode			**26440**	
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	CSA	**26277**		
	VDR + LED				
	RC				
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	CSA	**26278**		
	RC				
110 V AC/DC	VDR				
	VDR + LED				
	VDR-RC				
	RC			CSA **21172**	CSA **21173**
230 V AC/DC	VDR	CSA	**26079**		
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC			CSA **21172**	CSA **21173**
400 V AC/DC	VDR				
	RC				
415 V AC/DC	RC				
Technical Data					
Damping factor		~1.5 × U_N			
Temperature range		-20...+70 °C			
Material		plastic, flame retardant (UL 94)			
Connection wires		self-securing cable forks		plug contact	
Dimension drawing					
					
Notes					

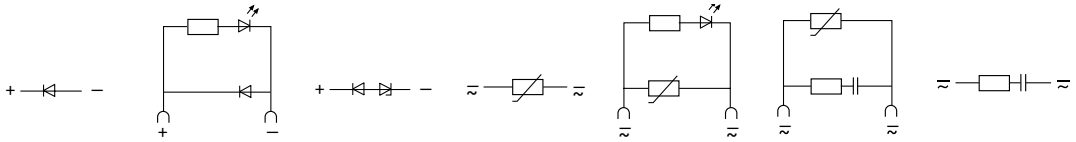
EMC SUPPRESSORS

Suppressors for contactors

Approvals:

	M	CL
		

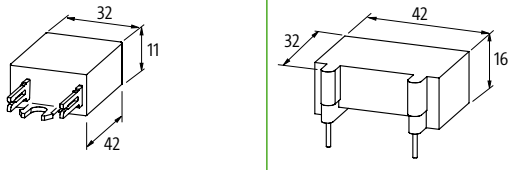
Circuit diagram



Appropriate contactors		M	CL00, 01, 02, 25	CL03, 04, 45	CL05...10
Order Data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression				
24...240 V DC	Diode	**2000-68300-1100000**	**2000-69100-1100000**	**2000-69200-1100000**	
24 V DC	Diode + LED				
	Diode/Z-Diode				
24 V AC/DC	VDR	**2000-68300-4400000**	**2000-69100-4400000**	**2000-69200-4400000**	**2000-69100-4400000**
	VDR + LED				
	RC	**2000-68300-4300000**	**2000-69100-4300000**	**2000-69200-4300000**	**2000-69101-4300000**
48 V DC	Diode/Z-Diode				
48 V AC/DC	VDR	**2000-68300-4400000**	**2000-69100-4400000**	**2000-69200-4400000**	**2000-69100-4400000**
	RC	**2000-68300-4300000**	**2000-69100-4300000**	**2000-69200-4300000**	**2000-69101-4300000**
110 V AC/DC	VDR		**2000-69100-7400000**	**2000-69200-7400000**	**2000-69100-7400000**
	VDR + LED				
	VDR-RC				
	RC		**2000-69100-7300000**		
230 V AC/DC	VDR		**2000-69100-2420000**	**2000-69200-2420000**	
	VDR + LED				
	VDR-RC				
	VDR-RC + LED				
	RC			**2000-69200-2320000**	**2000-69101-2320000**
400 V AC/DC	VDR		**2000-69100-5420000**	**2000-69200-5420000**	**2000-69100-5420000**
	RC				
415 V AC/DC	RC				

Technical Data	
Damping factor	~1.5 x U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

Art.-No. 2000-69200-1100000 – also for CL05...10 DC-coils.

MURR ELEKTRONIK
stay connected

Suppressors for contactors

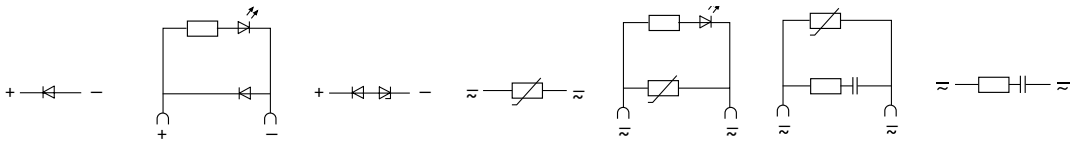
EATON
Powering Business Worldwide

Approvals:

X-Start



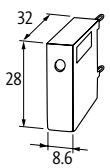
Circuit diagram



Appropriate contactors				
		DIL M7...15 DIL MP20, DIL A	DIL M17...32	DIL M40...95
Order Data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression			
24...240 V DC	Diode			
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR			
	VDR + LED	**26013**	**26015**	
	RC			
48 V DC	Diode/Z-Diode			
48 V AC	VDR + LED	**26013**	**26015**	
	RC			
110 V AC/DC	VDR			
	VDR + LED	**26014**		
	VDR-RC			
	RC	**20007**	**20008**	**20009**
230 V AC/DC	VDR			
	VDR + LED	**26014**		
	VDR-RC			
	VDR-RC + LED			
	RC	**20007**	**20008**	**20009**
400 V AC/DC	VDR			
	RC			

Technical Data	
Damping factor	~1.5 × U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



Notes

LED indicator for 24 V DC without suppression available on request.

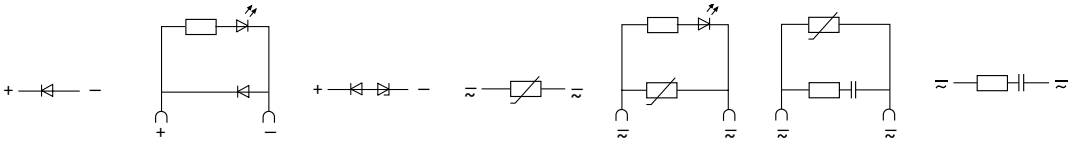
Suppressors for contactors | **DIL E**

Powering Business Worldwide



Approvals:

Circuit diagram



Appropriate contactors

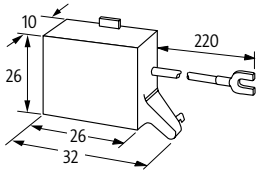
DIL E...

Order Data		**Art.-No.**
Voltage	Suppression	
24...240 V DC	Diode	
24 V DC	Diode + LED	
	Diode/Z-Diode	
24 V AC/DC	VDR	
	VDR + LED	
	RC	
48 V DC	Diode/Z-Diode	
48 V AC/DC	VDR	
	RC	
110 V AC/DC	VDR	
	VDR + LED	
	VDR-RC	
	RC	**21054**
230 V AC/DC	VDR	**26086**
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
	RC	**21054**
400 V AC/DC	VDR	
	RC	

Technical Data

Damping factor	~1.5 × U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

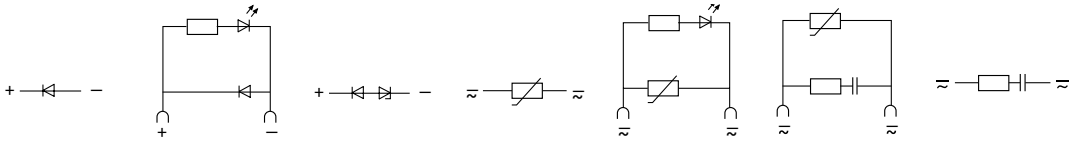
EMC SUPPRESSORS

Suppressors for contactors

OMRON

	J7KNA	J7KN	J7KN
			

Circuit diagram



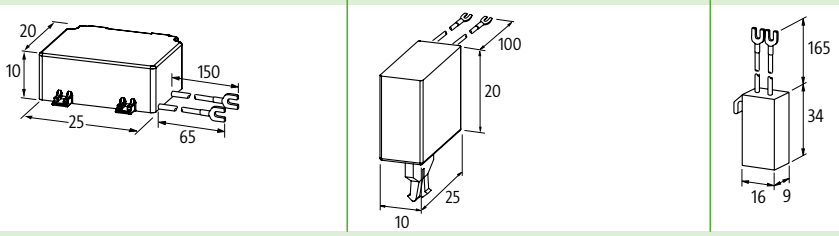
Appropriate contactors

		J7KNA	J7KN	J7KN
Order Data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Suppression			Approval
24...240 V DC	Diode			
24 V DC	Diode + LED			
	Diode/Z-Diode			
24 V AC/DC	VDR			cURus / CSA **26400**
	VDR + LED			
	RC	**2000-68800-2300000**	**2000-69000-2300000**	
48 V DC	Diode/Z-Diode			
48 V AC	VDR			cURus / CSA **26401**
	RC			
110 V AC/DC	VDR			
	VDR + LED			
	VDR-RC			
	RC	**2000-68800-7300000**		
230 V AC/DC	VDR			cURus / CSA **26403**
	VDR + LED			
	VDR-RC			
	VDR-RC + LED			
	RC	**2000-68800-2320000**		
400 V AC/DC	VDR			cURus / CSA **26404**
	RC			

Technical Data

Damping factor	~1.5 × U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	self-securing cable forks

Dimension drawing



Notes

Further types on request.

EMC SUPPRESSORS

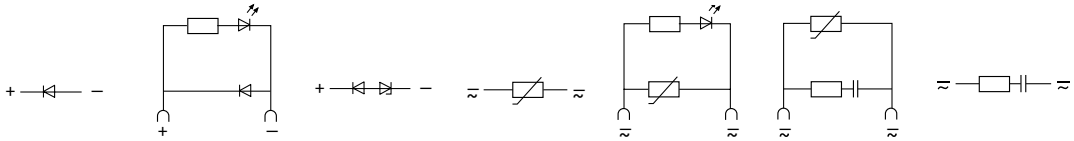
Suppressors for contactors | **I00-C**

ALLEN-BRADLEY

Approvals:



Circuit diagram



Appropriate contactors

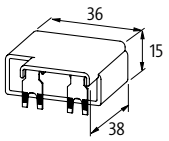
I00-C09...C85

Order Data		**Art.-No.**
Voltage	Suppression	
24...240 V DC	Diode	**2000-68200-1100000**
24 V DC	Diode + LED	
24 V AC/DC	Diode /Z-Diode	
	RC	**2000-68200-4300000**
	VDR	**2000-68200-4400000**
48 V AC/DC	RC	**2000-68200-4300000**
	VDR	**2000-68200-4400000**
110 V AC/DC	VDR	**2000-68200-7400000**
	VDR + LED	
	VDR-RC	
	RC	**2000-68200-1320000**
230 V AC/DC	VDR	**2000-68200-2420000**
	VDR + LED	
	VDR-RC	
	VDR-RC + LED	
	RC	**2000-68200-1320000**
400 V AC/DC	RC	**2000-68200-5320000**
	VDR	**2000-68200-5420000**

Technical Data

Damping factor	~1.5 × U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing

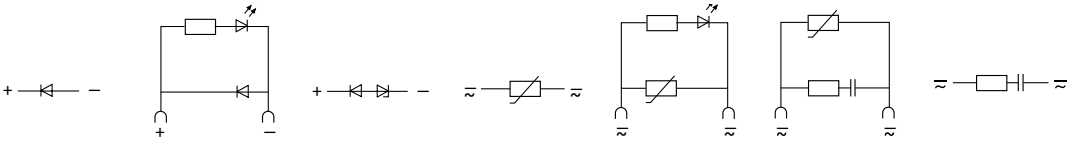


Notes

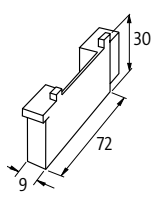
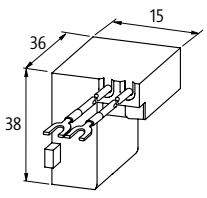
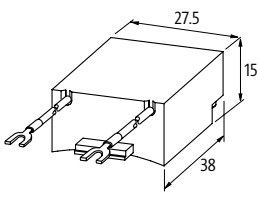
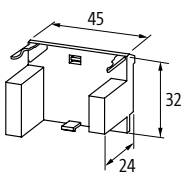
EMC SUPPRESSORS

Suppressors for contactors

Schneider Electric

	TeSys	TeSys	TeSys	D
				
Circuit diagram	 Diode; Diode + LED; Diode/Z-Diode; VDR; VDR + LED; VDR-RC; RC			
Appropriate contactors	LC 1 D09...D38 LC 1 DT20, DT40, LC 2 D09...D38 AC-coil		LC 1 D09...D38 LC 1 DT20, DT40, LC 2 D09...D38 DC-coil	CA 2 DN, CA 3 DN serie „d“ LC 1 DT20, DT40, LC 2 D09...D38

Order Data		**Art.-No.**	Approval	**Art.-No.**	Approval	**Art.-No.**	**Art.-No.**
Voltage	Suppression						
24...240 V DC	Diode				cURus	**2000-69300-1100000**	**26481**
24 V DC	Z-Diode	**26476**			cURus	**2000-69300-5200000**	
24 V AC/DC	VDR		cURus	**2000-69400-4400000**	cURus	**2000-69300-4400000**	
	RC		cURus	**2000-69400-4300000**	cURus	**2000-69300-4300000**	**21070**
30...250 V DC	Z-Diode						
48 V AC/DC	VDR		cURus	**2000-69400-4400000**	cURus	**2000-69300-4400000**	
	VDR + LED						
	RC		cURus	**2000-69400-4300000**	cURus	**2000-69300-4300000**	**21070**
110 V AC/DC	VDR		cURus	**2000-69400-7400000**	cURus	**2000-69300-7400000**	
	VDR + LED						
	RC	**21063**	cURus	**2000-69400-7300000**	cURus	**2000-69300-7300000**	**21071**
230 V AC/DC	VDR		cURus	**2000-69400-2420000**	cURus	**2000-69300-2420000**	
	VDR + LED						
	VDR-RC + LED						
	RC	**21063**	cURus	**2000-69400-2320000**	cURus	**2000-69300-2320000**	**21060**
	RC + LED						
400 V AC/DC	VDR		cURus	**2000-69400-5420000**			
	RC		cURus	**2000-69400-5320000**			

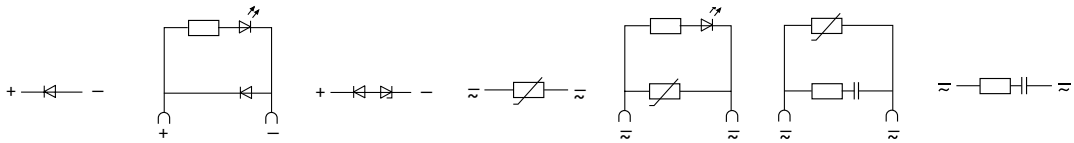
Technical Data			
Damping factor	~1.5 × U_N		
Temperature range	-20...+70 °C		
Material	plastic, flame retardant (UL 94)		
Connection wires	plug contact	self-securing cable forks	self-securing cable forks	plug contact
Dimension drawing				
Notes				

EMC SUPPRESSORS

Suppressors for contactors

SIEMENS

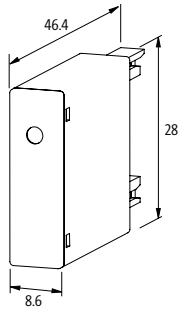
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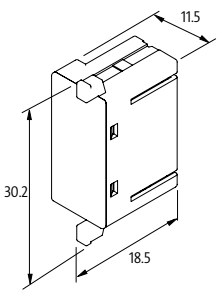
	S00	S0
		
Circuit diagram		
		
	Diode; Diode + LED; Diode/Z-Diode; VDR; VDR + LED; VDR-RC; RC	
Appropriate contactors		
	3 RT 20.15/16/17/18	3 RT 20.25/26/27/28

Order Data		**Art.-No.**	**Art.-No.**
Voltage	Suppression		
24...240 V DC	Diode	**2000-68500-1100000**	
24 V DC	Diode + LED		**2000-68400-2010000**
	Diode/Z-Diode		
24 V AC/DC	VDR	**2000-68500-4400000**	**2000-68400-4400000**
	VDR + LED	**2000-68500-4410000**	**2000-68400-4410000**
	RC	**2000-68500-4300000**	**2000-68400-4300000**
48 V AC/DC	VDR		
	RC	**2000-68500-4300000**	**2000-68400-4300000**
110 V AC/DC	VDR	**2000-68500-7400000**	**2000-68400-7400000**
	VDR + LED	**2000-68500-7410000**	**2000-68400-7410000**
	VDR-RC		
	RC	**2000-68500-7300000**	**2000-68400-7300000**
230 V AC/DC	VDR	**2000-68500-2420000**	**2000-68400-2420000**
	VDR + LED	**2000-68500-2470000**	
	RC	**2000-68500-2320000**	**2000-68400-2320000**
400 V AC/DC	VDR	**2000-68500-5420000**	**2000-68400-5420000**
	RC	**2000-68500-5320000**	**2000-68400-5320000**

Technical Data	
Damping factor	~1.5 × U_N
Temperature range	-20...+70 °C
Material	plastic, flame retardant (UL 94)
Connection wires	plug contact

Dimension drawing



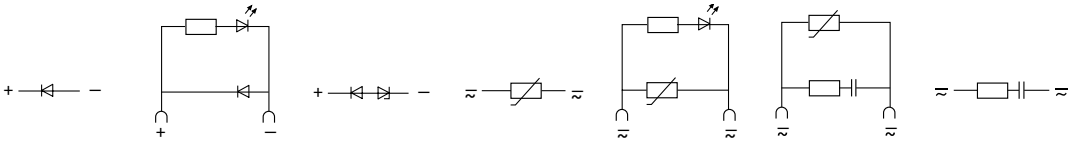


Notes

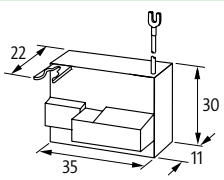
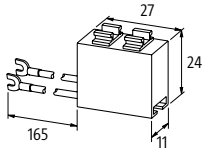
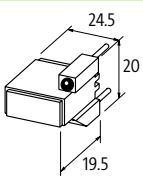
EMC SUPPRESSORS

Suppressors for contactors

SIEMENS

	S0 4	S0 1	3 TF/L-3 TF
			
Circuit diagram	 Diode · Diode + LED · Diode/Z-Diode · VDR · VDR + LED · VDR-RC · RC		
Appropriate contactors			
	3 TF 30...35 3 TF 40...45	3 TF 30...45 3 TB 40...3 TB 44	3 TH 2, 3 TF 2 3 TH 20, 3 TF 20

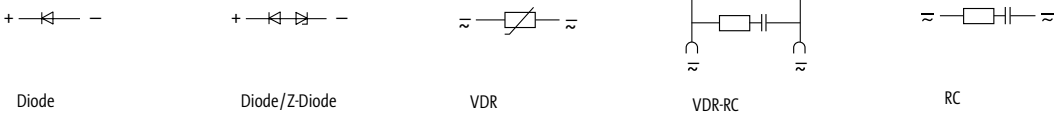
Order Data			**Art.-No.**		**Art.-No.**		**Art.-No.**
Voltage	Suppression	Approval		Approval		Approval	
24...240 V DC	Diode	CSA	**26588**	UR / CSA	**26283**	cURus / CSA	**26036**
24 V DC	Diode + LED					cURus / CSA	**26530**
	Diode/Z-Diode			UR / CSA	**26051**	cURus / CSA	**26034**
24 V AC/DC	VDR	CSA	**26576**				
	VDR + LED						
	RC			UR / CSA	**22050**		
48 V DC	Diode/Z-Diode						
48 V AC/DC	VDR	CSA	**26576**			cURus / CSA	**26038**
	RC			UR / CSA	**22051**		
110 V AC/DC	VDR						
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	**22051**		
230 V AC/DC	VDR	CSA	**26578**	UR / CSA	**26317**	cURus / CSA	**26039**
	VDR + LED						
	VDR-RC						
	RC			UR / CSA	**22052**		
	RC			UR / CSA	**22054**		
400 V AC/DC	VDR						
	RC			UR / CSA	**22054**		

Technical Data			
Damping factor	~1.5 × U_N		
Temperature range	-20...+70 °C		
Material	plastic, flame retardant (UL 94)		
Connection wires	self-securing cable forks		plug contact
Dimension drawing			
Notes			

EMC SUPPRESSORS

Suppressors

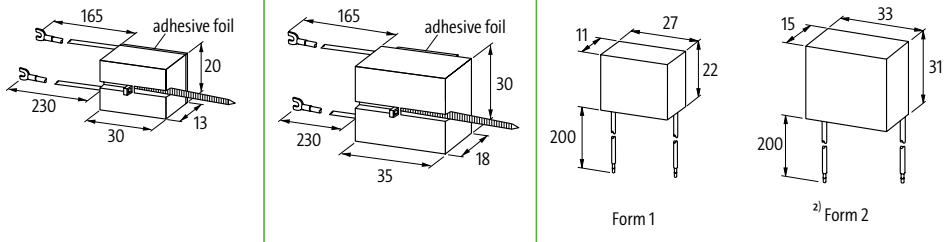
– universal

	AO	**AD**	**CF**
			
Circuit diagram			
	 Diode / Diode/Z-Diode / VDR / VDR-RC / RC		
Appropriate contactors			
	universal	universal	universal

Order Data			**Art.-No.**		**Art.-No.**		**Art.-No.**	**sugg. coil valves**		
Voltage	Suppression	Approval		Approval		Approval		AO	AD	CF
Max. 240 V DC	Diode	CSA	**26001**					15 W		
24V DC	Z-Diode	CSA	**26120**	CSA	**26073**			25 W	75 W	
24V AC/DC	VDR	cURus / CSA	**26180**	CSA	**26720**			50 VA/W	200 VA/W	
	RC					CSA	**20680**			20 VA
48V AC/DC	VDR	cURus / CSA	**26181**					70 VA/W		
	RC	cURus / CSA	**20001**	cURus / CSA	**20013**			15 VA	15 VA	
110V AC/DC	VDR	cURus / CSA	**26182**	CSA	**26722**			100 VA/W	200 VA/W	
	VDR-RC									
	RC									
230V AC/DC	VDR	cURus / CSA	**26183**	CSA	**26723**			200 VA/W	200 VA/W	
	VDR	cURus / CSA	**26184**					200 VA/W		
	RC			CSA	**20014**	CSA	**20682**		25 VA	20 VA
	RC	cURus / CSA	**20002**	cURus / CSA	**20010**	CSA	**20683**	15 VA	75 VA	20 VA
	RC			cURus / CSA	**20011**	CSA	[2] **20687**		100 VA	50 VA
400V AC/DC	VDR			CSA	**26724**				200 VA/W	
	RC	cURus / CSA	**20004**	cURus / CSA	**20012**	CSA	**20688**	15 VA	100 VA	50 VA
	RC									

Technical Data		
Damping factor	approx. 1.5	
Temperature range	-20...+70 °C	
Material	plastic, flame retardant (UL 94)	
Connection wires	self-securing cable forks	flexible connection wires

Dimension drawing



Notes

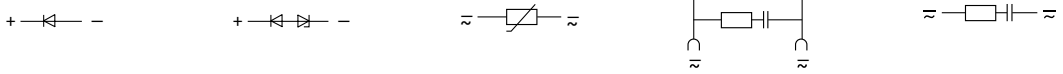
Art.-No. 26184 – up to 300 V AC/DC

Suppressors

– universal

	H	RC-BUG 2	BU + UB
			

Circuit diagram



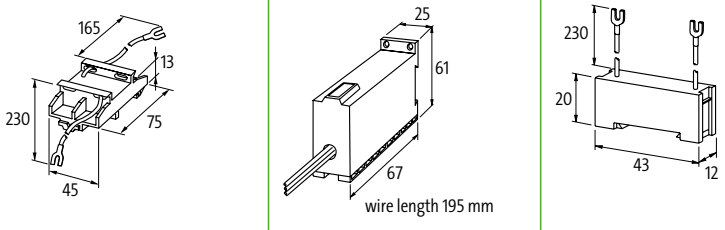
Appropriate contactors

		H	RC-BUG 2	BU + UB			
		universal		universal			
Order Data			**Art.-No.**		**Art.-No.**		**Art.-No.**	**sugg. coil valves**		
Voltage	Suppression	Approval		Approval		Approval		H	RC-BUG 2	BU + UB
24...240 V DC	Diode	CSA	**26097**			CSA	**26020**	25 W		50 W
24 V DC	Z-Diode	CSA	**26095**			CSA	**26130**	25 W		50 W
24 V AC/DC	VDR	cURus / CSA	**26090**			cURus / CSA	**26150**	50 VA/W		50 VA/W
	RC									
48 V AC/DC	VDR									
	RC	CSA	**20100**					15 VA		
110 V AC/DC	VDR									
	VDR-RC									
	RC			CSA	**26613**				146 VA	
230 V AC/DC	VDR									
	VDR			CSA	**26619**	cURus / CSA	**26155**		100 VA/W	200 VA/W
	RC	CSA	**20101**	CSA	**26614**	CSA	**20031**	15 VA	146 VA	25 VA
	RC	CSA	**20102**			CSA	**20033**	25 VA		25 VA
	RC	CSA	**20103**			CSA	**20034**	75 VA		25 VA
400 V AC/DC	VDR									
	RC			CSA	**26615**	CSA	**20032**		146 VA	25 VA
	RC			CSA	**26616**				146 VA	

Technical Data

Damping factor	approx. 1.5	
Temperature range	-20...+70 °C	
Material	plastic, flame retardant (UL 94)	
Mounting method	DIN-rail mounting (EN 60715)	with adapter ASA **Art.-No. 20900**, DIN-rail mounting (EN 60715)
Connection wires	self-securing cable forks	

Dimension drawing



Notes

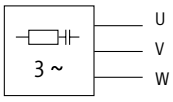
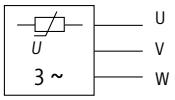
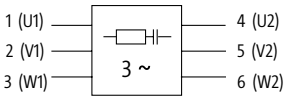
Art.-No. 20034 – without adapter, can be directly snapped onto DIN-rail, ASA adapter **Art.-No. 20900** included in delivery.
Art.-No. 26616 – up to 600 V AC/DC

EMC SUPPRESSORS

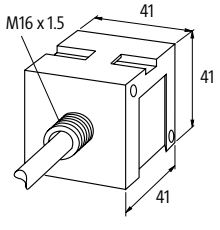
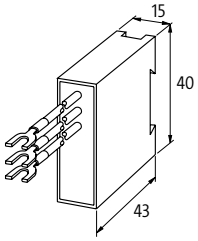
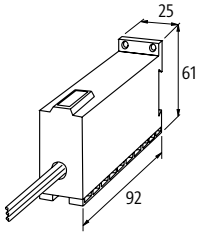
Suppressors for motors

Mounting methods:

- **on the motor terminal box**
- **inside the motor terminal box**
- **inside the distribution box**
- **on 35 mm DIN-rail acc. to EN 60715**

	RC 3 U	**RC 3 BU**	**RC 3 BUG**
	M16 × 1.5		
			
Circuit diagram			
	 RC	 VDR	 RC-(1) per phase

Order Data		**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Motor rating	Suppression/Approval	Suppression/Approval	Suppression/Approval
3 × 400 V AC	4 kW	RC **23022**	RC / cURus **23050**	RC **23104**
	4 kW			VDR **23100**
	4 kW		VDR / cURus **23115**	RC
	7.5 kW		VDR / cURus **23115**	RC **23104**
	10 kW	RC **23011**	VDR / cURus **23118**	RC **23106**
	10 kW	RC-per phase **23043**		
	20 kW		VDR / cURus **23118**	
3 × 575 V AC	4 kW		RC / cURus **23050**	
	7.5 kW	RC / cURus **23035**		RC **23104**
	20 kW			VDR **23102**
	45 kW			RC-per phase [1] **23103**
3 × 690 V AC	4 kW		RC / cURus [2] **23056**	RC **23104**
	7.5 kW			RC **23104**
	20 kW			

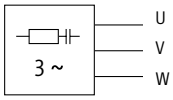
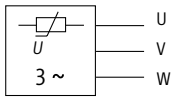
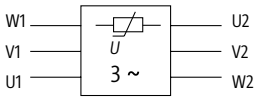
Technical Data			
Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz		
Material	plastic, flame retardant (UL 94)		
Potting compound	2-component epoxy		
Temperature range	-20...+60 °C		
Connection method	approx. 500 mm PVC cable 3 × 0.75 mm² or 7 × 0.75 mm²	approx. 200 mm single core 0.35 mm²; **Art.-No. 23056** 0.5 mm² with self-securing M4 cable forks M4	approx. 500 mm single core 1 mm²
Dimension drawing			
	 For DIN-rail mounting use 2 × **Art.- No. 20900** adapter feet	 For DIN-rail mounting use **Art.- No. 20900** adapter feet	 For DIN-rail mounting use 2 × **Art.- No. 20900** adapter feet
Notes			
	Do not use RC motor suppressors on variable frequency drives. 1 × **Art.-No. 23103, 23043** required per phase.		

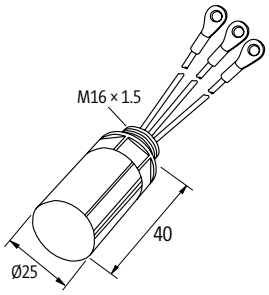
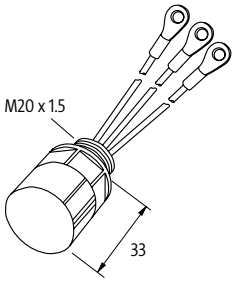
MURR ELEKTRONIK
stay connected

Suppressors for motors

Mounting methods:

- **with M16 × 1.5 and M20 × 1.5**
- **on the motor terminal box with plug connectors**

	RC 3 R	**RC 3 R**	**RC 3 RG**
	M16 × 1.5 screw	M16 × 1.5 screw	M20 × 1.5 screw
			
Circuit diagram			
	 RC	 VDR	 VDR-(1) per phase

Order Data			**Art.-No.**		**Art.-No.**		**Art.-No.**
Voltage	Motor rating	Suppression/Approval		Suppression/Approval		Suppression/Approval	
3 × 400 V AC	4 kW	VDR / cURus	**23170**	VDR / cURus	**23175**	RC / cURus	**23141**
	4 kW						
	4 kW						
	7.5 kW	VDR	**23171**				
	10 kW					VDR	**23142**
	20 kW					VDR	**23144**
3 × 575 V AC	4 kW	VDR / cURus	**23172**			RC / cURus	**23141**
	7.5 kW	VDR / cURus	**23173**				
	10 kW					VDR / cURus	**23145**
	20 kW					VDR / cURus	**23146**
	20 kW					VDR-Einzel	**23147**
3 × 690 V AC	7.5 kW	VDR	**23174**				
	20 kW					VDR	**23149**
Technical Data							
Frequency		for RC: 50...60 Hz; for VDR: 10...400 Hz					
Material		plastic, flame retardant (UL 94)					
Potting compound		2-component epoxy					
Temperature range		-20...+60 °C					
Connection method		approx. 100 mm single core 0.5 mm²				approx. 150 mm single core 1 mm²	
Ring terminals		isolated M6		isolated M4		isolated M6	
Dimension drawing							
							
Notes							
		Do not use RC motor suppressors on variable frequency drives. **Art.-No. 23174** – wire diameter 1.5 mm².					

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

– on the motor terminal box with plug connectors

RC 3 ST

Connector with cable and integrated motor suppression
Cable outlet in the back

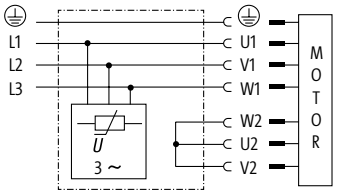


RC 3 ST

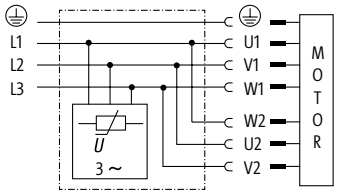
Connector with cable and integrated motor suppression
Cable outlet (right angle)



Circuit diagram



Varistor-suppression (star)



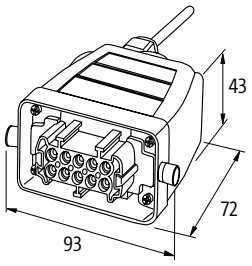
Varistor-suppression (delta)

Order Data				**Art.-No.**		**Art.-No.**
Voltage	Motor rating	Cable length	Suppression		Suppression	
max.	5.5 kW	5 m	VDR/star	**236139**	VDR/star	**236148**
3 × 575 V AC	5.5 kW	8 m	VDR/star	**236141**		
	5.5 kW	10 m	VDR/star	**236142**	VDR/star	**236149**

Technical Data

Frequency	10...400 Hz	
Plug connector	females, 10-pol. + PE	
Housing	aluminium pressure diecasting	
Temperature range	-20...+60 °C	
Connection method	PUR cable black, 4 × 1.5 mm² ; numbered wires, halogen free	PUR cable black, 4 × 1.5 mm² ; numbered wires, DESINA® compliant

Dimension drawing



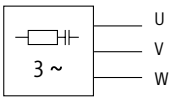
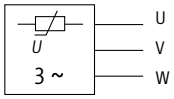
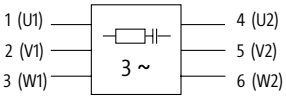
(without compression gland)

Notes

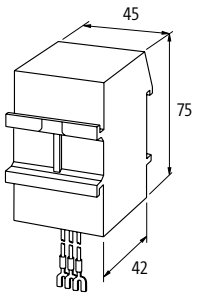
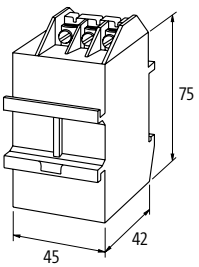
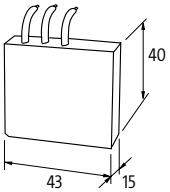
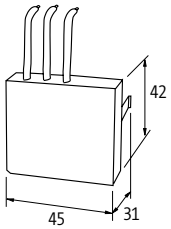
Suppressors for motors

Mounting methods:

- **on 35 mm DIN-rail acc. to EN 60715**
- **bolted together, stacked**
- **DIN-rail mounting under the control gear**

	HRC 3	**HRC 3 K**	**RC 3 BUR**	**RC 3 BUC**
			Connects onto Siemens SIRIUS 3 RT 20 contactors, with screw terminal	Connects onto Siemens SIRIUS 3 RT 20 contactors, with spring clamp terminal
				
Circuit diagram				
	 RC	 VDR	 RC-(1) per phase	

Order Data		**Art.-No.**	**Art.-No.**	**Art.-No.**	**Art.-No.**
Voltage	Motor rating	Suppression/Approval	Suppression	Suppression/Approval	Suppression/Approval
3 × 400 V AC	4 kW	RC / cURus **23004**	RC **23005**		
	4 kW	RC / cURus **233463**			
	5.5 kW			RC / cURus **236082**	
	7.5 kW				RC / cURus **23220**
	10 kW	RC / cURus **23002**	RC **23003**		
	20 kW	RC-per phase / cURus **23009**			
	20 kW	VDR / cURus **23015**			
3 × 500 V AC +10 %	4 kW	RC / cURus **23000**	RC **23001**		
3 × 575 V AC	5.5 kW			RC / cURus **236082**	
	7.5 kW	RC / cURus **23006**	RC **23007**		
	7.5 kW	RC / cURus **230563**			RC / cURus **23220**
	10 kW	VDR / cURus **23016**			
	20 kW		RC **23018**		
3 × 690 V AC	10 kW	RC **23017**			

Technical Data				
Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz			
Material	plastic, flame retardant (UL 94)			
Potting compound	2-component epoxy			
Temperature range	-20...+60 °C			
Connection method	approx. 250 mm s. core (**Art.-No. 23000**: 300 mm) 0.5 mm² (**Art.-No. 23000**: 1.5 mm²) with self-securing M4 cable forks	3-pole terminal 2 × (0.75...2.5 mm²) M4	wire (solid core) 1.5 mm²	wire with ferrule ends 2.0 mm²
Dimension drawing				
				
Notes				
	Do not use RC motor suppressors on variable frequency drives. **Art.-No. 233463** and **230563** – with ferrule ends.			

EMC SUPPRESSORS

Suppressors for motors

Mounting methods:

- **DIN-rail mounting under the control gear**
- **fixes onto contactors**
- **available with integrated coil suppression**

HRC 3 AS

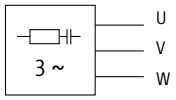


RC 3 RT

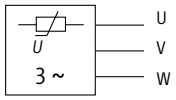
Connects onto Siemens SIRIUS 3 RT 10 contactors with screw terminal



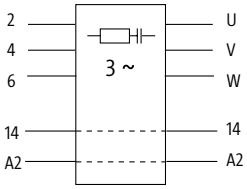
Circuit diagram



RC



VDR



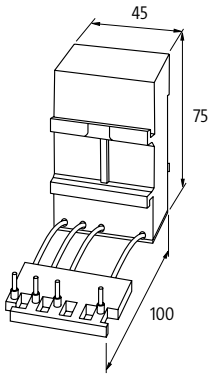
Appropriate contactors

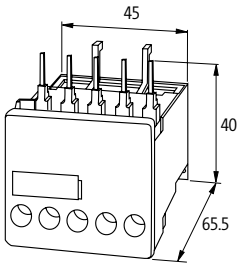
Motor contactors up to 5.5 kW from Siemens, Moeller, Sprecher + Schuh etc.		Siemens 3 RT 10

Order Data			**Art.-No.**		**Art.-No.**		**Art.-No.**
Voltage	Motor rating	Suppression motor + coil		Suppression motor + coil		Suppression/Approval	
3 × 400 V AC	5.5 kW	RC	**23160**	VDR	**23163**	RC / cURus / CSA	**23180**
	5.5 kW	RC + Diode	**23151**				
3 × 575 V AC	5.5 kW	RC	**23161**	VDR	**23164**	RC / cURus /CSA	**23181**
	5.5 kW			VDR + Diode	**23157**		

Technical Data		
Suppression Spule	for RC: 230 V AC/20 VA; for RC + Diode: 24...230 V DC/36 W	
Frequency	for RC: 50...60 Hz; for VDR: 10...400 Hz	
Material	plastic, flame retardant (UL 94)	
Temperature range	-20...+60 °C	
Connection method	ferrules, load side securely fixed	fits directly into SIRIUS contactors, size 00

Dimension drawing





Notes

Do not use RC motor suppressors on variable frequency drives.

EMC SUPPRESSORS

Suppressors for valves

– **with LED**
– **with suppression**

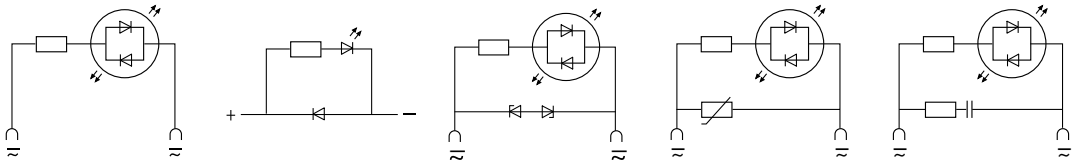
VBS
Form A
Pin spacing 18 mm
EN 175301-803 (ISO 4400)



LBS
Form BI Industrial Standard
Pin spacing 11 mm



Circuit diagram



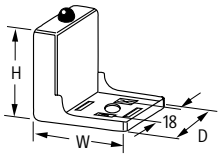
LED | LED + Diode | LED + Zener Diode | LED + VDR | LED + RC

Order Data		Art.-No.	Art.-No.			
Voltage	Suppression			Switch off delay time [ms]	Switch off voltage peak [V]	Valve hold-on rating [W/VA]
24 V DC	LED + Diode	[1] **3124021**	**3124221**	200	1	50
24 V AC/DC	LED	[1] **3124015**	**3124215**	–	–	50
	LED + Z-Diode	[1] **3124033**	**3124233**	20	55	100
	LED + VDR	[1] **3124048**	**3124248**	15	45	50
	LED + RC	**3124068**		20	105	10
	LED + RC		**3124269**	20	70	20
48 V AC/DC	LED	[1] **3124017**		–	–	50
	LED + VDR	[1] **3124052**		10	75	100
	LED + RC	[2] **3124071**		20	90	30
110 V AC/DC	LED	**3124018**		–	–	50
	LED + VDR	**3124046**		10	235	100
	LED + RC	**3124070**		20	250	10
	LED + RC	[2] **3124072**		20	250	25
230 V AC/DC	LED	**3124016**	**3124216**	–	–	50
	LED + VDR	**3124049**	**3124249**	15	360	100
	LED + RC	**3124063**	**3124263**	20	300	10
	LED + RC	[2] **3124064**		20	300	25

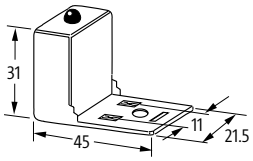
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

Dimension drawing



Housing H × W × D: 37 × 45 × 30 mm
[1] Housing H × W × D: 37 × 39 × 30 mm
[2] Housing H × W × D: 37 × 53 × 33 mm
0° and 180° version on request



Note PIN arrangement (PE at cable outlet of connector)
180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request.
For double valves the VA 2 series is suitable (please inquire). At **Art.-No. 3124021** and **3124221** polarity dependent

EMC SUPPRESSORS

Suppressors for valves

- **with LED**
- **with suppression**

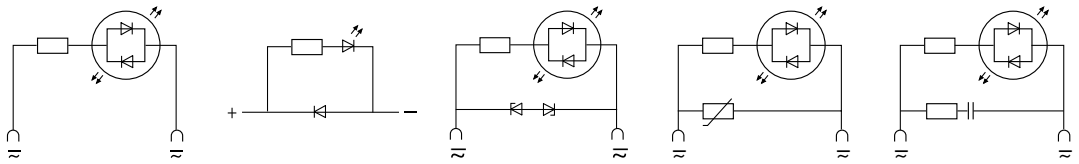
DAB/PBS
Form B/BI
Pin spacing 10/11 mm
EN 175301-803 (ISO 6952)



MVK/MVT
Form C/CI
Pin spacing 8/9.4 mm
EN 175301-803 (ISO 6952)



Circuit diagram



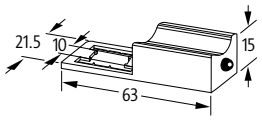
LED | LED + Diode | LED + Zener Diode | LED + VDR | LED + RC

Order Data		Art.-No.	Art.-No.	Art.-No.	Art.-No.			
Voltage	Suppression	EN 175301-803 (ISO 6952) Form B	Form BI	EN 175301-803 (ISO 6952) Form C	Form CI	Switch off delay time [ms]	Switch off voltage peak [V]	Valve-hold-on rating [W/VA]
24 V DC	LED + Diode	**3124871**	**3124121**			200	1	50
24 V AC/DC	LED	**3124875**	**3124115**	**3124811**	**3124815**	–	–	50
	LED + Z-Diode	**3124873**	**3124133**	**3124833**	**3124832**	20	55	100
	LED + VDR		**3124148**			15	45	50
	LED + RC		**3124169**			20	70	20
110 V AC/DC	LED + RC		**3124170**			20	250	10
230 V AC/DC	LED		**3124116**			–	–	50
	LED + VDR					15	360	100
	LED + RC		**3124163**			20	300	10

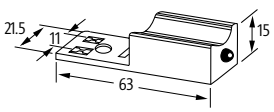
Technical Data

Supply indicator	LED yellow
Contact material	silvered bronze
Protection	IP65 when fully mounted
Material	polyamide black, flame retardant, temperature resistant up to 130 °C
Temperature range	-20...+60 °C

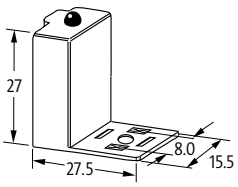
Dimension drawing

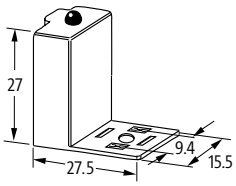


Suitable for 0° and 180° installation



Note PIN arrangement
(PE at cable outlet of connector)
180° version on request

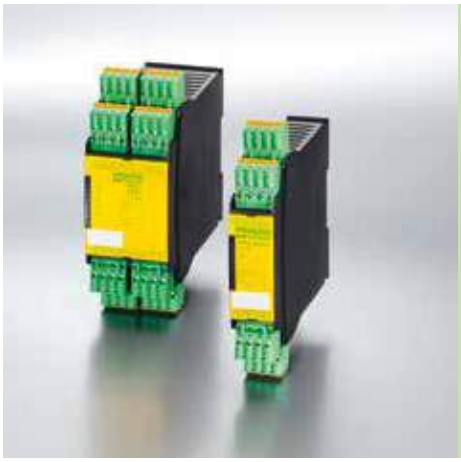




0° and 180° version on request

Notes

Do not use plug gasket when fitting adapter. Other LED colors on request. Right-angle housing version with 10 mm pin spacing (DAR/DARU), on request. At **Art.-No. 3124871** and **3124121** polarity dependent.



RELAYS / SAFETY RELAYS
INCREDIBLY VERSATILE

- **Over 600 different modules ready for all applications**
- **Push-In technology, spring clamps or screw terminals available**
- **Worldwide approvals**

TWICE AS SMALL, TWICE AS FAST!

Each system includes different kinds of active interface modules. Relay modules are used to separate two different potential levels. The control side is galvanically isolated from the load/contact side and should be protected from the wrong voltage. These interfaces adjust the different signal levels to work with the existing system.

With MIRO SAFE+, Murrelektronik offers safe switching devices for a wide range of safe industrial applications. They are the perfect solution to reach high safety standards – up to performance level e (PLe) according to EN 13849-1. **With MIRO SAFE+ you can design many different safety applications like: emergency stops, guard doors, two hand monitoring, light curtains, and safety magnet switch monitoring.**

Relays



Relay 6.2 mm pluggable
- Output relay
- Input relay

Page 1.9.1



Relay 6.2 mm
- Output relay
- Input relay

Page 1.9.4



Relay 12.4 mm
- Output relay
- Input relay

Page 1.9.9



Relay 22.5 mm
- Output relay
- Input relay

Page 1.9.17

Safety Relays



Safety Relay 22.5/45 mm
- MIRO SAFE+

Page 1.9.20

MURR ELEKTRONIK
stay connected

Terminal relay

– pluggable

– with bridge system

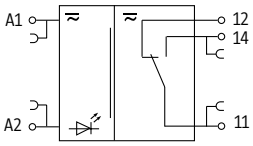
Approvals:

MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals

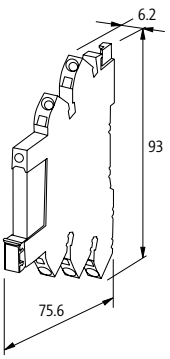


Circuit diagram



Order Data	Art-No.
6 V AC/DC (5...7.2 V AC/DC) - 25 mA	3000-16023-3100022
12 V AC/DC (9.8...14 V AC/DC) - 14.2 mA	3000-16023-3100005
24 V AC/DC (19.2...28.8 V AC/DC) - 12 mA	3000-16013-3100020
Accessories	**Art-No.**
Removable plug-in relay 6 V AC/DC	3000-16023-2100000
Removable plug-in relay 12 V AC/DC	3000-16023-2100005
Removable plug-in relay 24 V AC/DC	3000-16023-2100010
Utilization category	
AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)
Input	
LED display	LED (green)
Output	
Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	100 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2
Energize/release/contact bounce time	8/4/- ms
General data	
Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

Terminal relay

– pluggable

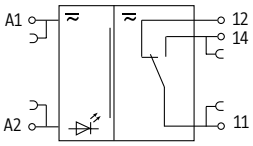
– with bridge system

MIRO 6.2

Output relay
1 NO/NC contact
Spring clamp terminals

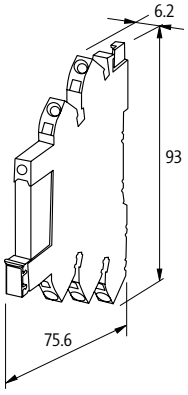


Circuit diagram



Order Data		**Art-No.**
60 V AC/DC (43.5...72 V AC/DC) - 7 mA	cURus, cCSAus	**3000-16513-3100022**
115...125 V AC/DC (88...138 V AC/DC) - 8 mA		**3000-16013-3100025**
230 V AC/DC (184...264 V AC/DC) - 4 mA		**3000-16013-3100030**
Accessories		**Art-No.**
Relay 60/125/230 V AC/DC		**3000-16023-2100020**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/30 V DC	
Switching current per output	max. 6 A	
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1 500 VA/180 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	8/4/- ms	
General data		
Test isolation voltage	250 V	
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent	
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-25...+60 °C	

Dimension drawing



Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

MURR ELEKTRONIK
stay connected

Terminal relay

– pluggable

– with bridge system

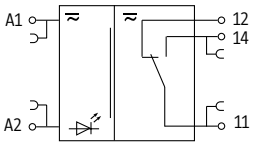
Approvals:

MIRO 6.2

Input relay
1 NO/NC contact
Spring clamp terminals

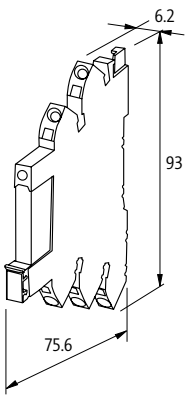


Circuit diagram



Order Data	**Art-No.**
24 V AC/DC (19.2...26.8 V AC/DC) - 14 mA	**3000-16013-3100040**
Accessories	**Art-No.**
Removable plug-in relay 24 V AC/DC	**3000-16023-2100030**
Utilization category	
AC-12	6 A (24/110/230 V AC)
AC-15	3 A (24/110 V AC); 1.5 A (230 V AC)
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)
Input	
LED display	LED (green)
Output	
Switching voltage	max. 250 V AC/30 V DC
Switching current per output	max. 6 A
Min. load current	10 mA
Power rating (voltage dependent)	max. 1 500 VA/180 W
Switching frequency	max. 10 Hz
Contact material	Ag Sn O2, gold plated
Energize/release/contact bounce time	8/4/- ms
General data	
Test isolation voltage	250 V
Mech./ elect. life	10 000 000 switching cycles (NO) 30 000; (NC) 10 000, load dependent
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C

Dimension drawing



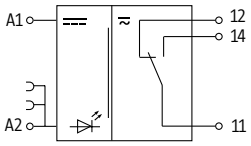
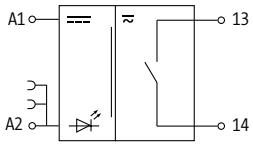
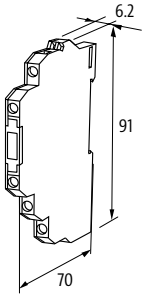
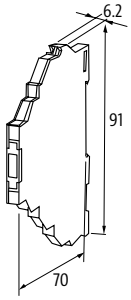
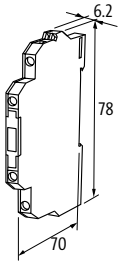
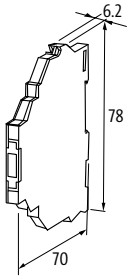
Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.

Terminal relay

– with bridge system

Approvals:

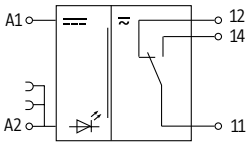
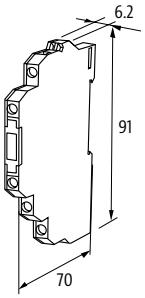
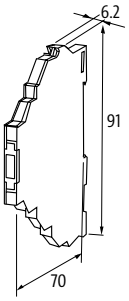
	MIRO 6.2	**MIRO 6.2**	**MIRO 6.2**	**MIRO 6.2**
	Output relay	Output relay	Output relay	Output relay
	1 NO/NC contact	1 NO/NC contact	1 NO contact	1 NO contact
	Screw terminals	Spring clamp terminals	Screw terminals	Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
12 V DC (10...15 V DC) - 20 mA	**52050**	**6652050**		
24 V DC (19.2...30 V DC) - 14 mA	CCC **52000**	CCC **6652000**	CCC **52002**	CCC **6652002**
24 V DC (19.2...30 V DC) - 17 mA	CCC **52001**	CCC **6652001**	CCC **52015**	CCC **6652015**
Utilization category				
AC-12	6 A (24/110/230 V AC)			
AC-15	3 A (24/110/230 V AC)			
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)			
Input				
LED display	LED (green)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 6 A			
Min. load current	10 mA (12 V DC)		100 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Sn O2			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	4 kV; safe separation (EN 60947-1)			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	-20...+55 °C			
Dimension drawing				
				
Notes				
	For inductive loads we recommend EMC suppressors connected parallel to the coil.			

MURR ELEKTRONIK
stay connected

Terminal relay

– with bridge system

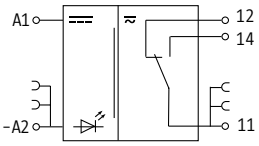
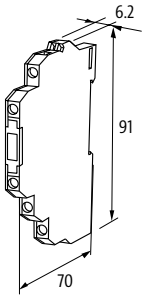
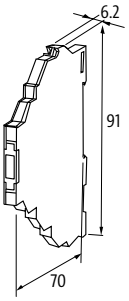
Approvals: cULus cCSAus

	MIRO 6.2	**MIRO 6.2**
	Output relay 1 NO/NC contact Screw terminals	Output relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
110 V AC/DC (95...121 V AC/DC) - 4 mA	**52030**	**6652030**
230 V AC/DC (195...253 V AC/DC) - 3 mA	CCC **52040**	CCC **6652040**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	
Dimension drawing		
		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil.	

Terminal relay

– with bridge system

Approvals:

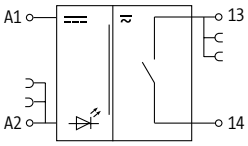
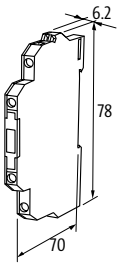
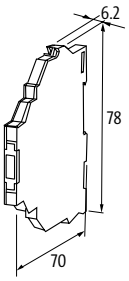
	MIRO 6.2	**MIRO 6.2**
	Input relay 1 NO/NC contact Screw terminals	Input relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC (19.2...30 V DC) - 14 mA	**52005**	**6652005**
24 V AC/DC (19.2...30 V AC/DC) - 16 mA	**52003**	**6652003**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 6 A	
Switching current per output (Signal)	max. 20 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	
Dimension drawing		
		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

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Terminal relay

– with bridge system

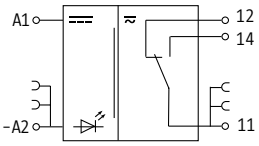
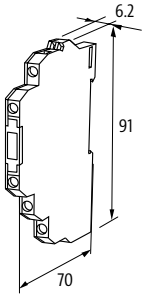
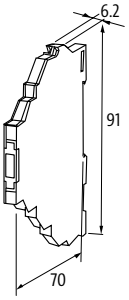
Approvals:

	MIRO 6.2	**MIRO 6.2**
	Input relay 1 NO contact Screw terminals	Input relay 1 NO contact Spring clamp terminals
		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC (19.2...30 V DC) - 14 mA	**52004**	**6652004**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	3 A (24/110/230 V AC)
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 50 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	
Dimension drawing		
		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

Terminal relay

– with bridge system

Approvals:

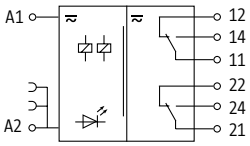
	MIRO 6.2	**MIRO 6.2**
	Input relay 1 NO/NC contact Screw terminals	Input relay 1 NO/NC contact Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
110 V AC/DC (95...121 V AC/DC) - 4 mA	**52031**	**6652031**
230 V AC/DC (195...253 V AC/DC) - 3 mA	CCC **52041**	CCC **6652041**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (yellow)	
Output		
Switching voltage	max. 30 V AC/36 V DC	
Switching current per output	max. 6 A	
Switching current per output (Signal)	max. 20 mA	
Min. load current	1 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	
Dimension drawing		
		
Notes		
	For inductive loads we recommend EMC suppressors connected parallel to the coil. When the max. switching voltage/current is exceeded the gold plating is destroyed. The relay will then take on the properties of an output type.	

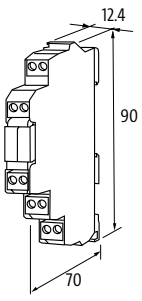
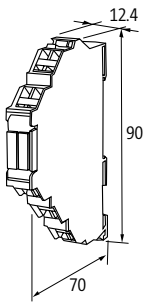
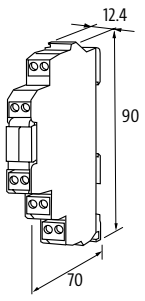
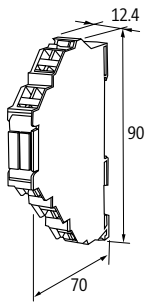
MURR ELEKTRONIK
stay connected

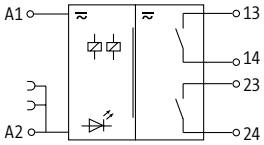
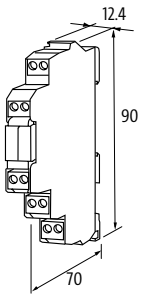
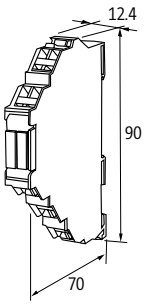
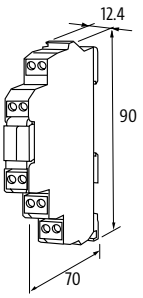
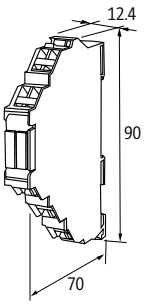
Terminal relay

– with bridge system

Approvals: cULus

	MIRO 12.4	MIRO 12.4	MIRO 12.4	MIRO 12.4
	Output relay 2 NO/NC contacts Screw terminals	Output relay 2 NO/NC contacts Spring clamp terminals	Input relay 2 NO/NC contacts Screw terminals	Input relay 2 NO/NC contacts Spring clamp terminals
				
Circuit diagram				
				

Order Data		**Art-No.**		**Art-No.**		**Art-No.**		**Art-No.**
24 V DC (19.2...30 V DC) - 18 mA	cCSAus, CCC	**52102**	cCSAus, CCC	**6652102**	CCC	**52110**	CCC	**6652110**
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	CCC	**52103**	CCC	**6652103**	CCC	**52111**	CCC	**6652111**
110 V AC/DC (95...121 V AC/DC) - 7 mA		**52130**		**6652130**		**52136**		**6652136**
230 V AC/DC (195...253 V AC/DC) - 5 mA	CCC	**52140**	CCC	**6652140**	CCC	**52146**	CCC	**6652146**
Utilization category								
AC-12	6 A (24/110/230 V AC)							
AC-15	3 A (24/110/230 V AC)							
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)							
Input								
LED display	LED (green)							
Output								
Switching voltage	max. 250 V AC/DC				max. 30 V AC/36 V DC			
Switching current per output	max. 6 A							
Switching current per output (Signal)	–				max. 20 mA			
Min. load current	100 mA (12 V DC)				1 mA (12 V DC)			
Power rating (voltage dependent)	max. 1 500 VA/120 W							
Switching frequency	max. 10 Hz							
Contact material	Ag Sn O2				Ag Sn O2 hv			
Energize/release/contact bounce time	10/15/1.5 ms							
General data								
Mech./ elect. life	20 000 000 switching cycles/load dependent							
Test isolation voltage	4 kV; safe separation (EN 60947-1)							
Mounting method	DIN-rail mountable (EN 60715)							
Temperature range	-20...+55 °C							
Dimension drawing								
								
Notes								
	For inductive loads we recommend EMC suppressors connected parallel to the coil.							

Terminal relay **– with bridge system** **Approvals:**	**MIRO 12.4** Output relay 2 NO contact Screw terminals	**MIRO 12.4** Output relay 2 NO contact Spring clamp terminals	**MIRO 12.4** Output relay 2 NO contact Screw terminals	**MIRO 12.4** Output relay 2 NO contact Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC) - 20 mA	**52104**	**6652104**		
24 V AC/DC (19.2...30 V AC/DC) - 16 mA			**52106**	**6652106**
Utilization category				
AC-12	6 A (24/110/230 V AC)			
AC-15	3 A (24/110/230 V AC)			
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)			
Input				
LED display	LED (green)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 6 A			
Min. load current	100 mA (12 V DC)			
Power rating (voltage dependent)	max. 1 500 VA/120 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Sn O2			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	4 kV; safe separation (EN 60947-1)			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	-20...+55 °C			
Dimension drawing				
				
Notes				
	For inductive loads we recommend EMC suppressors connected parallel to the coil.			

MURR ELEKTRONIK
stay connected

Terminal relay

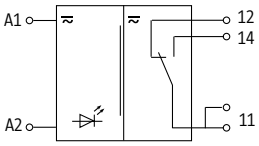
MIRO 12.4 Multi voltage

Output relay
1 NO/NC contact
Screw terminals



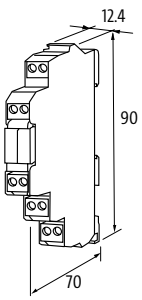
Approvals:

Circuit diagram



Order Data		Art-No.
24 V AC/DC - 6...27 mA		**52160**
48 V DC - 6...27 mA		**52160**
110 V AC/DC - 6...27 mA		**52160**
230 V AC/DC - 6...27 mA		**52160**
Utilization category		
AC-12	6 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	
Input		
LED display	LED (green)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 6 A	
Min. load current	10 mA (12 V DC)	
Power rating (voltage dependent)	max. 1 500 VA/120 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Sn O2	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV; safe separation (EN 60947-1)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+55 °C	

Dimension drawing



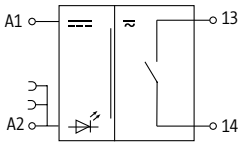
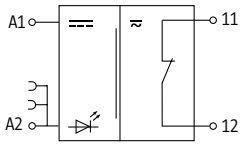
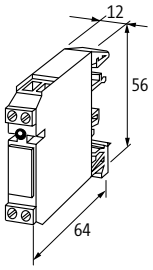
Notes

For inductive loads we recommend EMC suppressors connected parallel to the coil.

Relays

– Screw terminals

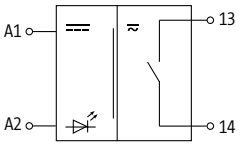
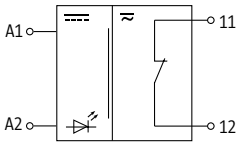
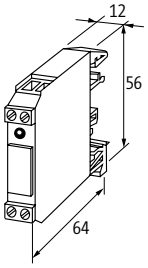
– with minus plug link

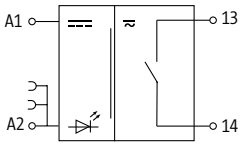
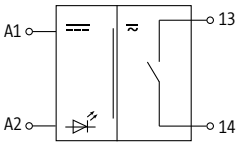
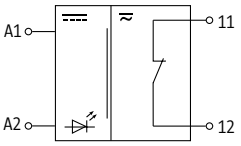
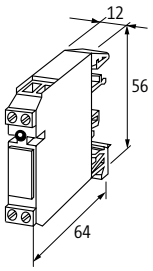
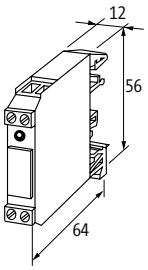
	RMM Output relay 1 relay; 1 NO contact	**RMM** Output relay 1 relay; 1 NC contact
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	**51851**	**51808**
Utilization category		
AC-1	5 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input		
Plug link (supplied)	Art.-No. 90960	
LED display	LED (red)	
Output		
Switching voltage	max. 250 V AC/300 V DC	
Switching current per output	max. 5 A	
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	
Switching frequency	max. 10 Hz	
Contact material	Ag Ni 0.15 hv	
Energize/release/contact bounce time	10/15/1.5 ms	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	20 000 000 switching cycles/load dependent
Test isolation voltage	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Temperature range	-20...+60 °C	
Dimension drawing		
		
Notes		

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stay connected

Relays

– Screw terminals

	RMM Output relay 1 relay; 1 NO contact		**RMM** Output relay 1 relay; 1 NC contact
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (19.2...30 V AC/DC) - 15 mA	**51551**	**512764**		**51508**
110 V AC/DC (95...121 V AC/DC) - 3.5 mA			**51552**	
230 V AC/DC (195...250 V AC/DC) - 3.5 mA			**51515**	
230 V AC/DC (195...250 V AC/DC) - 4 mA				**51562**
Utilization category				
AC-12	–	6 A (24/110/230 V AC)		5 A (24/110/230 V AC)
AC-1	5 A (24/110/230 V AC)	–		
AC-15	3 A (24/110/230 V AC)		4 A (24/110/230 V AC)	3 A (24/110/230 V AC)
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	1 A (24 V DC); 0.2 A (110 V DC); 0.1 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	1.3 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
Input				
LED display	LED (red)	LED (green)	LED (red)	
Output				
Switching voltage	max. 250 V AC/300 V DC			
Switching current per output	max. 5 A			
Min. load current	100 mA			
Power rating (voltage dependent)	max. 1 250 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni 0.15 hv; Ag hv			
Energize/release/contact bounce time	10/15/1.5 ms			
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	4 kV			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+50 °C			
Dimension drawing				
				
Notes				

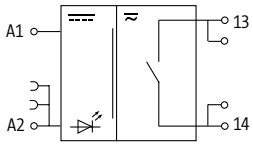
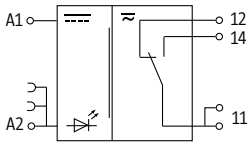
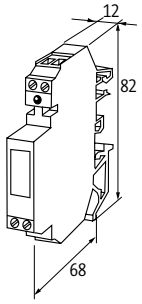
Relays – Screw terminals	RMME Input relay 1 relay; 1 NO contact with minus plug link	RMME Input relay 1 relay; 1 NO contact		RMME Input relay 1 relay; 1 NC contact
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (21.6...26.4 V AC/DC) - 6 mA	**51860**			
24 V AC/DC (19.2...30 V AC/DC) - 6 mA		**51560**		
110 V AC/DC (95...121 V AC/DC) - 3.5 mA		**51526**		
230 V AC (195...253 V AC) - 6 mA			**51517**	
24 V AC/DC (19.2...30 V AC/DC) - 15 mA				**51571**
Utilization category				
AC-15	1 A (24 V AC); 0.5 A (125 V AC)		0.25 A (50 V AC)	3 A (24/110/230 V AC)
DC-13	1 A (24 V DC); 0.5 A (125 V DC)		–	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)
AC-1	–			5 A (24/110/230 V AC)
AC-12	–		0.5 A (50 V AC)	–
Input				
Plug link (supplied)	Art.-No. 90960	–		
LED display	LED (yellow)			
Output				
Switching voltage	max. 125 V AC/DC			
Switching current per output	max. 1 A			
Min. load current	1 mA			
Power rating (voltage dependent)	max. 60 VA/30 W			
Switching frequency	max. 15 Hz			
Contact material	Pd Ni-Au Rh			
Energize/release/contact bounce time	10/10/1 ms			
General data				
Mech./ elect. life	100 000 000 switching cycles/load dependent			
Test isolation voltage	1.5 kV			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

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Relays

– with minus plug link

– Screw terminals

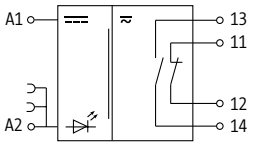
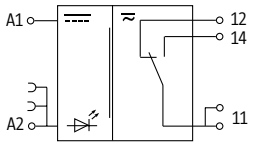
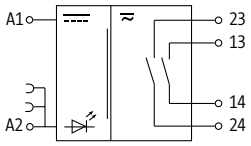
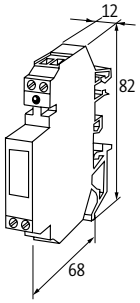
	RMMD Output relay 1 relay; 1 NO contact		**RMMD** Output relay 1 relay; 1 NO/NC contact	
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (21.6...26.4 V DC) - 13.5 mA	**51100**			
230 V AC/DC (195...253 V AC/DC) - 4.5 mA		**51108**		
24 V DC (21.6...26.4 V DC) - 15 mA			**51120**	
24 V AC/DC (19.2....30 V AC/DC) - 10 mA				**51125**
Utilization category				
AC-1	8 A (24/110/230 V AC)	6 A (24/110/230 V AC)	8 A (24/110/230 V AC)	
AC-15	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	3 A (24/110/230 V AC)	
DC-13	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	2.5 A (24 V DC); 0.4 A (110 V DC); 0.3 A (230 V DC)	
Input				
Plug link (supplied)	Art.-No. 90960	–	Art.-No. 90960	
LED display	LED (red)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 6 A		max. 8 A
Min. load current	100 mA			
Power rating (voltage dependent)	max. 2 000 VA/240 W			
Switching frequency	max. 10 Hz			
Contact material	Ag Ni			
Energize/release/contact bounce time	10/15/2 ms			
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent			
Test isolation voltage	5 kV; safe separation (IEC 61140/EN 61140)	4 kV	5 kV; safe separation (IEC 61140/EN 61140)	
Temperature range	-20...+50 °C			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Dimension drawing				
				
Notes				
	Art.-No. 51125 with low connection current.			

Relays

– with minus plug link

– with bridge system

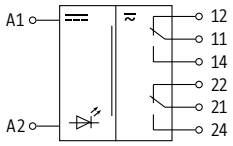
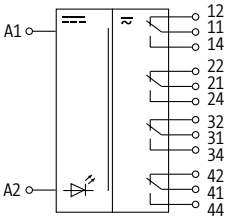
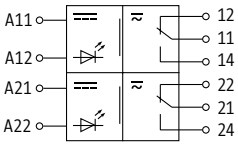
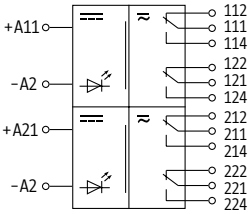
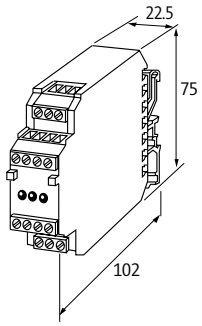
– Screw terminals

	RMMDE Input relay 1 relay; 1 NO contact/1 NC contact	**RMMDE** Input relay 1 relay; 1 NO/NC contact		**RMMDE** Input relay 1 relay; 2 NO contacts
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (17.5...30 V DC) - 14 mA	**516014**			
24 V DC (19.2...30 V DC) - 17 mA		**51130**		
230 V AC/DC (195...253 V AC/DC) - 4.5 mA			**51138**	
24 V DC (19.2...30 V DC) - 15 mA				**51140**
Utilization category				
AC-1	3 A (24 V AC); 2 A (230 V AC)	5 A (24/110/230 V AC)		2 A (24 V AC; 110 V AC; 230 V AC)
AC-15	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24/110/230 V AC)	4 A (24/110/230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)
DC-13	0.8 A (24 V DC); 0.01 A (230 V DC)	1.3 A (24 V DC); 0.25 A (110 V DC); 0.10 A (230 V DC)	2 A (24 V DC); 0.25 A (110 V DC); 0.1 A (230 V DC)	0.8 A (24 V DC); 0.1 A (110 V DC); 0.01 A (230 V DC)
Input				
Plug link (supplied)	Art.-No. 90960		–	Art.-No. 90960
LED display	LED (red)	LED (yellow)		
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 3 A	max. 20 mA	max. 5 A	max. 2 A
Min. load current	1 mA			5 mA
Power rating (voltage dependent)	max. 500 VA/180 W	max. 1 500 VA/180 W		max. 250 VA/150 W
Switching frequency	max. 10 Hz	max. 15 Hz		
Contact material	Ag Ni 0.15 hv	Ag Ni 0.15 hv; Ag hv		Ag Au
Energize/release/contact bounce time	6/3/2 ms	10/10/1 ms		
General data				
Mech./ elect. life	20 000 000 switching cycles/load dependent	100 000 000 switching cycles/load dependent		20 000 000 switching cycles/load dependent
Test isolation voltage	2.5 kV	4 kV		1.5 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+60 °C			-20...+50 °C
Dimension drawing				
				
Notes				

MURR ELEKTRONIK
stay connected

Relays

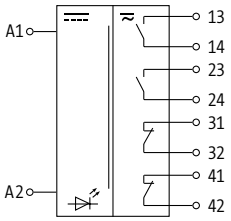
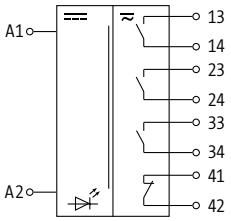
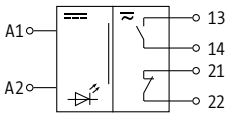
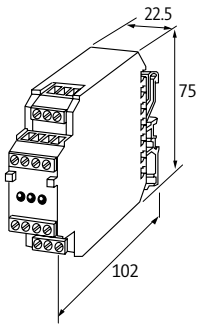
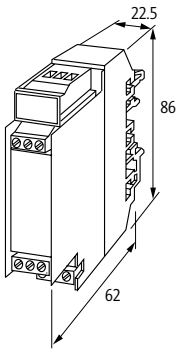
– Screw terminals

	RM Output relay 1 relay; 2 NO/NC contacts	**RM** Output relay 1 relay; 4 NO/NC contacts	**RM** Output relay 2 relays; each 1 NO/NC contact	**RM** Output relay 2 relays; each 2 NO/NC contacts
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V AC/DC (20.4...26.4 V AC/DC) - 20 mA	**51540**	**51410**		
230 VAC (195...250 VAC) - 10 mA		**51413**	**51412**	
24 V AC/DC (19.2...30 V AC/DC) - 10 mA			**51485**	
24 V AC/DC (19.2...30 V AC/DC) - 14 mA				**51465**
Utilization category				
AC-1	8 A (24/110/230 V AC)	–	8 A (24/110/230 V AC)	
AC-12	–	2 A (24 V AC); 0.5 A (230 V AC)	–	
AC-15	3 A (24/110/230 V AC)	1 A (24 V AC); 0.1 A (230 V AC)	3 A (24/110/230 V AC)	
DC-13	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)	0.8 A (24 V DC); 0.01 A (230 V DC)	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	2 A (24 V DC); 0.3 A (110 V DC); 0.2 A (230 V DC)
Input				
LED display	LED (red)			
Output				
Switching voltage	max. 250 V AC/DC			
Switching current per output	max. 8 A	max. 2 A	max. 8 A	
Min. load current	100 mA	0.1 mA	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	max. 125 VA/60 W	max. 1 250 VA/240 W	
Switching frequency	max. 0.1 Hz (with load)			
Contact material	Ag Ni 0.15 hv	Ag Au	Ag Sn O2	Ag Ni 0.15 hv
Energize/release/contact bounce time	10/10/2 ms	10/20/2 ms	10/10/2 ms	
General data				
Mech./ elect. life	50 000 000 switching cycles/load dependent		20 000 000 switching cycles/load dependent	
Test isolation voltage	4 kV	1.5 kV	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)			
Temperature range	-20...+50 °C			
Dimension drawing				
				
Notes				

Relays

– Screw terminals

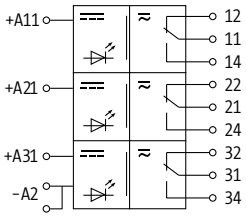
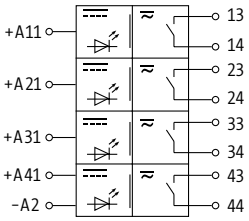
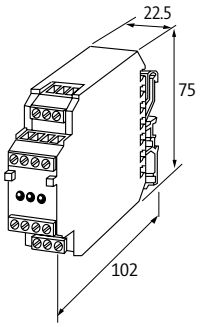
– with force guided contacts

	RM	**RM**	**MKS**
	Output relay 1 relay; 2 NO contacts/2 NC contacts	Output relay 1 relay; 3 NO contacts/1 NC contact	Output relay 1 relay; 1 NO contact/1 NC contact
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC (21.6...28 V DC) - 29 mA	**51300**		
24 V DC (21.6...28 V DC) - 30 mA		**51301**	
24 V AC/DC (21.6...28 V AC/DC) - 38 mA			**51302**
Utilization category			
AC-1	5 A (24/110/230 V AC)		6 A (24/110/230 V AC)
DC-13	2 A (24 V DC); 0.4 A (110 V DC); 0.2 A (230 V DC)		3 A (24 V DC); 0.22 A (110 V DC); 0.1 A (230 V DC)
AC-15	4 A (24 V AC); 3 A (110 V AC); 2 A (230 V AC)		3 A (24/110/230 V AC)
Input			
LED display	LED (red)		LED (green)
Output			
Switching voltage	max. 250 V AC/DC		
Switching current per output	max. 5 A		max. 6 A
Min. load current	300 mA		10 mA
Power rating (voltage dependent)	max. 1 000 VA/50 W		max. 1 500 VA/100 W
Switching frequency	max. 0.1 Hz (with load)	max. 1 Hz	max. 5 Hz
Contact material	Ag Ni 10 hv	Ag hv; Ag Sn O2	Ag Ni 10 hv
Energize/release/contact bounce time	15/15/2 ms		15/15/1.5 ms
General data			
Mech./ elect. life	1 000 000 switching cycles/load dependent		10 000 000 switching cycles/load dependent
Test isolation voltage	2.5 kV		4 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Temperature range	-20...+50 °C		
Dimension drawing			
			
Notes			

MURR ELEKTRONIK
stay connected

Relays

– Screw terminals

	RM	**RM**
	Output relay	Output relay
	3 relays; each 1 NO/NC contact	4 relays; each 1 NO contact
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC (19.2...30 V DC) - 16 mA	**51403**	**512498**
Utilization category		
AC-1	8 A (24/110/230 V AC)	5 A (24/110/230 V AC)
AC-15	3 A (24/110/230 V AC)	
DC-13	1.5 A (24 V DC); 0.3 A (110 V DC); 0.15 A (230 V DC)	
Input		
LED display	LED (red)	
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A	max. 5 A
Min. load current	100 mA	
Power rating (voltage dependent)	max. 1 250 VA/240 W	
Switching frequency	max. 0.1 Hz (with load)	
Contact material	Ag Sn O2	Ag hv
Energize/release/contact bounce time	10/10/2 ms	
General data		
Mech./ elect. life	20 000 000 switching cycles/load dependent	50 000 000 switching cycles/load dependent
Test isolation voltage	4 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Temperature range	-20...+50 °C	
Dimension drawing		
		
Notes		

Safety relay

– Protection-door and emergency-stop control

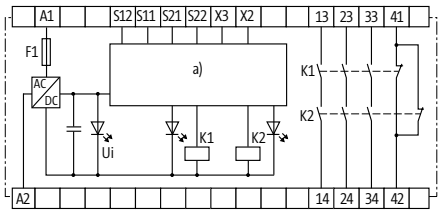
Approvals: cULus Listed

MIRO SAFE+ Switch H 48-230

with/without start button monitoring

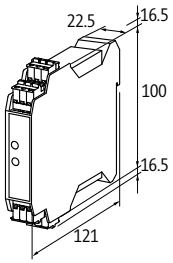


Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-1020012
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	48...240 V AC
Input current	max. 2.8 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

MURR ELEKTRONIK
stay connected

Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

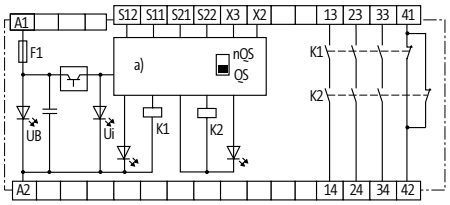
Approvals: c UL us Listed, CCC

MIRO SAFE+ Switch H L 24

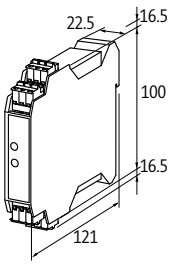
with/without start button monitoring



Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-3020012
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 4.9 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 8 A
Total current	24 A (45 °C); 18 A (55 °C); 12 A (60 °C)
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Safety relay

– Protection-door and emergency-stop control

– Light curtain control

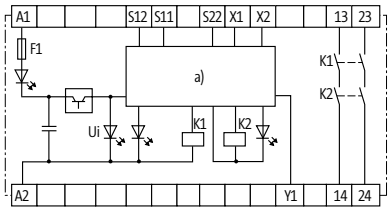
– Safety magnetic switch control

MIRO SAFE+ Switch ECOA 24

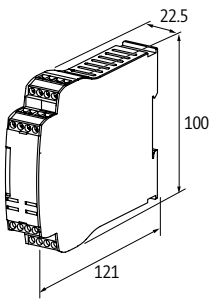
without start button monitoring



Circuit diagram	



Order Data	**Art-No.**
2 safety contacts	**3000-33113-3020005**
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/4 A; min. 5 V AC/1 mA (ohm./ind.), at suitable suppression
AC-15	2 A (230 V AC) STOP0
DC-13	1 A (24 V DC) STOP0
Alarm outputs	100 mA (24 V DC)
Safety Indicators	
PL	up to 4
Category	–
DC	–
SIL	–
Service life	–
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 5.2 VA/2.0 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 4 A
Number of auxiliary contacts	0
Number of alarm outputs	1 - (Y1)
Number of safety contacts	2 - (13-14; 23-24)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Screw terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes	

MURR ELEKTRONIK
stay connected

Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

Approvals: c UL us Listed

MIRO SAFE+ Switch BA L 24

without start button monitoring

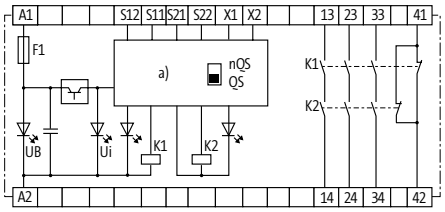


MIRO SAFE+ Switch BCS L 24

with start button monitoring

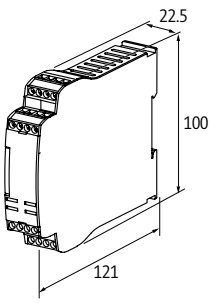


Circuit diagram



Order Data	Art-No.	Art-No.
3 safety contacts	**3000-33113-3020025**	**3000-33113-3020020**
Utilization category		
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression	
AC-15	6 A (230 V AC) STOP0	
DC-13	6 A (24 V DC) STOP0	
Safety Indicators		
PL	up to e	
Category	up to 4	
DC	99%	
SIL	up to 3	
Service life	20 years	
Input		
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)	
Input current	max. 4.9 VA/2.0 W	max. 4.4 VA/1.8 W
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A	
Total current	24 A (45 °C); 18 A (55 °C); 12 A (60 °C)	
Number of auxiliary contacts	1 - (41-42)	
Number of alarm outputs	0	
Number of safety contacts	3 - (13-14); (23-24); (33-34)	
Contact material	AgSnO, self cleaning, positively driven	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	
Connection	Screw terminals	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	

Dimension drawing



Notes

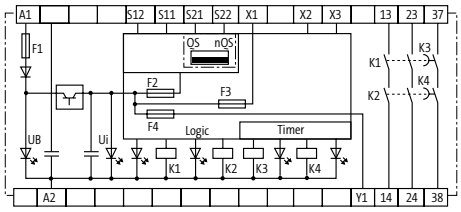
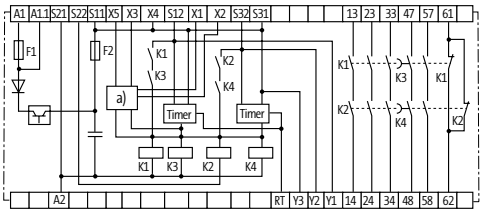
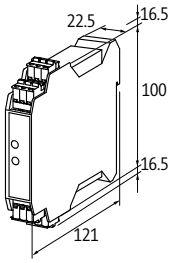
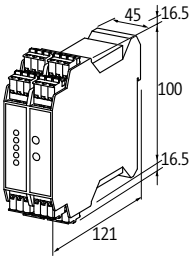
Safety relay

– Protection-door and emergency-stop control

– Light curtain control

– Safety magnetic switch control

Approvals: cULus Listed

	MIRO SAFE+ T 1 24 with/without start button monitoring	**MIRO SAFE+ T 2 24** with/without start button monitoring
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
3 safety contacts	**3000-33113-3020065**	
5 safety contacts		**3000-33113-3020060**
Utilization category		
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 5 V AC/5 mA (ohm./ind.), at suitable suppression	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
Safety contacts (STOP 1)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression	
AC-15	6 A (230 V AC) STOP0; 3 A (230 V AC) STOP1	
DC-13	5 A (24 V DC) STOP0; 2 A (24 V DC) STOP1	6 A (24 V DC) STOP0; 2 A (24 V DC) STOP1
Safety Indicators		
PL	up to e (STOP0); up to d (STOP1)	
Category	up to 4 (STOP0); up to 3 (STOP1)	
DC	99% (STOP0); min. 60% (STOP1)	
SIL	up to 3 (STOP0); up to 2 (STOP1)	
Service life	20 years	
Input		
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)	
Input current	5.9 VA/2.4 W (with monitoring output)	max. 7.1 VA/3.2 W (with monitoring output)
Output		
Switching voltage	max. 250 V AC/DC	
Switching current per output	max. 8 A (STOP0); max. 6 A (STOP1)	max. 6 A
Number of auxiliary contacts	0	1 - (31-32)
Total current (STOP 0)	–	18 A (45 °C); 15 A (55 °C); 12 A (60 °C)
Number of alarm outputs	1 - (Y1)	3 - (13-14); (23-24); (33-34)
Total current (STOP 1)	–	12 A (45 °C); 10 A (55 °C); 8 A (60 °C)
Number of safety contacts	2 - (13-14), (23-24), STOP0; 1 - (37-38), STOP1	3 - (13-14), (23-24), (33-34), STOP0; 2 - (47-48), (57-58), STOP1
Contact material	AgSnO, self cleaning, positively driven	
General data		
Mech./ elect. life	10 000 000 switching cycles/load dependent	
Connection	Spring clamp plug-in terminals	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		
		

MURR ELEKTRONIK
stay connected

Safety relay

– Two hand control

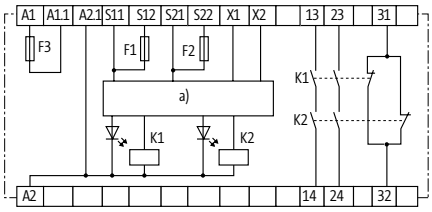
MIRO SAFE+ HAND 24

without start button monitoring



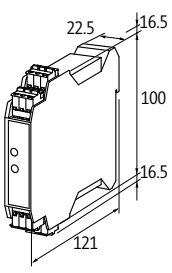
Approvals: c UL us Listed

Circuit diagram



Order Data	Art-No.
2 safety contacts	3000-33113-3020030
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	24 V DC ±10%
Input current	max. 1.2 W
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	1 - (31-32)
Number of alarm outputs	0
Number of safety contacts	2 - (13-14); (23-24)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

Safety relay

– Protection-door control

– Pressure-sensitive mat. control

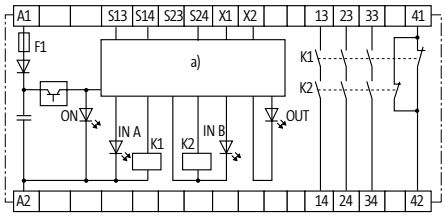
Approvals: c UL us Listed

MIRO SAFE+ STEP 24

without start button monitoring

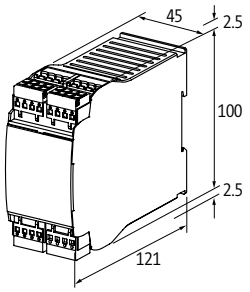


Circuit diagram



Order Data	Art-No.
3 safety contacts	3000-33113-3020050
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/8 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC) STOP0
DC-13	6 A (24 V DC) STOP0
Safety Indicators	
PL	up to e
Category	up to 4
DC	99%
SIL	up to 3
Service life	20 years
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 3.7 VA/1.6 W (24 V DC)
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 8 A
Number of auxiliary contacts	1 - (41-42)
Number of alarm outputs	0
Number of safety contacts	3 - (13-14); (23-24); (33-34)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+60 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

MURR ELEKTRONIK
stay connected

Expansion modules

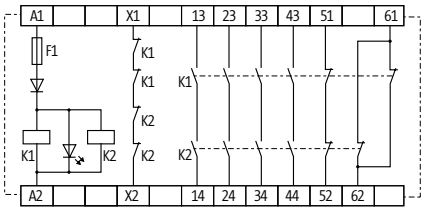
MIRO SAFE+ E 24

Expansion module



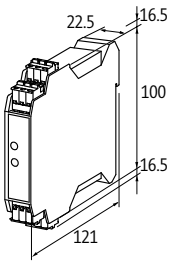
Approvals: c UL us Listed

Circuit diagram



Order Data	Art-No.
4 NO contacts	3000-33113-3020075
Utilization category	
Safety contacts (STOP 0)	max. 250 V AC/6 A; min. 10 V AC/10 mA (ohm./ind.), at suitable suppression
AC-15	6 A (230 V AC)
DC-13	6 A (24 V DC)
Safety Indicators	
PL	up to e
Category	up to 4
SIL	up to 3
Service life	20 years
Input	
Input voltage	24 V DC (-15 +20%), 24 V AC (-15 +10%)
Input current	max. 1.0 VA
Output	
Switching voltage	max. 250 V AC/DC
Switching current per output	max. 6 A
Number of auxiliary contacts	2 - (51-52); (61-62)
Number of alarm outputs	0
Number of contacts	4 - (13-14); (23-24); (33-34); (43-44)
Contact material	AgSnO, self cleaning, positively driven
General data	
Mech./ elect. life	10 000 000 switching cycles/load dependent
Connection	Spring clamp plug-in terminals
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	-25...+45 °C (storage temperature -40...+85 °C)

Dimension drawing



Notes

Labeling accessories			Art-No.
	**ACS label plate (KM 5)**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	5 × 10 mm		**90931**
	**Label plate (KWI 5/15)**		
	(88 pieces per plate)		**90901**

Wiring accessories			Art-No.
	**Potential plug link**		
	max. 48 V/2 A	RMM..., RMMD...	**90960**
	**Potential plug link**		
	max. 50 V/2 A	MIRO	**90961**
	**Potential plug link**		
	blue	MIRO 6.2 pluggable	**3000-90000-0300010**
	**Potential plug link**		
	black	MIRO 6.2 pluggable	**3000-90000-0300020**
	**Potential rail blue**		
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90975**
	40-pole, spacing 12 mm	RMM..., RMMD...	**90970**
	**Potential rail red**		
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90976**
	40-pole, spacing 12 mm	RMM..., RMMD...	**90971**
	**End caps for potential rail**		
	blue	MIRO 6.2 RMM..., RMMD...	**90980**
	**End caps for potential rail**		
	red	MIRO 6.2 RMM..., RMMD...	**90982**

Wiring accessories			Art-No.
	**Wire chain 16-pole**		
	Connection cable left and right approx. 50 cm; bk; 1 mm²	MIRO (spring clamp terminals)	**90977**
	**Double spring clamp terminal**		
	pluggable	MIRO SAFE+	**3000-33010-0000000**



OPTOCOUPLERS / SEMICONDUCTORS
SWITCHING WITHOUT WEAR

- **Shortest possible switching times**
- **High switching frequencies**
- **Resistant to EMC interference**

MILLIONS OF SWITCHING CYCLES – EVEN WITH HIGH FREQUENCIES

Optocouplers and semiconductors are used to combine different signal levels or to isolate one signal from another. They are similar to a relay interface because they provide an optoelectronic signal transfer between input and output.

Optocouplers and semiconductors have a long life span because they don‘t have any mechanical components that could wear out. They are suitable for applications with high switching frequencies, even over a long time.

Some benefits of optocouplers and semiconductors:

- Silent operation
- No contact bounce
- Galvanic separation between input and output
- High resistance to shock and vibration
- High switching currents
- Low input power

Optocouplers / Semiconductors



Optocouplers
• Pluggable
• DC applications

Page 1.10.1



Optocouplers
• DC applications

Page 1.10.2



Semiconductors
• AC applications

Page 1.10.18

MURR ELEKTRONIK
stay connected

Terminal optocoupler

– pluggable

– with bridge system

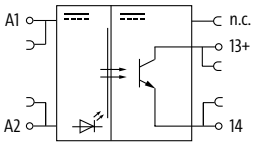
– Complete module

MIRO 6.2

Transistor 6 A
Spring clamp terminals

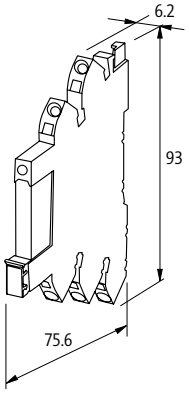


Circuit diagram

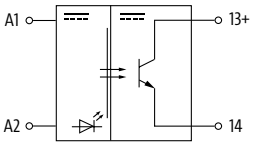
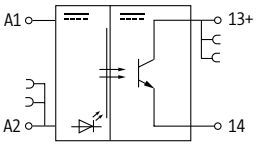
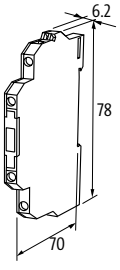
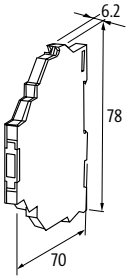
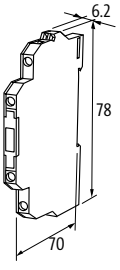
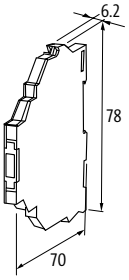


Order Data	**Art-No.**
24 V DC (18...30 V DC) - 9 mA	**3000-32512-2100040**
Accessories	**Art-No.**
Removable plug-in module	**3000-32522-2100040**
Input	
Connection voltage - current	24 V DC (18...30 V DC) - 9 mA
LED display	LED (yellow)
Output	
Switching time ON/OFF	15/31 µs
Switching voltage	3...30 V DC
Switching current per output	10 mA...6 A
Saturation voltage (across output)	max. 240 mV
Switching frequency	max. 500/50 Hz (ohm./ind.)
General data	
Test isolation voltage	50 V
Surge voltage resistance	2.5 kV
Protection	IP20
Mounting method	pluggable
Temperature range	-25...+50 °C

Dimension drawing



Notes

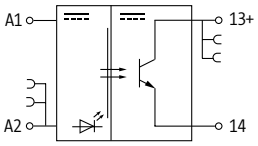
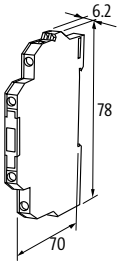
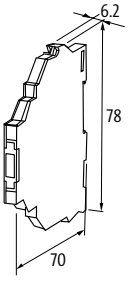
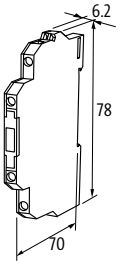
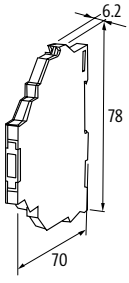
Terminal optocoupler **– with bridge system**	**MIRO 6.2** Transistor 1 A Screw terminals	**MIRO 6.2** Transistor 1 A Spring clamp terminals	**MIRO 6.2** Transistor 2 A Screw terminals	**MIRO 6.2** Transistor 2 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52515**	**6652515**		
5 V DC/6 mA			cURus, cCSAus **52502**	cURus, cCSAus **6652502**
Input				
Voltage range ON	11...30 V DC		4...5.5 V DC	
Voltage range OFF	0...5 V DC		0...2 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	3...48 V DC		5...48 V DC	
Switching current per output	500 µA...1 A		1 mA...2 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 0.3 V DC	
Leakage current (output is open)	max. 25 µA		max. 10 µA	
Switching time ON/OFF	1.5/1 ms (100 mA load)		1/5 ms	
Switching frequency	max. 40/4 Hz (resist./ind.)		max. 10/1 Hz (resist./ind.)	
General data				
Test isolation voltage	500 V		2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

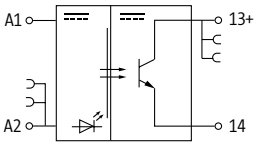
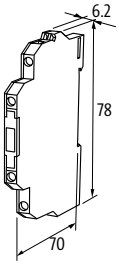
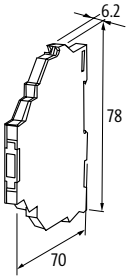
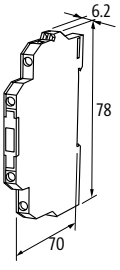
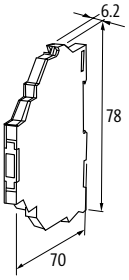
MURR ELEKTRONIK
stay connected

Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2	**MIRO 6.2**	**MIRO 6.2**	**MIRO 6.2**
	Transistor 2 A Screw terminals	Transistor 2 A Spring clamp terminals	Transistor 0.5 A Screw terminals	Transistor 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52501**	**6652501**		
48 V DC/6 mA			**52505**	**6652505**
Input				
Voltage range ON	10...48 V DC		18...56 V DC	
Voltage range OFF	0...5 V DC		0...12 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.3 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 10 µA			
Switching time ON/OFF	1/5 ms		20/100 µs	
Switching frequency	max. 10/1 Hz (resist./ind.)		max. 1 kHz/10 Hz (resist./ind.)	
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

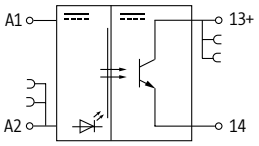
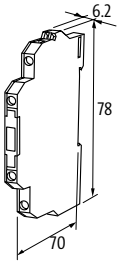
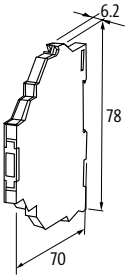
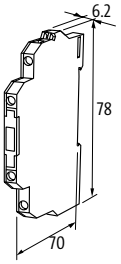
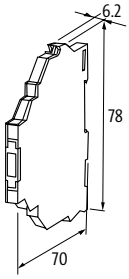
Terminal optocoupler – with bridge system	MIRO 6.2 Transistor 6 A Screw terminals	MIRO 6.2 Transistor 6 A Spring clamp terminals	MIRO 6.2 Transistor 10 A Screw terminals	MIRO 6.2 Transistor 10 A Spring clamp terminals
Approvals: cULus				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	cURus **52519**	**6652519**		
24 V DC/10 mA			cURus **52520**	**6652520**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	approx. 10 mA		10 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...6 A (without derating)		1 mA...10 A	
Saturation voltage (across output)	max. 0.1 V DC		max. 0.12 V DC	
Leakage current (output is open)	max. 25 µA			
Switching time ON/OFF	2/5 ms		2/5 ms (10 A load)	
Switching frequency	max. 1/0.1 Hz (resist./ind.)			
General data				
Test isolation voltage	2.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

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Terminal optocoupler

– with bridge system

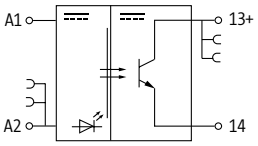
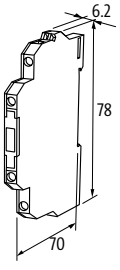
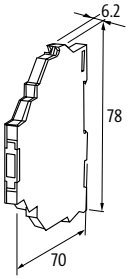
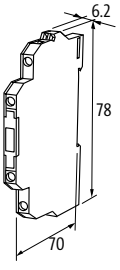
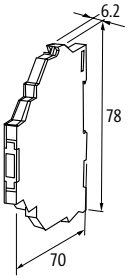
Approvals: cULus cSPus

	MIRO 6.2 Transistor 10 A Screw terminals	**MIRO 6.2** Transistor 10 A Spring clamp terminals	**MIRO 6.2** Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA (pulse control operation)	**52521**	**6652521**		
24 V DC/6 mA			**52500**	**6652500**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	10 mA		6 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...10 A, short-circuit and overload protected (pulse switching)		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.12 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 25 µA		max. 10 µA	
Switching time ON/OFF	2/5 ms (10 A load)		35/400 µs	
Switching frequency	max. 1/0.1 Hz (resist./ind.)		max. 1000/100 Hz (resist./ind.)	
General data				
Test isolation voltage	2.75 kV		3.75 kV	
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

Terminal optocoupler

– with bridge system

Approvals:

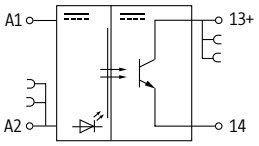
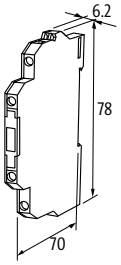
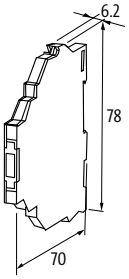
	MIRO 6.2 Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals	**MIRO 6.2** Transistor 0.5 A Screw terminals	**MIRO 6.2** Transistor 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
110 V AC/DC - 6 mA	**52506**	**6652506**		
230 V AC - 6 mA			**52507**	**6652507**
Input				
Voltage range ON	70...130 V AC/DC		90...250 V AC	
Voltage range OFF	0...30 V AC/DC		0...40 V AC	
Control current	6 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	0.1 mA...0.5 A			
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	100/700 µs		55/15 ms	
Switching frequency	max. 500/30 Hz (resist./ind.)			
General data				
Test isolation voltage	3.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

MURR ELEKTRONIK
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Terminal optocoupler

– with bridge system

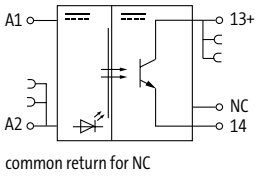
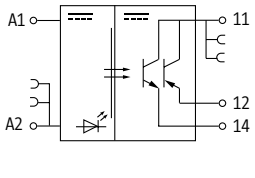
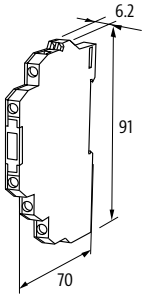
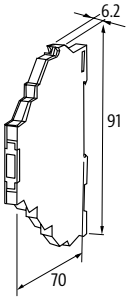
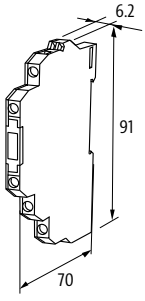
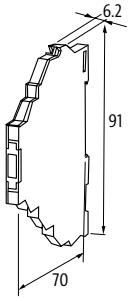
Approvals:

	MIRO 6.2 Transistor 2 A Screw terminals	MIRO 6.2 Transistor 2 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
230 V AC - 6 mA	**52508**	**6652508**
Input		
Voltage range ON	90...250 V AC	
Voltage range OFF	0...30 V AC	
Control current	15 mA	
LED display	LED (yellow)	
Output		
Switching time ON/OFF	3/10 ms	
Switching voltage	5...48 V DC	
Switching current per output	1 mA...2 A (without derating)	
Saturation voltage (across output)	max. 0.3 V DC	
Leakage current (output is open)	max. 0.3 mA	
Switching frequency	max. 10/1 Hz (resist./ind.)	
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		
		
Notes		

Terminal optocoupler

– with bridge system

Approvals:

	MIRO 6.2 Transistor 2 A Inrush current limiting Screw terminals	**MIRO 6.2** Transistor 2 A Inrush current limiting Spring clamp terminals	**MIRO 6.2** Transistor 0.5 A electr. NO/NC contact Screw terminals	**MIRO 6.2** Transistor 0.5 A electr. NO/NC contact Spring clamp terminals
				
Circuit diagram				
	 common return for NC			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**52512**	**6652512**	**52510**	**6652510**
Input				
Voltage range ON	10...53 V DC			
Voltage range OFF	0...5 V DC			
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC			
Switching current per output	1 mA...2 A (overload protected)		0.1 mA...0.5 A	
Saturation voltage (across output)	max. 0.35 V DC		max. 1.2 V DC	
Leakage current (output is open)	max. 0.1 mA			
Switching time ON/OFF	5/10 ms		40/150 µs	
Switching frequency	max. 10 Hz			
General data				
Test isolation voltage	2.5 kV		3.75 kV	
Housing	Black plastic, flame retardant			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

MURR ELEKTRONIK
stay connected

Terminal optocoupler

– with bridge system

Approvals: cULus

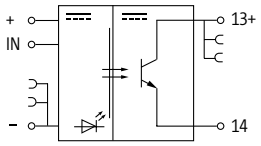
	MIRO 6.2 Transistor 0.2 A Control current 0.1 mA (5 V DC) Screw terminals	**MIRO 6.2** Transistor 0.2 A Control current 0.1 mA (5 V DC) Spring clamp terminals	**MIRO 6.2** Transistor 2 A short-circuit protected Screw terminals	**MIRO 6.2** Transistor 2 A short-circuit protected Spring clamp terminals
Circuit diagram				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/0.1 mA (5 V DC)	cCSAus **52511**	cCSAus **6652511**		
24 V DC/6 mA			**52503**	**6652503**
Input				
Voltage range ON	15...30 V DC		10...48 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	0.1 mA (5 V)		6 mA	
LED display	LED (yellow)			
Output				
Switching voltage	5...48 V DC		10...35 V DC	
Switching current per output	0.1 mA...0.2 A		1 mA...2 A (short-circuit protected)	
Saturation voltage (across output)	max. 1.2 V DC			
Leakage current (output is open)	max. 0.1 mA			
Switching frequency	max. 20 kHz		max. 1 kHz	
Switching time ON/OFF	10/18 µs		90/120 µs	
General data				
Test isolation voltage	3.75 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
Notes				

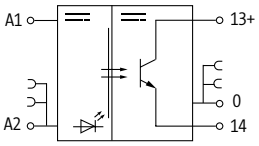


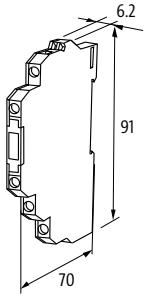


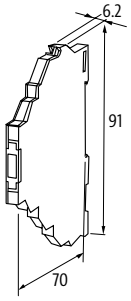


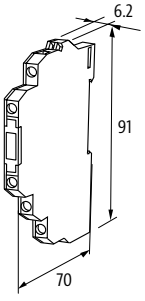


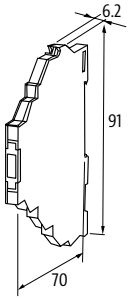


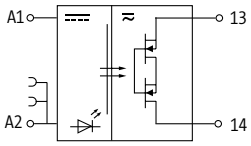
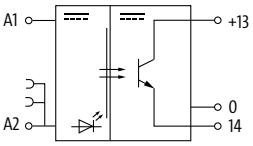
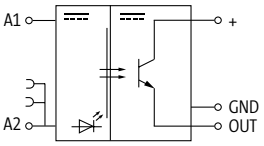
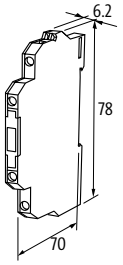
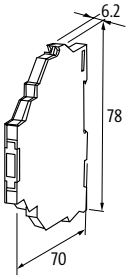
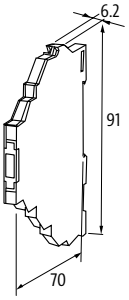










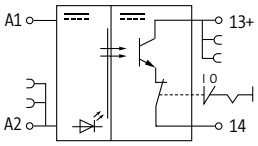
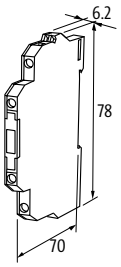
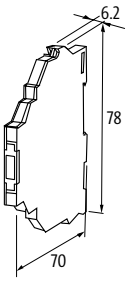
Terminal optocoupler – with bridge system	**MIRO 6.2** Transistor 1 A Multi voltage output Screw terminals	**MIRO 6.2** Transistor 1 A Multi voltage output Spring clamp terminals	**MIRO 6.2** Transistor 0.2 A Spring clamp terminals	**MIRO 6.2** Transistor 0.1 A Spring clamp terminals
				
Circuit diagram				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA	**52572**	**6652572**	UR, cCSAus **526071**	cURus, cCSAus **526100**
Input				
Voltage range ON	10...53 V DC		10...35 V DC	10...30 V DC
Voltage range OFF	0...5 V DC			0...7 V DC
Control current	10 mA		6 mA	5.5 mA
LED display	LED (yellow)		LED (green)	LED (yellow)
Output				
Switching time ON/OFF	3/6 ms		5/7 µs	0.4/0.1 µs
Switching voltage	5...250 V AC/5...350 V DC		10...30 V DC	5...48 V DC
Switching current per output	1 mA...1 A		1 mA...0.2 A	0...0.1 A
Saturation voltage (across output)	max. 0.7 V AC/DC		max. 0.3 V AC/DC	max. 1.2 V AC/DC
Leakage current (output is open)	max. 25 µA			max. 250 µA
Switching frequency	max. 10 Hz		max. 20 kHz/200 Hz (resist./ind.)	500 kHz (ohmic)
General data				
Test isolation voltage	2.75 kV		2.5 kV	2.75 kV
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
Notes				

MURR ELEKTRONIK
stay connected

Terminal optocoupler

– Isolation function in output circuit

Approvals:

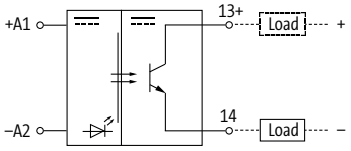
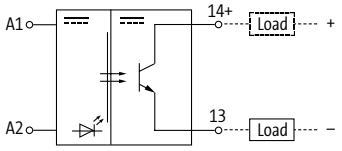
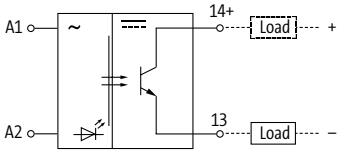
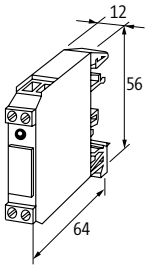
	MIRO 6.2 Transistor 2 A Screw terminals	**MIRO 6.2** Transistor 2 A Spring clamp terminals
		
Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/7 mA	**52513**	**6652513**
Input		
Voltage range ON	10...48 V DC	
Voltage range OFF	0...5 V DC	
Control current	7 mA	
LED display	LED (yellow)	
Output		
Switching time ON/OFF	1/5 ms	
Switching voltage	5...48 V DC	
Switching current per output	1 mA...2 A	
Saturation voltage (across output)	max. 0.3 V DC	
Leakage current (output is open)	max. 0.3 mA	
Switching frequency	max. 10/1 Hz (resist./ind.)	
General data		
Housing	Black plastic, flame retardant	
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	-20...+60 °C	
Dimension drawing		
Notes		

OPTOCOUPLERS / SEMICONDUCTORS

Optocouplers

– Inrush current limiting

– Screw terminals

	AMMS		**EMMS**
	Transistor 1.2 A		Transistor 1.2 A
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
3.5...5.5 V DC/6 mA	**50041**		
24 V DC/6 mA		**50040**	
110/230 V AC/2.7 mA			**50105**
Input			
Voltage range ON	3.5...5.5 V DC	10...53 V DC	100...253 V AC
Voltage range OFF	0...0.8 V DC	0...3 V DC	0...40 V AC
Input current	6 mA		2.7 mA
LED display	LED (red)		
Output			
Leakage current (output is open)	max. 0.3 mA		
Switching current per output	1 mA...1.2 A		
Switching voltage	4.5...53 V DC		
Saturation voltage (across output)	max. 1.2 V DC		
Switching time ON/OFF	100/700 µs		20/50 ms
Switching frequency	max. 500 Hz (resist.) at max. 0.2 A/max. 30 Hz (ind.)		max. 5 Hz
General data			
Test isolation voltage	3.75 kV		
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Dimension drawing			
			
Notes			

MURR ELEKTRONIK
stay connected

Optocouplers

– Inrush current limiting

– Screw terminals

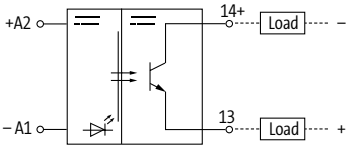
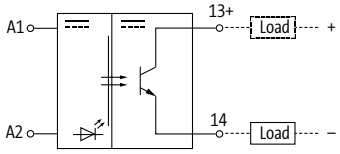
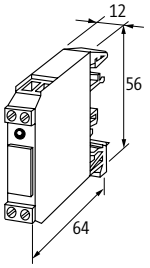
AMMS

Transistor 0.5 A



AMMS

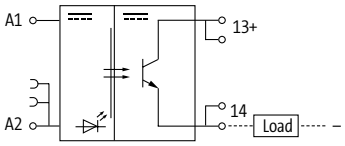
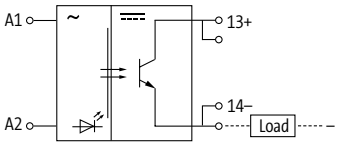
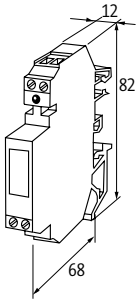
Transistor 2 A

Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
4...30 V DC/10 mA	**50010**	
24 V DC/6 mA		**50070**
Input		
Voltage range ON	4...30 V DC	10...53 V DC
Voltage range OFF	0...2 V DC	0...3 V DC
Input current	max. 10 mA	6 mA
LED display	LED (red)	
Output		
Switching voltage	4.5...44 V DC	4.5...40 V DC
Switching current per output	1 mA...0.5 A	10 mA...2 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.1 V DC
Leakage current (output is open)	max. 0.3 mA	max. 0.1 mA
Switching time ON/OFF	65 µs/20 ms	2/8 ms
Switching frequency	max. 7 kHz (resist.) at max. 0.1 A/max. 10 Hz (ind.)	max. 20/5 Hz (resist./ind.)
General data		
Test isolation voltage	3.75 kV	2.5 kV
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		
		
Notes		

Optocouplers

– Double terminals on the output side

– Screw terminals

	AMMDS Transistor 0.1 A with minus plug link	**AMMDS** Transistor 2 A with minus plug link	**AMMDS** Transistor 0.1 A
			
Circuit diagram			
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/6 mA	**50081**	**50080**	
230 V AC - 10 mA			**50110**
Input			
LED display	LED (red)		
Input current	6 mA		7.5 mA
Plug link (supplied)	Art.-No. 90960		–
Voltage range ON	10...53 V DC		195...253 V AC
Voltage range OFF	0...3 V DC		0...110 V AC
Output			
Switching voltage	4...40 V DC	4...35 V DC	4...40 V DC
Switching current per output	1 mA...0.1 A	10 mA...2 A (short-circuit protected)	1 mA...0.1 A
Saturation voltage (across output)	max. 1.2 V DC	max. 0.5 V DC	max. 1.2 V DC
Leakage current (output is open)	max. 0.3 mA		
Switching time ON/OFF	1.5/2 ms	5/15 ms	50/120 ms
Switching frequency	max. 300/40 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		
Test isolation voltage	3.75 kV	2.5 kV	3.75 kV
Dimension drawing			
			
Notes			

MURR ELEKTRONIK
stay connected

Optocouplers

– with minus plug link

– Screw terminals

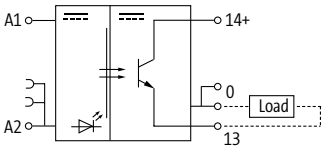
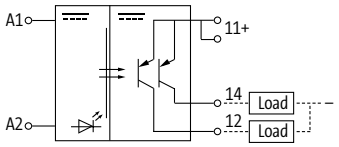
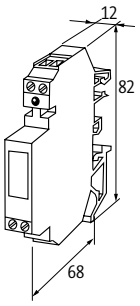
AMMDS

Transistor 0.2 A
Double terminals on the output side
for rapid switching



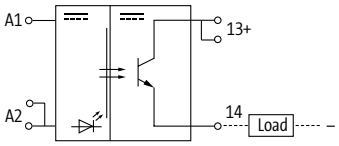
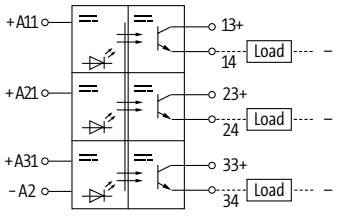
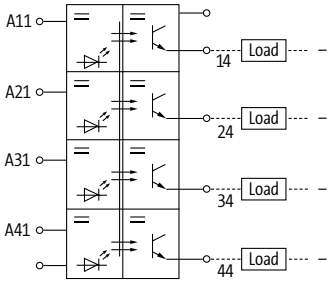
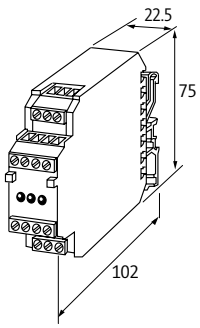
AMMDS

Transistor 1 A

Circuit diagram		
Order Data	**Art-No.**	**Art-No.**
24 V DC/15 mA	**50082**	
24 V AC/DC - 10 mA		**50085**
Input		
Voltage range ON	10...35 V DC	10...53 V DC
Voltage range OFF	0...5 V DC	0...6 V DC
Input current	10 mA	
LED display	LED (red)	
Plug link (supplied)	Art.-No. 90960	–
Output		
Switching voltage	5...35 V DC	4.5...53 V DC
Switching current per output	1 mA...0.2 A	1 mA...1 A
Saturation voltage (across output)	max. 0.5 V DC	
Leakage current (output is open)	max. 0.3 mA	
Switching time ON/OFF	20/14 µs	25/75 µs
Switching frequency	max. 20 kHz/200 Hz (resist./ind.)	max. 1 kHz/10 Hz (resist./ind.)
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		
Notes		

Power opto-coupler modules

– Screw terminals

	AMS Transistor 4 A	**AMS** Transistor 2 A (3-way) 3 NO contacts	**AMS** Transistor 2 A (4-way) 4 NO contacts
			
Circuit diagram			
		 common negative for all 3 inputs = – A2	
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
24 V DC/10 mA	**50044**	**50043**	
24 V DC/3 mA			cCSAus **50015**
Input			
Voltage range ON	10...53 V DC		20...30 V DC
Voltage range OFF	0...3 V DC		0...6 V DC
Input current	14.5 mA	10 mA	27 mA
LED display	LED (red)		LED (yellow)
Output			
Switching voltage	4.5...53 V DC	4.5...35 V DC	5...30 V DC
Switching current per output	10 mA...4 A	10 mA...2 A (short-circuit protected)	1 mA...2 A
Saturation voltage (across output)	max. 1.5 V DC	max. 0.5 V DC	max. 0.05 V DC
Switching time ON/OFF	4/7 µs	2/15 ms	1/5 ms
Leakage current (output is open)	–	max. 0.3 mA	max. 0.01 mA
Switching frequency	max. 2 kHz/4 Hz (resist./ind.)	max. 10/1 Hz (resist./ind.)	
General data			
Test isolation voltage	3.75 kV	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)		
Housing	Black plastic, flame retardant		
Temperature range	-20...+60 °C		-25...+50 °C
Dimension drawing			
			
Notes			

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Optocouplers

– DC Motor control

– Over current / temperature monitoring

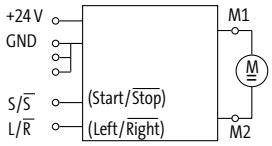
MIRO 12.4
Transistor 3 A
Screw terminals



MIRO 12.4
Transistor 3 A
Spring clamp terminals

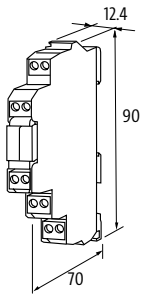


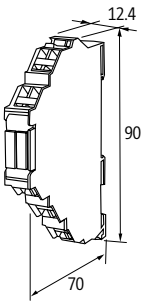
Circuit diagram



Order Data	Art-No.	Art-No.
24 V DC/10 mA	**50140**	**6650140**
Input		
Voltage range ON	15...30 V DC	
Voltage range OFF	0...5 V DC	
Input current	10 mA	
LED display	LED (yellow): right running; LED (green): left running	
Output		
Switching voltage	19.2...30 V DC	
Switching current per output	max. 3 A	
Highest current	approx. 6 A for 100 ms	
Saturation voltage (across output)	max. 1.4 V DC	
Leakage current (output is open)	max. 10 mA	
Switching time ON/OFF	1.2/10 ms	
Switching frequency	max. 1 Hz (motor dependant)	
Changing time	max. 50 ms	
LED display	LED (red): error (over current/over heated)	
General data		
Test isolation voltage	no galvanic separation	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	0...+50 °C	

Dimension drawing



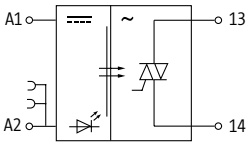
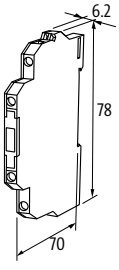
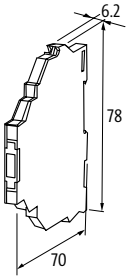
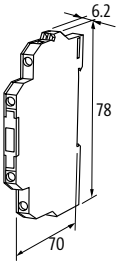
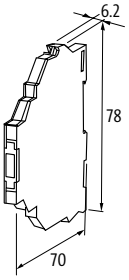


Notes

Terminal triac

– Zero potential switch

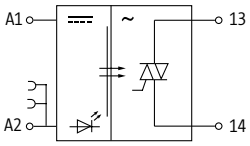
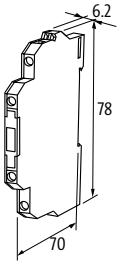
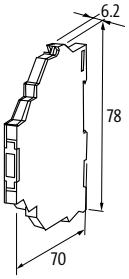
Approvals:

	MIRO 6.2	MIRO 6.2	MIRO 6.2	MIRO 6.2
	Triac 0.5 A	Triac 0.5 A	Triac 0.5 A	Triac 0.5 A
	Screw terminals	Spring clamp terminals	Screw terminals	Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
5 V DC/6 mA	**52551**	**6652551**		
24 V DC/6 mA			**52550**	**6652550**
Input				
Voltage range ON	4...5.5 V DC		10...53 V DC	
Voltage range OFF	0...2 V DC		0...5 V DC	
Control current	6 mA			
LED display	LED (yellow)			
Output				
Switching voltage	24...250 V AC			
Switching current per output	2 mA...0.5 A		1.5 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 mA			
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

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Terminal triac

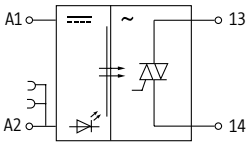
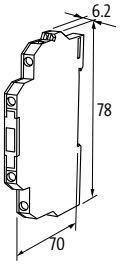
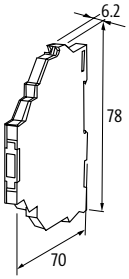
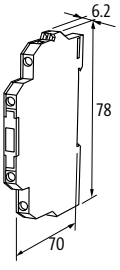
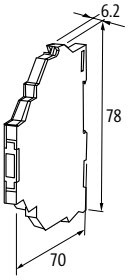
– Zero potential switch

	MIRO 6.2 Triac 1 A Screw terminals	**MIRO 6.2** Triac 1 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/9 mA	**52571**	**6652571**
Input		
Voltage range ON	12...53 V DC	
Voltage range OFF	0...3 V DC	
Control current	12 mA (24 V DC)	
LED display	LED (yellow)	
Output		
Switching voltage	12...250 V AC	
Switching current per output	10 mA...1 A	
Saturation voltage (across output)	max. 1.5 V AC	
Leakage current (output is open)	max. 1 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 2 Hz, depending on suppression	
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	0...+60 °C	
Dimension drawing		
		
Notes		

Terminal triac

– Zero potential switch

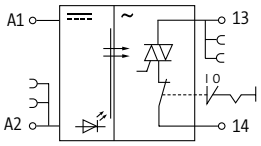
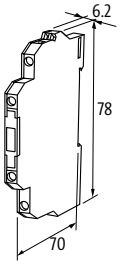
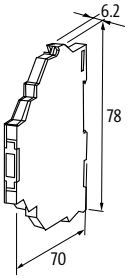
Approvals:

	MIRO 6.2 Triac 0.5 A Screw terminals	MIRO 6.2 Triac 0.5 A Spring clamp terminals	MIRO 6.2 Triac 0.5 A Screw terminals	MIRO 6.2 Triac 0.5 A Spring clamp terminals
				
Circuit diagram				
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
110 V AC/DC (95...121 V AC/DC) - 3.5 mA	**52556**	**6652556**		
230 V AC - 7 mA			**52557**	**6652557**
Input				
Voltage range ON	70...130 V AC/DC		140...250 V AC	
Voltage range OFF	0...35 V AC/DC		0...80 V AC	
Control current	3.5 mA		7 mA	
LED display	LED (yellow)			
Output				
Switching voltage	12...250 V AC			
Switching current per output	2 mA...0.5 A			
Saturation voltage (across output)	max. 1.5 V AC			
Leakage current (output is open)	max. 0.3 A	max. 0.3 mA		
Switching time ON/OFF	10/10 ms			
Switching frequency	max. 20 Hz, depending on suppression			
General data				
Test isolation voltage	2.5 kV			
Mounting method	DIN-rail mountable (EN 60715)			
Housing	Black plastic, flame retardant			
Temperature range	-20...+60 °C			
Dimension drawing				
				
Notes				

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Terminal triac

– Zero potential switch

	MIRO 6.2 Triac 0.5 A Screw terminals	**MIRO 6.2** Triac 0.5 A Spring clamp terminals
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/7 mA	**52561**	**6652561**
Input		
Voltage range ON	10...53 V DC	
Voltage range OFF	0...5 V DC	
Control current	7 mA	
LED display	LED (yellow)	
Output		
Switching voltage	24...250 V AC	
Switching current per output	2 mA...0.5 A	
Saturation voltage (across output)	max. 1.5 V AC	
Leakage current (output is open)	max. 0.3 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 20/1 Hz (resist./ind.)	
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		
		
Notes		

Triac modules

– Zero potential switch

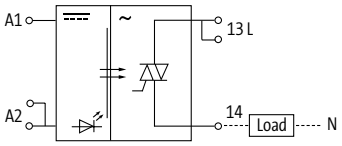
– Screw terminals

AMS

Triac 4 A

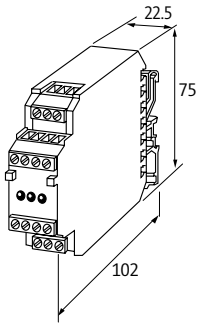


Circuit diagram



Order Data		**Art-No.**
24 V DC/10 mA		**50034**
Input		
Voltage range ON	10...53 V DC	
Voltage range OFF	0...3 V DC	
Input current	10 mA	
LED display	LED (red)	
Output		
Switching voltage	24...250 V AC	
Switching current per output	10 mA...4 A	
Saturation voltage (across output)	max. 1.4 V AC	
Leakage current (output is open)	max. 10 mA	
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 30/5 Hz (resist./ind.)	
General data		
Test isolation voltage	6 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	

Dimension drawing



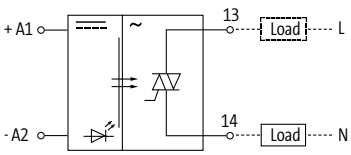
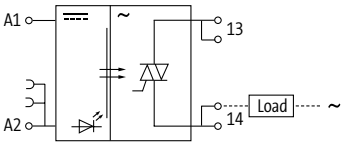
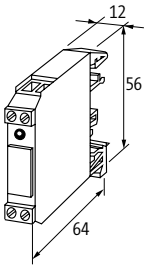
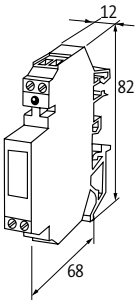
Notes

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Triac modules

– Zero potential switch

– Screw terminals

	AMMS	**AMMDS**
	Triac 1 A	Triac 2 A with minus plug link
		
Circuit diagram		
		
Order Data	**Art-No.**	**Art-No.**
24 V DC/6.6 mA	**50030**	
24 V DC/6 mA		**50092**
Input		
Voltage range ON	10...53 V DC	10...35 V DC
Voltage range OFF	0...3 V DC	
Input current	6.6 mA	6 mA
LED display	LED (red)	
Plug link (supplied)	–	Art.-No. 90960
Output		
Switching voltage	24...253 V AC	24...280 V AC
Switching current per output	50 mA...1 A	50 mA...2 A
Saturation voltage (across output)	max. 1.3 V AC	max. 1 V AC
Leakage current (output is open)	max. 5 mA	max. 2 mA
Switching time ON/OFF	10/10 ms	
Switching frequency	max. 20 Hz	max. 20/5 Hz (resist./ind.)
General data		
Test isolation voltage	2.5 kV	
Mounting method	DIN-rail mountable TH35 or G32 (EN 60715)	
Housing	Black plastic, flame retardant	
Temperature range	-20...+60 °C	
Dimension drawing		
		
Notes		

OPTOCOUPLERS / SEMICONDUCTORS

Labeling accessories			Art-No.
	**ACS label plate (KM 5)**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	**Label plate (KM 4)**		
	5 × 10 mm		**90931**
	**ACS label plate (KM 6/18)**		
	for self marking with ADEMARK markers		**7000-99003-0000000**
	**Label plate (KWI 5/15)**		
	(88 pieces per plate)		**90901**

Wiring accessories			Art-No.
	**Potential plug link**		
	max. 50 V/2 A	MIRO	**90961**
	**Potential plug link**		
	max. 48 V/2 A	RMM..., RMMD...	**90960**
	**Potential rail blue**		
	40-pole, spacing 12 mm	RMM..., RMMD...	**90970**
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90975**
	**Potential rail red**		
	40-pole, spacing 12 mm	RMM..., RMMD...	**90971**
	10-pole, spacing 6.2 mm	MIRO 6.2 (screw terminals)	**90976**
	**End caps for potential rail**		
	blue	MIRO 6.2 RMM..., RMMD...	**90980**
	red	MIRO 6.2 RMM..., RMMD...	**90982**

Wiring accessories			Art-No.
	**Wire chain 16-pole**		
	Connection cable left and right approx. 50 cm; bk; 1 mm²	MIRO (spring clamp terminals)	**90977**



SWITCHES
PERFECT CROSS-LINKING FOR YOUR APPLICATION

- **Reduces the installation effort**
- **Switches for the control cabinet IP20, IP50, and the field IP67**
- **Compact and robust design**

FROM SOLID BASIC FUNCTIONS TO AN ENORMOUS FUNCTIONAL VARIETY

Murrelektronik offers a broad portfolio of switches. Unmanaged switches are used to reliably cover basic functions at an advantageous price-performance ratio Lite-managed switches offer a large scope of functions and variants such as the PROFINET managed switches are tailored perfectly to the possibilities of PROFINET environments.

- Optimization of wiring flexibility and reduction of the complexity of installation solutions
- Easy insights into the communication and uncomplicated connection to network analysis tools or integrated web servers
- Relocation of the coupling level to the field creating space in the control cabinet by using compact and robust IP67 variants

Unmanaged Switches



Unmanaged Switches
- IP20
- IP50
- IP67

Page 1.11.1

Managed Switches



Lite-Managed Switches
- IP20
- IP67

Page 1.11.4



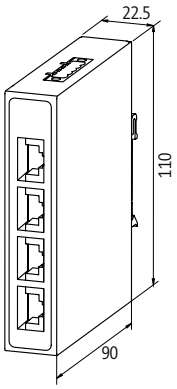
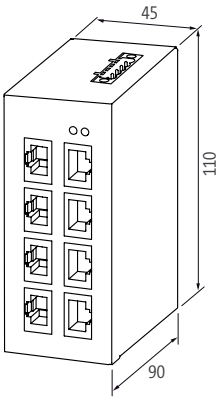
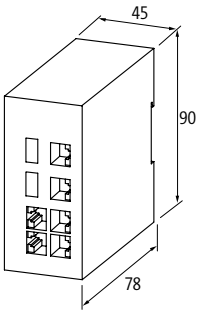
PROFINET-Managed Switches
- IP20
- IP67

Page 1.11.6

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Unmanaged Switch

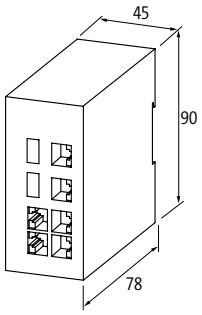
Approvals: c UL us Listed

	TREE 4TX Metal	TREE 8TX Metal	TREE 6TX Eco	TREE 8TX Metal
	IP50	IP50	IP20	IP50
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
4 ports	**58151**			
8 ports		**58152**		**58171**
6 ports			**58170**	
Connections				
Fieldbus	4 × RJ45	8 × RJ45	6 × RJ45	8 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm²		Screw plug-in terminal: 0.2...1.5 mm²	
Technical Data				
Operating voltage	2 × 9...48 V DC, redundancy		2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex			
Operating modes	Autocrossing Autonegotiation			
Switch Management				
Switch Form	Unmanaged Switch			
Webserver	no			
VLAN (QoS) IEEE 802.p	yes			
Port Mirroring	no			
Protocols	no			
Remote maintenance	no			
Alarm contact	no			
Diagnostic				
Communication status	via LED			
Monitoring - no voltage	yes			
General data				
Protection	IP50		IP20	IP50
Housing	Metal black		Black plastic	Metal black
Mounting method	DIN-rail mountable TH35 (EN 60715)			
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)		0...+60 °C (storage temperature -10...+70 °C)	-10...+70 °C (storage temperature -40...+85 °C)
Dimension drawing				
				
Notes				

Unmanaged Switch

Approvals: c UL us Listed

	TREE 6TX Metal IP50	TREE 8TX Metal 8 ports Gigabit IP50
		
Order Data	**Art-No.**	**Art-No.**
6 ports	**58172**	
8 ports Gigabit		**58173**
Connections		
Fieldbus	6 × RJ45	8 × RJ45
Supply	Screw plug-in terminal: 0.2...1.5 mm²	
Technical Data		
Operating voltage	2 × 9...30 V DC, redundancy	2 × 9...48 V DC, redundancy
Transfer rate	10/100 Mbit/s full duplex	10/100/1 000 Mbit/s full duplex
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP50	
Housing	Metal black	
Mounting method	DIN-rail mountable TH35 (EN 60715)	
Temperature range	-10...+70 °C (storage temperature -40...+85 °C)	
Dimension drawing		

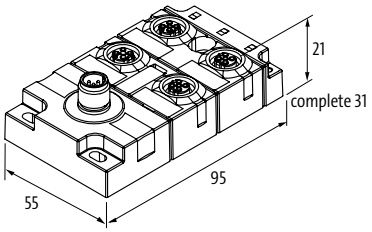
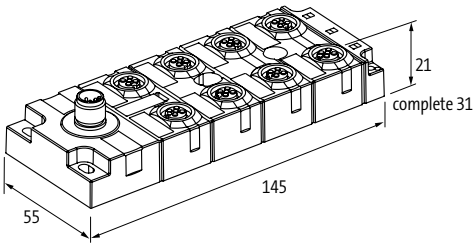


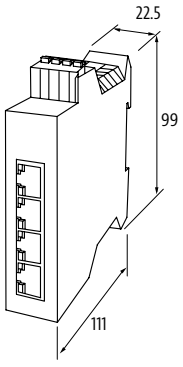
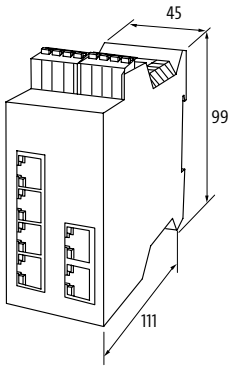
Notes	

MURR ELEKTRONIK
stay connected

Unmanaged Switch

Approvals: c UL us Listed

	TREE 4TX IP67 M12	TREE 8TX IP67 M12
	4 × M12 (female), D-coded IP67	8 × M12 (female), D-coded IP67
		
Order Data	**Art-No.**	**Art-No.**
4 ports	**58160**	
8 ports		**58161**
Connections		
Fieldbus	4 × M12 (female), D-coded	8 × M12 (female), D-coded
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	2 × 18...30 V DC, redundancy	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Unmanaged Switch	
Webserver	no	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	no	
Protocols	no	
Remote maintenance	no	
Alarm contact	no	
Diagnostic		
Communication status	via LED	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Zinc die casting, matte nickel plated	
Mounting method	4 hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -40...+80 °C)	
Dimension drawing		
		
Notes		

Lite - Managed Switch	TREE M-4TX IP20	TREE M-6TX IP20
		
Order Data	**Art-No.**	**Art-No.**
4 ports	**58181**	
6 ports		**58182**
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Lite - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	DHCP, SNMP (v1, v2c, v3), RSTP, STP	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		
		
Notes		

MURR ELEKTRONIK
stay connected

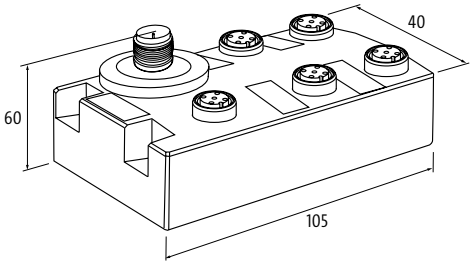
Lite - Managed Switch

TREE M-5TX-PN IP67

IP67

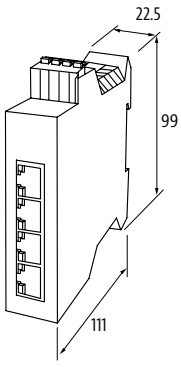
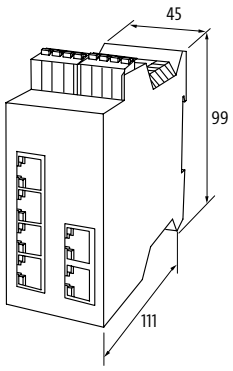


Order Data		Art-No.
5 ports		**58183**
Connections		
Fieldbus	5 × M12 (female), D-coded	
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	Lite - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Black plastic	
Mounting method	3 hole screw mounting	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	

PROFINET - Managed Switch

	TREE M-4TX	TREE M-6TX
	PROFINET - Managed Switch IP20	PROFINET - Managed Switch IP20
		
Order Data	**Art-No.**	**Art-No.**
4 ports	**58185**	
6 ports		**58186**
Connections		
Fieldbus	4 × RJ45	6 × RJ45
Supply	Spring clamp plug-in terminal: 0.2...2.5 mm²	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	PROFINET - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	yes
PROFINET		
Addressing	DCP	
FSU (Fast-Start-Up)	no	
Shared Device/Input	no	
Profinet Netload Class	I	
Specification	V2.3, Conformance Class B	
MRP	yes	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP20	
Housing	Black plastic	
Mounting method	DIN-rail mountable (EN 50022)	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		
		
Notes		

MURR ELEKTRONIK
stay connected

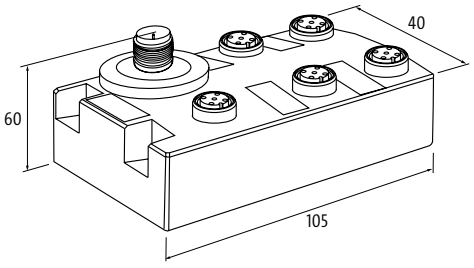
PROFINET - Managed Switch

TREE M-5TX-PN IP67

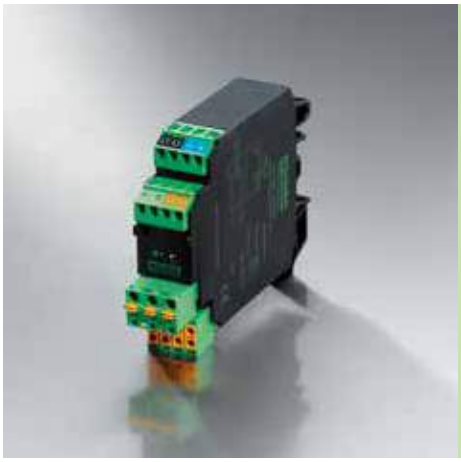
PROFINET - Managed Switch
IP67



Order Data		Art-No.
5 ports		**58184**
Connections		
Fieldbus	5 × M12 (female), D-coded	
Supply	1 × M12 (male), A-coded	
Technical Data		
Operating voltage	9.5...31.5 V	
Transfer rate	10/100 Mbit/s full duplex	
Operating modes	Autocrossing Autonegotiation	
Switch Management		
Switch Form	PROFINET - Managed Switch	
Webserver	HTTP, HTTPS	
VLAN (QoS) IEEE 802.p	yes	
Port Mirroring	yes	
Protocols	DHCP, SNMP (v1, v2c, v3), RSTP, STP, LLDP, NTP, RMON, SSH (CLI)	
Remote maintenance	Open VPN	
Alarm contact	no	
PROFINET		
Addressing	DCP	
FSU (Fast-Start-Up)	no	
Shared Device/Input	no	
Profinet Netload Class	I	
Specification	V2.3, Conformance Class B	
MRP	yes	
Diagnostic		
Communication status	via LED, LLDP	
Monitoring - no voltage	yes	
General data		
Protection	IP67	
Housing	Black plastic	
Mounting method	3 hole screw mounting	
Temperature range	0...+60 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	



ACTIVE INTERFACE TECHNOLOGY
ANALOG AND DIGITAL

- **Solid state or relay outputs are short circuit protected**
- **LED display**
- **DIN-rail mounting**

CONVERT MEASURED VALUES INTO SIGNALS

While measuring, positioning or checking systems, the status of the machine or installation should be monitored. The measured values have to be converted into digital or standard signals (0...20 mA, 4...20 mA or 0...10 V) so that PLCs and computers can process them.

Murrelektronik offers a wide range of intelligent interface modules that enable signal conversion or signal acquisition with galvanic separation.

Active Interface Technology



Converters
AD/DA converters, Analog converters, Frequency converters, U/I converters

An overview of this product range can be found in our online shop



Timer
MIRO 6.2 Timer

An overview of this product range can be found in our online shop



Comparator modules
MAK

An overview of this product range can be found in our online shop



Temperature converter
MTW

An overview of this product range can be found in our online shop



Further
Brake rectifiers, Demagnetizer

An overview of this product range can be found in our online shop



PASSIVE INTERFACE TECHNOLOGY
INTERFACE MODULES

- **Screw or spring clamp terminals**
- **LED displays**
- **DIN-rail mounting**

FOR ANY APPLICATION

Murrelektronik's interface modules make the connections between the controls and the field. They take over 3 major functions in the system:

- Signal transfer from the machine to the control
- Signal transfer inside the machine or control system
- Easy wiring in control systems

Murrelektronik has been an innovative partner in coming up with interface solutions for years. Their interface modules are fitted with different kinds of robust plugs like SUB-D connectors or ribbon cable connectors for strong signal or power transfers.

They are extremely compact. Individual terminal labels and status displays are integrated into the standard modules.

Interface Modules



With ribbon cable connection
UFL

An overview of this product range can be found in our online shop



With SUB-D connector
UG SUB, SV

An overview of this product range can be found in our online shop



With pluggable terminals
LUGS, PKB

An overview of this product range can be found in our online shop



EUROCARD HOLDERS / CONTROL MODULES

- **Flexible applications**
- **Compact modules**
- **Connections with up to 96-poles**

THE IDEAL CONTROL TECHNOLOGY FOR THE CABINET

Various electronic circuits are fitted onto 100×160 mm Eurocards and then placed in 19" system housings. Murrelektronik's Eurocard holders are designed to mount Eurocards on DIN rails in the cabinet.

In control systems, units are used which require analog control signals (i.e. 0...10 V DC). With these well designed MPOT potentiometer modules, it is simple, cheap and easy to solve your set-point problems. The diode modules of the MKS series are designed for decoupling and interference applications. The LED indicators are available with diameters of 3, 5, and 10 mm. With their compact design, they are suitable for installation in front panels or process flow diagrams.

Eurocard Holders



SKT

An overview of this product range can be found in our online shop



SKP

An overview of this product range can be found in our online shop

Control Modules



Potentiometer modules
MPOT

An overview of this product range can be found in our online shop



Diode modules
MKS-D, MKS-LDP, MKS-BCD

An overview of this product range can be found in our online shop



Assembly modules
MKS-M, ML 14, MP

An overview of this product range can be found in our online shop



2 INTERFACES

MURR ELEKTRONIK
stay connected

2 INTERFACES

Front Panel Interfaces		2.1
Control Cabinet Interfaces / Cable Entry Systems		2.2
Hybrid Fieldbus Coupling	*An overview of this product range can be found in our online shop*	2.3
Lighting Elements		2.4
Control Devices		2.5
Modular Connection Systems (Modlink Vario)		2.6
Heavy Duty Connectors (Modlink Heavy)		2.7



MODLINK MSDD
FRONT PANEL INTERFACES

- **PLC Service Port**
- **IP65 Protection; UL Type Rating 4, 4×, 12, 13**
- **Modular Inserts**

DESIGN YOUR OWN PART – WITH OUR ARTICLE NUMBERS

The article numbers help you figure out whether you are ordering outlets, data connector inserts, individual frames or sets. The article numbers of the individual components can be found on the following pages. Both modules and sets can be ordered in quantities of 1 or more.

THE SET

The set article number is made up of **A, B, C** and **D**.

	A		B		C	D
4000 – 68	☐☐☐	–	☐☐☐		☐☐☐	☐
	Frame		**Insert 1**		**Insert 2** For single frames 000	**Locking mechanism**

First select your components:

Block A:	Frame	(for example 4000-68**522**-000 0001 for transparent double frame)
Block B:	Insert 1	(for example 4000-68000-**001** 0000 for Germany (VDE) gray)
Block C:	Insert 2	(for example 4000-68000-**091** 0000 for 2× RJ45 + 2× USB)
Block D:	Locking mechan.	(for example 4000-68522-000 000**1** for 3 mm double-bit key)

The article number for this example set will be:

4000 – 68 **5 2 2** – **0 0 1** **0 9 1** **1**

Modlink MSDD Front Panel Interfaces



Frames
• Single and double frames

Page 2.1.1



Inserts
• Power outlets
• Data connection inserts

Page 2.1.2



Built-in Sockets
• USB
• RJ45

Page 2.1.14

Modlink MSDD Front Panel Interfaces

An overview of this product range can be found in our online shop

Frames (plastic)			Art-No.
	**1-way transparent**		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68512-0000001**
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	**4000-68512-0000003**
	**1-way metallic**		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68513-0000001**
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	**4000-68513-0000003**
	**1-way gray**		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68514-0000001**
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	**4000-68514-0000003**
	**2-way transparent**		
	Mounting frame plastic, PA black Lid: plastic, PC transparent	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68522-0000001**
	Mounting frame plastic, PA black Lid: plastic, PC transparent	Closure: Daimler	**4000-68522-0000003**
	**2-way metallic**		
	Mounting frame plastic, PA black Lid: plastic, ABS gray	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68523-0000001**
	Mounting frame plastic, PA black Lid: plastic, ABS gray	Closure: Daimler	**4000-68523-0000003**
	**2-way gray**		
	Mounting frame plastic, PA black Lid: plastic, PBT gray	cURus Closure: 3 mm double bit with attachable rotation knob	**4000-68524-0000001**
	Mounting frame plastic, PA black Lid: plastic, PBT gray	Closure: Daimler	**4000-68524-0000003**

FRONT PANEL INTERFACES

Power outlets			Art-No.
	**Germany (VDE) white**		
	Screw terminals: max. 6 mm² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	**4000-68000-0010000**
	**Germany (VDE) white**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		**4000-68000-0160000**
	**Germany (VDE) yellow**		
	Screw terminals: max. 6 mm² Operating voltage: 250 V AC Operating current: 16 A		**4000-68000-0020000**
	**France (UTE-NF) gray**		
	Screw terminals: max. 6 mm² Operating voltage: 250 V AC Operating current: 16 A	LED (yellow)	**4000-68000-0050000**
	**France (UTE-NF) white**		
	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A		**4000-68000-3010000**
	**USA (NEMA 5-15) white**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	**4000-68000-3240000**
	**USA (2 × NEMA-GFCI 5-15)**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 125 V AC Operating current: 15 A	cURus	**4000-68000-3220000**

Power outlets			Art-No.
	**USA (2 × NEMA-GFCI 5-20)**		
	Screw terminals: max. 6 mm² Operating voltage: 125 V AC Operating current: max. 20 A per socket	cURus	**4000-68000-3280000**
	**England (BS)**		
	Screw terminals: max. 4 mm² Operating voltage: 250 V AC Operating current: max. 13 A	with touch protection	**4000-68000-0060000**
	**England (BS) orange**		
	Screw terminals: max. 4 mm² Operating voltage: 250 V AC Operating current: max. 13 A		**4000-68000-0190000**
	**Italy (CEI 23-16)**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A	Double	**4000-68000-0070000**
	**Italy (CEI 23-16)**		
	Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A		**4000-68000-0180000**
	**Denmark**		
	Spring clamp terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		**4000-68000-0170000**
	**Swiss**		
	Spring clamp terminals: max. 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A		**4000-68000-0120000**

FRONT PANEL INTERFACES

Power outlets			Art-No.
	**Australia** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A		**4000-68000-0090000**
	**India (IS 1293)** Screw terminals: max. 4 mm² Operating voltage: 240 V AC Operating current: max. 5 A		**4000-68000-3210000**
	**China (CCC)** Screw terminals: max. 4 mm² Operating voltage: 250 V AC Operating current: max. 10 A		**4000-68000-3250000**
	**Brazil** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Double	**4000-68000-3290000**
	**Brazil** Screw terminals: max. 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 10 A	Single	**4000-68000-3310000**

Communication inserts			Art-No.
	**SUB-D15 HD; RJ45; USB; USB (formA)**		
	1 × SUB-D15 HD (female/male) VGA 1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	cURus shielded	**4000-68000-1040000**
	**RJ45; RJ45; USB (formA)**		
	2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus shielded	**4000-68000-0940000**
	**RJ45; USB (form A); DVI**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × DVI (female/female)		**4000-68000-0820000**
	**RJ45; RJ45; USB; USB (form A)**		
	2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-0990000**
	**RJ45; RJ12; USB; USB (form A)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × RJ12, 6-pole plastic 2 × USB (female/female) form A	cURus shielded	**4000-68000-0910000**
	**RJ45; USB; USB (form A)**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	**4000-68000-0960000**
	**RJ45; RJ45; USB; USB (form A)**		
	2 × RJ45, 8-pole metal, CAT5e (female/female) 2 × USB (female/female) form A	shielded	**4000-68000-0970000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**RJ45; SUB-D9; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female) 1 × SUB-D9 (male/male)	cURus	**4000-68000-1110000**
	**RJ45; RJ45**		
	2 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1200000**
	**RJ45**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (blind plug)	cURus	**4000-68000-1210000**
	**RJ45; RJ45; RJ45; RJ45**		
	4 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1220000**
	**USB (form A); RJ45**		
	1 × USB (female/female) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1310000**
	**RJ45; SUB-D9**		
	1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)	cURus shielded	**4000-68000-1410000**
	**SUB-D9; RJ45; USB (form A)**		
	1 × SUB-D9 (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-1420000**

Communication inserts			Art-No.
	**RJ45; USB (form A); SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/male)	cURus shielded	**4000-68000-1430000**
	**RJ45; USB (form A); SUB-D9** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × SUB-D9 (female/female)	cURus shielded	**4000-68000-1440000**
	**RJ45; RJ45; SUB-D9** 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	**4000-68000-1620000**
	**RJ45; SUB-D9; SUB-D25** 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male) 1 × SUB-D25 (female/male)	cURus	**4000-68000-1700000**
	**BNC; RJ45; SUB-D9** 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/male)	shielded	**4000-68000-1800000**
	**BNC; RJ45; SUB-D9** 1 × BNC (female/female) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (female/female)		**4000-68000-1810000**
	**USB (form A); SUB-D25; RJ45** 1 × USB (female/female) form A 1 × SUB-D25 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus shielded	**4000-68000-1450000**

FRONT PANEL INTERFACES

Communication inserts			Art-No.
	**USB (form A); RJ45**		
	1 × USB (female/female/0.7 m cable) form A 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1300000**
	**USB (form A); SUB-D9; RJ45**		
	1 × USB (female/female/0.7 m cable) form A 1 × SUB-D9 (female/male) 1 × RJ45, 8-pole metal, CAT5e (female/female)	shielded	**4000-68000-1400000**
	**USB; USB (form A)**		
	2 × USB (female/female/0.7 m cable) form A	shielded	**4000-68000-0900000**
	**USB (form A to A)**		
	1 × USB (female/female) form A	cURus shielded	**4000-68000-0920000**
	**USB (form A); USB (form A)**		
	2 × USB (female/female) form A	cURus shielded	**4000-68000-0930000**
	**USB; USB; USB; USB (form A)**		
	4 × USB (female/female) form A		**4000-68000-0950000**
	**USB (form A); DVI**		
	2 × USB (female/female) form A 1 × DVI (female/female)		**4000-68000-1280000**

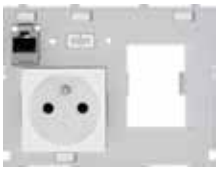
Combinations			Art-No.
	**Germany (VDE)** 1 × Germany (VDE) white 2 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4500000**
	**Germany (VDE) white; RJ45** 1 × Germany (VDE) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4500001**
	**Germany (VDE) white; RJ45** 1 × Germany (VDE) white 2 × RJ45, 8-pole metal, CAT6A (female/female)	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4500004**
	**Germany (VDE) orange; RJ45** 1 × Germany (VDE) orange 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4620001**
	**France (UTE-NF); RJ45** 1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4510001**
	**France (UTE-NF)** 1 × France (UTE-NF) white 2 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4510000**
	**USA (NEMA 5-15); RJ45; USB (form A)** 1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A	cURus	**4000-68000-4030000**

FRONT PANEL INTERFACES

Combinations			Art-No.
	**USA (NEMA 5-15); RJ45**		
	1 × NEMA 5-15 (plug-solder connection) 1 × RJ45, 8-pole metal, CAT5e (female/female)	cURus	**4000-68000-4040000**
	**England (BS)**		
	1 × Great Britain (BS) 2 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	**4000-68000-4520000**
	**Great Britain (BS); RJ45**		
	1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: max. 13 A shielded	**4000-68000-4520001**
	**Italy (CEI 23-16)**		
	1 × Italy (CEI 23-16) 2 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4530000**
	**Italy (CEI 23-16); RJ45**		
	1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4530001**
	**Italy (CEI 23-16); SUB-D9**		
	1 × Italy (CEI 23-16) 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: 16 A shielded	**4000-68000-4530004**
	**Denmark**		
	1 × Denmark (white) 2 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	**4000-68000-4550000**

Combinations			Art-No.
	**Denmark**		
	1 × Denmark (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 2.5 mm² (AWG 14) Operating voltage: 250 V AC Operating current: max. 13 A shielded	**4000-68000-4550001**
	**Swiss**		
	1 × Swiss 2 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4540000**
	**Swiss; RJ45**		
	1 × Swiss 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Spring clamp terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4540001**
	**India (IS 1293)**		
	1 × India (white) 2 × data cut-out	Screw terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	**4000-68000-4570000**
	**India (IS 1293); RJ45**		
	1 × India (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 240 V AC Operating current: max. 5 A shielded	**4000-68000-4570001**
	**China (CCC)**		
	1 × China (white) 2 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4580000**
	**China (CCC); RJ45**		
	1 × China (white) 1 × RJ45, 8-pole metal, CAT6A (female/female) 1 × data cut-out	Screw terminals: max. 2 × 4 mm² (AWG 12) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4580001**

FRONT PANEL INTERFACES

Combinations			Art-No.
	**Brazil**		
	1 × Brazil 4 × data cut-out	Screw terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A	**4000-68000-4610000**
	**Brazil; RJ45**		
	1 × Brazil 1 × RJ45, 8-pole metal, CAT6A (female/female) 3 × data cut-out	Screw terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4610001**
	**Brazil; SUB-D9**		
	1 × Brazil 1 × SUB-D9 (male/female) 1 × SUB-D9 cut-out	Screw terminals: max. 2 × 1.5 mm² (AWG 16) Operating voltage: 250 V AC Operating current: max. 10 A shielded	**4000-68000-4610004**
	**Germany (VDE); RJ45; FI-cut-out**		
	1 × VDE 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4300001**
	**Germany (VDE) yellow; RJ45; FI-cut-out**		
	1 × VDE yellow 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4390001**
	**France (UTE-NF); RJ45; FI-cut-out**		
	1 × France (UTE-NF) white 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4310001**
	**USA (2 × NEMA-GFCI 5-15); RJ45; USB (form A); fuse**		
	2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × USB (female/female) form A 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4100000**

Combinations			Art-No.
	**USA (2 × NEMA-GFCI 5-15); RJ45; fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4110000**
	**USA (2 × NEMA-GFCI 5-15); RJ45; RJ45; fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 2 × RJ45, 8-pole metal, CAT5e (female/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4120000**
	**USA (2 × NEMA-GFCI 5-15); RJ45; SUB-D9; fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × SUB-D9 (male/female) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4130000**
	**USA (2 × NEMA-GFCI 5-15); fuse** 2 × NEMA-GFCI 5-15 (screw terminals) 1 × fuse (3 A)	cURus with touch protection	**4000-68000-4140000**
	**Great Britain (BS); RJ45; FI-cut-out** 1 × Great Britain (BS) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4320001**
	**Italy (CEI 23-16); RJ45; FI-cut-out** 1 × Italy (CEI 23-16) 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4330001**
	**Swiss; RJ45; FI cut-out** 1 × Swiss 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4340001**
	**Australia; RJ45; FI-cut-out)** 1 × Australia 1 × RJ45, 8-pole metal, CAT5e (female/female) 1 × FI cut-out		**4000-68000-4360001**

FRONT PANEL INTERFACES

Pass-through			Art-No.
	**Pass-through**		
	1 × RJ45, 8-pole metal, CAT5e (female/female)	cULus	**4000-73000-0010000**
	**Pass-through**		
	1 × USB 3.0 (female/male) form A, 0.6 m cable	cULus	**4000-73000-0150000**
	1 × USB 3.0 (female/male) form A, 1.0 m cable	cULus	**4000-73000-0160000**
	1 × USB 3.0 (female/male) form A, 1.5 m cable	cULus	**4000-73000-0170000**
	1 × USB 3.0 (female/male) form A, 2.0 m cable	cULus	**4000-73000-0180000**

Connection accessories			Art-No.
	**Gender Changer**		
	RJ45 (female /female)	cURus	**4000-68000-9040010**
	**Gender Changer**		
	RJ12; (female/female)		**4000-68000-9040011**
	**Gender Changer**		
	RJ45 (female /female) Zinc die casting, nickel-plated	cURus	**4000-68000-9040012**
	**Gender Changer**		
	USB (form A) 3.0 (female/female)		**4000-68000-9040022**
	**Gender Changer**		
	SUB-D9 (female/female)	cURus	**4000-68000-9040030**
	SUB-D9 (female/male)	cURus	**4000-68000-9040031**
	**Gender Changer**		
	SUB-D9 (male/male)	cURus	**4000-68000-9040032**
	**Gender Changer**		
	SUB-D15 (female/male)	cURus	**4000-68000-9040040**
	SUB-D15 (female/female)	cURus	**4000-68000-9040041**
	**Gender Changer**		
	SUB-D15 (male/male)	cURus	**4000-68000-9040042**
	**Gender Changer**		
	SUB-D15 HD (female/male) VGA	cURus	**4000-68000-9040045**

FRONT PANEL INTERFACES

Connection accessories			Art-No.
	**Gender Changer**		
	SUB-D25 (female/female)	cURus	**4000-68000-9040050**
	SUB-D25 (female/male)	cURus	**4000-68000-9040051**
	**Cables**		
	SUB-D9 (male/male); 2 m	shielded	**4000-68000-9030010**
	SUB-D9 (male/male); 5 m	shielded	**4000-68000-9030011**
	SUB-D9 (female/male); 2 m	shielded	**4000-68000-9030020**
	SUB-D9 (female/male); 5 m	shielded	**4000-68000-9030021**
	**Cables**		
	SUB-D25 (female/male); 1.8 m	shielded	**4000-68000-9030040**
	SUB-D25 (female/male); 5 m	shielded	**4000-68000-9030041**
	**Cables**		
	USB (form A to A); 2 m (male/male)	shielded	**4000-68000-9030050**
	USB (form A to A); 5 m (male/male)	shielded	**4000-68000-9030051**
	USB (form A to A); 2 m (male/male) PUR	shielded	**4000-68000-9030052**
	USB (form A to A); 5 m (male/male) PUR	shielded	**4000-68000-9030053**
	USB (form A to B); 2 m	shielded	**4000-68000-9030054**
	USB (form A to B); 5 m	shielded	**4000-68000-9030055**
	**Cables**		
	RJ45 (8/8-pole) metal, CAT6; 2 m	shielded	**4000-68000-9030060**
	RJ45 (8/8-polie) metal, CAT6; 5 m	shielded	**4000-68000-9030061**
	RJ45 (8/8-pole) metal, CAT6; 10 m	shielded	**4000-68000-9030062**

Mounting accessories			Art-No.
	**Ground strap 6 mm²**		
	100 mm for screw (M4)		**4000-71001-0610004**
	200 mm for screw (M4)		**4000-71001-0620004**
	300 mm for screw (M4)		**4000-71001-0630004**
	**Blind plate (flat)**		
	Self-installation available space: 45 × 75 mm	cURus	**4000-68000-8900000**
	**Blind plate (depth)**		
	Self-installation available space: 34 × 58 mm Cavity: 13 mm deep	cURus	**4000-68000-8910000**

Mounting accessories			Art-No.
	**Blind plates (pre-cut)**		
	1 × USB, 1 × RJ45, SUB-D9	cURus shielded	**4000-68000-8500000**
	**Blind plates (pre-cut)**		
	1 × USB, 1 × RJ45, 1 × SUB-D25	cURus shielded	**4000-68000-8510000**
	**Housing (1-way)**		
	with 4 blind plugs (M16 × 1.5) H × W × D: 180×94×81 mm		**4000-68000-9060010**
	**Housing (2-way)**		
	with 6 blind plugs (M16 × 1.5) H × W × D: 182×180×90 mm		**4000-68000-9060020**
	**Touch protection box**		
	for double frame H × W × D: 124×124×67 mm	cURus	**4000-68000-9140000**
	**Touch protection box**		
	for single frame H × W × D: 115×87×66 mm	cURus	**4000-68000-9180000**
	**Cable compression gland M16**		
		Sealing range (cable Ø): 4...8 mm	**4000-68000-9060030**
	**Label plate**		
	Frame: 20 pcs	cURus	**4000-68000-9000000**



CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

- **Durable connections**
- **Modular system**
- **High protection degree**

MODLINK MPV CABLE ENTRY SYSTEM

The article numbers help you figure out whether you are ordering inserts, individual frames or sets.
A set has one part number for up to three components.

THE MODLINK MPV SET

The set article number is made up of **A, B** and **C**.

		A		B		C	
4000 – 69	☐☐☐	–	☐☐☐	–	☐☐☐	0
	Frame		**Insert 1**		**Insert 2** For single frames 000	

First select your components:

Block A: Frame (e.g. 4000-69**122**-000 0000 for double frame)
Block B: Insert 1 (e.g. 4000-69000-**100** 0000 for M12 / SUB-D)
Block C: Insert 2 (e.g. 4000-69000-**200** 0000 for 7/8" / spring clamp terminal)

The article number for this example set will be:

4000 – 69 **1 2 2** – **1 0 0** **2 0 0** 0

Control Cabinet Interfaces



Modlink MPV – *modular*
- Frames
- Inserts
- Accessories

Page 2.2.1

Cable Entry Systems



Cable entry system – *modular*
- Cable entry plate
- Inserts

Page 2.2.3



Cable entry system – *predefined*
- Rectangular
- Round

Page 2.2.4

MPV Frame			Art-No.
	**Single**		
	for standard cut-out Size 6 (35 × 52 mm) IP65	cURus	**4000-69112-0000000**
	**Double**		
	for standard cut-out Size 24 (35 × 112 mm) IP65	cURus	**4000-69122-0000000**
	**Single (30°-angle)**		
	for standard cut-out Size 6 (35 × 52 mm) IP65	cURus	**4000-69212-0000000**
	**Double (30°-angle)**		
	for standard cut-out Size 24 (35 × 112 mm) IP65	cURus	**4000-69222-0000000**

MPV Inserts			Art-No.
	**M12**		
	M12 (male/female) 5-pole IP65	cURus	**4000-69000-1040000**
	M12 (male/female) 5-pole, B-coded IP65	cURus	**4000-69000-1060000**
	M12 (male/female) 6-pole, Cube67 IP65	cURus	**4000-69000-1080000**
	**M12; SUB-D9**		
	M12 (female) B-coded SUB-D9 (female) IP65	cURus	**4000-69000-1000000**
	**M12; terminators**		
	M12 (female) 5-pole, A-coded Spring clamp terminal connection IP65		**4000-69000-1050000**

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

MPV Inserts			Art-No.
	**M12; terminators**		
	M12 (female) 5-pole, A-coded Screw terminal connection (yellow) Safety IP65		**4000-69000-1090000**
	**M12; RJ45**		
	M12 (female) 4-pole, D-coded RJ45 (8/8-pole) metal, CAT6 IP65		**4000-69000-1100000**
	**7/8"; Spring clamp terminal**		
	7/8" (female) Spring clamp terminal connection IP65	cURus	**4000-69000-2000000**
	**7/8"; Spring clamp terminal**		
	7/8" (male) Spring clamp terminal connection		**4000-69000-2040000**
	**RJ45**		
	RJ45 (8/8-pole) metal, CAT6 IP65	cURus	**4000-69000-2500000**
	**LWL**		
	Fiber Optic (male/male) single mode IP65		**4000-69000-5200000**

MPV accessories			Art-No.
	**Blind insert**		
	for sealing of unused openings IP65	cURus	**4000-69000-9000000**

MPV accessories			Art-No.
	**RJ45**		
	Male straight, 4-pole IP65		**4000-69000-9500050**
	**RJ45**		
	Male 90°, 4-pole IP65		**4000-69000-9500060**
	**Control cabinet entry system M12**		
	straight, A-coded, 5-pole, shielded	DeviceNet, CANopen	**7000-42111-0000000**
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus	**7000-44111-0000000**
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**
	**Control cabinet entry system M12**		
	straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	**7000-44611-0000000**

Connectors			Art-No.
	**Size 16**		
	for 4 cables (0 large, 4 small)		**4000-70103-0004000**
	for 5 cables (1 large, 4 small)		**4000-70103-0104000**
	for 8 cables (0 large, 8 small)		**4000-70103-0008000**
	**Size 24**		
	for 4 cables (2 large, 2 small)		**4000-70103-0202000**
	for 7 cables (1 large, 6 small)		**4000-70103-0106000**
	for 10 cables (0 large, 10 small)		**4000-70103-0010000**

CONTROL CABINET INTERFACES / CABLE ENTRY SYSTEMS

Cable entry glands			Art-No.
	**with cable tie eye**		
	Cable diameter (3...4 mm)		**4000-70403-0001030**
	Cable diameter (4...5 mm)		**4000-70403-0001040**
	Cable diameter (5...6 mm)		**4000-70403-0001050**
	Cable diameter (6...7 mm)		**4000-70403-0001060**
	Cable diameter (7...8 mm)		**4000-70403-0001070**
	Cable diameter (8...9 mm)		**4000-70403-0001080**
	Cable diameter (9...10 mm)		**4000-70403-0001090**
	Cable diameter (10...11 mm)		**4000-70403-0001100**
	Cable diameter (11...12 mm)		**4000-70403-0001110**
	Cable diameter (12...13 mm)		**4000-70403-0001120**
	Cable diameter (13...14 mm)		**4000-70403-0001130**
	Cable diameter (14...15 mm)		**4000-70403-0001140**
	Cable diameter (15...16 mm)		**4000-70403-0001150**
	Cable diameter (16...17 mm)		**4000-70403-0100160**
	Cable diameter (17...18 mm)		**4000-70403-0100170**
	Cable diameter (18...19 mm)		**4000-70403-0100180**
	Cable diameter (19...20 mm)		**4000-70403-0100190**
	Cable diameter (20...21 mm)		**4000-70403-0100200**
	Cable diameter (21...22 mm)		**4000-70403-0100210**
	Cable diameter (22..23 mm)		**4000-70403-0100220**
	Cable diameter (23...24 mm)		**4000-70403-0100230**
	Cable diameter (24...25 mm)		**4000-70403-0100240**
	Cable diameter (24...25 mm)		**4000-70403-0100250**
	Cable diameter (26...27 mm)		**4000-70403-0100260**
	Cable diameter (27...28 mm)		**4000-70403-0100270**
	Cable diameter (28...29 mm)		**4000-70403-0100280**
	Cable diameter (29...30 mm)		**4000-70403-0100290**
	Cable diameter (30...31 mm)		**4000-70403-0100300**
	**Special**		
	Blind plug (plugs) single		**4000-70503-0001010**
	Blind plug (plugs) double		**4000-70503-0100010**
	Adapter		**4000-70503-0100020**
	for 1 AS-Interface cable		**4000-70503-0001020**
	for 2 AS-Interface cables		**4000-70503-0001030**
	for 2 cables (Ø 6 mm)		**4000-70503-0001060**
	for 2 cables (Ø 5 mm)		**4000-70503-0001050**

Plates			Art-No.
	**Size 24**		
	Cable diameter (12) × 8...12 mm		**4000-70603-0240120**
	Cable diameter (6) × 3...6.5 mm, (4) × 5...9.2 mm, (4) × 9.6...15.9 mm		**4000-70603-0240140**
	Cable diameter (17) × 5...9.2 mm		**4000-70603-0240170**
	Cable diameter (16) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 8...12.5 mm		**4000-70603-0240220**
	Cable diameter (23) × 4.3...8.1 mm		**4000-70603-0240230**
	Cable diameter (29) × 3...6.5 mm		**4000-70603-0240290**
	**M50**		
	Cable diameter (3) × 6...10 mm, (1) × 9.6...15.9 mm		**4000-70703-0500040**
	Cable diameter (1) × 3...5.5 mm, (5) × 5...9.2 mm		**4000-70703-0500060**
	Cable diameter (7) × 3...6.5 mm, (1) × 6...10 mm		**4000-70703-0500080**
	Locknut		**4000-70704-0500000**

Plates			Art-No.
	**M63**		
	Cable diameter (2) × 3...6.5 mm, (4) × 5...9.2 mm, (2) × 9.6...15.9 mm		**4000-70703-0630080**
	Cable diameter (6) × 3...5.5 mm, (6) × 3...6.5 mm, (1) × 6...10 mm		**4000-70703-0630130**
	Cable diameter (19) × 3...5 mm		**4000-70703-0630190**
	Locknut		**4000-70704-0630000**
Accessories			**Art-No.**
	**Blind plate**		
	Size 16		**4000-70202-0001000**
	**Blind plate**		
	Size 24		**4000-70202-0002000**
	**Adapter**		
	from size 24 to 16		**4000-70203-0100000**
	**Cable strain relief**		
	for 1 cable		**4000-70302-0000010**
	for 5 cables		**4000-70302-0000050**
	for 9 cables		**4000-70302-0000090**
	**Label plate**		
	20 × 9 mm		**4000-70920-0000000**
	**Cable tie**		
	for small glands L = 75 mm		**4000-70902-0075220**
	for large glands L = 160 mm		**4000-70902-0160450**
	for large glands L = 180 mm		**4000-70902-0180800**



HYBRID FIELDBUS COUPLING

- **For durable connections**
- **A high degree of protection**
- **Repeater included**

EASILY CONNECTED – QUICKLY AND SAFELY

MSDD hybrid fieldbus couplers transfer data and power from the cabinet into the industrial field. A repeater function amplifies and processes signals.

Active hybrid fieldbus coupling offers many benefits:

- Repeater and control cabinet interface in one module
- PROFIBUS FMS/DP galvanically separated
- Three independent PROFIBUS ports
- All three PROFIBUS segments are galvanically separated
- Baud rate change during operation – automatic and continuous Baud rate detection
- 3 × segment length – 200 m at 1.5 Mbit/s and 100 m at 12 Mbit/s
- Cascading capabilities for 31 modules per PROFIBUS segment
- Integrated terminating resistor

MSDD Hybrid Fieldbus Coupling



Active Hybrid Fieldbus Coupling
Active connection between control cabinet and fieldbus area (incl. repeater)

An overview of this product range can be found in our online shop



Passive Hybrid Fieldbus Coupling
Passive connection between control cabinet and fieldbus area

An overview of this product range can be found in our online shop



LIGHTING ELEMENTS
MAXIMUM FLEXIBILITY

- **High light yield**
- **Long life**
- **Plug-in solutions**

DISTINCT SIGNALS AND PERFECT ILLUMINATION IN DAYLIGHT QUALITY

Modlight Pro LED signal towers

The signal towers are characterized by maximum flexibility in color selection and color composition. The elements of the signal towers with diameters of 50 and 70 millimeters are connected by bayonet locks, making for easy and quick assembly. The signal towers can be flexibly mounted.

Modlight Illumix LED machine light

The machine lights of the Modlight Illumix series ensure optimal illumination of machines and systems based on maintenance-free and durable LED technology in daylight quality. Rotatable mounting brackets provide flexibility in attaching the lights.

Signal lights



Modlight50 Pro / Modlight70 Pro
- 50/70 mm
- Connecting elements
- Buzzer modules
- LED modules

Page 2.4.1



Sets – Modlight30 / Modlight50 Pro / Modlight70 Pro
- 30/50/70 mm
- LED signal towers

Page 2.4.2



Comlight57
- 57 mm
- Single lights
- LED

Page 2.4.3

Machine lights



Modlight Illumix Slim Line
- Machine light (LED)
- Degree of protection IP54

Modlight Illumix Classic Line
- Machine light (LED)
- Degree of protection IP67

Page 2.4.5



Modlight Illumix Xtreme
- Machine light (LED)
- Degree of protection IP69K

Page 2.4.6

Connection modules			Art-No.
	Base for floor mount Modlight50 Pro	Spring clamp terminals cURus	**4000-76050-1100002**
	Base for floor mount Modlight70 Pro	Spring clamp terminals cURus	**4000-76070-1100002**
	Basic for tube mounting Modlight50 Pro	Spring clamp terminals cURus	**4000-76050-1100003**
	Basic for tube mounting Modlight70 Pro	Spring clamp terminals cURus	**4000-76070-1100003**
	Basic Modlight70 Pro	M12 (8-pole), down	**4000-76070-1300002**
	Basic Modlight70 Pro	M12 (8-pole), sideways	**4000-76070-1400002**
	Basic with magnet base Modlight70 Pro	M12 (8-pole), sideways	**4000-76070-1500002**

Buzzer modules			Art-No.
	Buzzer module Modlight50 Pro		**4000-76050-1100004**
	Buzzer module Modlight70 Pro		**4000-76070-1100004**

LED modules			Art-No.
	LED module Modlight50 Pro	red	**4000-76050-1011000**
	LED module Modlight70 Pro	red	**4000-76070-1011000**
	LED module Modlight50 Pro	yellow	**4000-76050-1012000**
	LED module Modlight70 Pro	yellow	**4000-76070-1012000**

LIGHTING ELEMENTS

LED modules			Art-No.
			
	LED module Modlight50 Pro	green	**4000-76050-1013000**
	LED module Modlight70 Pro	green	**4000-76070-1013000**
			
	LED module Modlight50 Pro	blue	**4000-76050-1014000**
	LED module Modlight70 Pro	blue	**4000-76070-1014000**
			
	LED module Modlight50 Pro	clear	**4000-76050-1015000**
	LED module Modlight70 Pro	clear	**4000-76070-1015000**

Sets			Art-No.
	**Modlight30 (green/yellow/red)**		
	Connection module + LED modules	Connection cable L = 300 mm	**4000-75324-5310000**
	Connection module + LED modules	Connection M12 (on bottom)	**4000-75330-5310000**
	**Modlight50 Pro (green/yellow/red)**		
	Basic + LED modules		**4000-76501-5310000**
	Basic, buzzer + LED modules		**4000-76502-5310000**
	**Modlight70 Pro (green/yellow/red)**		
	Basic + LED modules + M12 (down)		**4000-76704-5310000**
	Basic, buzzer + LED modules + M12 (down)		**4000-76705-5310000**
	**Modlight70 Pro (green/yellow/red)**		
	Basic + LED modules + M12 (side)		**4000-76712-5310000**
	Basic, buzzer + LED modules + M12 (side)		**4000-76713-5310000**

Compact status lights			Art-No.
	**Comlight57**		
	red	Spring clamp terminal connection	**4000-75057-1111000**
	red	Connection M12 (on bottom)	**4000-75057-1311000**
	**Comlight57**		
	yellow	Spring clamp terminal connection	**4000-75057-1112000**
	yellow	Connection M12 (on bottom)	**4000-75057-1312000**
	**Comlight57**		
	green	Spring clamp terminal connection	**4000-75057-1113000**
	green	Connection M12 (on bottom)	**4000-75057-1313000**
	**Comlight57**		
	blue	Spring clamp terminal connection	**4000-75057-1114000**
	blue	Connection M12 (on bottom)	**4000-75057-1314000**
	**Comlight57**		
	clear	Spring clamp terminal connection	**4000-75057-1115000**
	clear	Connection M12 (on bottom)	**4000-75057-1315000**

Accessories Modlight30			Art-No.
	**Adapter for wall assembly**		
			4000-75030-0000903

Accessories Modlight50/70 Pro			Art-No.
	**Bottom adapter for tube mounting**		
		for Modlight50/70 Pro	**4000-76070-0000901**
	**Adapter for tube/wall mounting**		
		for Modlight50/70 Pro	**4000-76070-0000902**
	**Adapter for wall assembly**		
		for Modlight70 Pro	**4000-76070-0000903**
	**Adapter for wall assembly**		
	Cable outlet (on the bottom)	for Modlight70 Pro	**4000-75070-0000904**
	**Aluminum tube**		
	300 mm	for Modlight50/70 Pro	**4000-76070-0000913**
	800 mm	for Modlight50/70 Pro	**4000-76070-0000918**
	**Magnet base**		
	with M16 × 1.5 gland	Sideways cable entry point for Modlight50/70 Pro	**4000-75070-0000920**
	**Magnet base**		
	with M12 flange plug connector (8-pole)	Sideways connection for Modlight50/70 Pro	**4000-75070-0000921**

Accessories Modlight50/70 Pro			Art-No.
	**Mounting adapter**		
	for strain relief	bottom or side exit	**4000-75070-0000922**
	**Label plate**		
	transparent	for Modlight50 Pro	**4000-76050-0000923**
	transparent	for Modlight70 Pro	**4000-76070-0000923**

LED machine lights			Art-No.
	**Modlight Illumix Slim Line**		
	4 W - 24 V DC Connection M8	IP54 cULus	**4000-75800-1715004**
	8 W - 24 V DC Connection M8	IP54 cULus	**4000-75800-1715008**
	16 W - 24 V DC Connection M8	IP54 cULus	**4000-75800-1715016**
	24 W - 24 V DC Connection M8	IP54 cULus	**4000-75800-1715024**
	32 W - 24 V DC Connection M8	IP54 cULus	**4000-75800-1715032**
	**Modlight Illumix Slim Line C**		
	4 W - 24 V DC Connection M8 expandability	IP54 cULus	**4000-75900-1715004**
	8 W - 24 V DC Connection M8 expandability	IP54 cULus	**4000-75900-1715008**
	16 W - 24 V DC Connection M8 expandability	IP54 cULus	**4000-75900-1715016**
	24 W - 24 V DC Connection M8 expandability	IP54 cULus	**4000-75900-1715024**
	32 W - 24 V DC Connection M8 expandability	IP54 cULus	**4000-75900-1715032**
	**Modlight Illumix Classic Line**		
	6 W - 24 V DC Connection M12	IP67 cULus	**4000-75801-1415006**
	12 W - 24 V DC Connection M12	IP67 cULus	**4000-75801-1415012**
	18 W - 24 V DC Connection M12	IP67 cULus	**4000-75801-1415018**
	24 W - 24 V DC Connection M12	IP67 cULus	**4000-75801-1415024**

LIGHTING ELEMENTS

LED machine lights			Art-No.
	**Modlight Illumix Classic Line C**		
	6 W - 24 V DC Connection M12 expandability	IP67 cULus	**4000-75901-1415006**
	12 W - 24 V DC Connection M12 expandability	IP67 cULus	**4000-75901-1415012**
	18 W - 24 V DC Connection M12 expandability	IP67 cULus	**4000-75901-1415018**
	24 W - 24 V DC Connection M12 expandability	IP67 cULus	**4000-75901-1415024**
	**Modlight Illumix Xtreme**		
	27 W - 24 V DC Connection M12	IP69K cULus	**4000-75827-1315000**
	**Modlight Illumix Xtreme**		
	Joint coupling		**4000-75800-0000900**



CONTROL DEVICES
EMERGENCY STOP AND RESET PUSHBUTTONS

- **Easy mounting**
- **Error-free connection**
- **Suitable for applications in the safety technology**

FAST AND ERROR-FREE WIRING WITH STANDARD CABLES

The EMERGENCY STOP and RESET buttons from Murrelektronik can be integrated very easily in electronic installations

These control and monitoring devices can be connected via preconfigured M12 cables (4-, 5-, or 8-pole). A time-saving solution excluding the risk of faulty wirings. The 'Plug & Play' feature makes integrating the control devices in machines and systems faster.

42 mm variants



E-Stop button
- With M12 connection
- 4-, 5-, or 8-pole variants

Page 2.5.1



R-Button
- With M12 connection
- 4- or 8-pole variants

Page 2.5.1

72 mm variants



E-Stop button
- With M12 connection
- 4-, 5-, or 8-pole variants
- With/without protective collar

Page 2.5.1

Control devices			Art-No.
	E-Stop 42 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	**69000**
	E-Stop 42 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	**69001**
	E-Stop 42 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	**69002**
	E-Stop / R-B 42 2NC 1NO M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69003**
	E-Stop / R-B 42 2NC 1NO L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) 1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69004**
	R-Button / 42 1NO M12(4) M12 (4-pole)	1 button (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69010**
	R-Button / 42 1NO L M12(4) M12 (4-pole)	1 button can be lit (1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69013**
	R-Button / 42 2NO M12(4) M12 (4-pole)	2 buttons (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69011**
	R-Button / 42 2NO L M12(8) M12 (8-pole)	2 buttons can be lit (each 1 NO contact) Flat lens, transparent clear, red, yellow, green, blue	**69012**
	E-Stop 72 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening)	**55550**
	E-Stop 72 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening)	**69041**
	E-Stop 72 2NC L M12(8) M12 (8-pole)	Emergency-Stop button 2 NC (positively-opening) LED-Ring can be lit	**69043**
	E-Stop 72P 2NC M12(4) M12 (4-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	**69040**
	E-Stop 72P 2NC M12(5) M12 (5-pole)	Emergency-Stop button 2 NC (positively-opening) with protection shroud	**69042**

Accessories control devices			Art-No.
	**T-coupler (SlimLine) M12 - M12**		
	Male straight - female/male straight	for 8-pole Emergency-Stop button	**7030-42622-0000000**



MODLINK VARIO
MEDIA CONNECTOR

- **Easy mounting and dismounting without the need of tools**
- **Maximum robustness, all components being made of solid metal**
- **Electronics and media in one coupling**

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

Modlink Vario is a modular media connector to couple and decouple pneumatics, fluids and electronics with just one system.

It is suitable for uncomplicated use on switch cabinets, tools and machine parts. Its unique feature is that it allows simultaneous non-drip coupling under pressure of electrical connections and media. The basic modules are available in 4, 6, 8 or 10 different models.

For each bore, the type of application, pneumatics, fluids or electronics, can be freely selected. This gives almost unlimited equipment options.

Base body





Round or rectangular
- Different locking types (union nut, lever)
- Connections made of aluminum or stainless steel
- Different types (e.g. 4, 6, 8, and 10 connections)

Page 2.6.1

An overview of this product range can be found in our online shop

Inserts





Inserts
- Inserts for power and media supply
- Inserts for the connection of different M12 connecting cables
- Pneumatics and fluid inserts for a variety of hose diameters

Page 2.6.2

Stationary housing (round)			Art-No.
	4-way	Aluminium	**M1850-040601**
		Stainless Steel 1.4404 (V4A)	**M1851-040601**
	6-way	Aluminium	**M1850-060601**
		Stainless Steel 1.4404 (V4A)	**M1851-060601**
	8-way	Aluminium	**M1850-080601**
		Stainless Steel 1.4404 (V4A)	**M1851-080601**
	10-way	Aluminium	**M1850-100601**
		Stainless Steel 1.4404 (V4A)	**M1851-100601**
Mobile housing (round)			**Art-No.**
	4-way	Aluminium	**M1850-040602**
		Stainless Steel 1.4404 (V4A)	**M1851-040602**
	6-way	Aluminium	**M1850-060602**
		Stainless Steel 1.4404 (V4A)	**M1851-060602**
	8-way	Aluminium	**M1850-080602**
		Stainless Steel 1.4404 (V4A)	**M1851-080602**

MODULAR CONNECTION SYSTEMS (MODLINK VARIO)

Mobile housing (round)			Art-No.
	10-way	Aluminium	**M1850-100602**
		Stainless Steel 1.4404 (V4A)	**M1851-100602**

Stationary housing (rectangular)			Art-No.
	8-way	Aluminium	**M1856-24080611**

Mobile housing (rectangular)			Art-No.
	8-way	Aluminium	**M1856-24080612**

Inserts Media (Stationary housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	**MVT1821-062406021**
	AD6 without shut-off	Brass, nickel plated	**MVT1821-062406041**
	AD8 without shut-off	Brass, nickel plated	**MVT1821-062406061**
	AD4 with shut-off	Brass, nickel plated	**MVT1820-062406021**
	AD6 with shut-off	Brass, nickel plated	**MVT1820-062406041**
	AD8 with shut-off	Brass, nickel plated	**MVT1820-062406061**
	AD6 drip-free	Brass, dezincification-resistant	**MVT1825-262406041**
	AD8 drip-free	Brass, dezincification-resistant	**MVT1825-262406061**

Inserts Media (Mobile housing)			Art-No.
	AD4 without shut-off	Brass, nickel plated	**MVT1821-062406022**
	AD6 without shut-off	Brass, nickel plated	**MVT1821-062406042**
	AD8 without shut-off	Brass, nickel plated	**MVT1821-062406062**
	AD4 with shut-off	Brass, nickel plated	**MVT1820-062406022**
	AD6 with shut-off	Brass, nickel plated	**MVT1820-062406042**
	AD8 with shut-off	Brass, nickel plated	**MVT1820-062406062**
	AD6 drip-free	Brass, dezincification-resistant	**MVT1825-262406042**
	AD8 drip-free	Brass, dezincification-resistant	**MVT1825-262406062**

Inserts Electro (Stationary housing)			Art-No.
	M12, 5-pole	A-coded	**7000-42114-0000000**
	M12, 4-pole	B-coded	**7000-44114-0000000**
	M12, 6-pole	A-coded	**7000-46114-0000000**
	M12, 8-pole	A-coded	**7000-48114-0000000**
	M12, 4-pole	D-coded	**7000-44624-0000000**

Inserts Electro (Mobile housing)			Art-No.
	M12, 5-pole	A-coded	**7000-42116-0000000**
	M12, 4-pole	B-coded	**7000-44116-0000000**
	M12, 6-pole	A-coded	**7000-46116-0000000**
	M12, 4-pole	A-coded	**7000-48116-0000000**
	M12, 4-pole	D-coded	**7000-44586-0000000**



MODLINK HEAVY
HEAVY DUTY CONNECTOR

- **Maximum variety**
- **High tightness**
- **Worldwide use**

MAXIMUM MODULARITY IN INDUSTRIAL ENVIRONMENT

The heavy-duty plug connectors of the Modlink Heavy series from Murrelektronik guarantee secure transmission of signals, energy, data and pneumatics - even in the roughest of industrial environments. They consistently protect interfaces from water, dirt and high mechanical loads.

We provide a broad range of products. For our customers, we offer a matching connector for every requirement - Flexibility in the configuration of the plug connectors is our great strength. Thus, for housings, we offer as many as four different types, each in seven different sizes. They can be locked, as needed, by three different methods. As for contact inserts, you can choose from a large number of fixed-pole or modular versions. Our offer of accessories is exactly tuned to the heavy-duty plug connectors from Murrelektronik and rounded off to the last detail.

Housings



- 4 housing types
- 7 different sizes
- 3 locking types
- Outgoing cables in all directions

Page 2.7.1

An overview of this product range can be found in our online shop

Inserts



- Series A, D, E, EE, K, HSE, HV and Q
- 3 different connection types

Page 2.7.3

An overview of this product range can be found in our online shop

Frames and modules



- 4 frame sizes
- Modules for signals, energy, data and pneumatics

Page 2.7.5

An overview of this product range can be found in our online shop

Hood			Art-No.
	**B6**		
	Form	low	**70MH-GTDNL-A01B000**
	Looking techniques	Single locking lever	
	Cable outlet	straight	
	Threaded hole	M20	
	**B6**		
	Form	low	**70MH-GTDNL-A02B000**
	Looking techniques	Single locking lever	
	Cable outlet	laterally	
	Threaded hole	M20	
	**B10**		
	Form	low	**70MH-GTENQ-A01C000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M25	
	**B10**		
	Form	low	**70MH-GTENQ-A02C000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M25	
	**B16**		
	Form	high	**70MH-GTFHQ-A01D000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M32	
	**B16**		
	Form	high	**70MH-GTFHQ-A02D000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M32	
	**B24**		
	Form	high	**70MH-GTGHQ-A01D000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M32	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Hood			Art-No.
	**B24**		
	Form	high	**70MH-GTGHQ-A02D000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M32	

Bulkhead mounted housing			Art-No.
	**B6**		
	Looking techniques	Single locking lever	**70MH-GADNL-B000000**
	Protection	IP65	
	**B10**		
	Looking techniques	Double locking lever	**70MH-GAENQ-B000000**
	Protection	IP65	
	**B16**		
	Looking techniques	Double locking lever	**70MH-GAFNQ-B000000**
	Protection	IP65	
	**B24**		
	Looking techniques	Double locking lever	**70MH-GAGNQ-B000000**
	Protection	IP65	

Surface mounted housing			Art-No.
	**B6**		
	Form	low	**70MH-GSDNL-B01B000**
	Looking techniques	Single locking lever	
	Cable outlet	laterally	
	Threaded hole	M20	
	Form	low	**70MH-GSDNL-B02B000**
	Looking techniques	Single locking lever	
	Cable outlet	double-sided	
	Threaded hole	M20	
	**B10**		
	Form	low	**70MH-GSENQ-B01C000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M25	
	Form	high	**70MH-GSEHQ-B02C000**
	Looking techniques	Double locking lever	
	Cable outlet	double-sided	
	Threaded hole	M25	

Surface mounted housing			Art-No.
	**B16**		
	Form	high	**70MH-GSFHQ-B01D000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M32	
	Form	high	**70MH-GSFHQ-B02D000**
	Looking techniques	Double locking lever	
	Cable outlet	double-sided	
	Threaded hole	M32	
	**B24**		
	Form	high	**70MH-GSGHQ-B01D000**
	Looking techniques	Double locking lever	
	Cable outlet	laterally	
	Threaded hole	M32	
	Form	high	**70MH-GSGHQ-B02D000**
	Looking techniques	Double locking lever	
	Cable outlet	double-sided	
	Threaded hole	M32	

Coupling housing			Art-No.
	**B10**		
	Form	low	**70MH-GKENQ-B01C000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M25	
	**B16**		
	Form	high	**70MH-GKFHQ-B01D000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M32	
	**B24**		
	Form	high	**70MH-GKGHQ-B01D000**
	Looking techniques	Double locking lever	
	Cable outlet	straight	
	Threaded hole	M32	

Fixed-pole inserts			Art-No.
	**B6**		
	Type	Male	**70MH-ES006-DP03020**
	No. of poles	6	
	Connection	Push-In terminals	
	E-Series		

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Fixed-pole inserts			Art-No.
	**B10**		
	Type	Male	**70MH-ES010-EP03020**
	No. of poles	10	
	Connection	Push-In terminals	
	E-Series		
	**B16**		
	Type	Male	**70MH-ES016-FP03020**
	No. of poles	16	
	Connection	Push-In terminals	
	E-Series		
	**B24**		
	Type	Male	**70MH-ES024-GP03020**
	No. of poles	24	
	Connection	Push-In terminals	
	E-Series		
	**B6**		
	Type	Female	**70MH-EB006-DP03020**
	No. of poles	6	
	Connection	Push-In terminals	
	E-Series		
	**B10**		
	Type	Female	**70MH-EB010-EP03020**
	No. of poles	10	
	Connection	Push-In terminals	
	E-Series		
	**B16**		
	Type	Female	**70MH-EB016-FP03020**
	No. of poles	16	
	Connection	Push-In terminals	
	E-Series		
	**B24**		
	Type	Female	**70MH-EB024-GP03020**
	No. of poles	24	
	Connection	Push-In terminals	
	E-Series		

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

MURR ELEKTRONIK
stay connected

Frame			Art-No.
	**Male**		
	B6	for 2 modules	**70MH-RD02S-0000000**
	**Male**		
	B10	for 3 modules	**70MH-RE03S-0000000**
	**Male**		
	B16	for 4 modules	**70MH-RF04S-0000000**
	**Male**		
	B24	for 6 modules	**70MH-RG06S-0000000**
	**Female**		
	B6	for 2 modules	**70MH-RD02B-0000000**
	**Female**		
	B10	for 3 modules	**70MH-RE03B-0000000**
	**Female**		
	B16	for 4 modules	**70MH-RF04B-0000000**
	**Female**		
	B24	for 6 modules	**70MH-RG06B-0000000**

Blind module			Art-No.
	**Male/female**		
			70MH-MAA10-0000000

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Module 1-pole (axial screw connection)			Art-No.
	**Male**		
	Operating voltage	1 000 V AC/DC	**70MH-MAB2A-0010707**
	Operating current	200 A	
	No. of poles	1	
	**Female**		
	Operating voltage	1 000 V AC/DC	**70MH-MAC2A-0010707**
	Operating current	200 A	
	No. of poles	1	
PE modules 1-pole (axial screw connection)			**Art-No.**
	**Male**		
	Operating current	200 A	**70MH-MAQ2A-0010707**
	No. of poles	1 (PE)	
	**Female**		
	Operating current	200 A	**70MH-MAR2A-0010707**
	No. of poles	1 (PE)	
Module 2-pole (axial screw connection)			**Art-No.**
	**Male**		
	Operating voltage	1 000 V AC/DC	**70MH-MAB1A-0020703**
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	**70MH-MAB1A-0020706**
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	**70MH-MAB2A-0020704**
	Operating current	100 A	
	No. of poles	2	
	**Female**		
	Operating voltage	1 000 V AC/DC	**70MH-MAC1A-0020703**
	Operating current	40 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	**70MH-MAC1A-0020706**
	Operating current	70 A	
	No. of poles	2	
	Operating voltage	1 000 V AC/DC	**70MH-MAC2A-0020704**
	Operating current	100 A	
	No. of poles	2	

Modules 2-pole (Crimp)			Art-No.
	**Male**		
	Operating voltage	1 000 V AC/DC	**70MH-MAF2C-0020704**
	Operating current	100 A	
	No. of poles	2	
	**Female**		
	Operating voltage	1 000 V AC/DC	**70MH-MAG2C-0020704**
	Operating current	100 A	
	No. of poles	2	
Modules 2-pole shielded (Crimp)			**Art-No.**
	**Male**		
	No. of poles for coax- and 4-pole contact carrier	2	**70MH-MAD2C-0020101**
	**Female**		
	No. of poles for coax- and 4-pole contact carrier	2	**70MH-MAE2C-0020101**
Modules 3 pole (crimp)			**Art-No.**
	**Male**		
	Operating voltage	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE)	**70MH-MAB1C-0030903**
	Operating current	40 A	
	No. of poles	3	
	**Female**		
	Operating voltage	690 V AC/DC (PIN - PIN); 400 V AC/DC (PIN - PE)	**70MH-MAC1C-0030903**
	Operating current	40 A	
	No. of poles	3	
Modules 4 pole (crimp)			**Art-No.**
	**Male**		
	Operating voltage	830 V AC/DC	**70MH-MAB1C-0040603**
	Operating current	40 A	
	No. of poles	4	

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules 4 pole (crimp)			Art-No.
	**Female**		
	Operating voltage	830 V AC/DC	**70MH-MAC1C-0040603**
	Operating current	40 A	
	No. of poles	4	

Modules 5 pole (push-in)			Art-No.
	**Male**		
	Operating voltage	400 V AC/DC	**70MH-MAB1P-0050402**
	Operating current	16 A	
	No. of poles	5	
	**Female**		
	Operating voltage	400 V AC/DC	**70MH-MAC1P-0050402**
	Operating current	16 A	
	No. of poles	5	

Modules 6 pole (crimp)			Art-No.
	**Male**		
	Operating voltage	500 V AC/DC	**70MH-MAB1C-0060502**
	Operating current	16 A	
	No. of poles	6	
	**Female**		
	Operating voltage	500 V AC/DC	**70MH-MAC1C-0060502**
	Operating current	16 A	
	No. of poles	6	

Modules 8-pole (Crimp)			Art-No.
	**Male**		
	Operating voltage	400 V AC/DC	**70MH-MAB1C-0080402**
	Operating current	16 A	
	No. of poles	8	
	**Female**		
	Operating voltage	400 V AC/DC	**70MH-MAC1C-0080402**
	Operating current	16 A	
	No. of poles	8	

Modules 12 pole (crimp)			Art-No.
	**Male**		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	**70MH-MAB1C-0120801**
	Operating current	10 A	
	No. of poles	12	
	**Female**		
	Operating voltage	400 V AC/DC (PIN - PIN); 250 V AC/DC (PIN - PE)	**70MH-MAC1C-0120801**
	Operating current	10 A	
	No. of poles	12	

Modules 17-pole (Crimp)			Art-No.
	**Male**		
	Operating voltage	160 V AC/DC	**70MH-MAB1C-0170201**
	Operating current	10 A	
	No. of poles	17	
	**Female**		
	Operating voltage	160 V AC/DC	**70MH-MAC1C-0170201**
	Operating current	10 A	
	No. of poles	17	

Modules 20-pole (Crimp)			Art-No.
	**Male**		
	Operating voltage	500 V AC/DC	**70MH-MAB1C-0200502**
	Operating current	16 A	
	No. of poles	20	
	**Female**		
	Operating voltage	500 V AC/DC	**70MH-MAC1C-0200502**
	Operating current	16 A	
	No. of poles	20	

Modules GIGABIT			Art-No.
	**Male**		
	Transfer parameters	CAT6A	**70MH-MAH1C-0000000**

HEAVY DUTY CONNECTORS (MODLINK HEAVY)

Modules GIGABIT			Art-No.
	**Female**		
	Transfer parameters	CAT6A	**70MH-MAI1C-0000000**

Modules RJ45			Art-No.
	**Male**		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	**70MH-MAL10-0000000**
	**Male**		
	Transfer parameters	CAT5e	**70MH-MAL10-0010000**
	**Male**		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	**70MH-ZRJ45-1000000**
	**Male**		
	Insert Transfer parameters	for 70MH-MAL10-0010000 CAT5	**70MH-ZRJ45-2000000**
	**Female**		
	Transfer parameters	CAT6A (IEC 60512-27-100:2008, TIA-568-C.2:2009)	**70MH-MAM10-0000000**

Modules pneumatic			Art-No.
	**Male/female**		
	2-pole	Internal hose Ø 6 mm	**70MH-MAP10-0020000**
	3-pole	Internal hose Ø 1.6, 3, 4 mm	**70MH-MAP10-0030000**



3 CONNECTION TECHNOLOGY

MURR ELEKTRONIK
stay connected

3

CONNECTION TECHNOLOGY

M8 Round Plug Connectors	3.1
M12 Round Plug Connectors	3.2
T-couplers M8, M12, 7/8“	3.3
Flange Connectors	3.4
MQ12 Round Plug Connectors	3.5
Fieldbus Connectors	3.6
Plug Connectors for Food & Beverage	3.7
Mobile Applications	3.8
M23 Round Plug Connectors	3.9
Round Plug Connectors Power	3.10
TPE Series – The North American standard	3.11
Valve Connectors	3.12
Technical Appendix Cables	3.13



MURRELEKTRONIK'S **CONNECTORS**

ORDERING SYSTEM

Our concept for your individual application solutions.
Our connector range is a modular system that you can customize for your application.

ARTICLE NUMBER SYSTEM

The article number consists of three blocks: form, jacket material/color and cable length.

	1		2		3	
7000 –	□□□□□	–	□□□		□□□□	
	Form		Jacket material/ color		Cable length	

EXAMPLE

Block 1:	Form	1 2 4 0 1	M12 female 90° with LED, 4-pole
Block 2:	Jacket material/color	0 3 3	PUR (UL/CSA), yellow
Block 3:	Cable length	0 3 0 0	3 m

The resulting part number is how you will order your connector.

7000 – 1 2 4 0 1 – 0 3 3 0 3 0 0

MURR ELEKTRONIK
stay connected

INTERNATIONAL APPROVALS FOR FLEXIBLE USE WORLDWIDE

DID YOU KNOW?

Every Murrelektronik connector is 100% tested.

This means:

- **Electrically tested**
- **High voltage tested**
- **Performance tested**
- **Pin assignment tested**
- **Short circuit tested**
- **Visually controlled**

YOUR BENEFITS

- **Modular connector program**
  - Find your connector quickly
- **International approvals**
  - Products approved for your market
- **Guaranteed quality**
  - 100% tested
  - All contacts gold-plated
  - High IP67 protection as standard
  - Shock and vibration resistant
- **Worldwide and industry wide**
  - Benefit from our expertise and our cross-industry expertise

Quality
MADE BY MURRELEKTRONIK





AUDIBLY SEALED – SIMPLE AND SAFE

Our torque wrench connects Murrelektronik M8-, M12-, 7/8" and M23 connectors simply and tightly, leaving no room for error.



M8	0.4 Nm
M12	0.6 Nm
7/8"	1.5 Nm
M23	2.0 Nm

Just turn until you hear the click.

No more sore fingers!

STANDARD CABLE TYPES
FOR YOUR APPLICATION



WIDE RANGE MEETS YOUR REQUIREMENTS

- **4 standard cable types for your application solution**
  - Always the right cable
- **3 cable colors (yellow, gray and black)**
  - The color you need for your industry
- **Meets the highest quality requirements**
  - Certified, application approved and successfully tested with many aggressive media (oil and lubricants)






Cable Types		PVC	PUR/PVC	PUR	PUR Welding Spark Resistant
Cable Standard		★	★★	★★★	★★★★★
Properties*	Flame retardant	■	■	■	■
	Resistant to chemicals	■	■	■	■
	Resistant to cleaning agents (Ecolab)	■			
	Resistant to oil and lubricants		■	■	■
	Suitable for use in C-tracks**		2 million	5 million	10 million
	Suitable for robotic applications			±180°	±360°
	Welding spark resistant				■
	UV resistant			■	■
	Halogen-free			■	■
	Varying temperatures	-5...+80 °C	-5...+80 °C	-25...+80 °C	-25...+90 °C
	UL/CSA approvals	■		■	■
	Compliant with NFPA 79 Edition 2012	■		■	
Application Examples		Packaging machines Food & Beverage Assembly lines Production lines	Packaging machines Handling machines Assembly lines Production lines	Machine tools Swivel tables Metal cutting	Machine tools Industrial robots Metal cutting High performance C-tracks

* The properties of some cable types may differ from this data.

** Max. 3.3 m/s at 5 m horizontal travel distance and max. acceleration of 5 m/s².



M8 ROUND PLUG CONNECTORS
SMALL, LIGHT, MEETS YOUR NEEDS

- **Extensive selection**
- **Tested technology**
- **Modern design**

M8 REDESIGN – MORE MODELS, & NEW DESIGN

M8's redesign introduces new innovations. We completely redesigned all Murrelektronik's molded M8 connectors. They now have a new look and have been upgraded. We also significantly expanded our range of shielded M8 connectors.

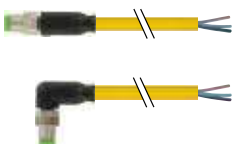
Features:

- Durable PUR molding
- Gold plated contacts
- Small dimensions and improved feel
- Corrugated tubing connection
- Hex screw with thread (SW9)

Huge Variety:

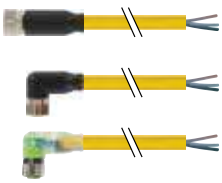
- Male/female, straight/90°, 3-pole/4-pole
- Shielded and unshielded connectors
- 3 standard colors, 4 standard cable types
- Cables, open ended wires, T-couplers, adapters, models with LED

With Open Ended Wires



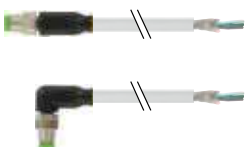
M8 male
• Straight
• 90°

Page 3.1.1



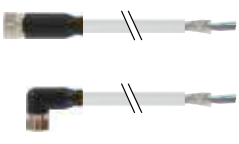
M8 female
• Straight
• 90°
• 90° with LED

Page 3.1.3



M8 male (shielded)
• Straight
• 90°

Page 3.1.6



M8 female (shielded)
• Straight
• 90°

Page 3.1.8

Connection Cables



M8 male
- Straight

M8 female
- Straight
- 90°
- 90° with LED

Page 3.1.10



Y connector M8
- Male straight

Y connector M8
- Female straight

M8 female
- Straight

M8 male
- Straight

Page 3.1.13



M8 male (shielded)
- Straight

M8 female (shielded)
- Straight
- 90°

Page 3.1.15

Field-Wireable



Insulation Displacement Technology (IDC)
0.14...0.34 mm²

M8 male/female
- Straight

Page 3.1.17



Screw terminals

M8 male/female
- Straight

Page 3.1.18



Screw terminals (shielded)

M8 male/female
- Straight

Page 3.1.19

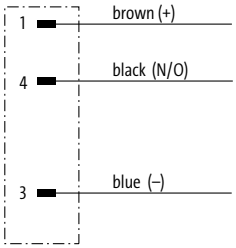
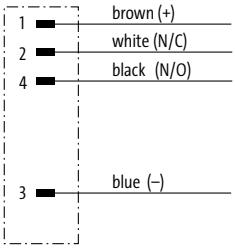
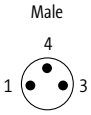
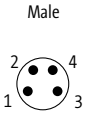
With open ended wires

Male
straight



Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

1 Form	08001 me	08011 me
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC (UL/CSA)	020	220	620	021	221	621
PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
PUR (UL/CSA), welding spark	050	250	650	051	251	651

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _
7005	M8 Lite (plastic hexagonal screw) on request		
	1 Form	2 Cable Type	3 Cable Length

Notes

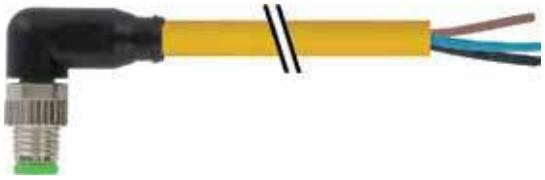
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

With open ended wires

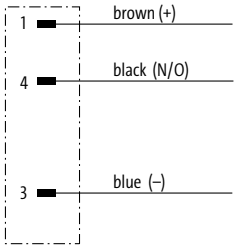
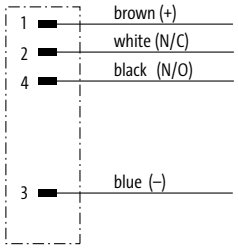
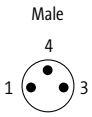
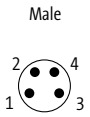
Male

90°



Approvals: cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

1 Form	08021	08031
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC (UL/CSA)	020	220	620	021	221	621
PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
PUR (UL/CSA), welding spark	050	250	650	051	251	651

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _

7005 **M8 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

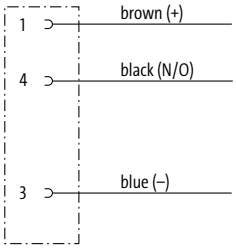
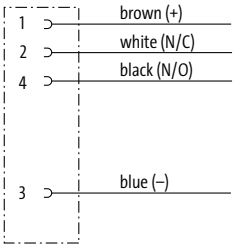
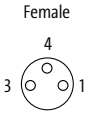
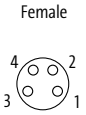
With open ended wires

Female
straight



Approvals: cULus Listed * CSP c US *
* only for products with UL/CSA approved cable

1 Form

	08041 me	08061 me
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**	**011**	**211**	**611**
PUR/PVC (UL/CSA)	**020**	**220**	**620**	**021**	**221**	**621**
PUR (UL/CSA), robots/C-tracks	**030**	**230**	**630**	**031**	**231**	**631**
PUR (UL/CSA), welding spark	**050**	**250**	**650**	**051**	**251**	**651**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7 0 0 5	**M8 Lite** (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

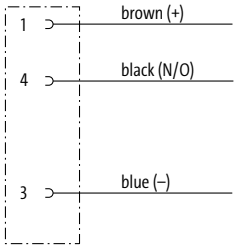
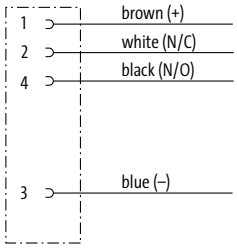
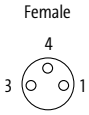
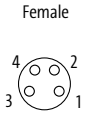
With open ended wires

Female
90°



Approvals: cULus Listed, CSA *

* only for products with UL/CSA approved cable

1 Form	08081	08101
Type	3-pole	4-pole
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC (UL/CSA)	020	220	620	021	221	621
PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
PUR (UL/CSA), welding spark	050	250	650	051	251	651

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M8 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

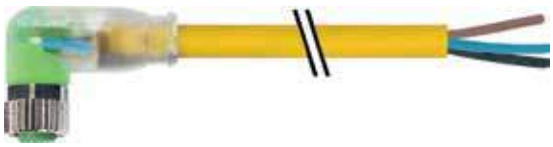
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

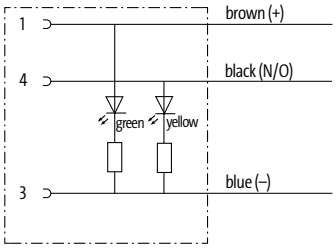
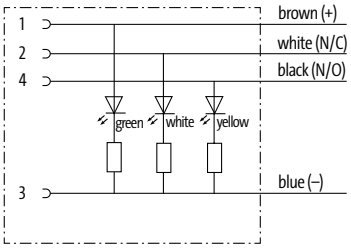
Female

90° with LED



Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

		08121			08141		
1	**Form**						
	Type	**3-pole with 2 × LED (PNP)** **(NPN) on request**			**4-pole with 3 × LED (PNP)** **(NPN) on request**		
	Circuit diagram						
	Contact layout	Female 			Female 		
2	**Cable Type**	**Jacket Color**			**Jacket Color**		
	Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
	PVC (UL/CSA)	**010**	**210**	**610**	**011**	**211**	**611**
	PUR/PVC (UL/CSA)	**020**	**220**	**620**	**021**	**221**	**621**
	PUR (UL/CSA), robots/C-tracks	**030**	**230**	**630**	**031**	**231**	**631**
	PUR (UL/CSA), welding spark	**050**	**250**	**650**	**051**	**251**	**651**
3	**Cable Length**						
	1.5 m	**0150**					
	3.0 m	**0300**					
	5.0 m	**0500**					
	7.5 m	**0750**					
	10.0 m	**1000**					

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7	0	0	0	–						–									
7	0	0	5	**M8 Lite** (plastic hexagonal screw) on request															
										1	**Form**			**2**	**Cable Type**			**3**	**Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

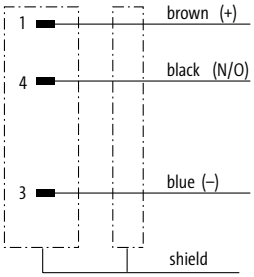
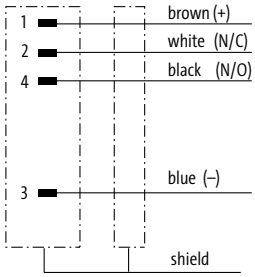
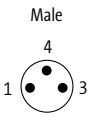
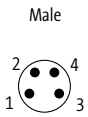
M8 ROUND PLUG CONNECTORS

With open ended wires

Male
straight



Approvals: cULus Listed * CSA *
* only for products with UL/CSA approved cable

1	**Form**	**08701**	**08711**
	Type	**3-pole, shielded**	**4-pole, shielded**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**		**Jacket Color**	
	Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
	PVC (UL/CSA)	**200**	**600**	**201**	**601**
	PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

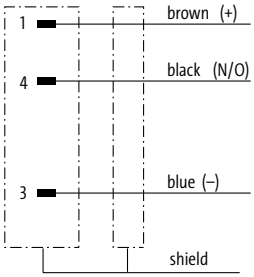
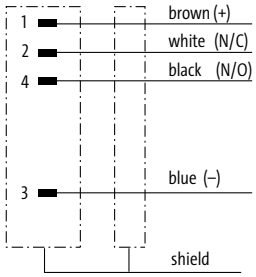
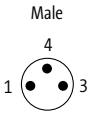
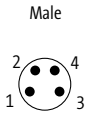
Male

90°



Approvals: cULus Listed, CSP cUS *

* only for products with UL/CSA approved cable

1	**Form**	**08721**			**08731**		
	Type	**3-pole, shielded**			**4-pole, shielded**		
	Circuit diagram						
	Contact layout						
2	**Cable Type**	**Jacket Color**			**Jacket Color**		
	Wire diameter 0.34 mm²		**gray**	**black**		**gray**	**black**
	PVC (UL/CSA)		**200**	**600**		**201**	**601**
	PUR (UL/CSA), robots/C-tracks		**240**	**640**		**241**	**641**
3	**Cable Length**						
	1.5 m	**0150**					
	3.0 m	**0300**					
	5.0 m	**0500**					
	7.5 m	**0750**					
	10.0 m	**1000**					

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

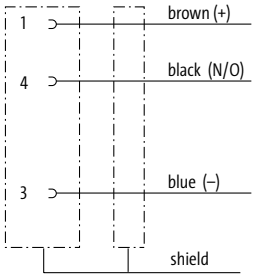
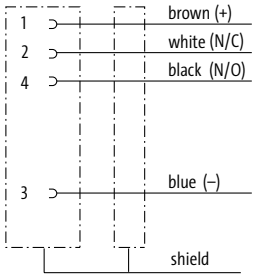
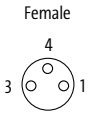
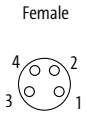
M8 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals: cULus Listed * CSA * only for products with UL/CSA approved cable

1 Form	08741	08761
Type	3-pole, shielded	4-pole, shielded
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	gray	black	gray	black
PVC (UL/CSA)	200	600	201	601
PUR (UL/CSA), robots/C-tracks	240	640	241	641

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Female

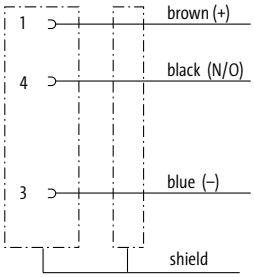
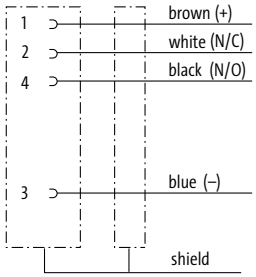
90°



Approvals: cULus Listed, CSP cUS *

* only for products with UL/CSA approved cable

1 Form

	08781	08801
Type	**3-pole, shielded**	**4-pole, shielded**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**
PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

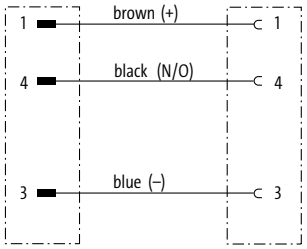
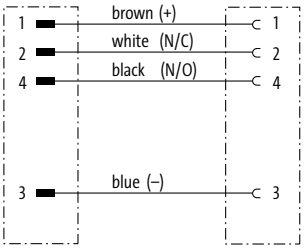
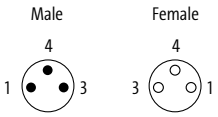
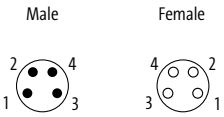
Male
straight

Female
straight



Approvals: cULus Listed, CSA
* only for products with UL/CSA approved cable

1 Form

	88001 me	88011 me
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.25 mm²	88001 Jacket Color: yellow	gray	black	88011 Jacket Color: yellow	gray	black
PVC (UL/CSA)	010	210	610	011	211	611
PUR/PVC (UL/CSA)	020	220	620	021	221	621
PUR (UL/CSA), robots/C-tracks	030	230	630	031	231	631
PUR (UL/CSA), welding spark	050	250	650	051	251	651

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M8 - M8

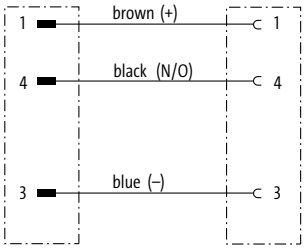
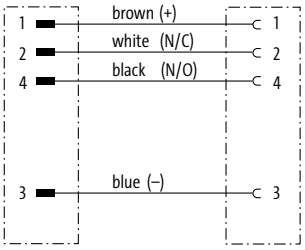
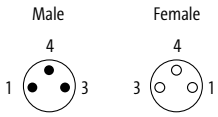
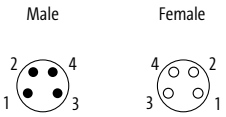
Male
straight

Female
90°



Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

1 Form	**88021** me	**88031** me
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**010**	**210**	**610**	**011**	**211**	**611**
PUR/PVC (UL/CSA)	**020**	**220**	**620**	**021**	**221**	**621**
PUR (UL/CSA), robots/C-tracks	**030**	**230**	**630**	**031**	**231**	**631**
PUR (UL/CSA), welding spark	**050**	**250**	**650**	**051**	**251**	**651**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _

7005 **M8 Lite** (plastic hexagonal screw) on request

	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

Male
straight

Female
90° with LED



Approvals: cULus Listed * CSA US *

* only for products with UL/CSA approved cable

1 Form

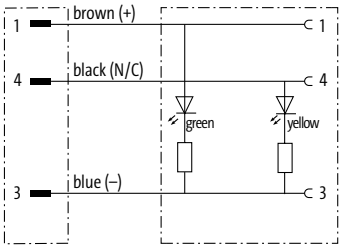
88041 mex

Type

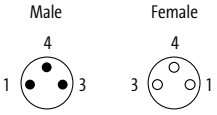
3-pole with 2 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.25 mm²	yellow	gray	black
PVC (UL/CSA)	010	210	610
PUR/PVC (UL/CSA)	020	220	620
PUR (UL/CSA), robots/C-tracks	030	230	630
PUR (UL/CSA), welding spark	050	250	650

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000 – 88041 – ___ ____

7005 **M8 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

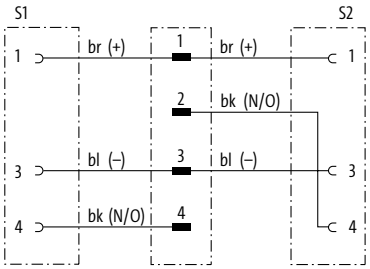
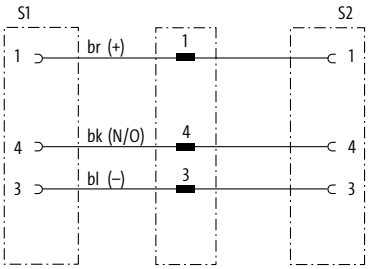
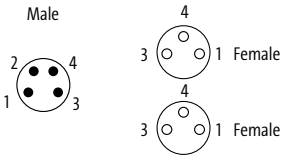
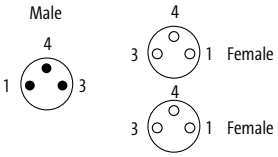
– M8 - M8

Y connector
Male straight

Females
straight



1 Form

	87001	87011
Type	**4-/3-pole**	**3-pole**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.25 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	010	210	610	010	210	610
PUR/PVC (UL/CSA)	020	220	620	020	220	620
PUR (UL/CSA), robots/C-tracks	030	230	630	030	230	630
PUR (UL/CSA), welding spark	050	250	650	050	250	650

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M8 Lite (plastic hexagonal screw) on request		

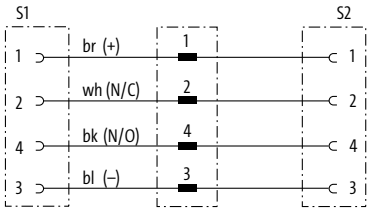
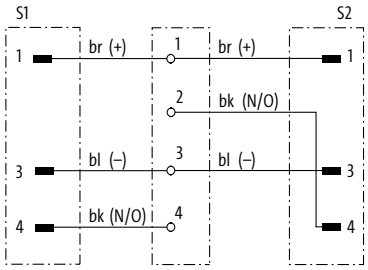
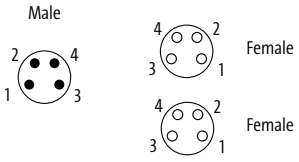
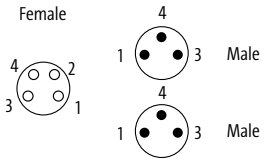
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

– M8 - M8

	Y connector Male straight	Females straight	Y connector Female straight	Males straight
				
1 Form	**87061**		**87251**	
Type	**4-pole**		**4-/3-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.25 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**011**	**211**	**611**	**010**	**210**	**610**
PUR/PVC (UL/CSA)	**021**	**221**	**621**	**020**	**220**	**620**
PUR (UL/CSA), robots/C-tracks	**031**	**231**	**631**	**030**	**230**	**630**
PUR (UL/CSA), welding spark	**051**	**251**	**651**	**050**	**250**	**650**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 – _ _ _ _ _ –	_ _ _	_ _ _ _
7005 M8 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M8 - M8

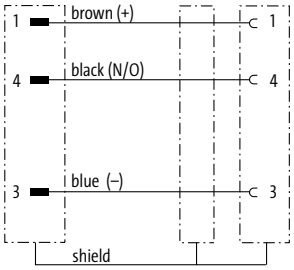
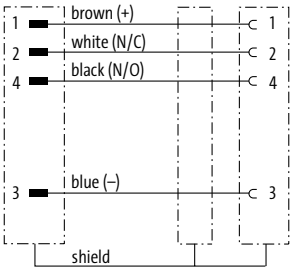
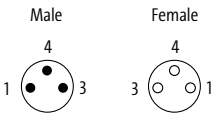
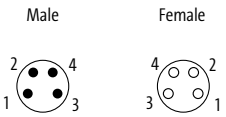
Male
straight

Female
straight



Approvals: cULus Listed, CSP c US *

* only for products with UL/CSA approved cable

1	**Form**	**89501**	**89511**
	Type	**3-pole, shielded**	**4-pole, shielded**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**		**Jacket Color**	
	Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
	PVC (UL/CSA)	**200**	**600**	**201**	**601**
	PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**

3	**Cable Length**	
	0.3 m	**0030**
	0.6 m	**0060**
	1.0 m	**0100**
	1.5 m	**0150**
	2.0 m	**0200**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M8 ROUND PLUG CONNECTORS

Connection cables

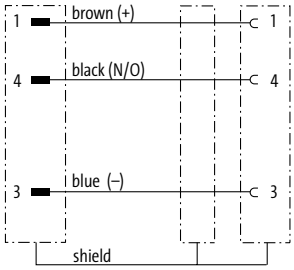
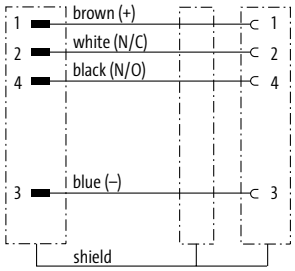
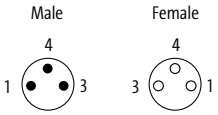
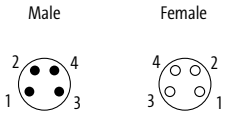
– M8 - M8

Male
straight

Female
90°



Approvals: cULus Listed * CSA *
* only for products with UL/CSA approved cable

1 Form	**89521**	**89531**
Type	**3-pole, shielded**	**4-pole, shielded**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**
PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data	
Operating voltage	max. 50 V AC/60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Field-wireable

– IDC terminals

Approvals: cULus

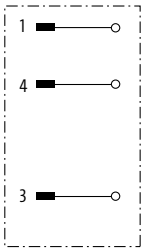
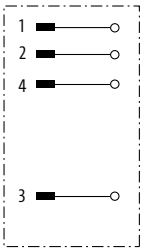
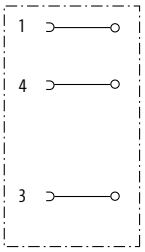
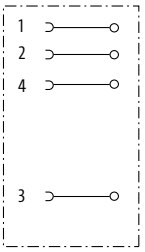
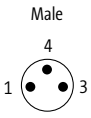
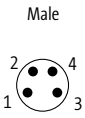
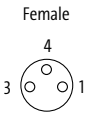
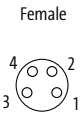
Male
straight



Female
straight



1 Form

	08331 me✖	08351 me✖	08371 me✖	08391 me✖
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.14...0.34 mm²**			
Contact layout				

Technical Data

Operating voltage	max. 32 V AC/DC
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Configuration	fully used
Material group	IEC 60664-1, category I
Over voltage category	3
Isolation resistance	≥ 10^8 Ohm
Contact resistance	≤ 10 mOhm
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	2.5...5.1 mm (gasket included)
Outer wire Ø	1.0...1.6 mm
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing
Compression gland	M8 (SW9)
Protection	IP67 inserted and tightened (EN 60529)
Wire isolation	PVC, PP, TPE
Material	PA
Locking material	Zinc die casting, matte nickel plated
Mating cycles	≥ 100
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

M8 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

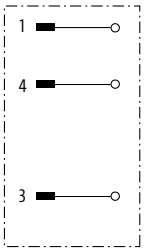
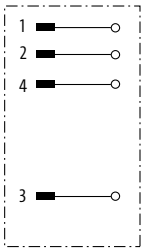
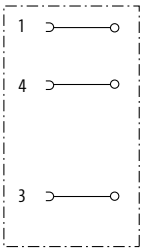
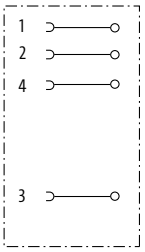
Approvals: cULus

Male
straight



Female
straight



1 Form	08601 me✖	08611 me✖	08621 me✖	08631 me✖
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.14...0.5 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Rated surge voltage	1.5 kV	0.8 kV	1.5 kV	0.8 kV
Operating current per contact	max. 4 A			
Connection cross section	0.14...0.5 mm²			
Sealing range (cable Ø)	2.5...5.0 mm			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

Field-wireable

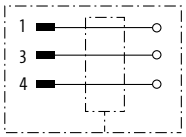
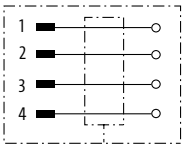
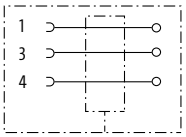
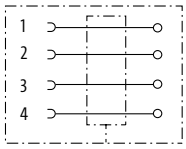
– Screw terminals

Male
straight



Female
straight



1 Form	08641 me✖	08651 me✖	08661 me✖	08671 me✖
Type	3-pole, shielded	4-pole, shielded	3-pole, shielded	4-pole, shielded
Circuit diagram				
Connection cross section	0.14...0.5 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 50 V AC/60 V DC	max. 30 V AC/DC	max. 60 V AC/DC	max. 30 V AC/DC
Rated surge voltage	1.5 kV	0.8 kV	1.5 kV	0.8 kV
Operating current per contact	max. 4 A			
Material group	IEC 60664-1, category III			
Connection cross section	0.14...0.5 mm²			
Sealing range (cable Ø)	3.5...5.5 mm			
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Locking material	Brass, nickel plated			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M8 ROUND PLUG CONNECTORS

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)		**7000-99002-0000000**
	**Colored ring M8/M12**		
	sandy yellow	for unshielded molding	**7000-99301-V011002**
	zinc yellow	for unshielded molding	**7000-99301-V011018**
	redorange	for unshielded molding	**7000-99301-V012008**
	red	for unshielded molding	**7000-99301-V013020**
	violet	for unshielded molding	**7000-99301-V014003**
	purple	for unshielded molding	**7000-99301-V014006**
	blue	for unshielded molding	**7000-99301-V015005**
	green	for unshielded molding	**7000-99301-V016018**
	gray	for unshielded molding	**7000-99301-V017035**
	white	for unshielded molding	**7000-99301-V019003**
	black	for unshielded molding	**7000-99301-V019004**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99101-0000000**
	**Torque wrench**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99091-0000000**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**
	**Gasket**		
	MOSA M8		**7000-99008-0000000**

Connection accessories			Art-No.
	**Universal holder**		
	modular	M8 M12	**7000-99801-0000000**
	**Flange M8 male, pre-wired 0.2 m**		
	suitable for mounting with wall thickness	max. 4.5 mm	**7000-08552-9700020**
	suitable for mounting with wall thickness	max. 4.5 mm	**7000-08562-9690020**
	**Flange M8 female, pre-wired 0.2 m**		
	straight, A-coded, 3-pole		**7000-08571-9700020**
			7000-08581-9710020



M12 ROUND PLUG CONNECTORS
COMPREHENSIVE AND VERSATILE

- **The right model for any application**
- **Shock and vibration resistant with integrated fastening**
- **Reliable – 100% tested**

M12 CONNECTORS – DESIGNED FOR MANY DIFFERENT CUSTOMER APPLICATIONS

Murrelektronik offers one of the most comprehensive M12 connector ranges on the market. Reliable, quick and easy assembly, a clear LED indicator: these are only a few of the features that make this product range one of the best.

Features

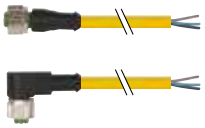
- Combined hex screw with thread for secure connections
- Highly resistant, halogen-free PUR molding guarantees IP67/68 seal
- Wide range of cable material and color – always the right choice for your application

With Open Ended Wires



M12 male
• Straight
• 90°

Page 3.2.1



M12 female
• Straight
• 90°

Page 3.2.7



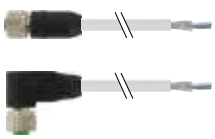
M12 female with LED
• Straight
• 90°

Page 3.2.13



M12 male (shielded)
• Straight
• 90°

Page 3.2.17



M12 female (shielded)
• Straight
• 90°

Page 3.2.23

Connection Cables



M12 male
- Straight
- 90°

M12 female
- Straight
- 90°
- 90° with LED

Page 3.2.29



M12 Y connector male
- Straight

M12 female
- Straight
- 90°
- 90° with LED

Page 3.2.35



M12 male (shielded)
- Straight

M12 female (shielded)
- Straight

Page 3.2.38

Field-Wireable



Insulation Displacement Technology (IDC)

M12 male/female
- Straight
- 90°

M12 female
- 90° with LED

Page 3.2.41



Screw terminals

M12 male/female
- Straight
- 90°

Screw terminals

M12 Y connector male
- Straight

Page 3.2.47



Screw terminals (shielded)

M12 male/female
- Straight
- 90°

Page 3.2.54

With open ended wires

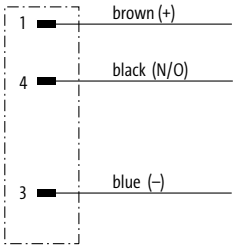
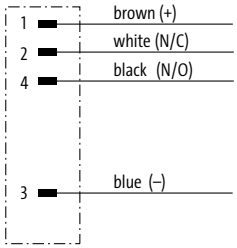
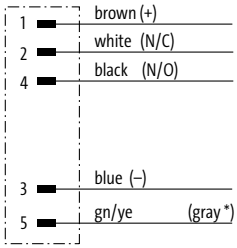
Male
straight



Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

1 Form

	12001 me	12021 me	12041 me
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			
	1 brown (+) 4 black (N/O) 3 blue (–)	1 brown (+) 2 white (N/C) 4 black (N/O) 3 blue (–)	1 brown (+) 2 white (N/C) 4 black (N/O) 3 blue (–) 5 gn/ye (gray *)
			(* for cable type 126, 732, 219, 619)
Contact layout	Male 	Male 	Male 

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color: yellow	gray	black	Jacket Color: yellow	gray	black	Jacket Color: yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	–	
7005 M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

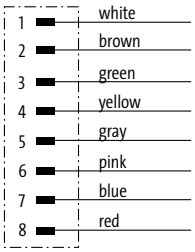
M12 ROUND PLUG CONNECTORS

With open ended wires

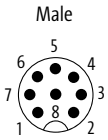
Male
straight



Approvals: cULus Listed * CSA *
* only for products with UL/CSA approved cable

1 Form	17001	17001
Type	8-pole	8-pole
Circuit diagram		

Contact layout



2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**gray**	**black**	**yellow**		**gray**	**black**
PVC (UL/CSA)	**207**	**607**			**208**	**608**
PUR (UL/CSA), robots/C-tracks	**292**	**722**	**114**		**295**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Male
straight



Approvals: cULus *

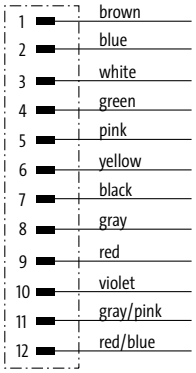
* only for products with UL/CSA approved cable

1 Form

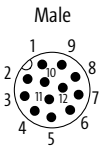
19001

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.14 mm²	gray	black
PVC (UL/CSA)	**209**	**609**
PUR (UL/CSA), robots/C-tracks		**705**
Wire diameter 0.25 mm²		
PUR (UL/CSA), robots/C-tracks	**301**	
PUR (UL/CSA), welding spark	**302**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	19001 –	___	____

7005 **M12 Lite** (plastic hexagonal screw) on request

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

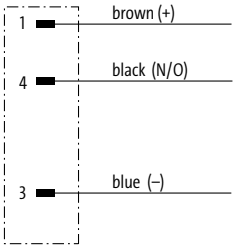
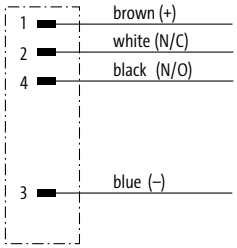
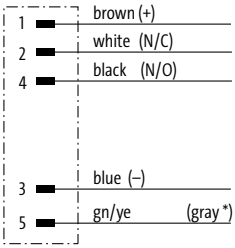
90°



Approvals: cULus Listed, CSA *

* only for products with UL/CSA approved cable

1 Form

	12081 me	12101 me	12121 me
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126, 732, 219, 619)
Contact layout	Male 	Male 	Male 

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

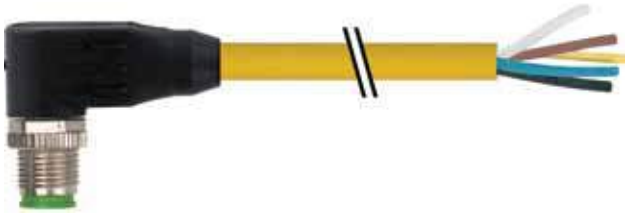
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Male

90°



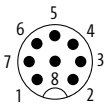
Approvals: cULus Listed, CSP cUS *

* only for products with UL/CSA approved cable

1 Form	17021	17021
Type	8-pole	8-pole
Circuit diagram		

Contact layout

Male



2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**gray**	**black**	**yellow**		**gray**	**black**
PVC (UL/CSA)	**207**	**607**			**208**	**608**
PUR (UL/CSA), robots/C-tracks	**292**	**722**	**114**		**295**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals: cULus*

* only for products with UL/CSA approved cable

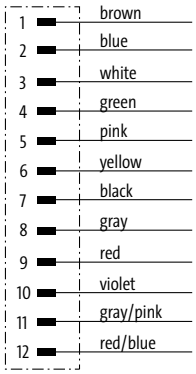
1 Form

19021

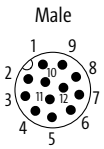
Type

12-pole

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	
Wire diameter 0.14 mm²	**gray**	**black**
PVC (UL/CSA)	**209**	**609**
PUR (UL/CSA), robots/C-tracks		**705**
Wire diameter 0.25 mm²		
PUR (UL/CSA), robots/C-tracks	**301**	
PUR (UL/CSA), welding spark	**302**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19021	–	___	____

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

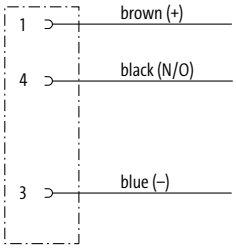
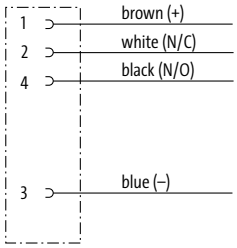
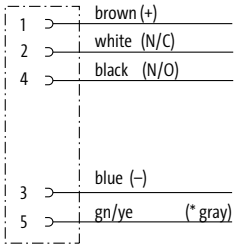
With open ended wires

Female
straight



Approvals: cULus Listed * cSPus *
* only for products with UL/CSA approved cable

1 Form

	12181 me	12221 me	12241
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126, 732, 219, 619)
Contact layout	Female 	Female 	Female 

2 Cable Type

	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**014**	**214**	**614**	**015**	**215 (219)**	**615 (619)**
PUR/PVC (UL/CSA)	**023**	**223**	**623**	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA), robots/C-tracks	**033**	**233**	**633**	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark	**053**	**253**	**653**	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
7 0 0 5	**M12 Lite** (plastic hexagonal screw) on request		
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

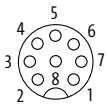
M12 ROUND PLUG CONNECTORS

With open ended wires

Female
straight



Approvals: cULus Listed * CSA c US *
* only for products with UL/CSA approved cable

1 Form	17041	17041
Type	**8-pole**	**8-pole**
Circuit diagram		
Contact layout	Female 	

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**gray**	**black**	**yellow**		**gray**	**black**
PVC (UL/CSA)	**207**	**607**			**208**	**608**
PUR (UL/CSA), robots/C-tracks	**292**	**722**	**114**		**295**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_____ –	___	____
7005	**M12 Lite** (plastic hexagonal screw) on request	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Female
straight



Approvals: cULus *

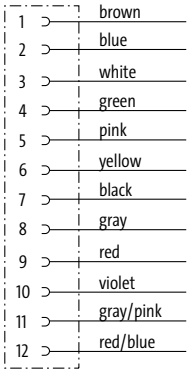
* only for products with UL/CSA approved cable

1 Form

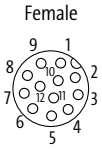
19041

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	
Wire diameter 0.14 mm²	**gray**	**black**
PVC (UL/CSA)	**209**	**609**
PUR (UL/CSA), robots/C-tracks		**705**
Wire diameter 0.25 mm²		
PUR (UL/CSA), robots/C-tracks	**301**	
PUR (UL/CSA), welding spark	**302**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19041	–	___	____

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

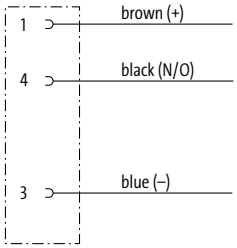
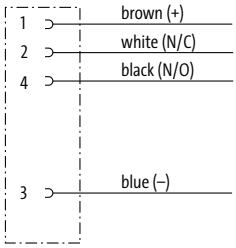
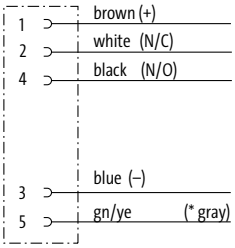
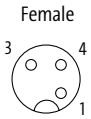
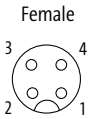
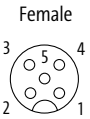
Female

90°



Approvals: cULus Listed, CSA *

* only for products with UL/CSA approved cable

1 Form	12321	12341	12361
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			 (* for cable type 126, 732, 219, 619)
Contact layout			

2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**014**	**214**	**614**	**015**	**215 (219)**	**615 (619)**
PUR/PVC (UL/CSA)	**023**	**223**	**623**	**024**	**224**	**624**	**025**	**225**	**625**
PUR (UL/CSA), robots/C-tracks	**033**	**233**	**633**	**034**	**234**	**634**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark	**053**	**253**	**653**	**054**	**254**	**654**	**055**	**255**	**655**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request				

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Female

90°



Approvals: cULus Listed, CSA

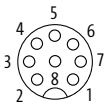
* only for products with UL/CSA approved cable

1 Form

	17061	17061
Type	**8-pole**	**8-pole**
Circuit diagram	1 white 2 brown 3 green 4 yellow 5 gray 6 pink 7 blue 8 red	1 brown 2 white 3 blue 4 black 5 gray 6 pink 7 violet 8 orange

Contact layout

Female



2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**gray**	**black**	**yellow**		**gray**	**black**
PVC (UL/CSA)	**207**	**607**			**208**	**608**
PUR (UL/CSA), robots/C-tracks	**292**	**722**	**114**		**295**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

Notes

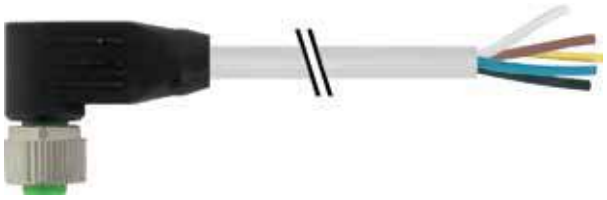
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

90°



Approvals: cULus*

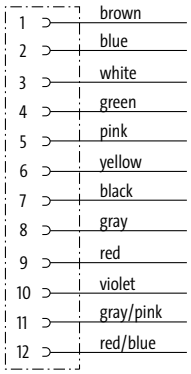
* only for products with UL/CSA approved cable

1 Form

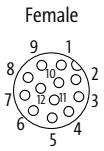
19061

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	
	gray	**black**
Wire diameter 0.14 mm²		
PVC (UL/CSA)	**209**	**609**
PUR (UL/CSA), robots/C-tracks		**705**
Wire diameter 0.25 mm²		
PUR (UL/CSA), robots/C-tracks	**301**	
PUR (UL/CSA), welding spark	**302**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19061	–	___	____
1 Form		2 Cable Type		3 Cable Length	

7005 **M12 Lite** (plastic hexagonal screw) on request

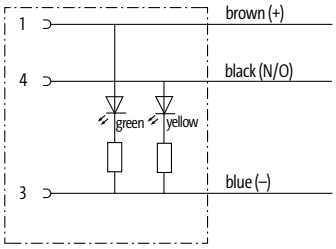
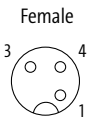
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

	Female straight, with LED	Female 90° with LED
		
1 Form	**12261**	**12381**
Type	**3-pole with 2 × LED (PNP) (NPN) on request**	**3-pole with 2 × LED (PNP) (NPN) on request**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color: yellow	gray	black	Jacket Color: yellow	gray	black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC (UL/CSA)	023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633	033	233	633
PUR (UL/CSA), welding spark	053	253	653	053	253	653

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

Notes

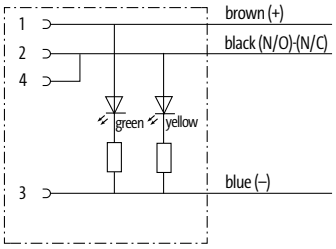
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

	Female straight, with LED	**Female** 90° with LED
		
1 Form	**12281**	**12401**
Type	**4-pole with 2 × LED (PNP) (NPN) on request**	**4-pole with 2 × LED (PNP) (NPN) on request**
Circuit diagram		
Contact layout	Female 	

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**013**	**213**	**613**	**013**	**213**	**613**
PUR/PVC (UL/CSA)	**023**	**223**	**623**	**023**	**223**	**623**
PUR (UL/CSA), robots/C-tracks	**033**	**233**	**633**	**033**	**233**	**633**
PUR (UL/CSA), welding spark	**053**	**253**	**653**	**053**	**253**	**653**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request	

	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

Female
straight, with LED



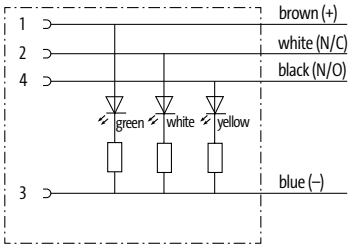
Female
90° with LED



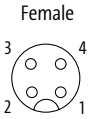
1 Form

	Female, straight, with LED	Female, 90° with LED
Type	**12231** **4-pole with 3 × LED (PNP)** **(NPN) on request**	**12421** **4-pole with 3 × LED (PNP)** **(NPN) on request**

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.34 mm²	Female, straight, with LED – Jacket Color: yellow	gray	black	Female, 90° with LED – Jacket Color: yellow	gray	black
PVC (UL/CSA)	**014**	**214**	**614**	**014**	**214**	**614**
PUR/PVC (UL/CSA)	**024**	**224**	**624**	**024**	**224**	**624**
PUR (UL/CSA), robots/C-tracks	**034**	**234**	**634**	**034**	**234**	**634**
PUR (UL/CSA), welding spark	**054**	**254**	**654**	**054**	**254**	**654**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005 M12 Lite (plastic hexagonal screw) on request		

Notes

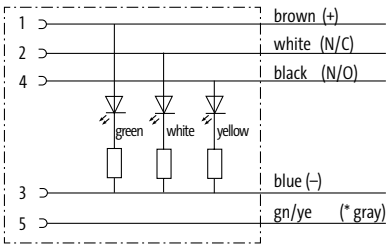
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Approvals: cULus *

* only for products with UL/CSA approved cable

	Female straight, with LED	**Female** 90° with LED
		
1 Form	**12251**	**12441**
Approvals		**cULus ***
Type	**5-pole with 3 × LED (PNP)** **(NPN) on request**	**5-pole with 3 × LED (PNP)** **(NPN) on request**
Circuit diagram	 (* for cable type 126, 732, 219, 619)	
Contact layout	Female 	

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**015**	**215 (219)**	**615 (619)**	**015**	**215 (219)**	**615 (619)**
PUR/PVC (UL/CSA)	**025**	**225**	**625**	**025**	**225**	**625**
PUR (UL/CSA), robots/C-tracks	**035 (126)**	**235**	**635 (732)**	**035 (126)**	**235**	**635 (732)**
PUR (UL/CSA), welding spark	**055**	**255**	**655**	**055**	**255**	**655**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ – ___	____
7005 **M12 Lite** (plastic hexagonal screw) on request	

	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

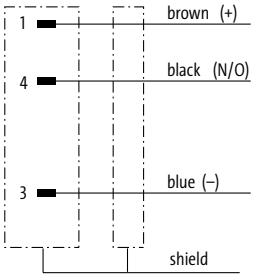
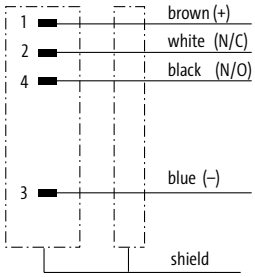
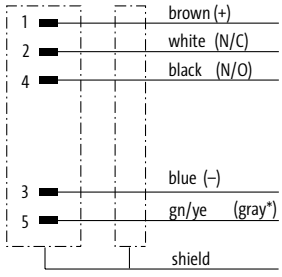
With open ended wires

Male
straight



Approvals: cULus Listed * cSPus *

* only for products with UL/CSA approved cable

1 Form	13061	13081	13101
Type	**3-pole, shielded**	**4-pole, shielded**	**5-pole, shielded**
Circuit diagram			 (* for cable type 203, 603, 243, 643)
Contact layout	Male 	Male 	Male 

2 Cable Type	Jacket Color		Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**	**202 (203)**	**602 (603)**
PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**	**242 (243)**	**642 (643)**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

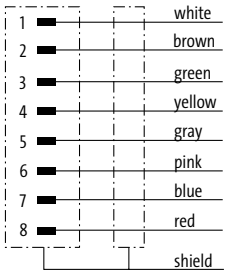
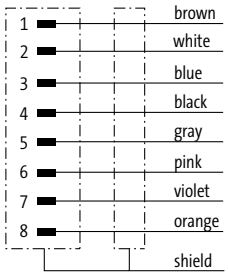
Male
straight



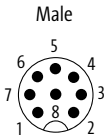
Approvals: cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

1 Form

	17081	17081
Type	**8-pole, shielded**	**8-pole, shielded**
Circuit diagram		

Contact layout



2 Cable Type

	Jacket Color		Jacket Color	
Wire diameter 0.25 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**204**		**205**	
PUR (UL/CSA), robots/C-tracks	**291**	**717**	**294**	**715**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Male
straight



Approvals: cULus *

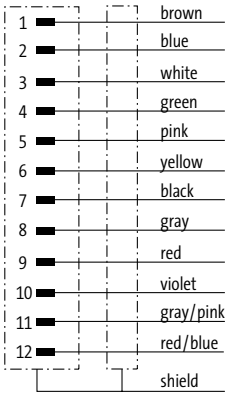
* only for products with UL/CSA approved cable

1 Form

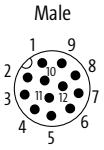
19301

Type: **12-pole, shielded**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.14 mm²	**black**
PVC (UL/CSA)	**703**
PUR (UL/CSA), robots/C-tracks	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19301	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

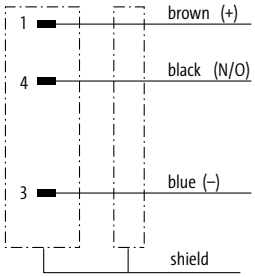
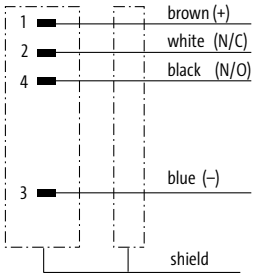
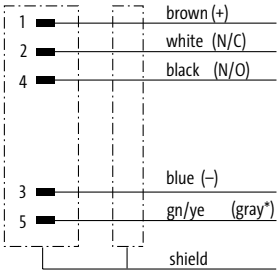
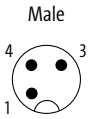
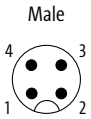
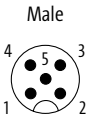
90°



Approvals: cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

1 Form

	13121	13141	13161
Type	**3-pole, shielded**	**4-pole, shielded**	**5-pole, shielded**
Circuit diagram			
Contact layout			

(* for cable type 203, 603, 243, 643)

2 Cable Type

	Jacket Color		Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**	**202 (203)**	**602 (603)**
PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**	**242 (243)**	**642 (643)**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Male

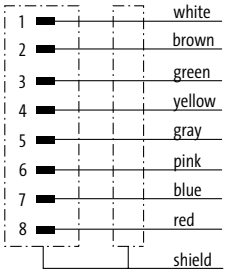
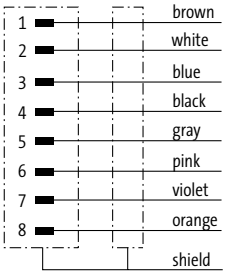
90°



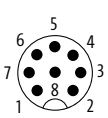
Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

1 Form

	17101	17101
Type	**8-pole, shielded**	**8-pole, shielded**
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.25 mm²	Jacket Color: gray	Jacket Color: black	Jacket Color: gray	Jacket Color: black
PVC (UL/CSA)	**204**		**205**	
PUR (UL/CSA), robots/C-tracks	**291**	**717**	**294**	**715**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Male

90°



Approvals: cULus*

* only for products with UL/CSA approved cable

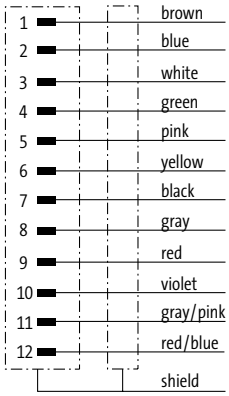
1 Form

19321

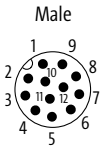
Type

12-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.14 mm²	**black**
PVC (UL/CSA)	**703**
PUR (UL/CSA), robots/C-tracks	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19321	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

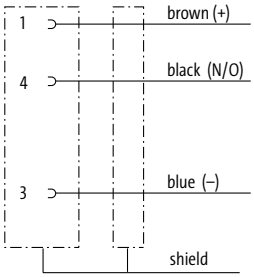
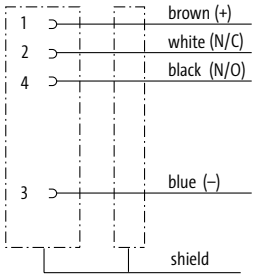
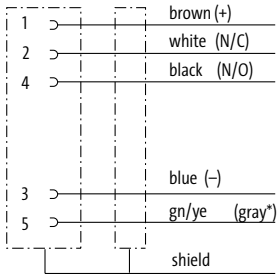
With open ended wires

Female
straight



Approvals: cULus Listed * cSPus *
* only for products with UL/CSA approved cable

1 Form

	13181	13201	13221
Type	**3-pole, shielded**	**4-pole, shielded**	**5-pole, shielded**
Circuit diagram			
Contact layout			

(* for cable type 203, 603, 243, 643)

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color: gray	Jacket Color: black
PVC (UL/CSA)	200	600
PUR (UL/CSA), robots/C-tracks	240	640

Wire diameter 0.34 mm²	Jacket Color: gray	Jacket Color: black
PVC (UL/CSA)	201	601
PUR (UL/CSA), robots/C-tracks	241	641

Wire diameter 0.34 mm²	Jacket Color: gray	Jacket Color: black
PVC (UL/CSA)	202 (203)	602 (603)
PUR (UL/CSA), robots/C-tracks	242 (243)	642 (643)

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

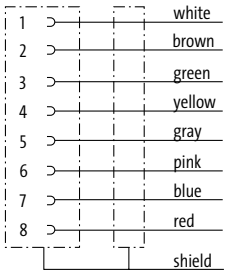
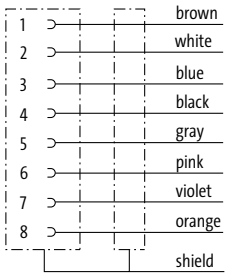
Female
straight



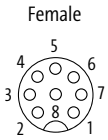
Approvals: cULus*

* only for products with UL/CSA approved cable

1 Form

	17121	17121
Type	**8-pole, shielded**	**8-pole, shielded**
Circuit diagram		

Contact layout



2 Cable Type

	Jacket Color		Jacket Color	
Wire diameter 0.25 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**204**		**205**	
PUR (UL/CSA), robots/C-tracks	**291**	**717**	**294**	**715**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Female
straight



Approvals: cULus *

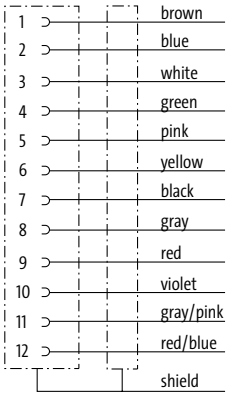
* only for products with UL/CSA approved cable

1 Form

19341

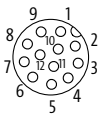
Type: **12-pole, shielded**

Circuit diagram



Contact layout

Female



2 Cable Type

	Jacket Color
Wire diameter 0.14 mm²	**black**
PVC (UL/CSA)	**703**
PUR (UL/CSA), robots/C-tracks	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

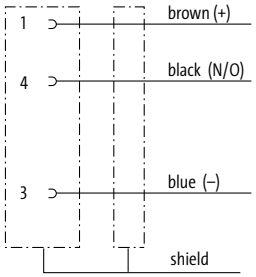
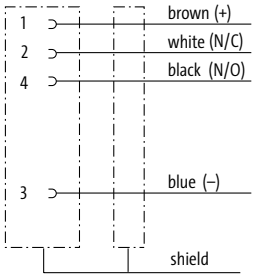
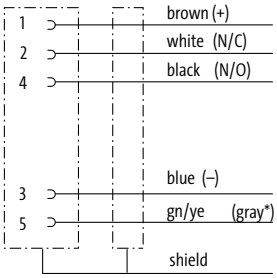
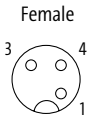
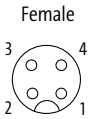
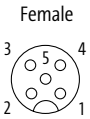
Female

90°



Approvals: cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

1 Form	13241	13261	13281
Type	3-pole, shielded	4-pole, shielded	5-pole, shielded
Circuit diagram			 (* for cable type 203, 603, 243, 643)
Contact layout			

2 Cable Type	Jacket Color		Jacket Color		Jacket Color	
Wire diameter 0.34 mm²	gray	black	gray	black	gray	black
PVC (UL/CSA)	200	600	201	601	202 (203)	602 (603)
PUR (UL/CSA), robots/C-tracks	240	640	241	641	242 (243)	642 (643)

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ – ___ ____
1 Form / 2 Cable Type / 3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

Female

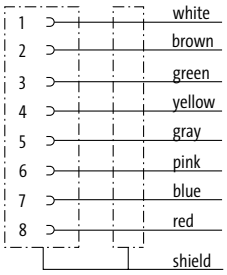
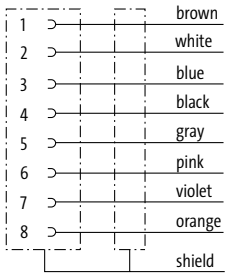
90°



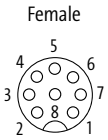
Approvals: cULus Listed, CSP cUS *

* only for products with UL/CSA approved cable

1 Form

	17141	17141
Type	**8-pole, shielded**	**8-pole, shielded**
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.25 mm²	Jacket Color		Jacket Color	
	gray	black	gray	black
PVC (UL/CSA)	204		205	
PUR (UL/CSA), robots/C-tracks	291	717	294	715

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

With open ended wires

Female

90°



Approvals: cULus*

* only for products with UL/CSA approved cable

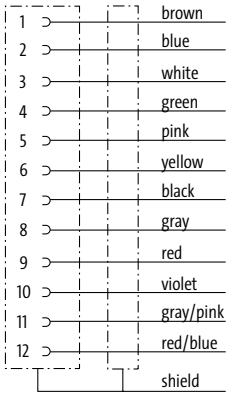
1 Form

19361

Type

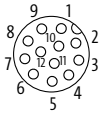
12-pole, shielded

Circuit diagram



Contact layout

Female



2 Cable Type

	Jacket Color
Wire diameter 0.14 mm²	**black**
PVC (UL/CSA)	**703**
PUR (UL/CSA), robots/C-tracks	**706**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	19361	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

Male
straight

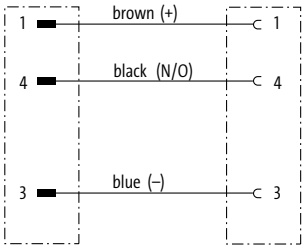
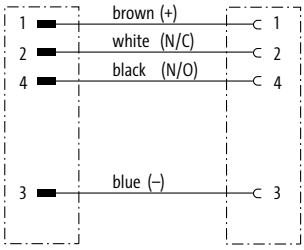
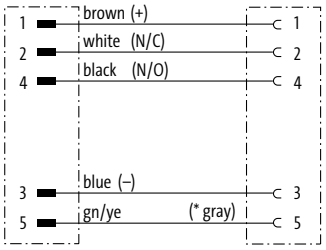
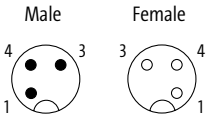
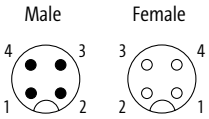
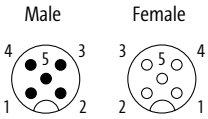
Female
straight



Approvals: cULus Listed * CSP c US *

* only for products with UL/CSA approved cable

1 Form

	40001	40021	40041
Type	**3-pole**	**4-pole**	**5-pole**
Circuit diagram			
			(* for cable type 126, 732, 219, 619)
Contact layout			

2 Cable Type

Wire diameter 0.34 mm²	40001 yellow	40001 gray	40001 black	40021 yellow	40021 gray	40021 black	40041 yellow	40041 gray	40041 black
PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005 M12 Lite (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

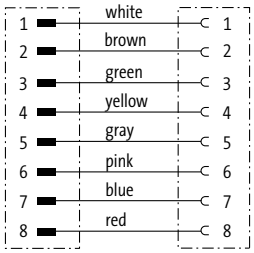
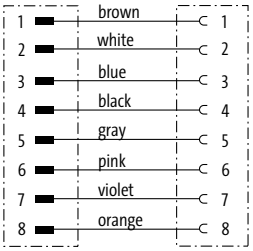
Female
straight



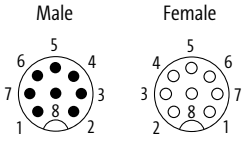
Approvals: cULus Listed * CSA US *

* only for products with UL/CSA approved cable

1 Form

	48001	48001
Type	**8-pole**	**8-pole**
Circuit diagram		

Contact layout



2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.25 mm²	**gray**	**black**	**yellow**		**gray**	**black**
PVC (UL/CSA)	**207**	**607**			**208**	**608**
PUR (UL/CSA), robots/C-tracks	**292**	**722**	**114**		**295**	

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

Male
straight

Female
straight



Approvals: cULus*

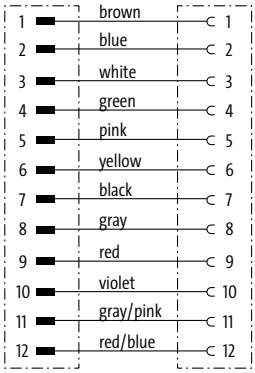
* only for products with UL/CSA approved cable

1 Form

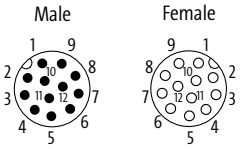
53001

Type: **12-pole**

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Wire diameter 0.14 mm²	gray	black
PVC (UL/CSA)	209	609
PUR (UL/CSA), robots/C-tracks		705
Wire diameter 0.25 mm²		
PUR (UL/CSA), robots/C-tracks	301	
PUR (UL/CSA), welding spark	302	

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– 53001	– ___	____

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

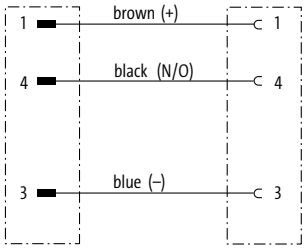
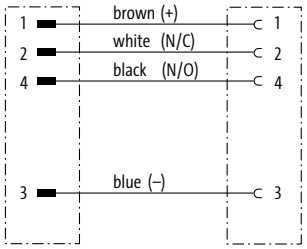
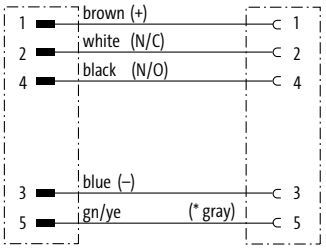
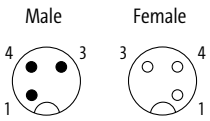
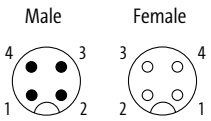
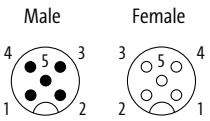
Male
straight

Female
90°



Approvals: cULus Listed, CSA * only for products with UL/CSA approved cable

1 Form

	40101	40121	40141
Type	3-pole	4-pole	5-pole
Circuit diagram			
			(* for cable type 126, 732, 219, 619)
Contact layout			

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

Male
straight

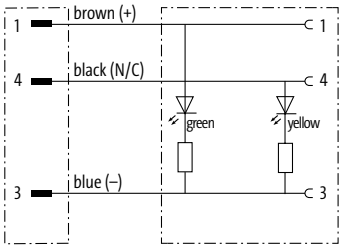
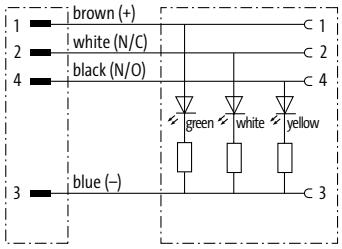
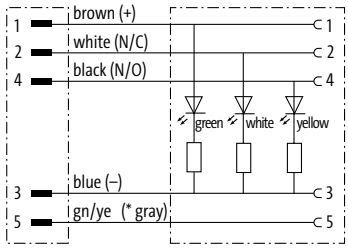
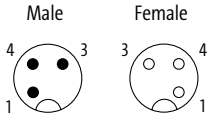
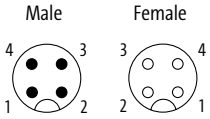
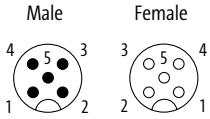
Female
90° with LED



Approvals: cULus Listed * CSP c US *

* only for products with UL/CSA approved cable

1 Form

	40321	40341	40361
Type	**3-pole with 2 × LED (PNP)** **(NPN) on request**	**4-pole with 3 × LED (PNP)** **(NPN) on request**	**5-pole with 3 × LED (PNP)** **(NPN) on request**
Circuit diagram			 (* for cable type 126, 732, 219, 619)
Contact layout			

2 Cable Type

Wire diameter 0.34 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	013	213	613	014	214	614	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	023	223	623	024	224	624	025	225	625
PUR (UL/CSA), robots/C-tracks	033	233	633	034	234	634	035 (126)	235	635 (732)
PUR (UL/CSA), welding spark	053	253	653	054	254	654	055	255	655

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000	– _ _ _ _ _	– _ _ _	_ _ _ _
7005	**M12 Lite** (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
90° with LED



Approvals: cULus Listed * CSA US *

* only for products with UL/CSA approved cable

1 Form

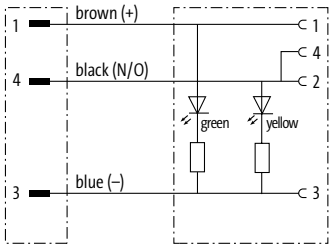
40381

Type

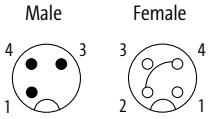
3-pole with 2 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.34 mm²	yellow	gray	black
PVC (UL/CSA)	013	213	613
PUR/PVC (UL/CSA)	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633
PUR (UL/CSA), welding spark	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – 4 0 3 8 1 – _ _ _ _ _ _ _ _

7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request

1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

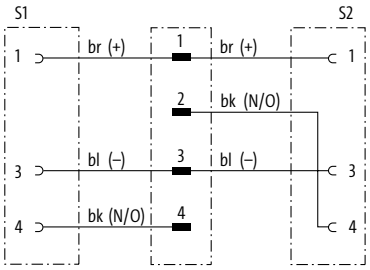
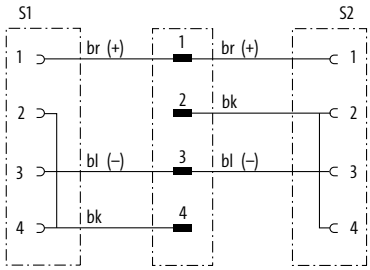
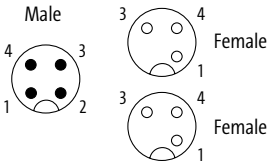
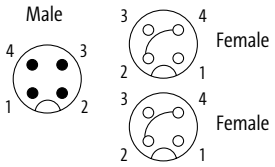
Y connector
Male straight

Females
straight



Approvals: cULus Listed, CSP c US *

* only for products with UL/CSA approved cable

		40701	40721
1	**Form**		
	Type	**4-/3-pole**	**4-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.34 mm²	**yellow / gray / black**	**yellow / gray / black**
	PVC (UL/CSA)	**013 / 213 / 613**	**013 / 213 / 613**
	PUR/PVC (UL/CSA)	**023 / 223 / 623**	**023 / 223 / 623**
	PUR (UL/CSA), robots/C-tracks	**033 / 233 / 633**	**033 / 233 / 633**
	PUR (UL/CSA), welding spark	**053 / 253 / 653**	**053 / 253 / 653**
3	**Cable Length**		
	0.3 m	**0030**	
	0.6 m	**0060**	
	1.0 m	**0100**	
	1.5 m	**0150**	
	2.0 m	**0200**	

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _
7005	M12 Lite (plastic hexagonal screw) on request	

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Y connector
Male straight

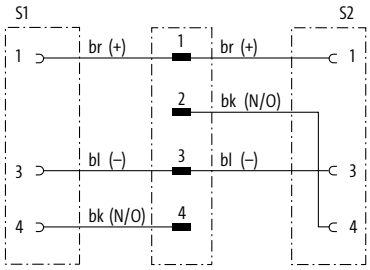
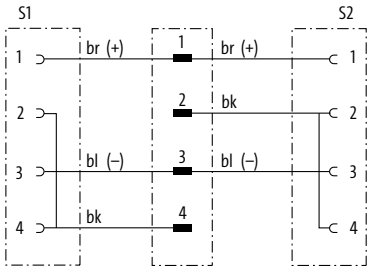
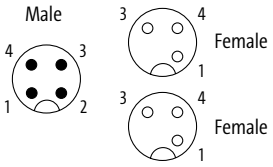
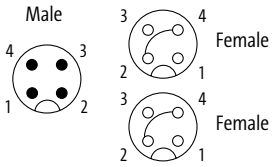
Females
90°



Approvals: cULus Listed, CSA *

* only for products with UL/CSA approved cable

1 Form

	40741	40761
Type	**4-/3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.34 mm²	40741 yellow	40741 gray	40741 black	40761 yellow	40761 gray	40761 black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC (UL/CSA)	023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633	033	233	633
PUR (UL/CSA), welding spark	053	253	653	053	253	653

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
7005	M12 Lite (plastic hexagonal screw) on request		

Notes

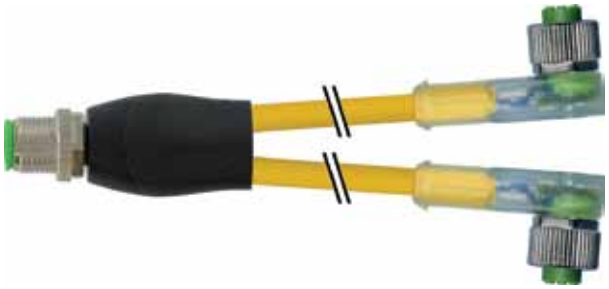
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

Y connector
Male straight

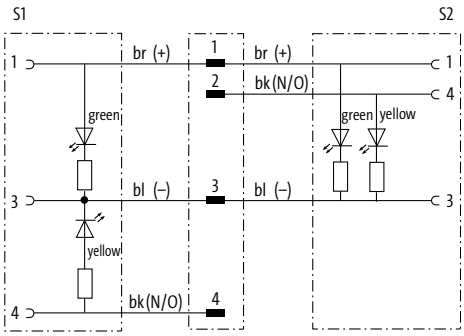
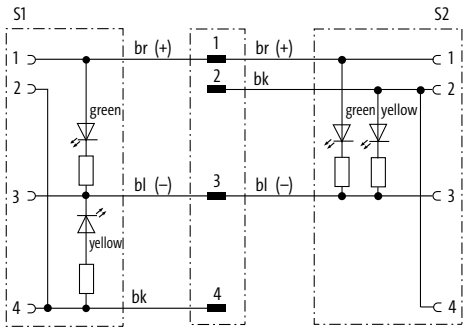
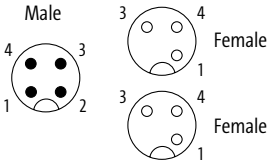
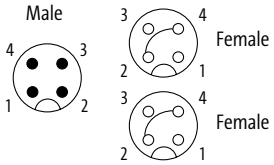
Females
90° with LED



Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

1 Form

	40781	40801
Type	**4-/3-pole** **LED (yellow/green)**	**4-pole** **LED (yellow/green)**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.34 mm²	40781 Jacket Color: yellow	gray	black	40801 Jacket Color: yellow	gray	black
PVC (UL/CSA)	013	213	613	013	213	613
PUR/PVC (UL/CSA)	023	223	623	023	223	623
PUR (UL/CSA), robots/C-tracks	033	233	633	033	233	633
PUR (UL/CSA), welding spark	053	253	653	053	253	653

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

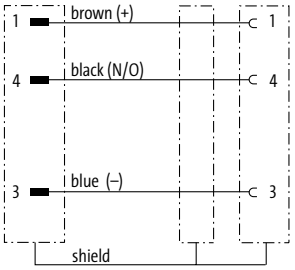
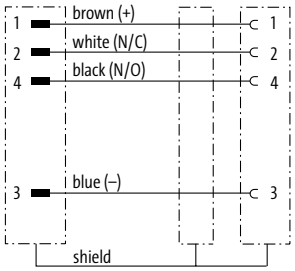
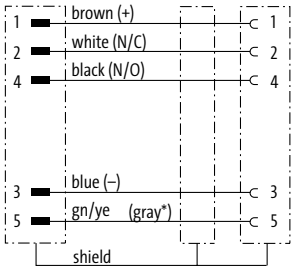
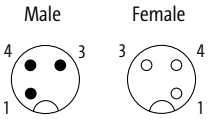
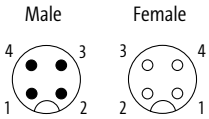
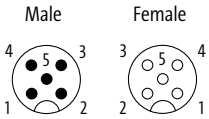
Male
straight

Female
straight



Approvals: cULus Listed, CSA *

* only for products with UL/CSA approved cable

1 Form	**40481**	**40501**	**40521**
Type	**3-pole, shielded**	**4-pole, shielded**	**5-pole, shielded**
Circuit diagram			 (* for cable type 203, 603, 243, 643)
Contact layout			

2 Cable Type	**Jacket Color**		**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**200**	**600**	**201**	**601**	**202 (203)**	**602 (603)**
PUR (UL/CSA), robots/C-tracks	**240**	**640**	**241**	**641**	**242 (243)**	**642 (643)**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data	
Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

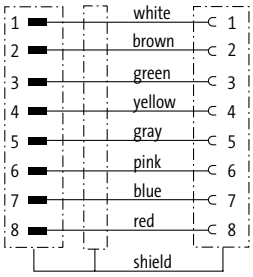
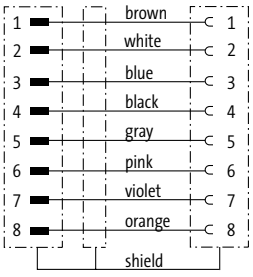
Male
straight

Female
straight

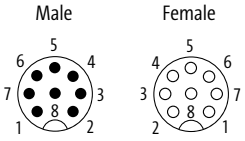


Approvals: cULus Listed * cSPus *
* only for products with UL/CSA approved cable

1 Form

	Male	Female
Type	**48041** **8-pole, shielded**	**48041** **8-pole, shielded**
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.25 mm²	Jacket Color: gray	Jacket Color: black	Jacket Color: gray	Jacket Color: black
PVC (UL/CSA)	**204**		**205**	
PUR (UL/CSA), robots/C-tracks	**291**	**717**	**294**	**715**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

M12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
straight



Approvals: cULus*

* only for products with UL/CSA approved cable

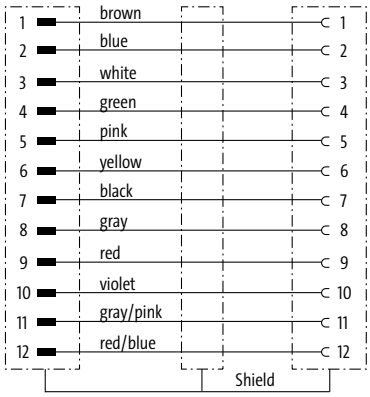
1 Form

53301

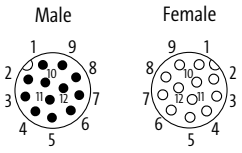
Type

12-pole, shielded

Circuit diagram



Contact layout



2 Cable Type / Jacket Color

Wire diameter 0.14 mm²	**black**
PVC (UL/CSA)	**703**
PUR (UL/CSA), robots/C-tracks	**706**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	53301	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Field-wireable

– IDC terminals

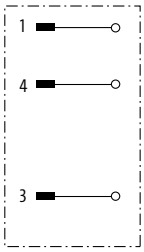
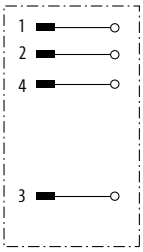
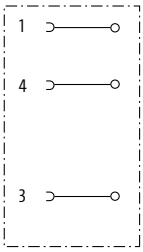
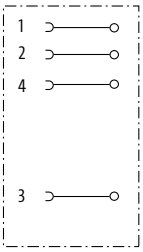
Male
straight



Female
straight



1 Form

	12461 me	12481 me	12581 me	12601 me
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.25...0.5 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ –	000	0000
7005	M12 Lite (plastic hexagonal screw) on request		

1 Form

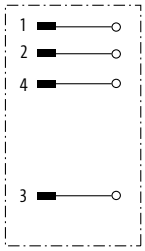
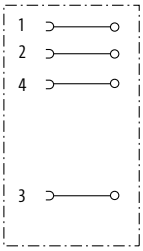
Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– IDC terminals

	Male straight, compact	**Female** straight, compact
		
1 Form	**12491** me	**12611** me
Approvals	**cURus**	
Type	**4-pole**	**4-pole**
Circuit diagram		
Connection cross section	**0.14...0.34 mm²**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.14...0.34 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	2.9...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.0...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

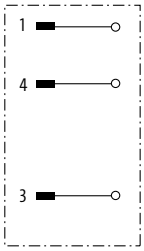
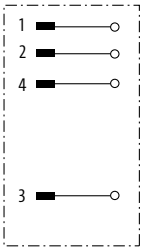
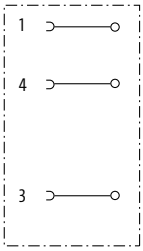
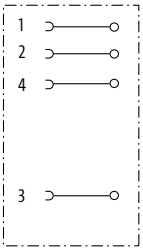
7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

Field-wireable

– IDC terminals

	Male 90°		Female 90°	
				
1 Form	12541 me	12561 me	12661 me	12681 me
Approvals		cURus		
Type	3-pole	4-pole	3-pole	4-pole
Circuit diagram				
Connection cross section	0.25...0.5 mm²			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ –	000	0000
7005	M12 Lite (plastic hexagonal screw) on request		
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

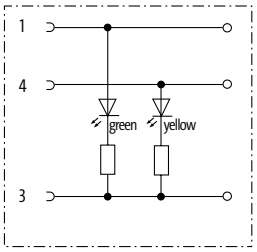
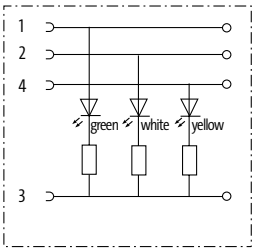
Field-wireable

– IDC terminals

Female

90° with LED



1 Form	12671 me	12691 me
Type	3-pole with 2 × LED (PNP)	4-pole with 3 × LED (PNP)
Circuit diagram		
Connection cross section	0.25...0.5 mm²	
Contact layout	Female 	Female 

Technical Data

Operating voltage	24 V DC ±25%
Operating current per contact	max. 4 A
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.2...1.6 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000

7005 **M12 Lite** (plastic hexagonal screw) on request

	1 Form		

Notes

Other versions on request.

Field-wireable

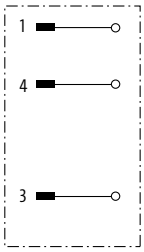
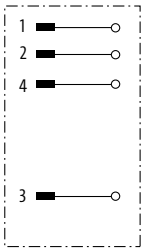
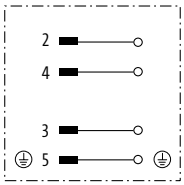
– IDC terminals

Male

straight



1 Form

	12501 me	12521 me	12515 me
Type	**3-pole**	**4-pole**	**4-pole**
Circuit diagram			
Connection cross section	**0.5...1.0 mm²**		
Contact layout	Male 	Male 	Male 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5...1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.6...2.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
7005	M12 Lite (plastic hexagonal screw) on request		
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

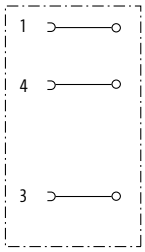
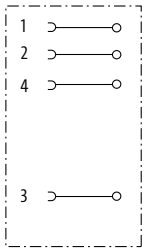
Field-wireable

– IDC terminals

Female

straight



1 Form	12621	12641
Type	3-pole	4-pole
Circuit diagram		
Connection cross section	0.5...1.0 mm²	
Contact layout	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Operating current per contact	max. 4 A
Connection cross section	0.5...1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.6...2.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Reconnection (cable)	10
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000 – _____ –	000	0000
7005	M12 Lite (plastic hexagonal screw) on request		
	1 Form		

Notes

Other versions on request.

Field-wireable

– Screw terminals

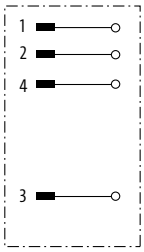
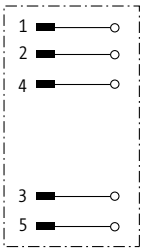
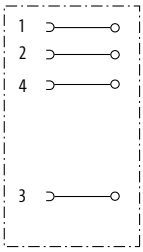
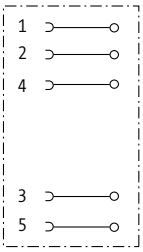
Approvals: cULus

Male
straight



Female
straight



1 Form	12701 me	12721 me	12901 me	12921 me
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable Ø)	4...6 mm			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	4...6 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

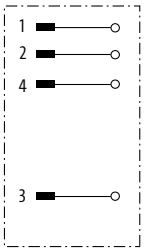
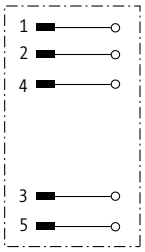
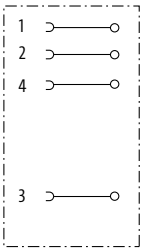
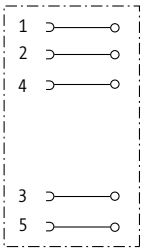
Approvals: cULus

Male
straight



Female
straight



1 Form	12741 me	12761 me	12941 me	12961 me
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable Ø)	6...8 mm			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	6...8 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

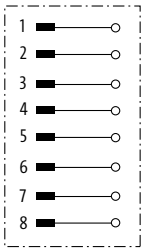
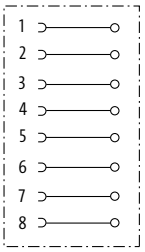
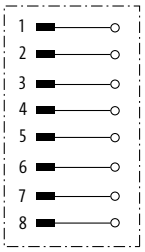
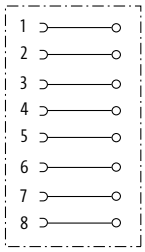
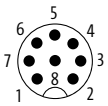
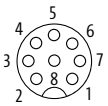
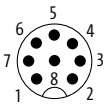
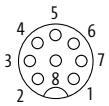
Notes

Other versions on request.

Field-wireable

– Screw terminals

Approvals: cULus

	Male straight	Female straight	Male 90°	Female 90°
				
1 Form	17301 me	17321 me	17311 me	17331 me
Type	8-pole	8-pole	8-pole	8-pole
Circuit diagram				
Sealing range (cable Ø)	6...8 mm			
Contact layout	Male 	Female 	Male 	Female 

Technical Data

Operating voltage	max. 30 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable Ø)	6...8 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

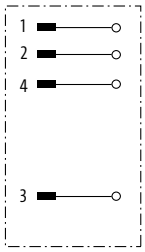
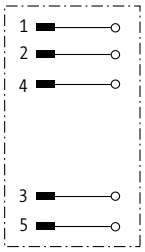
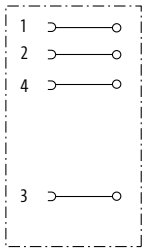
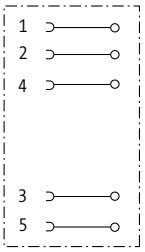
Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals: cULus

	Male 90°		Female 90°	
				
1 Form	12821 me	12841 me	12981 me	13001 me
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable Ø)	4...6 mm			
Contact layout	Male 	Male 	Female 	Female 
Technical Data				
Operating voltage	max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	4...6 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+85 °C			
Article No.				
The composition of your article number is explained on page 3.1.i	7000 – _____ – 000			0000
		1 Form		
Notes				
	Other versions on request.			

Field-wireable

– Screw terminals

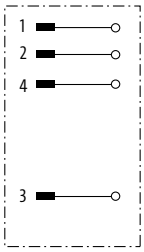
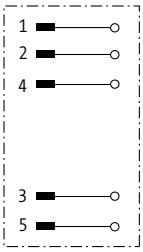
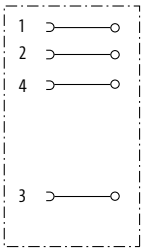
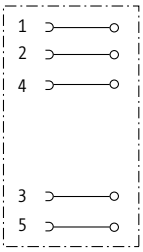
Approvals: cULus

Male
90°



Female
90°



1 Form	12861 me	12881 me	13021 me	13041 me
Type	4-pole	5-pole	4-pole	5-pole
Circuit diagram				
Sealing range (cable Ø)	6...8 mm			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 60 V AC/DC	max. 250 V AC/DC	max. 60 V AC/DC
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	6...8 mm			
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-40...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

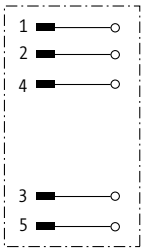
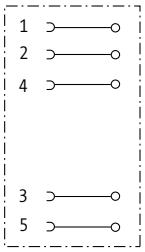
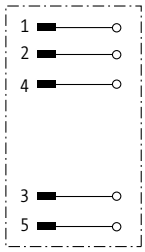
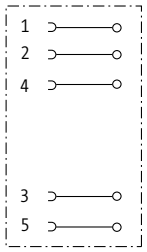
Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

– Screw terminals

Approvals: cULus Listed

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	12731 mex	12931 mex	12851 mex	13011 mex
Type	**5-pole**	**5-pole**	**5-pole**	**5-pole**
Circuit diagram				
Sealing range (cable Ø)	**2.5...8.0 mm**			
Contact layout	Male 	Female 	Male 	Female 

Technical Data

Operating voltage	max. 60 V AC/DC
Operating current per contact	max. 7.5 A (+40 °C; 1.5 mm²)
Connection cross section	max. 1.5 mm²
Sealing range (cable Ø)	2.5...8.0 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-30...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

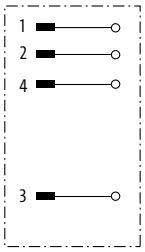
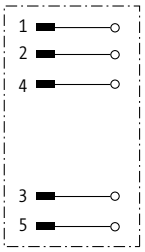
Field-wireable

– Screw terminals

Y connector

Male straight



1 Form	12781	12801
Type	4-pole	5-pole
Circuit diagram		
Sealing range (cable Ø)	2.1...3/4...5 mm	
Contact layout	Male 	Male 

Technical Data

Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC
Operating current per contact	max. 4 A	
Connection cross section	max. 0.75 mm²	
Sealing range (cable Ø)	2.1...3/4...5 mm (2 cable entries)	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+85 °C	

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

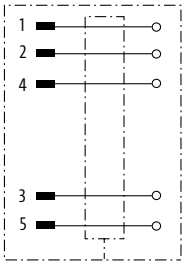
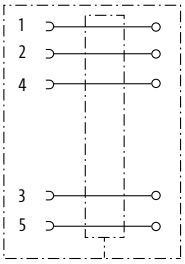
– Screw terminals

Male
straight



Female
straight



1 Form	13301 me✖	13321 me✖	13381 me✖	13401 me✖
Approvals		cURus		cURus
Type	5-pole, shielded	5-pole, shielded	5-pole, shielded	5-pole, shielded
Circuit diagram				
Sealing range (cable Ø)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Contact layout	Male 		Female 	

Technical Data

Operating voltage	max. 60 V AC/DC			
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Protection	IP67 inserted and tightened (EN 60529)			
Housing	Brass, nickel plated			
Temperature range	-40...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

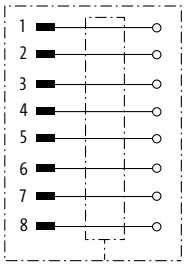
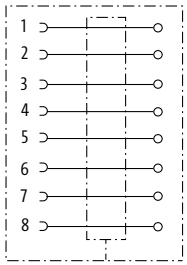
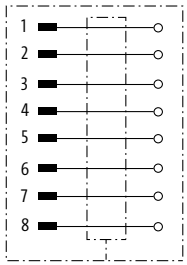
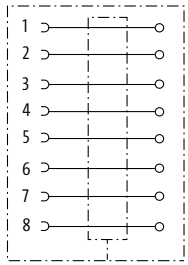
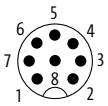
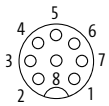
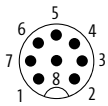
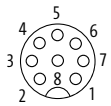
Notes

Other versions on request.

Field-wireable

– Screw terminals

Approvals: cULus

	Male straight	Female straight	Male 90°	Female 90°
				
1 Form	17341 me	17361 me	17351 me	17371 me
Type	8-pole, shielded	8-pole, shielded	8-pole, shielded	8-pole, shielded
Circuit diagram				
Sealing range (cable Ø)	6...8 mm			
Contact layout	Male 	Female 	Male 	Female 

Technical Data

Operating voltage	max. 30 V AC/DC
Operating current per contact	max. 2 A
Connection cross section	max. 0.5 mm²
Sealing range (cable Ø)	6...8 mm
Protection	IP67 inserted and tightened (EN 60529)
Housing	Brass, nickel plated
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M12 ROUND PLUG CONNECTORS

Field-wireable

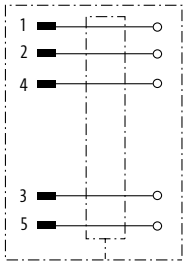
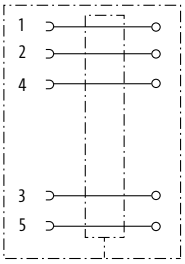
– Screw terminals

Male
90°



Female
90°



1 Form	13341 me✖	13361 me✖	13421 me✖	13441 me✖
Approvals				cURus
Type	5-pole, shielded	5-pole, shielded	5-pole, shielded	5-pole, shielded
Circuit diagram				
Sealing range (cable Ø)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Contact layout	Male 		Female 	

Technical Data

Operating voltage	max. 60 V AC/DC			
Operating current per contact	max. 4 A			
Connection cross section	max. 0.75 mm²			
Sealing range (cable Ø)	4...6 mm	6...8 mm	4...6 mm	6...8 mm
Protection	IP67 inserted and tightened (EN 60529)			
Housing	Brass, nickel plated			
Temperature range	-40...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)		**7000-99002-0000000**
	**Colored ring M8/M12**		
	sandy yellow	for unshielded molding	**7000-99301-V011002**
	zinc yellow	for unshielded molding	**7000-99301-V011018**
	redorange	for unshielded molding	**7000-99301-V012008**
	red	for unshielded molding	**7000-99301-V013020**
	violet	for unshielded molding	**7000-99301-V014003**
	purple	for unshielded molding	**7000-99301-V014006**
	blue	for unshielded molding	**7000-99301-V015005**
	green	for unshielded molding	**7000-99301-V016018**
	gray	for unshielded molding	**7000-99301-V017035**
	white	for unshielded molding	**7000-99301-V019003**
	black	for unshielded molding	**7000-99301-V019004**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99109-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	**7000-99094-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	**7000-99103-0000000**
	**Hold clip M12**		
	Plastic		**7000-99045-0000000**

M12 ROUND PLUG CONNECTORS

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**

Connection accessories			Art-No.
	**Universal holder**		
	modular	M8 M12	**7000-99801-0000000**
	**Universal holder**		
	modular	M12 Y-connector M12	**7000-99811-0000000**
	**Flange M12 male, pre-wired 0.2 m**		
	straight, A-coded, 4-pole		**7000-13501-9710020**
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13521-9720020**
	straight, A-coded, 8-pole		**7000-17161-9730020**
	**Flange M12 female, pre-wired 0.2 m**		
	straight, A-coded, 4-pole		**7000-13541-9710020**
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13561-9720020**
	straight, A-coded, 8-pole		**7000-17181-9730020**



T-COUPLERS
VERSATILE ADAPTERS

- **Slimline saves space**
- **Minimizes wiring efforts**
- **Many different configurations**

T-COUPLERS FOR PERFECT SYSTEM INSTALLATIONS

Increasingly, automation requires a large number of sensors and with each sensor comes more wiring.

By using T-couplers you reduce the number of cables required and you can combine inputs and outputs depending on the application. Thanks to the slim design, you can connect several M12 ports to our Cube module. The handy torque wrench makes installation easy even in tight spaces and guarantees IP67 seals.

The slimline T-couplers feature a new female screw connection which makes the connection even safer and easier.

T-couplers



M8 male
T-coupler
T-coupler (Nano)

M8 female
T-coupler
T-coupler (Nano)

Page 3.3.1



M12 male
T-coupler

M12 female
T-coupler

Page 3.3.2



M12 female
T-coupler
• Industrial Ethernet

M12 male/M12 female
T-coupler

Page 3.3.4



7/8"‘ male
T-coupler

7/8" female
T-coupler

Page 3.3.5

M8 - M8

T-coupler

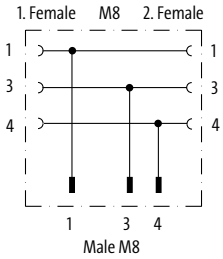
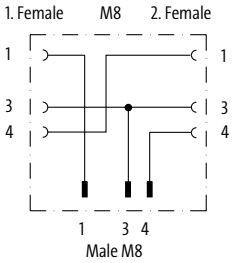
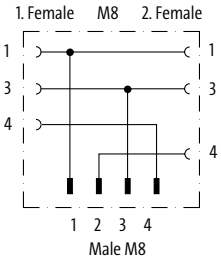
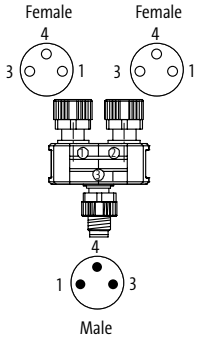
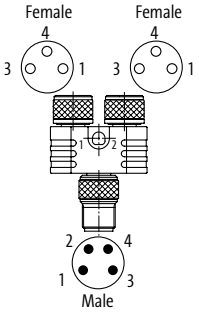
Male straight - female straight



T-coupler (Nano)

Male straight - female straight



1 Form	88611	88621	88602
Approvals	cULus	cULus	
Type	3-pole Parallel circuit	3-pole Series connection	3-/4-pole Distribution function (NO)
Circuit diagram			
Contact layout			

Technical Data

Operating voltage	max. 50 V AC/60 V DC	max. 32 V AC/DC
Rated surge voltage	1.5 kV	0.8 kV
Operating current per contact	max. 4 A	max. 2 A
Locking of ports	Screw thread M8 × 1 mm (recommended torque 0.4 Nm) self-securing	Screw thread M8 × 1 mm, self-securing
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	-30...+80 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

T-COUPLERS M8, M12, 7/8"

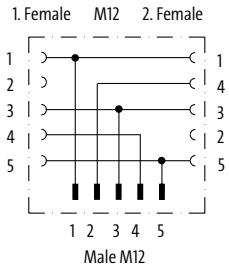
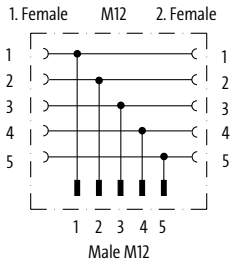
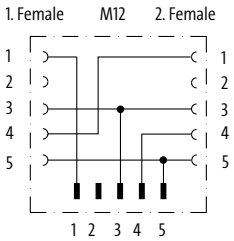
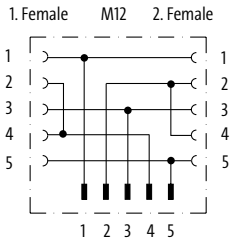
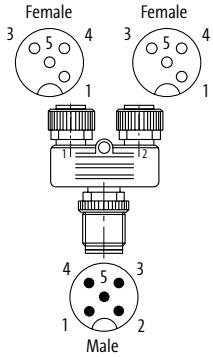
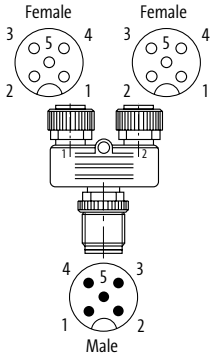
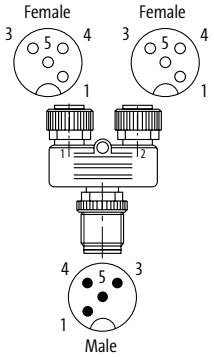
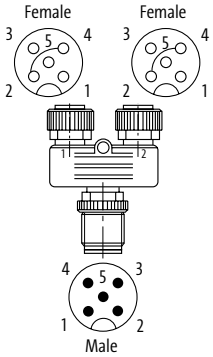
M12 - M12

Approvals: cULus Listed

T-coupler

Male straight - female straight



1 Form	41121	41141	41161	41181
Type	**5-pole** **Distribution function (NO)**	**5-pole** **Parallel circuit**	**4-pole** **Series connection**	**5-pole** **Distribution function (NO)**
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	max. 60 V AC/DC
Operating voltage (only UL listed)	30 V AC/DC
Rated surge voltage	1.5 kV
Operating current per contact	max. 4 A
Material group	IEC 60664-1, category I
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Locking material	Zinc die casting, matte nickel plated
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

M12 - M12

Approvals: c UL us Listed

T-coupler (Slim Line)

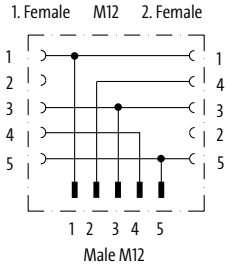
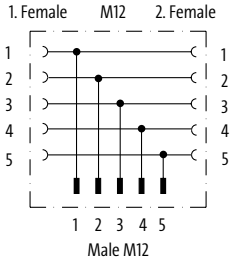
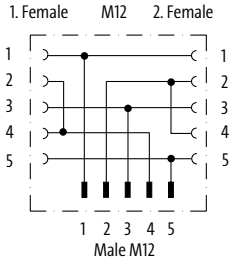
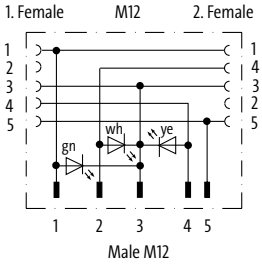
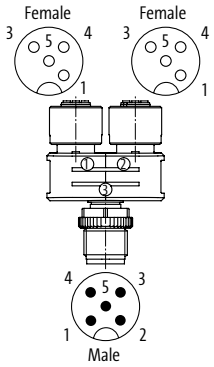
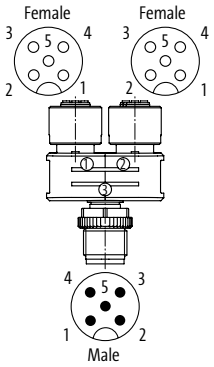
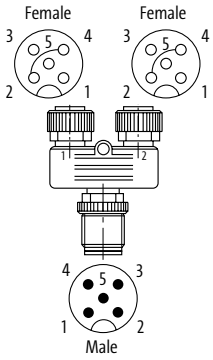
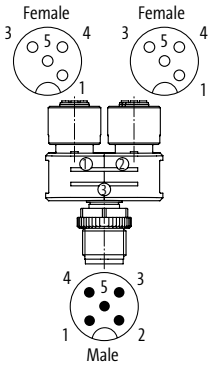
Male straight - female straight



T-coupler (Slim Line)

Male straight - female straight with LED



1 Form	41131	41151	41191	41135
Type	5-pole Distribution function (NO)	5-pole Parallel circuit	5-pole Distribution function (NO)	5-pole with 3 × LED (PNP) Distribution function (NO)
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	max. 60 V AC/DC	24 V DC ±25%
Operating voltage (only UL listed)	30 V AC/DC	30 V DC
Rated surge voltage	1.5 kV	0.8 kV
Operating current per contact	max. 4 A	
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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1 Form

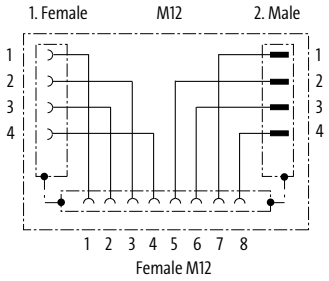
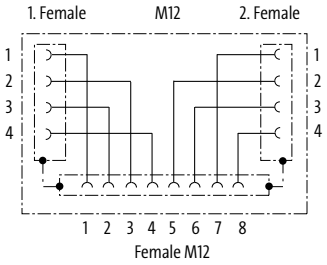
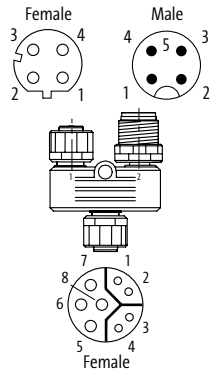
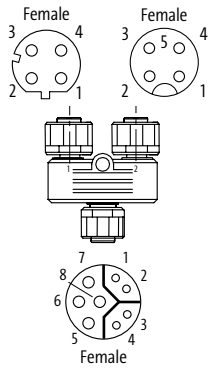
Notes

Other versions on request.

T-COUPLERS M8, M12, 7/8"

Industrial Ethernet

– M12 - M12

	T-coupler Female straight - male/female straight	**T-coupler** Female straight - female straight
		
1 Form	**47301**	**47311**
Type	**4-/8-pole, shielded** **Y-coded, D-coded** **Distribution function (NO)**	**4-/8-pole, shielded** **Y-coded, D-coded** **Distribution function (NO)**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	max. 30 V DC
Rated surge voltage	0.8 kV
Operating current per contact	4 A (Power), 0.5 A (Data)
Material group	IEC 60664-1, category I
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)
Transfer rate	to 100 Mbit/s Full Duplex
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP54 inserted and tightened (EN 60529)
Locking material	Zinc die casting, matte nickel plated
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

7/8"- 7/8"

T-coupler

Female straight - male/female straight



1 Form

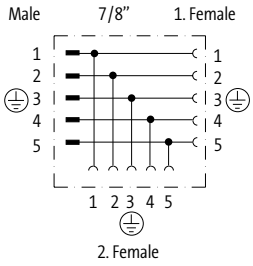
50061

Type

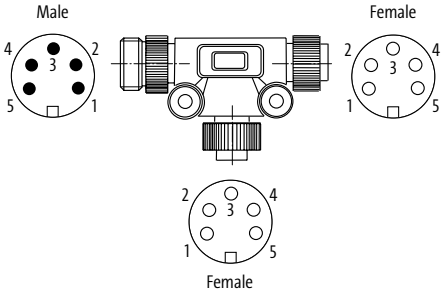
5-pole

Parallel circuit

Circuit diagram



Contact layout



Technical Data

Operating voltage	max. 50 V AC/DC
Operating current per contact	max. 8 A
Protection	IP67 inserted and tightened (EN 60529)
Locking material	Zinc die casting
Temperature range	-20...+80 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– 50061	– 000	0000
	1 Form		

Notes

Other versions on request.

T-COUPLERS M8, M12, 7/8"

Mounting accessories			Art-No.
	**Holding plate**		
	for T-couplers M12 (SlimLine)	with mounting set	**7000-99062-0000000**
	**Mounting clamp**		
			7000-99063-0000000



FLANGE CONNECTORS
READY FOR ANYTHING

- **Molded PVC or PP wires**
- **Anti-twist protection ensures convenient assembly**
- **Front and rear mounting**

COMPREHENSIVE RANGE TO CUSTOMER NEEDS

Murrelektronik has a wide range of M12 flange plug connectors and offers solutions for all kinds of applications. Encapsulated components guarantee a high level of short-circuit protection. In addition, the integrated anti-rotation protection makes installation very easy.

Don't see what you needed? Visit **shop.murrelektronik.com** for other styles including V4A Stainless Steal for Food & Beverage applications.

M8



Male/female
- 3-pole
- 4-pole

Page 3.4.1

M12



Male/female
- 3-pole
- 4-pole
- 5-pole
- 8-pole

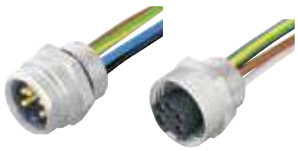
Page 3.4.2



Control Cabinet Entry System
Male/female (shielded)
- 5-pole
- 6-pole
- 8-pole

Page 3.4.12

Power



7/8"
Male/female
- 5-pole

Page 3.4.4



M12 Power
Male/female
- 4-pole
- 5-pole

Page 3.4.5



MQ15 X-Power
Male/female
- 4-pole
- 6-pole

Page 3.4.8



MQ15 X-Power
Male/female (shielded housing)
- 4-pole
- 6-pole

Page 3.4.10

MURR ELEKTRONIK
stay connected

With multi-strand wire

– M8

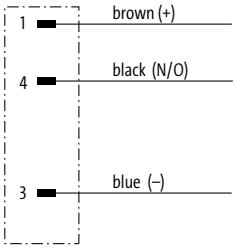
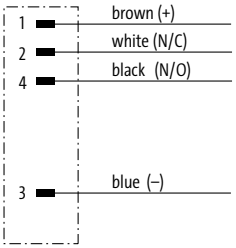
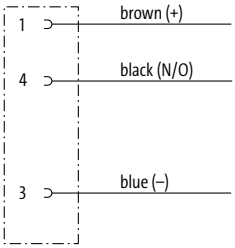
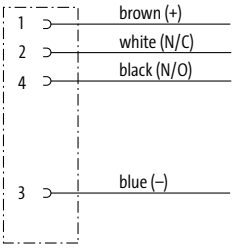
Approvals:

Flange male
Front mounting



Flange female
Front mounting



1	**Form**	**08552**	**08562**	**08571**	**08581**
	Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
	Circuit diagram				
	Contact layout	Male 	Male 	Female 	Female 
2	**Wires**				
	Wire diameter 0.25 mm²	**multi-colored**	**multi-colored**	**multi-colored**	**multi-colored**
	PP	**970**	**969**	**970**	**969**
	PVC	**910**	**911**	**910**	**911**
	Hexagonal nut M8 × 0.5	**7000-08591-0000000**			
3	**Wires Length**				
	0.2 m	**0020**			
	0.5 m	**0050**			
	1.0 m	**0100**			
	Technical Data				
	Operating voltage	max. 50 V AC/60 V DC			
	Protection	IP67 inserted and tightened (EN 60529)			
	Temperature range	-25...+85 °C			
	Article No.				
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _			_ _ _ _
			1 Form	**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

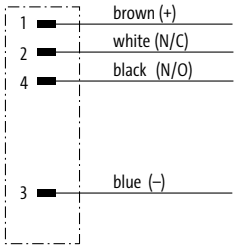
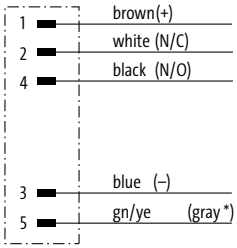
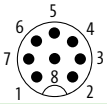
– M12

Approvals:

Flange male

Front mounting



1 Form	13501	13521	17161
Type	**4-pole**	**5-pole**	**8-pole**
Circuit diagram		 (* for cable type 902 and 972)	
Contact layout	Male 	Male 	Male 
2 Wires			
Wire diameter 0.34 mm²	**multi-colored**	**multi-colored**	**multi-colored**
PUR		**975 (972)**	
PVC	**901**	**902**	
PP	**971**		
Wire diameter 0.25 mm²			
PP			**973**
PVC			**903**
Hexagonal nut M16 × 1.5	**7000-13581-0000000**		
3 Wires Length			
0.2 m	**0020**		
0.5 m	**0050**		
1.0 m	**0100**		
Technical Data			
Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		
Article No.			
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _		_ _ _ _
		1 Form	**2** Wires	**3** Wires Length

Notes

Other versions on request.

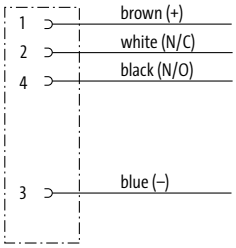
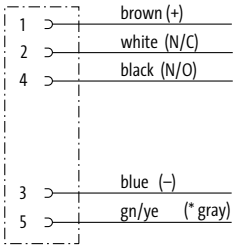
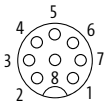
With multi-strand wire

– M12

Approvals:

Flange female
Front mounting



1	**Form**	**13541**	**13561**	**17181**
	Type	**4-pole**	**5-pole**	**8-pole**
	Circuit diagram		 (* for cable type 902, 972)	
	Contact layout	Female 	Female 	Female 
2	**Wires**			
	Wire diameter 0.34 mm²	**multi-colored**	**multi-colored**	**multi-colored**
	PUR		**975 (972)**	
	PVC	**901**	**902**	
	PP	**971**		
	Wire diameter 0.25 mm²			
	PP			**973**
	PVC			**903**
3	**Wires Length**			
	0.2 m	**0020**		
	0.5 m	**0050**		
	1.0 m	**0100**		
	Technical Data			
	Operating voltage	max. 250 V AC/DC	max. 125 V AC/DC	max. 30 V AC/DC
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-25...+85 °C		
	Article No.			
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _		
			1 Form	**2 Wires**	**3 Wires Length**

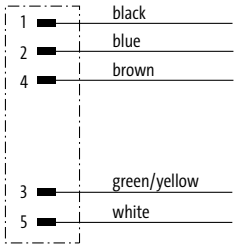
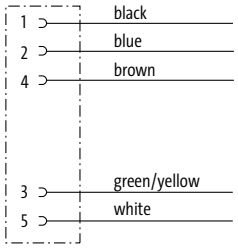
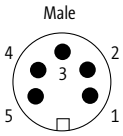
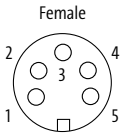
Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

– 7/8"

	Flange male Front mounting	**Flange female** Front mounting
		
1 Form	**78341**	**78381**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Wires		
5 × AWG18	**multi-colored**	**multi-colored**
PVC	**978**	**978**
Hexagonal nut PG 13.5	**7000-78391-0000000**	
3 Wires Length		
0.2 m	**0020**	
0.5 m	**0050**	
1.0 m	**0100**	
Technical Data		
Operating voltage	max. 300 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C	
Article No.		

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Wires**	**3 Wires Length**

Notes

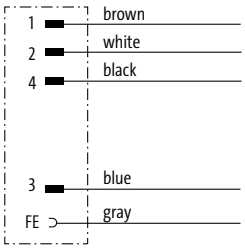
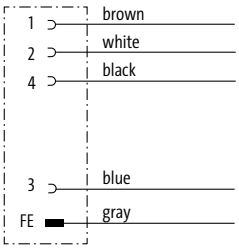
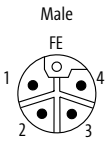
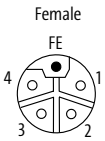
Other versions on request.

MURR ELEKTRONIK
stay connected

With multi-strand wire

– M12 Power

Approvals:

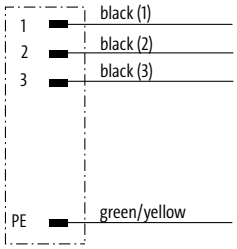
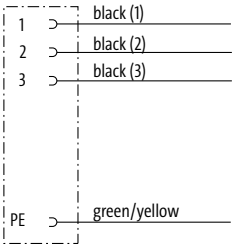
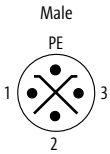
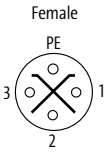
	Flange male Front mounting	**Flange female** Front mounting
		
1 Form	**P4281**	**P4291**
Type	**5-pole** **L-coded**	**5-pole** **L-coded**
Circuit diagram		
Contact layout		
2 Wires		
Wire diameter 1.5 mm²	**multi-colored**	**multi-colored**
PUR	**980**	**980**
3 Wires Length		
0.2 m	**0020**	
0.5 m	**0050**	
1.0 m	**0100**	
Technical Data		
Operating voltage	max. 63 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form **2 Wires** **3 Wires Length**
Notes		
	Other versions on request.	

FLANGE CONNECTORS

With multi-strand wire

– M12 Power

Approvals: cULus

	Flange male Front mounting	**Flange female** Front mounting
		
1 Form	**P6281**	**P6291**
Type	**4-pole** **S-coded**	**4-pole** **S-coded**
Circuit diagram		
Contact layout		
2 Wires		
Wire diameter 1.5 mm²	**multi-colored**	**multi-colored**
mPPE	**940**	**940**
3 Wires Length		
0.2 m	**0020**	
0.5 m	**0050**	
1.0 m	**0100**	
1.5 m	**0150**	
Technical Data		
Operating voltage	max. 630 V AC/DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Wires**	**3 Wires Length**

Notes

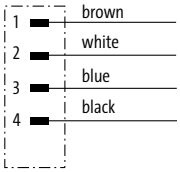
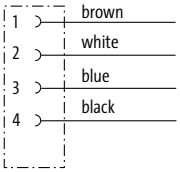
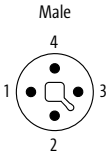
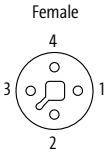
Other versions on request.

MURR ELEKTRONIK
stay connected

With multi-strand wire

– M12 Power

Approvals: cULus

	Flange male Front mounting	Flange female Front mounting
		
1 Form	**P7281**	**P7291**
Type	**4-pole** **T-coded**	**4-pole** **T-coded**
Circuit diagram		
Contact layout		
2 Wires		
Wire diameter 1.5 mm²	**multi-colored**	**multi-colored**
PVC	**941**	**941**
3 Wires Length		
0.2 m	**0020**	
0.5 m	**0050**	
1.0 m	**0100**	
Technical Data		
Operating voltage	max. 63 V AC/DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

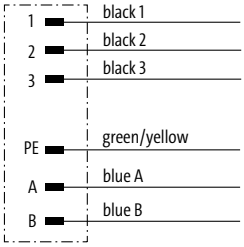
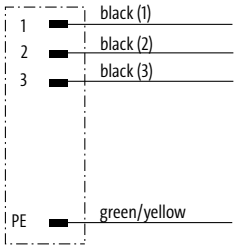
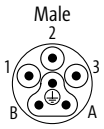
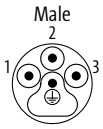
FLANGE CONNECTORS

With multi-strand wire

– MQ15 X-Power

Flange male
Front mounting



1 Form	P8181	P8081	P8081
Type	6-pole max. 16 A (Power); max. 10 A (Signal)	4-pole Operating current: max. 13 A	4-pole Operating current: max. 16 A
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 2.5 mm²	multi-colored	multi-colored	multi-colored
PVC (UL)	P80		P82
Wire diameter 1.5 mm²			
PVC (UL)		P81	
3 Wires Length			
0.25 m	0025		
0.5 m	0050		
1.0 m	0100		
Technical Data			
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC	
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-40...+70 °C, depending on cable quality		
Article No.			

The composition of your article number is explained on page 3.1.i

7000	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Wires	3 Wires Length

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

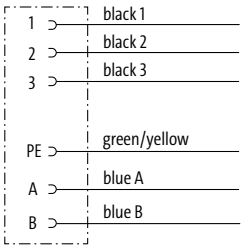
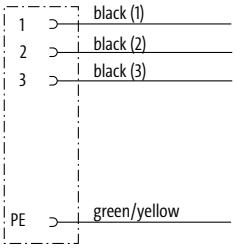
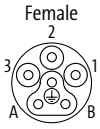
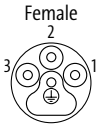
With multi-strand wire

– MQ15 X-Power

Flange female
Front mounting



1 Form

	P8191	P8091
Type	**6-pole** **max. 16 A (Power); max. 10 A (Signal)**	**4-pole** **Operating current: max. 13 A**
Circuit diagram		
Contact layout		

2 Wires

Wire diameter 2.5 mm²	**multi-colored**	**multi-colored**
PVC (UL)	**P80**	
Wire diameter 1.5 mm²		
PVC (UL)		**P81**

3 Wires Length

0.25 m	**0025**
0.5 m	**0050**
1.0 m	**0100**

Technical Data

Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+70 °C, depending on cable quality	-40...+90 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

FLANGE CONNECTORS

With multi-strand wire

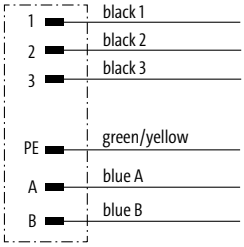
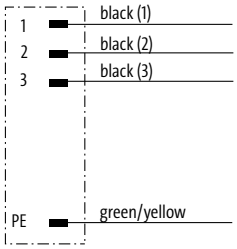
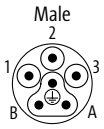
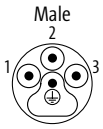
– MQ15 X-Power

– shielded housing

Flange male

Front mounting



1 Form	**P 8381**	**P 8281**	**P 8281**
Type	**6-pole** **max. 16 A (Power); max. 10 A (Signal)**	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
Circuit diagram			
Contact layout			
2 Wires			
Wire diameter 2.5 mm²	**multi-colored**	**multi-colored**	**multi-colored**
PVC (UL)	**P80**		**P82**
Wire diameter 1.5 mm²			
PVC (UL)		**P81**	
3 Wires Length			
0.25 m	**0025**		
0.5 m	**0050**		
1.0 m	**0100**		
Technical Data			
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC	
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-40...+90 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**		
		1 Form	**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

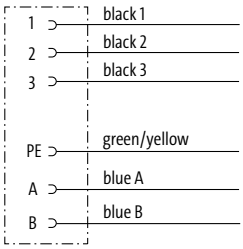
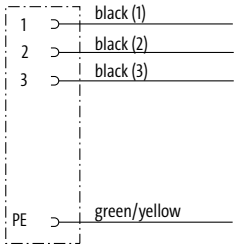
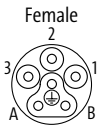
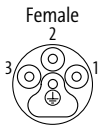
With multi-strand wire

– MQ15 X-Power

– shielded housing

Flange female
Front mounting



1	**Form**	**P8391**	**P8291**	**P8291**
	Type	**6-pole** **max. 16 A (Power); max. 10 A (Signal)**	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
	Circuit diagram			
	Contact layout			
2	**Wires**			
	Wire diameter 2.5 mm²	**multi-colored**	**multi-colored**	**multi-colored**
	PVC (UL)	**P80**		**P82**
	Wire diameter 1.5 mm²			
	PVC (UL)		**P81**	
3	**Wires Length**			
	0.25 m	**0025**		
	0.5 m	**0050**		
	1.0 m	**0100**		
	Technical Data			
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-40...+90 °C, depending on cable quality	-40...+70 °C, depending on cable quality	
	Article No.			
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _		_ _ _ _
		1 Form	**2 Wires**	**3 Wires Length**

Notes

Other versions on request.

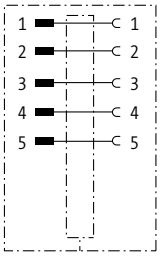
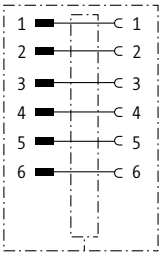
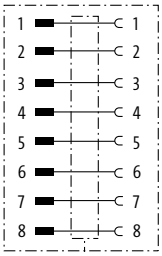
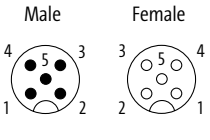
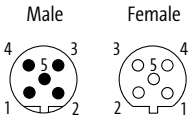
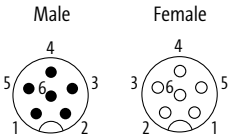
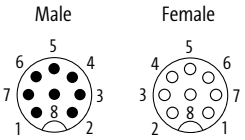
FLANGE CONNECTORS

Control cabinet entry system

– M12 - M12

Male/female



1 Form	42111	44111	46111	48111
Type	5-pole, shielded	5-pole, shielded B-coded	6-pole, shielded	8-pole, shielded
Circuit diagram				
Contact layout				

Technical Data

Operating voltage	max. 60 V AC/DC		max. 30 V AC/DC	
Rated surge voltage	1.5 kV		0.8 kV	
Operating current per contact	max. 4 A			max. 2 A
Material group	IEC 60664-1, category I			
Coding	A-coded	B-coded	A-coded	
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Material	Brass, nickel plated			
Temperature range	-25...+85 °C			

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

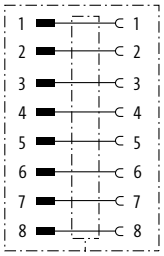
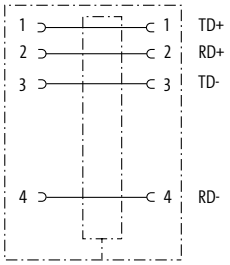
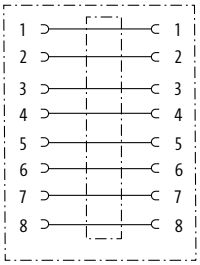
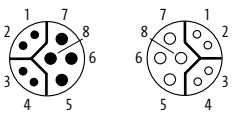
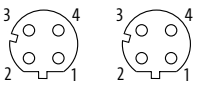
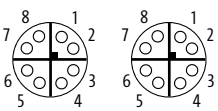
Notes

Other versions on request.

Control cabinet entry system

– M12 - M12

EtherCAT EtherNet/IP PROFINET

	Male/female	Female/female	
			
1 Form	**47281**	**44611**	**51521**
Type	**8-pole, shielded** **Y-coded**	**4-pole, shielded** **D-coded**	**8-pole, shielded** **X-coded**
Circuit diagram			
Contact layout	Male / Female 	Female / Female 	Female / Female 

Technical Data

Operating voltage	max. 30 V DC	max. 60 V AC/DC	max. 50 V AC/60 V DC
Rated surge voltage	0.8 kV		
Operating current per contact	max. 6 A	max. 4 A	max. 0.5 A
Operating current per contact (Signal)	max. 0.5 A	–	
Material group	IEC 60664-1, category I	–	IEC 60664-1, category III
Transfer parameters	CAT5, Class D (ISO/IEC 11801:2002), (EN 50173-1)		CAT6, Class EA (ISO/IEC 11801:2002), (EN 50173-1)
Transfer rate	to 100 Mbit/s Full Duplex		GIGABIT
Coding	Y-coded	D-coded	X-coded
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing		Screw thread M12 × 1 mm
Compression gland	M16 (SW19)		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	IP67 inserted and tightened (EN 60529)	
Material	Brass, nickel plated		
Temperature range	-25...+85 °C		-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

FLANGE CONNECTORS

Connection accessories			Art-No.
	**Shielding plate**		
		Quantity: 1 000 pcs.	**7000-99951-0000000**
	**Protection cap**		
	Flange M8 male	Quantity: 10 pcs.	**7000-99901-0000000**
	Flange M12 male	Quantity: 10 pcs.	**7000-99921-0000000**
	**Protection cap**		
	Flange M8 female	Quantity: 10 pcs.	**7000-99911-0000000**
	Flange M12 female	Quantity: 10 pcs.	**7000-99931-0000000**



THE MQ12 SYSTEM
THE CLEVER SOLUTION

- **Effective quick connection system**
- **Saves installation time – up to 80%**
- **Plug in, ¼ turn – done!**

COMPATIBLE, QUICK AND SAFE

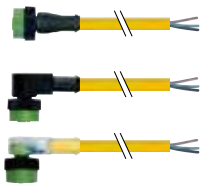
Simply clever – it's our quick connection system that doesn't require any changes on the sensor side. MQ12 is completely compatible and interchangeable with all standard systems.

More features:

- Fits on all existing sensor and distributor systems
- High resistance to shock and vibration
- IP67 sealed

MQ12™
Murrelektronik's Efficient Quick Connection System

With Open Ended Wires



MQ12 female
• Straight
• 90°
• 90° with LED

Page 3.5.1

Connection Cables





MQ12 male
• Straight

MQ12 female
• Straight
• 90°
• 90° with LED

Page 3.5.3

Field-Wireable



Insulation Displacement Technology (IDC)
MQ12 male/female
• Straight

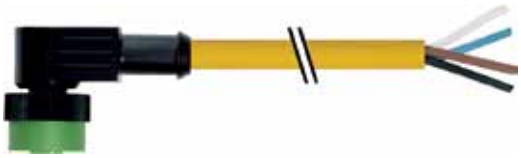
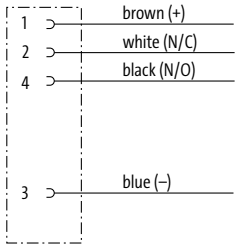
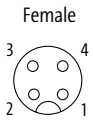
Page 3.5.5

With open ended wires

– M12

Approvals: cULus *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**014**	**214**	**614**	**014**	**214**	**614**
PUR/PVC (UL/CSA)	**024**	**224**	**624**	**024**	**224**	**624**
PUR (UL/CSA), robots/C-tracks	**034**	**234**	**634**	**034**	**234**	**634**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7050	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

With open ended wires

– M12

Female

90° with LED



Approvals: cULus*

* only for products with UL/CSA approved cable

1 Form

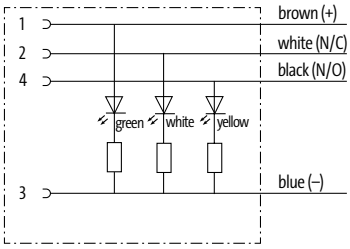
12421

Type

4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout

Female



2 Cable Type

	Jacket Color		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**
PVC (UL/CSA)	**014**	**214**	**614**
PUR/PVC (UL/CSA)	**024**	**224**	**624**
PUR (UL/CSA), robots/C-tracks	**034**	**234**	**634**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

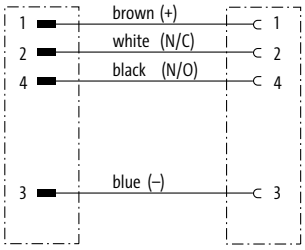
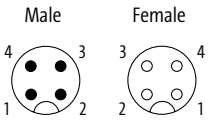
7050	–	12421	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– M12 - M12

	Male straight	**Female** straight	**Male** straight	**Female** 90°
				
1 Form	**40021**		**40121**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.34 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC (UL/CSA)	**014**	**214**	**614**	**014**	**214**	**614**
PUR/PVC (UL/CSA)	**024**	**224**	**624**	**024**	**224**	**624**
PUR (UL/CSA), robots/C-tracks	**034**	**234**	**634**	**034**	**234**	**634**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MQ12 ROUND PLUG CONNECTORS

Connection cables

– M12 - M12

Male
straight

Female
90° with LED



1 Form

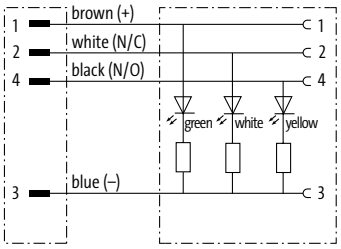
40341

Type

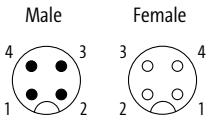
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.34 mm²	yellow	gray	black
PVC (UL/CSA)	014	214	614
PUR/PVC (UL/CSA)	024	224	624
PUR (UL/CSA), robots/C-tracks	034	234	634

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7050	–	40341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Field-wireable

– M12

– IDC terminals

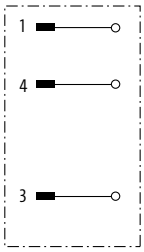
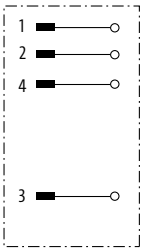
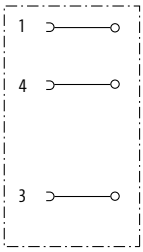
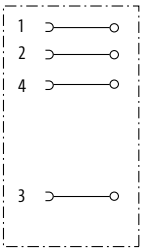
Male
straight



Female
straight



1 Form

	12461	12481	12581	12601
Type	**3-pole**	**4-pole**	**3-pole**	**4-pole**
Circuit diagram				
Connection cross section	**0.25...0.5 mm²**			
Contact layout	Male 	Male 	Female 	Female 

Technical Data

Operating voltage	max. 32 V AC/DC
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Material group	IEC 60664-1, category II
Connection cross section	0.25...0.5 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	4...5.1 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.2...1.6 mm
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 5 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
	1 Form		

Notes

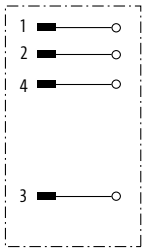
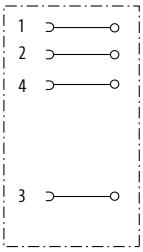
Other versions on request.

MQ12 ROUND PLUG CONNECTORS

Field-wireable

– M12

– IDC terminals

	Male straight	**Female** straight
		
1 Form	**12521**	**12641**
Type	**4-pole**	**4-pole**
Circuit diagram		
Connection cross section	**0.5...1.0 mm²**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 250 V AC/DC
Rated surge voltage	2.5 kV
Operating current per contact	max. 4 A
Material group	IEC 60664-1, category III
Connection cross section	0.5...1.0 mm² (conductor diameter min. 0.1 mm)
Sealing range (cable Ø)	5.5...8 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	1.6...2.0 mm
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7050	–	_ _ _ _ _	–	000	0000
		1 Form			

Notes

Other versions on request.

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)		**7000-99002-0000000**
	**Colored ring M8/M12**		
	sandy yellow	for unshielded molding	**7000-99301-V011002**
	zinc yellow	for unshielded molding	**7000-99301-V011018**
	redorange	for unshielded molding	**7000-99301-V012008**
	red	for unshielded molding	**7000-99301-V013020**
	violet	for unshielded molding	**7000-99301-V014003**
	purple	for unshielded molding	**7000-99301-V014006**
	blue	for unshielded molding	**7000-99301-V015005**
	green	for unshielded molding	**7000-99301-V016018**
	gray	for unshielded molding	**7000-99301-V017035**
	white	for unshielded molding	**7000-99301-V019003**
	black	for unshielded molding	**7000-99301-V019004**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**



CONNECTORS FOR **FIELDBUS**

- **Wide range of M8, M12 and RJ45 connectors**
- **360° shielding**
- **Flex rated cables**

FROM AS-INTERFACE TO ETHERNET TO PROFIBUS AND MORE...

Murrelektronik offers connection accessories for the fieldbus products. In addition to both field-wireable M12 and RJ45 connectors we have a wide range of pre-wired, molded models. Both the 15° locking mechanism and the PUR molding ensure an IP65/67 rated connection which make the connectors suitable for many rough industrial environments.

PROFIBUS® PROFINET® DeviceNet EtherCAT® CANopen AS-i EtherNet/IP cube67

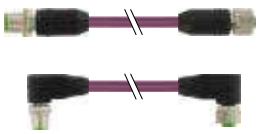
PROFIBUS



With open ended wires

M12 male/female (shielded)
• Straight/90°

Page 3.6.1



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.3

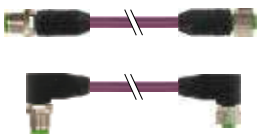
DeviceNet, CANopen



With open ended wires

M12 male/female
• Straight/90°

Page 3.6.4

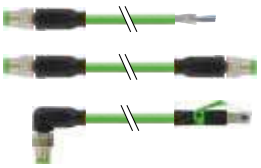


Connection Cables

M12 male – M12 female
• Straight/90°

Page 3.6.6

EtherNet, EtherCAT, PROFINET



With open ended wires

M8 male/female (shielded)
• Straight/90°

Connection Cables

M8 male – M8 male/M8 female/RJ45 male (shielded)
• Straight/90°

Page 3.6.7



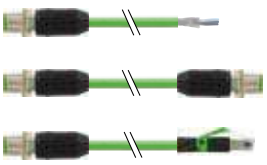
With open ended wires

M8 female
• Straight/90°

Connection Cables

M8 male – M8 female
• Straight/90°

Page 3.6.10



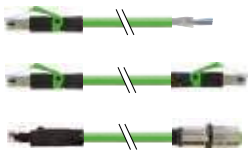
With open ended wires

M12 male/female (shielded)
• Straight/90°

Connection Cables

M12 male – M12 male/M12 female/RJ45 male (shielded)
• Straight/90°

Page 3.6.12



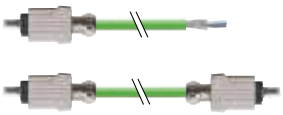
With open ended wires

RJ45 male (shielded)
• Straight/90°

Connection Cables

RJ45 male – RJ45 male/M12 female flange plug (shielded)
• Straight/90°

Page 3.6.21



With open ended wires

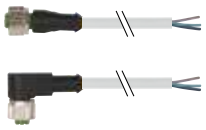
RJ45 male Push Pull Power
• Straight

Connection Cables

RJ45 male Push Pull Power – RJ45 male Push Pull Power
• Straight

Page 3.6.26

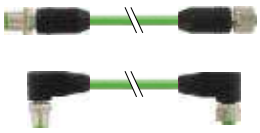
Cube67



With open ended wires

M12 female
• Straight/90°

Page 3.6.28



Connection Cables

M12 male – M12 female (shielded)
• Straight/90°

Page 3.6.29

AS-Interface



Connection Cables for MASI68

M12 male – M12 female
• Straight

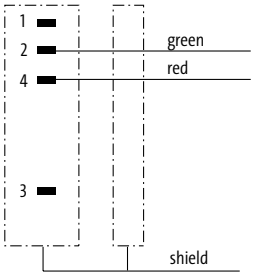
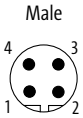
Page 3.6.30

PROFIBUS

– with open ended wires M12

Approvals: cULus Listed, cSPus *

* only for products with UL/CSA approved cable

	Male	Male
	straight	90°
		
1 Form	**14051**	**14081**
Type	**2-pole, shielded** **B-coded**	**2-pole, shielded** **B-coded**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
1×2×0.25 mm²	**violet**	**violet**
PUR (UL/CSA), C-tracks	**841**	**841**
PUR (UL/CSA), Highspeed C-track	**840**	**840**
PUR (UL/CSA), Torsion	**843**	**843**
PVC (UL), C-tracks	**850**	**850**
Terminator M12 (male)	**7000-14041-0000000**	
Control cabinet entry system M12	**7000-44111-0000000**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

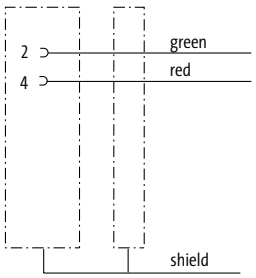
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

PROFIBUS

– with open ended wires M12

Approvals: * only for products with UL/CSA approved cable

		Female straight	Female 90°
			
1	**Form**	**14061**	**14071**
	Type	**2-pole, shielded** **B-coded**	**2-pole, shielded** **B-coded**
	Circuit diagram		
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	1×2×0.25 mm²	**violet**	**violet**
	PUR (UL/CSA), C-tracks	**841**	**841**
	PUR (UL/CSA), Highspeed C-track	**840**	**840**
	PUR (UL/CSA), Torsion	**843**	**843**
	PVC (UL), C-tracks	**850**	**850**
	Terminator M12 (male)	**7000-14041-0000000**	
	Control cabinet entry system M12	**7000-44111-0000000**	
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 60 V AC/DC	
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

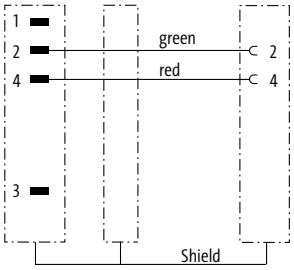
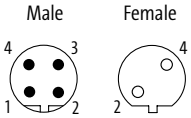
PROFIBUS

– Connection cables M12 - M12

PROFIBUS

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**44001**		**44021**	
Type	**2-pole, shielded** **B-coded**		**2-pole, shielded** **B-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
1×2×0.25 mm²	**violet**	**violet**
PUR (UL/CSA), C-tracks	**841**	**841**
PUR (UL/CSA), Highspeed C-track	**840**	**840**
PUR (UL/CSA), Torsion	**843**	**843**
PVC (UL), C-tracks	**850**	**850**

Terminator M12 (male)	**7000-14041-0000000**
Control cabinet entry system M12	**7000-44111-0000000**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

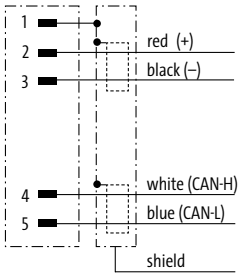
DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen

Approvals: cULus Listed, CSA

* only for products with UL/CSA approved cable

	Male straight	**Male** 90°
		
1 Form	**13105**	**13125**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout	Male 	

2 Cable Type	**Jacket Color**		**Jacket Color**	
2×0.25 + 2×0.34 mm²	**black**	**violet**	**black**	**violet**
PUR (UL/CSA), C-tracks	**838**	**803**	**838**	**803**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

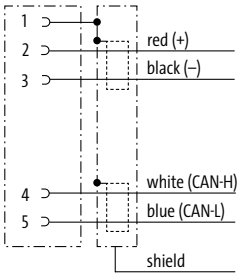
DeviceNet, CANopen

– with open ended wires M12

DeviceNet CANopen

Approvals: cULus Listed, cSPus *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**13225**	**13251**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout	Female 	

2 Cable Type	**Jacket Color**		**Jacket Color**	
2×0.25 + 2×0.34 mm²	**black**	**violet**	**black**	**violet**
PUR (UL/CSA), C-tracks	**838**	**803**	**838**	**803**
Control cabinet entry system M12	**7000-42111-0000000**			

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

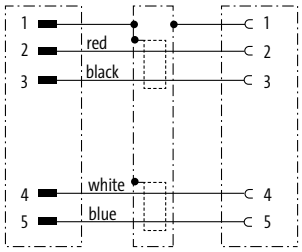
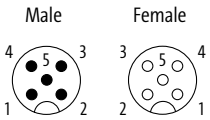
DeviceNet, CANopen

– Connection cables M12 - M12

DeviceNet CANopen

Approvals: cULus Listed, CSA

* only for products with UL/CSA approved cable

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40531**		**40551**	
Type	**5-pole**		**5-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**		**Jacket Color**	
2×0.25 + 2×0.34 mm²	**black**	**violet**	**black**	**violet**
PUR (UL/CSA), C-tracks	**838**	**803**	**838**	**803**
Control cabinet entry system M12	**7000-42111-0000000**			

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
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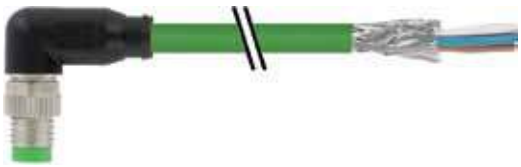
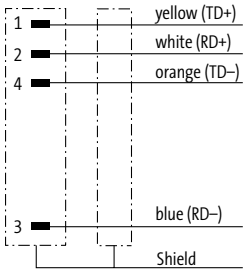
Industrial Ethernet

– with open ended wires M8

EtherCAT

Approvals: cULus Listed * cSPus *

* only for products with UL/CSA approved cable

	Male straight	Male 90°
		
1 Form	**08811**	**08821**
Type	**4-pole, shielded**	**4-pole, shielded**
Circuit diagram		
Contact layout	Male 	

2 Cable Type	**Jacket Color**	**Jacket Color**
1×4×0.15 mm²	**green**	**green**
PUR (UL/CSA), C-tracks	**791**	**791**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

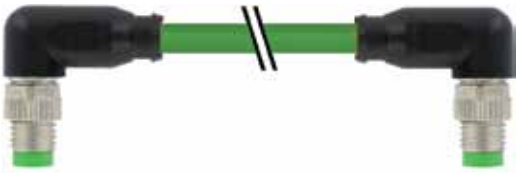
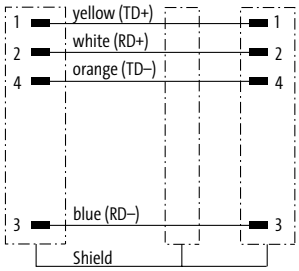
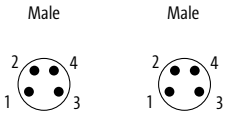
Industrial Ethernet

– Connection cables M8 - M8

EtherCAT

Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

	Male straight	Male straight	Male 90°	Male 90°
				
1 Form	**89701**		**89771**	
Type	**4-pole, shielded**		**4-pole, shielded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
1×4×0.15 mm²	**green**		**green**	
PUR (UL/CSA), C-tracks	**791**		**791**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 50 V AC/60 V DC			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

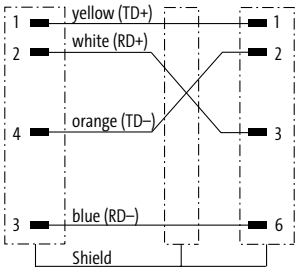
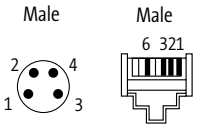
Industrial Ethernet

– Connection cables M8 - RJ45

EtherCAT

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	Male straight	Male 90°	Male straight
				
1 Form	**89721**		**89781**	
Type	**4-pole, shielded**		**4-pole, shielded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**		**Jacket Color**	
1×4×0.15 mm²		**green**		**green**
PUR (UL/CSA), C-tracks		**791**		**791**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP67 (M8) - IP20 (RJ45)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Industrial Ethernet

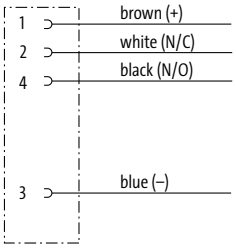
– with open ended wires M8

– EtherCAT Power

EtherCAT

Approvals: cULus*

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**08871**	**08881**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**black**	**black**
PUR (UL/CSA), robots/C-tracks	**634**	**634**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 50 V AC/60 V DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7000 – _____ – ___ ____	
	7005 **M8 Lite** (plastic hexagonal screw) on request	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

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Industrial Ethernet

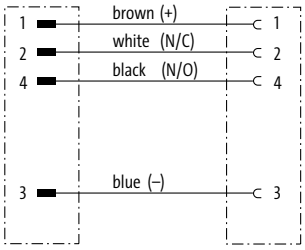
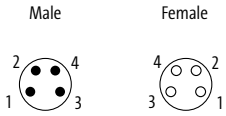
– Connection cables M8 - M8

– EtherCAT Power

EtherCAT

Approvals: cULus *

* only for products with UL/CSA approved cable

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**89401**		**89431**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**black**		**black**	
PUR (UL/CSA), robots/C-tracks	**634**		**634**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

1 Form	2 Cable Type	3 Cable Length
7000 –	_____ –	___	____
7005	**M8 Lite** (plastic hexagonal screw) on request		

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

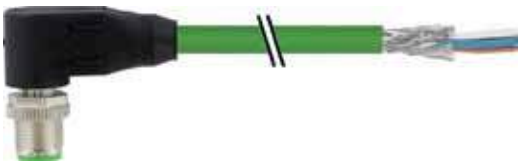
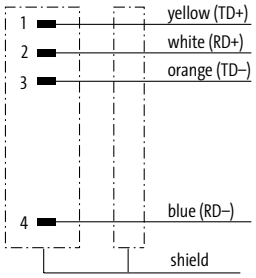
Industrial Ethernet

– with open ended wires M12

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed, CSA

* only for products with UL/CSA approved cable

	Male	Male
	straight	90°
		
1 Form	**14541**	**14561**
Type	**4-pole, shielded** **D-coded**	**4-pole, shielded** **D-coded**
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
1×4×0.34 mm²	**green**	**black**	**red**	**green**	**black**	**red**
PVC (UL/CSA), C-tracks	**800**			**800**		
PUR (UL/CSA), Torsion	**793**			**793**		
2×2×0.34 mm²						
PUR (UL/CSA)	**794**			**794**		
PUR (UL/CSA), robots/C-tracks	**796**	**851**	**792**	**796**	**851**	**792**
PUR (UL/CSA), C-tracks, 600 V	**659**			**659**		

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

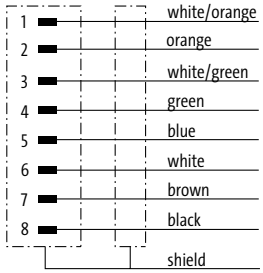
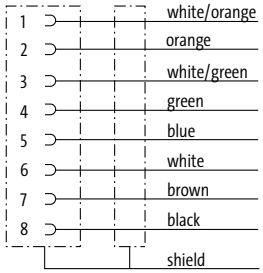
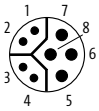
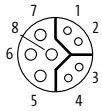
Industrial Ethernet

– with open ended wires M12

– Hybrid cable

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	Female
	straight	straight
		
1 Form	**15501**	**15551**
Type	**8-pole, shielded** **Y-coded**	**8-pole, shielded** **Y-coded**
Circuit diagram		
Contact layout	Male 	Female 

2 Cable Type	**Jacket Color**		**Jacket Color**	
4×0.5 + 1×4×0.14 mm²	**black**	**green**	**black**	**green**
PUR (UL/CSA), robots/C-tracks	**805**	**831**	**805**	**831**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

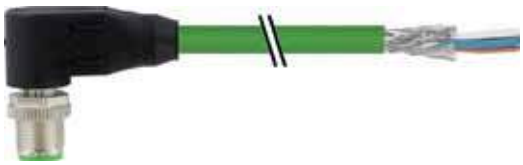
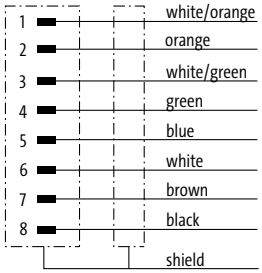
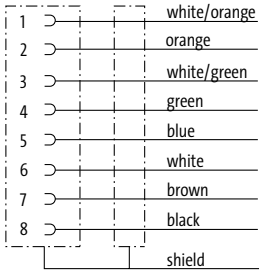
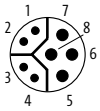
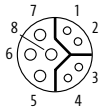
Industrial Ethernet

– with open ended wires M12

– Hybrid cable

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male 90°	**Female** 90°
		
1 Form	**15521**	**15571**
Type	**8-pole, shielded** **Y-coded**	**8-pole, shielded** **Y-coded**
Circuit diagram		
Contact layout	Male 	Female 

2 Cable Type	**Jacket Color**		**Jacket Color**	
4×0.5 + 1×4×0.14 mm²	**black**	**green**	**black**	**green**
PUR (UL/CSA), robots/C-tracks	**805**	**831**	**805**	**831**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 50 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

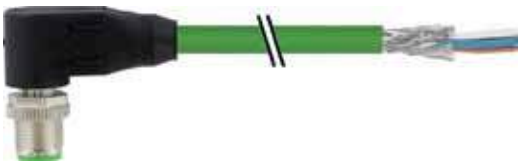
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

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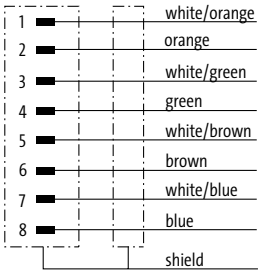
Industrial Ethernet

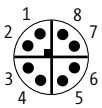
– with open ended wires M12

– Gigabit Ethernet CAT6A

	Male straight	**Male** 90°
		

* only for products with UL/CSA approved cable

1	**Form**	**21001**	**21021**
	Approvals	**cULus ***	
	Type	**8-pole, shielded**	**8-pole, shielded**
		X-coded	**X-coded**
	Circuit diagram		

	Contact layout	Male 	

2	**Cable Type**	**Jacket Color**	**Jacket Color**
	4×2×0.14 mm²	**green**	**green**
	PUR (UL/CSA)	**790**	**790**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2** Cable Type	**3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

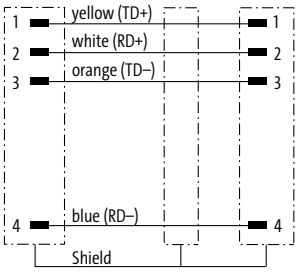
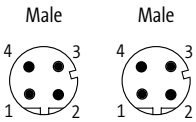
Industrial Ethernet

– Connection cables M12 - M12

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed, cCSAus

* only for products with UL/CSA approved cable

	Male straight	Male straight	Male 90°	Male 90°
				
1 Form	**44511**		**44561**	
Type	4-pole, shielded D-coded		4-pole, shielded D-coded	
Circuit diagram				
Contact layout				

2 Cable Type	Jacket Color			Jacket Color		
1×4×0.34 mm²	green	black	red	green	black	red
PVC (UL/CSA), C-tracks	800			800		
PUR (UL/CSA), Torsion	793			793		
2×2×0.34 mm²						
PUR (UL/CSA)	794			794		
PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792
PUR (UL/CSA), C-tracks, 600 V	659			659		

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
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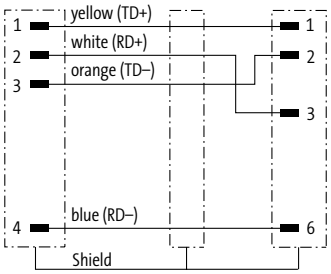
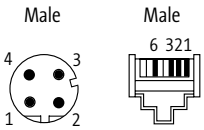
Industrial Ethernet

– Connection cables M12 - RJ45

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	**Male** straight	**Male** straight	**Male** 45° on bottom
				
1 Form	**44711**		**44731**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
1×4×0.34 mm²	**green**	**black**	**red**	**green**	**black**	**red**
PVC (UL/CSA), C-tracks	**800**			**800**		
PUR (UL/CSA), Torsion	**793**			**793**		
2×2×0.34 mm²						
PUR (UL/CSA)	**794**			**794**		
PUR (UL/CSA), robots/C-tracks	**796**	**851**	**792**	**796**	**851**	**792**
PUR (UL/CSA), C-tracks, 600 V	**659**			**659**		

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP67 (M12) - IP20 (RJ45)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

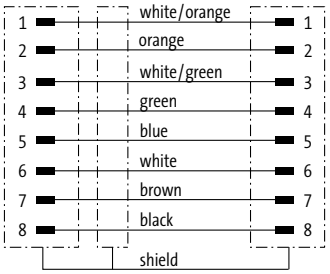
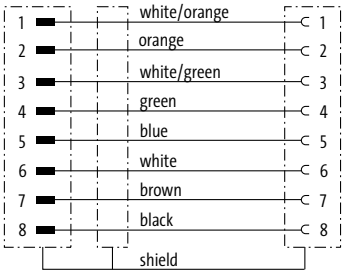
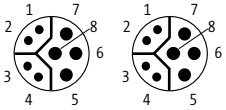
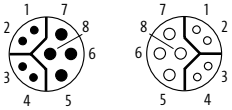
Industrial Ethernet

– Connection cables M12 - M12

– Hybrid cable

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight / Male straight	Male 90° / Male 90°	Male straight / Female straight
			
1 Form	**47001**	**47021**	**47051**
Type	**8-pole, shielded** **Y-coded**	**8-pole, shielded** **Y-coded**	**8-pole, shielded** **Y-coded**
Circuit diagram			
Contact layout	Male Male 		Male Female 
2 Cable Type	**Jacket Color**	**Jacket Color**	**Jacket Color**
4×0.5 + 1×4×0.14 mm²	**black** **green**	**black** **green**	**green**
PUR (UL/CSA), robots/C-tracks	**805** **831**	**805** **831**	**831**
3 Cable Length			
1.5 m	**0150**		
3.0 m	**0300**		
5.0 m	**0500**		
7.5 m	**0750**		
10.0 m	**1000**		
Technical Data			
Operating voltage	max. 50 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _		
		1 Form	**2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

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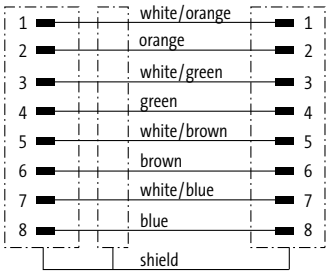
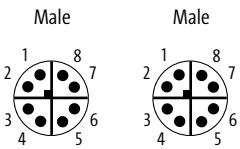
Industrial Ethernet

– Connection cables M12 - M12

– Gigabit Ethernet CAT6A

	Male straight	**Male** straight	**Male** 90°	**Male** 90°
				

* only for products with UL/CSA approved cable

1	**Form**	**51001**	**51021**
	Approvals	**cULus ***	
	Type	**8-pole, shielded** **X-coded**	**8-pole, shielded** **X-coded**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**			**Jacket Color**	
	4×2×0.14 mm²		**green**			**green**
	PUR (UL/CSA)		**790**			**790**

3	**Cable Length**	
	1.5 m	**0150**
	3.0 m	**0300**
	5.0 m	**0500**
	7.5 m	**0750**
	10.0 m	**1000**

	Technical Data	
	Operating voltage	max. 50 V AC/60 V DC
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
	Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

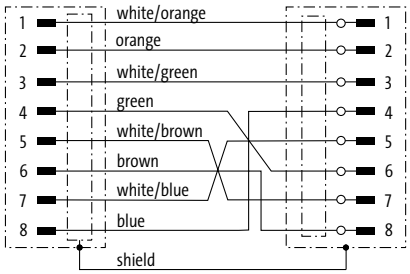
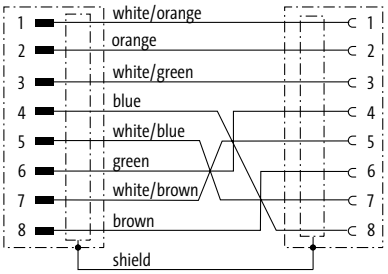
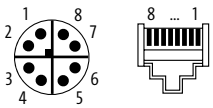
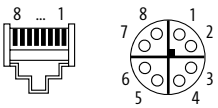
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Industrial Ethernet

– Connection cables M12 - RJ45

– Gigabit Ethernet CAT6A

	Male straight	**Male** straight	**Male** straight	**Flange female** straight
				
1 Form	**51101**		**51551**	
Type	**8-pole, shielded** **X-coded**		**8-pole, shielded** **X-coded** **Rear mounting**	
Circuit diagram				
Contact layout	Male 		Male 	
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.14 mm²	**green**		**green**	
PUR (UL/CSA)	**790**		**790**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP67 (M12) - IP20 (RJ45)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

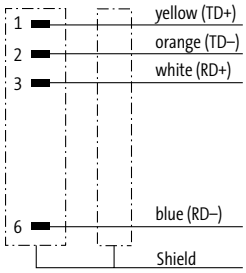
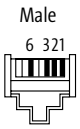
Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	Male 45° on top	Male 45° on bottom
			
1 Form	**74101**	**74121**	**74141**
Type	**4-pole, shielded**	**4-pole, shielded**	**4-pole, shielded**
Circuit diagram			
Contact layout			

2 Cable Type

	Jacket Color			Jacket Color			Jacket Color		
1×4×0.34 mm²	green	black	red	green	black	red	green	black	red
PVC (UL/CSA), C-tracks	800			800			800		
PUR (UL/CSA), Torsion	793			793			793		
2×2×0.34 mm²									
PUR (UL/CSA)	794			794			794		
PUR (UL/CSA), robots/C-tracks	796	851	792	796	851	792	796	851	792
PUR (UL/CSA), C-tracks, 600 V	659			659			659		

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

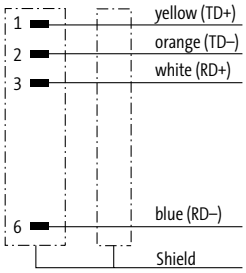
Industrial Ethernet

– with open ended wires RJ45

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male 45° left	Male 45° right
		
1 Form	**74161**	**74181**
Type	**4-pole, shielded**	**4-pole, shielded**
Circuit diagram		
Contact layout	Male 6 321 	

2 Cable Type	**Jacket Color**			**Jacket Color**		
1×4×0.34 mm²	**green**	**black**	**red**	**green**	**black**	**red**
PVC (UL/CSA), C-tracks	**800**			**800**		
PUR (UL/CSA), Torsion	**793**			**793**		
2×2×0.34 mm²						
PUR (UL/CSA)	**794**			**794**		
PUR (UL/CSA), robots/C-tracks	**796**	**851**	**792**	**796**	**851**	**792**
PUR (UL/CSA), C-tracks, 600 V	**659**			**659**		

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

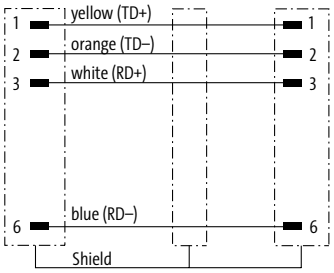
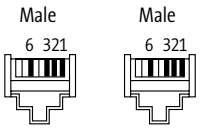
Industrial Ethernet

– Connection cables RJ45 - RJ45

EtherNet/IP EtherCAT PROFINET

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	**Male** straight	**Male** 45° on bottom	**Male** 45° right
				
1 Form	**74301**		**74521**	
Type	**4-pole, shielded**		**4-pole, shielded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**			**Jacket Color**		
1×4×0.34 mm²	**green**	**black**	**red**	**green**	**black**	**red**
PVC (UL/CSA), C-tracks	**800**			**800**		
PUR (UL/CSA), Torsion	**793**			**793**		
2×2×0.34 mm²						
PUR (UL/CSA)	**794**			**794**		
PUR (UL/CSA), robots/C-tracks	**796**	**851**	**792**	**796**	**851**	**792**
PUR (UL/CSA), C-tracks, 600 V	**659**			**659**		

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Industrial Ethernet

– Connection cables RJ45 - RJ45

– Gigabit Ethernet CAT6A

Male
straight

Male
straight

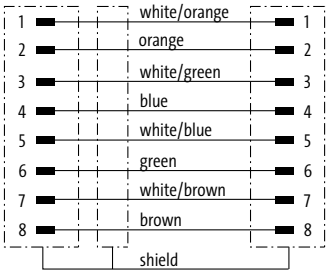


1 Form

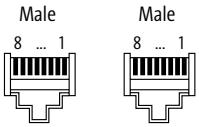
74311

Type: **8-pole, shielded**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
4×2×0.14 mm²	**green**
PUR (UL/CSA)	**790**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	74311	–	___	____
		1 Form	2 Cable Type	3 Cable Length	

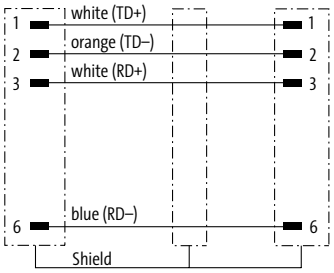
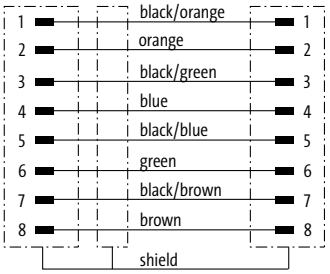
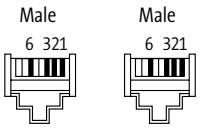
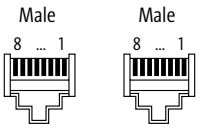
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

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Cabinetline

– Connection cables RJ45 - RJ45

	Male straight	**Male** straight	**Male** straight	**Male** straight
				
1 Form	**74701**		**74711**	
Type	**4-pole, shielded**		**8-pole, shielded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**		**Jacket Color**		
4×2×0.14 mm²		**gray**	**green**	**black**	**red**
FRNC			**478**	**380**	**578**
2×2×0.14 mm²					
FRNC, C-tracks		**777**			

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELDBUS CONNECTORS

Ethernet CAT5e

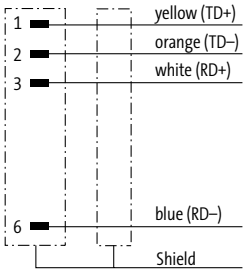
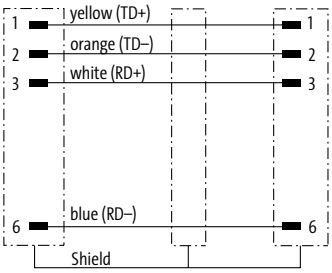
– Push Pull RJ45

– AIDA conform

PROFINET

Approvals: cULus Listed *

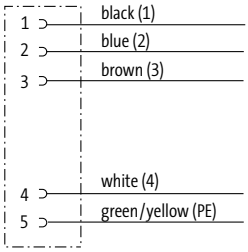
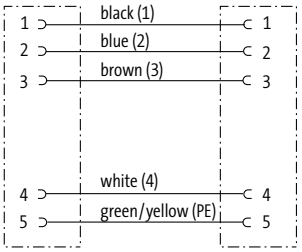
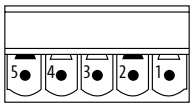
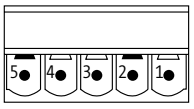
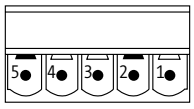
* only for products with UL/CSA approved cable

	Male straight	**Male** straight	**Male** straight
			
1 Form	**74601**	**74641**	
Type	**4-pole, shielded**	**4-pole, shielded**	
Circuit diagram			
Contact layout	Male 6 321	Male 6 321	Male 6 321
2 Cable Type	**Jacket Color**	**Jacket Color**	
2×2×0.34 mm²	**green**	**green**	
PUR (UL/CSA)	**794**	**794**	
PUR (UL/CSA), robots/C-tracks	**796**	**796**	
3 Cable Length			
1.5 m	**0150**		
3.0 m	**0300**		
5.0 m	**0500**		
7.5 m	**0750**		
10.0 m	**1000**		
Technical Data			
Operating voltage	max. 60 V DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _		
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

Push Pull Power	Male straight	Male straight	Male straight
			
1 Form	**99621**	**99641**	
Type	**5-pole**	**5-pole**	
Circuit diagram			
Contact layout			
2 Cable Type	**Jacket Color**	**Jacket Color**	
Wire diameter 2.5 mm²	**gray**	**gray**	
PUR (UL/CSA), robots/C-tracks	**962**	**962**	
3 Cable Length			
1.5 m	**0150**		
3.0 m	**0300**		
5.0 m	**0500**		
7.5 m	**0750**		
10.0 m	**1000**		
Technical Data			
Operating voltage	max. 24 V AC/DC		
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)		
Temperature range	-40...+85 °C, depending on cable quality		
Article No.			
The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _		
		1 Form	**2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.
Connection accessories and general accessories can be found at the end of chapter 3.6.

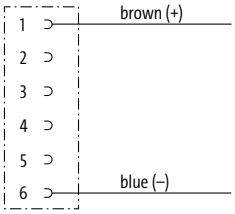
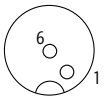
Cube67

– with open ended wires M12

– Actuator supply external

Approvals: cULus Listed, CSA C US *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**15001**	**15021**
Type	**2-pole**	**2-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.5 mm²	**gray**	**gray**
PUR (UL/CSA), robots/C-tracks	**414**	**414**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 30 V AC/DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	7 0 0 5 **M12 Lite** (plastic hexagonal screw) on request	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

MURR ELEKTRONIK
stay connected

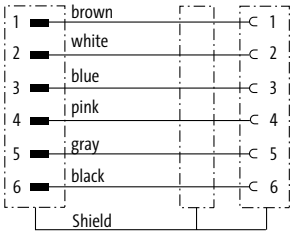
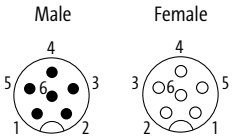
Cube67

– Connection cables M12 - M12

– Hybrid cable

Approvals: cULus Listed, cCSAus *

* only for products with UL/CSA approved cable

	Male straight	Female straight	Male 90°	Female 90°
				
1 Form	**46041**		**46061**	
Type	**6-pole, shielded**		**6-pole, shielded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
4×0.5 + 2×0.25 mm²	**green**	**green**
PUR (UL/CSA), robots/C-tracks	**802**	**802**

Terminator M12 (male)	**7000-15041-0000000**
Control cabinet entry system M12	**7000-46111-0000000**
T-coupler M12/M12, female/male	**7000-46101-0000000**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

FIELDBUS CONNECTORS

AS-Interface

– Connection cables M12 - M12

– for MASI68

Approvals: cULus Listed, CSA

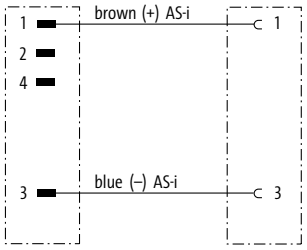
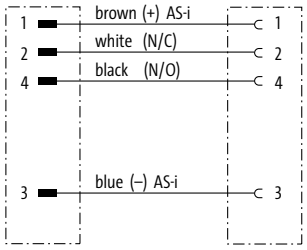
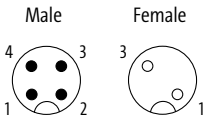
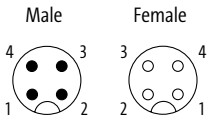
* only for products with UL/CSA approved cable

Male
straight

Female
straight



1 Form

	40005	40021
Type	**2-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**gray**	**gray**
PUR (UL/CSA), robots/C-tracks	**588**	
Wire diameter 0.75 mm²		
PUR (UL/CSA), robots/C-tracks		**862**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP67/IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7060	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.
Connection accessories and general accessories can be found at the end of chapter 3.6.

Connection accessories			Art-No.
	**T-coupler M12 – M12**		
	Male straight - female/male straight straight, B-coded, 5-pole, shielded	PROFIBUS	**7000-44151-0000000**
	**T-coupler M12 – M12**		
	Female straight - male/female straight straight, B-coded, 5-pole, shielded	PROFIBUS	**7000-44161-0000000**
	**T-coupler M12 – M12**		
	Male straight - female straight straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	**7000-46101-0000000**
	**T-coupler M12 – M12**		
	Female straight - male/male straight straight, A-coded, 4-pole	MASI68 additional actuator power supply	**7060-42701-0000000**
	**Male M12, field-wireable, screw terminals**		
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	**7000-14001-0000000**
	**Female M12, field-wireable, screw terminals**		
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	**7000-14021-0000000**
	**Male M12, field-wireable, screw terminals**		
	90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	**7000-14011-0000000**
	90°, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 6...8 mm	**7000-14581-0000000**
	**Female M12, field-wireable, screw terminals**		
	90°, B-coded, 5-pole, shielded	PROFIBUS, Interbus Sealing range (cable Ø): 6...8 mm	**7000-14031-0000000**
	**Male M12, field-wireable, IDC terminals**		
	straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	**7000-14201-0000000**
	straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	**7000-14521-0000000**
	**Female M12, field-wireable, IDC terminals**		
	straight, B-coded, 3-pole, shielded	PROFIBUS Sealing range (cable Ø): 7...8.8 mm	**7000-14221-0000000**
	straight, D-coded, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...8.8 mm	**7000-14621-0000000**

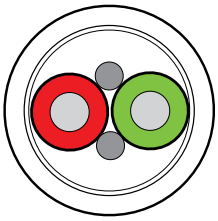
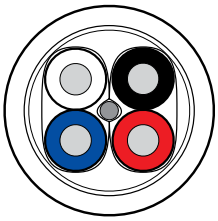
FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**Male M12, field-wireable, screw terminals**		
	straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	**7000-12761-0000000**
	**Female M12, field-wireable, screw terminals**		
	straight, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	**7000-12961-0000000**
	**Male M12, field-wireable, screw terminals**		
	90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	**7000-12881-0000000**
	**Female M12, field-wireable, screw terminals**		
	90°, A-coded, 5-pole	DeviceNet, CANopen Sealing range (cable Ø): 6...8 mm	**7000-13041-0000000**
	**Male RJ45, field-wireable, IDC terminals**		
	straight, IP20, 4-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 4.5...9 mm	**7000-74001-0000000**
	straight, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...9 mm	**7000-74011-0000000**
			
	straight, IP20, 8-pole, shielded	PROFINET Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	**7000-74071-0000000**
	straight, IP20, 8-pole, shielded	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	**7000-74075-0000000**
	**Male RJ45, field-wireable, IDC terminals**		
	45°, IP20, 4-pole, shielded	Ethernet CAT5e Sealing range (cable Ø): 4.5...8 mm	**7000-74021-0000000**
	45°, IP20, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 4.5...8 mm	**7000-74031-0000000**
	**Male RJ45, field-wireable, IDC terminals**		
	90°, IP20, 8-pole, shielded on top	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	**7000-74081-0000000**
	90°, IP20, 8-pole, shielded on top	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	**7000-74085-0000000**
			
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 PROFINET Sealing range (cable Ø): 5...9 mm	**7000-74091-0000000**
	90°, IP20, 8-pole, shielded on bottom	Ethernet CAT5 Sealing range (cable Ø): 5...9 mm	**7000-74095-0000000**

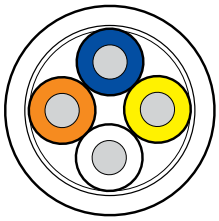
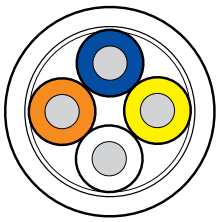
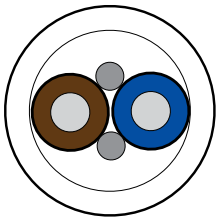
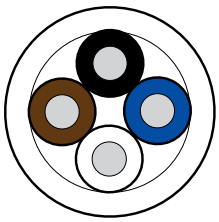
Connection accessories			Art-No.
	**Adapter M12/RJ45 (female/female)**		
	straight, D-coded, 4-pole, shielded	Ethernet CAT5	**7000-44671-0000000**
	**Adapter M12/RJ45 (female/female)**		
	90°, D-coded, 4-pole, shielded	Ethernet CAT5	**7000-44681-0000000**
	**Adapter M12/RJ45 (female/female)**		
	straight, X-coded, 8-pole, shielded	Ethernet CAT6A	**7000-51531-0000000**
	**Adapter M12/RJ45 (female/female)**		
	90°, X-coded, 8-pole, shielded	Ethernet CAT6A	**7000-51541-0000000**
	**Terminator M12 (male)**		
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13461-0000000**
	straight, B-coded, 4-pole	PROFIBUS	**7000-14041-0000000**
	straight, A-coded, 6-pole	Cube67	**7000-15041-0000000**
	**Terminator 7/8" (male)**		
	straight, screw fixing, 5-pole	DeviceNet, CANopen	**7000-78301-0000000**
	**Male M12, field-wireable, IDC terminals**		
	straight, X-coded, 8-pole, shielded	Ethernet CAT6A Sealing range (cable Ø): 5.5...9 mm	**7000-21101-0000000**
	**M12 Flange female straight**		
	straight, X-coded, 8-pole, shielded Front mounting	Ethernet CAT6A	**7000-21151-0000000**
	straight, X-coded, 8-pole, shielded Rear mounting	Ethernet CAT6A	**7000-21161-0000000**
	**M12 Flange female straight**		
	straight, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	**7000-15701-0000000**

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**M12 Flange female 90°**		
	90°, Y-coded, 8-pole, shielded Front mounting	Ethernet CAT5	**7000-15711-0000000**
	**Control cabinet entry system M12**		
	straight, A-coded, 5-pole, shielded	DeviceNet, CANopen	**7000-42111-0000000**
	straight, B-coded, 5-pole, shielded	PROFIBUS, Interbus	**7000-44111-0000000**
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**
	**Control cabinet entry system M12**		
	straight, D-coded, 4-pole, shielded (female/female)	Ethernet CAT5	**7000-44611-0000000**
	**Flange M12 male, pre-wired 0.2 m**		
	straight, B-coded, 5-pole	PROFIBUS, Interbus	**7000-14121-9750020**
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13521-9720020**
	**Flange M12 female, pre-wired 0.2 m**		
	straight, B-coded, 5-pole	PROFIBUS, Interbus	**7000-14161-9750020**
	straight, A-coded, 5-pole	DeviceNet, CANopen	**7000-13561-9720020**
	**Flange M12 female, CAT 5, pre-wired 0.2 m**		
	straight, D-coded, 4-pole, shielded	Ethernet CAT5	**7000-14501-9760020**
	**Push Pull Power connector, spring clamp terminals**		
	straight, IP65/67, 5-pole	Sealing range (cable Ø): 9...13 mm	**7000-99601-0000000**
	**Push Pull RJ45 data connector, IDC terminals**		
	straight, IP65/67, 8-pole	Ethernet CAT5 Sealing range (cable Ø): 5.5...10 mm	**7000-99591-0000000**
	**Push Pull RJ45 data connector, IDC terminals**		
	straight, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 4...11 mm	**7000-74041-0000000**

Connection accessories			Art-No.
	**Push Pull RJ45 data connector, IDC terminals**		
	45°, IP65/67, 4-pole	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	**7000-74061-0000000**
	**Push Pull SCRJ POF male, field-wireable**		
	straight, IP65/67, for POF 1 mm	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	**7000-99701-0000000**
	**Push Pull SCRJ POF male, field-wireable**		
	straight, IP65/67, for POF 1 mm Connection Crimp	PROFINET IO Sealing range (cable Ø): 6.5...9.5 mm	**7000-99691-0000000**
	**Push Pull SCRJ POF male, field-wireable**		
	straight Connection Crimp		**7000-99695-0000000**
	**Protective cover**		
	Push Pull Power		**7000-99661-0000000**
	**Protective cover**		
	Push Pull RJ45		**7000-99671-0000000**
	**Cable drum (100 m)**		
	1 × 2 × 0.64 mm², violet suitable for C-tracks	PROFIBUS	**7000-C0201-8400000**
	**Cable drum (100 m)**		
	2×0.25 + 2×0.34 mm², violet suitable for C-tracks	DeviceNet, CANopen	**7000-C0201-8030000**

FIELDBUS CONNECTORS

Connection accessories			Art-No.
	**Cable drum (100 m)**		
	2 × 2 × 0.34 mm², green suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	**7000-C0201-7960000**
	**Cable drum (100 m)**		
	2 × 2 × 0.34 mm², violet suitable for C-tracks	Ethernet CAT5, PROFINET IO, EtherCAT	**7000-C0201-7980000**
	**Cable drum (100 m)**		
	2 × 1.5 mm², gray suitable for C-tracks	AS-Interface, MASI68	**7000-C0201-5880000**
	**Cable drum (100 m)**		
	4 × 0.75 mm², gray suitable for C-tracks	AS-Interface, MASI68	**7000-C0201-8620000**
	**Bus Connection Plug 90°**		
	SUB-D9 (female), screw terminals	CANopen	**55760**
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**
	**Bus Connection Plug 180°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55584**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55585**

Connection accessories			Art-No.
	**Bus Connection Plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	**55586**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**
	**Bus Connection Plug 35°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99401-0000000**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99411-0000000**
	**Bus Connection Plug 180°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99421-0000000**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded Zinc die casting	PROFIBUS	**7000-99431-0000000**

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**

FIELDBUS CONNECTORS

Labeling accessories			Art-No.
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)		**7000-99002-0000000**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99101-0000000**
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**



CONNECTORS FOR **FOOD & BEVERAGE**

- **Made with stainless steel**
- **Resistant to cleaning substances**
- **High protection degree**

MEETS DEMANDING HYGIENIC STANDARDS

The food and beverage industry needs an extremely clean environment – perfect hygiene is required. Products and components have to be highly resistant and handle tough environments. Murrelektronik offers a wide connector range for this industry and each product meets the tough requirements. All metal parts are made of stainless steel and the cables feature a PVC or TPE-S jacket.

Murrelektronik is closely connected to this industry and can fulfill all the important requirements of the food and beverage industry. And Murrelektronik offers even more:

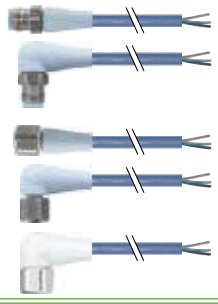
- Complete system solutions
- Comprehensive diagnostic options
- Vibration-proof products
- Excellent logistics for fast deliveries
- Specialists with industry-specific knowledge

ECOLAB

C SA® US

STAINLESS STEEL

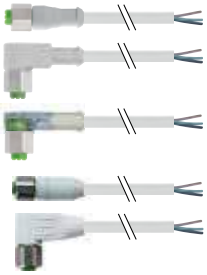
With Open Ended Wires



M12 F&B Pro male
- Straight
- 90°

M12 F&B Pro female
- Straight
- 90°
- 90° with LED

Page 3.7.1



M12 F&B female
- Straight
- 90°
- 90° with LED
- Straight (shielded)
- 90° (shielded)

Page 3.7.10



M12 Steel male
- Straight
- 90°

M12 Steel female
- Straight
- Straight with LED
- 90°

Page 3.7.15

Connection Cables



M12 F&B Pro male
- Straight
- 90°

M12 F&B Pro female
- Straight
- 90°

Page 3.7.19



M12 F&B male
- Straight

M12 F&B female
- Straight
- 90°
- 90° with LED

Page 3.7.14



M12 Steel male
- Straight
- 90°

M12 Steel female
- Straight
- Straight with LED
- 90°

Page 3.7.16

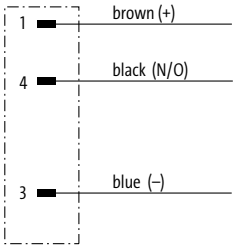
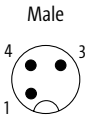
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Male straight	**Male** 90°
		
1 Form	**12001**	**12081**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**315**	**315**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7024	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

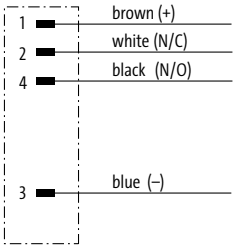
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Male straight	**Male** 90°
		
1 Form	**12021**	**12101**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout	Male 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**321**	**321**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 2 4 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form **2 Cable Type** **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

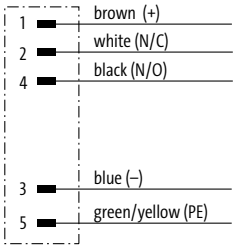
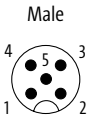
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Male straight	**Male** 90°
		
1 Form	**12041**	**12121**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**339**	**339**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7024	– _____	– ___	____
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

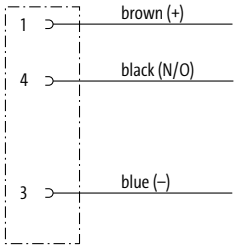
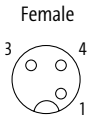
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Female straight	**Female** 90°
		
1 Form	**12181**	**12321**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**315**	**315**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 2 4 – _ _ _ _ _ – _ _ _ _ _ _ _**	
		1 Form **2 Cable Type** **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

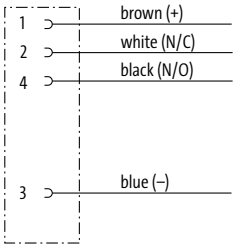
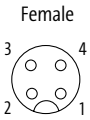
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Female straight	**Female** 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**321**	**321**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7024	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**	

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

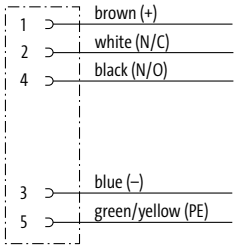
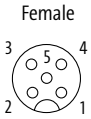
M12 F&B Pro

– with open ended wires M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Female straight	**Female** 90°
		
1 Form	**12241**	**12361**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**339**	**339**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)	
Temperature range	-40...+105 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7024	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

MURR ELEKTRONIK
stay connected

M12 F&B Pro

– with open ended wires M12

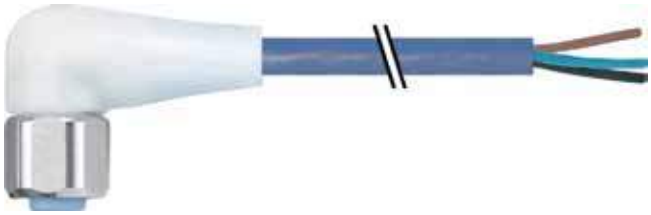
– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

Female

90° with LED



1 Form

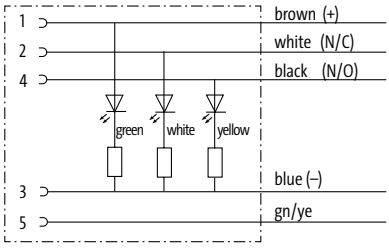
12441

Type

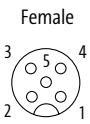
5-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**pastel blue**
TPE-S (UL) robots/C-tracks	**339**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7024	–	12441	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

M12 F&B Pro

– Connection cables M12 - M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

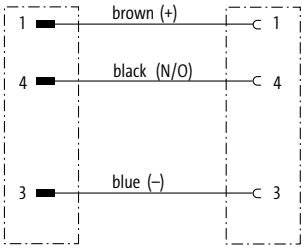
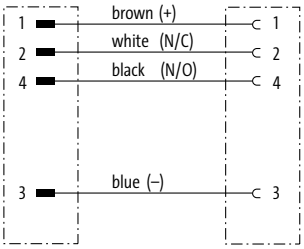
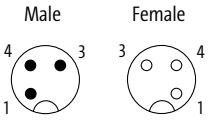
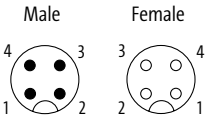
Approvals: ECOLAB

Male
straight

Female
straight



1 Form

	40001	40021
Type	**3-pole**	**4-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**315**	**321**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7024	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

MURR ELEKTRONIK
stay connected

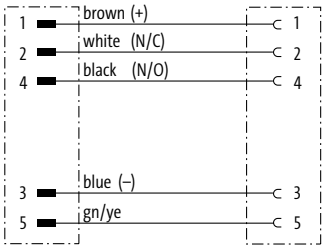
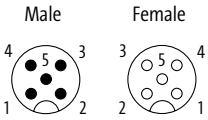
M12 F&B Pro

– Connection cables M12 - M12

– high resistance PP materials

– Screw, Stainless Steel 1.4404 (V4A)

Approvals: ECOLAB

	Male straight	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40041**		**40281**	
Type	**5-pole**		**5-pole**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**pastel blue**	**pastel blue**
TPE-S (UL) robots/C-tracks	**339**	**339**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 125 V AC/DC
Protection	IP65/IP68/IP69K inserted and tightened (EN 60529)
Temperature range	-40...+105 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7024	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

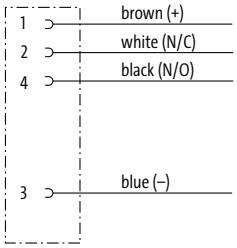
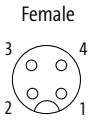
with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: ECOLAB, cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.34 mm²	**gray**	**gray**
PVC (UL/CSA)	**214**	**214**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 250 V AC/DC	
Protection	IP65, IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 1 4 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Other versions on request. Further cable lengths on request.	

with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Female

90° with LED



Approvals: ECOLAB cULus Listed * CSA US *

* only for products with UL/CSA approved cable

1 Form

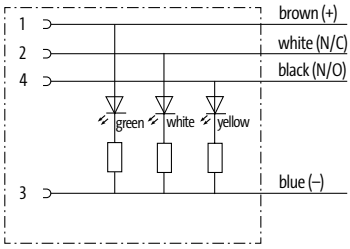
12421

Type

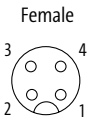
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	12421	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

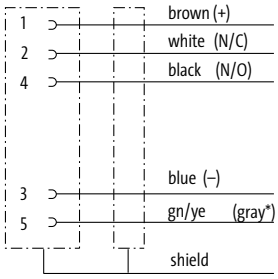
with open ended wires M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: ECOLAB, cULus Listed, CSA c US *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**13221**	**13281**
Type	**5-pole, shielded**	**5-pole, shielded**
Circuit diagram	 (* for cable type 203)	
Contact layout	Female 	

2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**	**black**	**gray**	**black**
PVC (UL/CSA)	**202 (203)**	**602 (603)**	**202 (203)**	**602 (603)**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

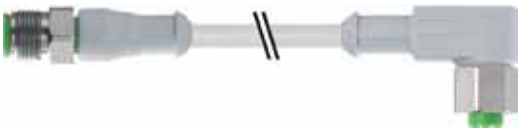
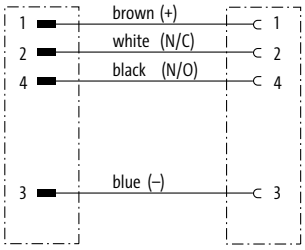
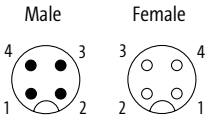
Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Approvals: ECOLAB cULus Listed cCSAus *

* only for products with UL/CSA approved cable

	Male straight	**Female** straight	**Male** straight	**Female** 90°
				
1 Form	**40021**		**40121**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**		**gray**	
PVC (UL/CSA)	**214**		**214**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 250 V AC/DC			
Protection	IP65, IP68 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7014 – _____ – ___		____	
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

Connection cables M12 - M12

– Stainless Steel 1.4404 (V4A)

– Profile gasket

Male
straight

Female
90° with LED



Approvals: ECOLAB c UL us Listed * c SA us *

* only for products with UL/CSA approved cable

1 Form

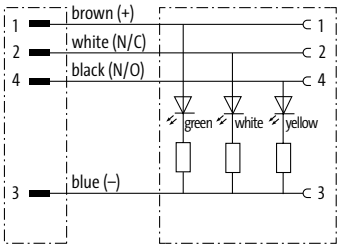
40341

Type

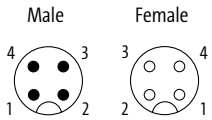
4-pole with 3 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP65, IP68 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7014	–	40341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

With open ended wires

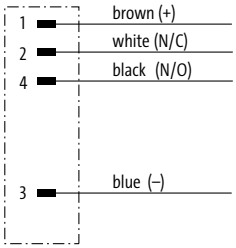
– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Approvals: ECOLAB, cULus*

* only for products with UL/CSA approved cable

		Male straight	Male 90°
			
1	**Form**	**12021**	**12101**
	Type	**4-pole**	**4-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.34 mm²	**gray**	**gray**
	PVC (UL/CSA)	**214**	**214**
	TPE-S	**336**	**336**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 32 V AC/DC	
	Protection	IP68, IP69K inserted and tightened (EN 60529)	
	Temperature range	-40...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7044 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

With open ended wires

– M12-Steel

– Stainless Steel 1.4404 (V4A)

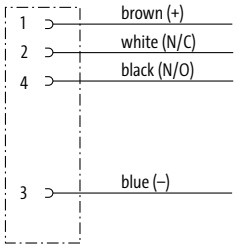
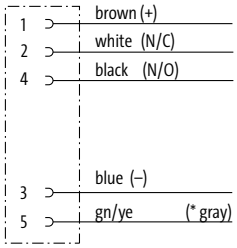
– Permanently IP69K

Approvals: ECOLAB, cULus*

* only for products with UL/CSA approved cable

Female
straight



1 Form	**12221**	**12241**
Type	**4-pole**	**5-pole**
Circuit diagram		 (* for cable type 219)
Contact layout	Female 	Female 

2 Cable Type	**Jacket Color**		**Jacket Color**		
Wire diameter 0.34 mm²		**gray**		**gray**	**black**
PVC (UL/CSA)		**214**		**215**	**615**
TPE-S		**336**			

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 32 V AC/DC
Protection	IP68, IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

With open ended wires

– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Approvals: cULus* ECOLAB

* only for products with UL/CSA approved cable

Female

90°

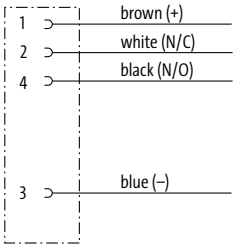


1 Form

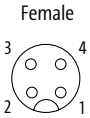
12341

Type: **4-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**
TPE-S	**336**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 32 V AC/DC
Protection	IP68, IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	12341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

With open ended wires

– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Approvals: cULus* ECOLAB

* only for products with UL/CSA approved cable

Female

straight, with LED



1 Form

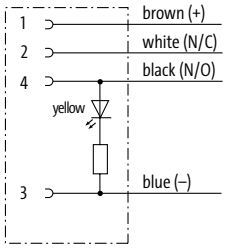
12292

Type

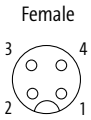
4-pole with 1 × LED (PNP)

(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**
TPE-S	**336**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC/DC ±25%
Protection	IP68, IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	12292	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

Connection cables

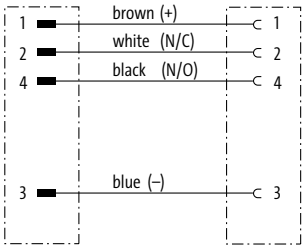
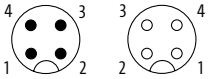
– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Approvals: ECOLAB, cULus*

* only for products with UL/CSA approved cable

	Male straight	**Female** straight	**Male** straight	**Female** 90°
				
1 Form	**40021**		**40121**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**		**gray**	
PVC (UL/CSA)	**214**		**214**	
TPE-S	**336**		**336**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			

Technical Data

Operating voltage	max. 32 V AC/DC
Protection	IP68, IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

Connection cables

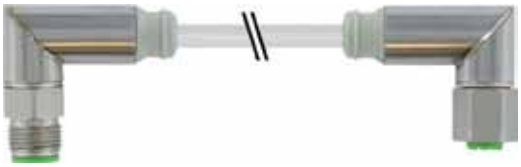
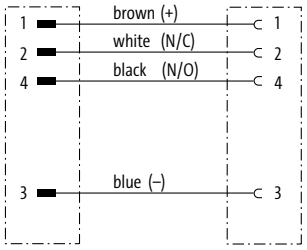
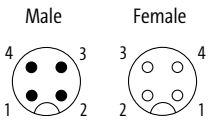
– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Approvals: cULus* ECOLAB

* only for products with UL/CSA approved cable

	Male 90°	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40201**		**40261**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.34 mm²	**gray**		**gray**	
PVC (UL/CSA)	**214**		**214**	
TPE-S	**336**		**336**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 32 V AC/DC			
Protection	IP68, IP69K inserted and tightened (EN 60529)			
Temperature range	-40...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7044 – _____ –		___	____
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Further cable lengths on request.

Connection cables

– M12-Steel

– Stainless Steel 1.4404 (V4A)

– Permanently IP69K

Male
straight

Female
straight, with LED



Approvals: ECOLAB, cULus*

* only for products with UL/CSA approved cable

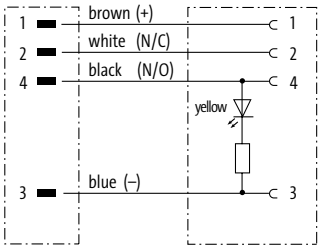
1 Form

40312

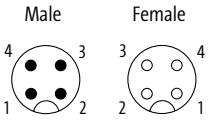
Type

4-pole with 1 × LED (PNP)
(NPN) on request

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
Wire diameter 0.34 mm²	**gray**
PVC (UL/CSA)	**214**
TPE-S	**336**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V AC/DC ±25%
Protection	IP68, IP69K inserted and tightened (EN 60529)
Temperature range	-40...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7044	–	40312	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Further cable lengths on request.

PLUG CONNECTORS FOR FOOD & BEVERAGE

Labeling accessories			Art-No.
	**Slip-on cable sleeve**		
	for ACS label plates (4 × 18 mm)	Cable diameter (4...6.5 mm)	**7000-99004-0000000**
	Snap-on cable sleeve		
	for ACS label plates (4 × 18 mm)	Cable diameter (4.2...5.6 mm)	**7000-99005-0000000**
	for ACS label plates (4 × 18 mm)	Cable diameter (5...7 mm)	**7000-99006-0000000**
	ACS label plate		
	for self marking (4 × 18 mm)		**7000-99002-0000000**
	**Colored ring M8/M12**		
	sandy yellow	for unshielded molding	**7000-99301-V011002**
	zinc yellow	for unshielded molding	**7000-99301-V011018**
	redorange	for unshielded molding	**7000-99301-V012008**
	red	for unshielded molding	**7000-99301-V013020**
	violet	for unshielded molding	**7000-99301-V014003**
	purple	for unshielded molding	**7000-99301-V014006**
	blue	for unshielded molding	**7000-99301-V015005**
	green	for unshielded molding	**7000-99301-V016018**
	gray	for unshielded molding	**7000-99301-V017035**
	white	for unshielded molding	**7000-99301-V019003**
	black	for unshielded molding	**7000-99301-V019004**

Mounting accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99101-0000000**
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Torque wrench set**		
	M12 (0.6 Nm, SW14)		**7000-99107-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	**7000-99108-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	**7000-99094-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	**7000-99103-0000000**

Mounting accessories			Art-No.
	**Hold clip M12**		
	Plastic		**7000-99045-0000000**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**

Connection accessories			Art-No.
	**Universal holder**		
	modular	M8 M12	**7000-99801-0000000**
	**Universal holder**		
	modular	M12 Y-connector M12	**7000-99811-0000000**



MOBILE APPLICATIONS
FOR ROUGH APPLICATIONS

- **Robust**
- **Resistant**
- **Sealed**

KEEP YOUR MOBILE EQUIPMENT GOING STRONG WITH OUR FULLY POTTED CONNECTORS

Many leading mobile hydraulic valve manufacturers are currently updating their connection concepts. Instead of the old-fashioned (rectangular) valve connectors compliant with DIN EN 175301-803, they are increasingly recommending alternatives with Junior Power Timer, Deutsch or SuperSeal connectors.

MDC – MURRELEKTRONIK DEUTSCH CONNECTOR

Murrelektronik MDC connectors are pre-wired valve connectors, which are 100% compatible with Deutsch DT connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

MSC – MURRELEKTRONIK SUPERSEAL CONNECTOR

Murrelektronik MSC cordsets are pre-wired valve connectors that are 100% compatible with the size 1.5 SuperSeal connectors. Even though the cables are connected to the housing and fully sealed, the connector is as compact as possible.

With Open Ended Wires



AMP Junior Power Timer
- Female straight
- Female 90°

Page 3.8.1



Deutsch MDC
- Male straight
- Y connector male
- Female straight

Page 3.8.3



SuperSeal MSC1.5
- Male straight
- Female straight

Page 3.8.8

MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

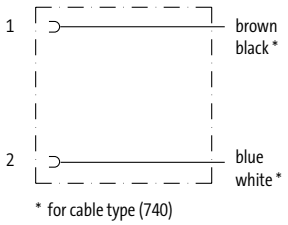
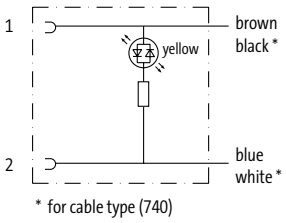
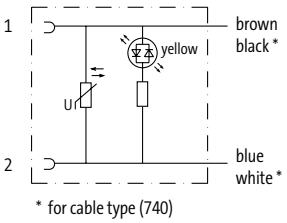
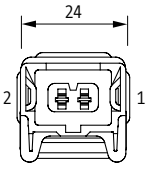
– with open ended wires

– compatible with:

– AMP Junior Power Timer

Female
straight



1 Form	**70001**	**70021**	**70061**
Type	**max. 230 V AC/DC** **without components**	**12...24 V AC/DC** **LED**	**12...24 V AC/DC** **LED and VDR**
Circuit diagram	 * for cable type (740)	 * for cable type (740)	 * for cable type (740)
Contact layout			

2 Cable Type	Jacket Color	Jacket Color	Jacket Color
Wire diameter 0.75 mm²	**black**	**black**	**black**
PUR/PVC	**750**	**750**	**750**
PUR (UL/CSA), robots/C-tracks	**754**	**754**	**754**
Wire diameter 0.5 mm²			
PUR, C-tracks	**740**	**740**	**740**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	max. 230 V AC/DC	12...24 V AC/DC
Protection	IP65 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7072	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2** Cable Type	**3** Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

– with open ended wires

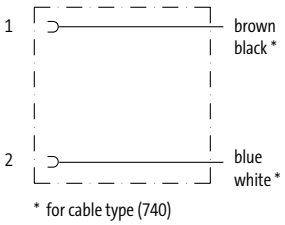
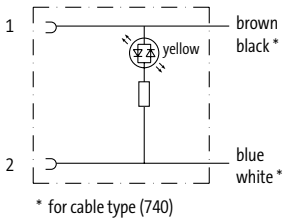
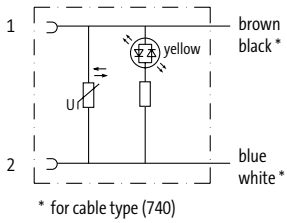
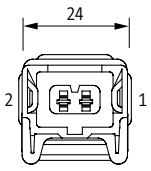
– compatible with:

– AMP Junior Power Timer

Female

90°



1 Form	**70301**	**70321**	**70361**
Type	**max. 230 V AC/DC** **without components**	**12...24 V AC/DC** **LED**	**12...24 V AC/DC** **LED and VDR**
Circuit diagram	 * for cable type (740)	 * for cable type (740)	 * for cable type (740)
Contact layout			

2 Cable Type	**Jacket Color**	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**	**black**
PUR/PVC	**750**	**750**	**750**
PUR (UL/CSA), robots/C-tracks	**754**	**754**	**754**
Wire diameter 0.5 mm²			
PUR, C-tracks	**740**	**740**	**740**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	max. 230 V AC/DC	12...24 V AC/DC
Protection	IP65 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7 0 7 2	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

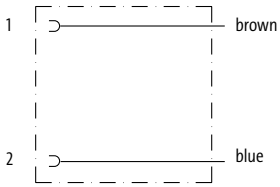
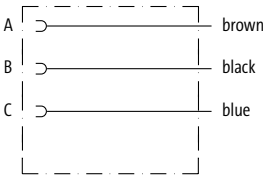
MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– Deutsch DT 06

	Deutsch MDC 06-2S Male straight	**Deutsch MDC 06-3S** Male straight
		
1 Form	**72011**	**72081**
Type	**2-pole** **12...230 V AC/DC** **without components**	**3-pole** **6...230 V AC/DC** **without components**
Circuit diagram		
Contact layout	Male female contacts 	Male female contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black** / **yellow**	**black**
PUR/PVC	**750**	
PUR (UL/CSA), robots/C-tracks	**754** / **145**	**564**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	12...230 V AC/DC	6...230 V AC/DC
Protection	IP68 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _**	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

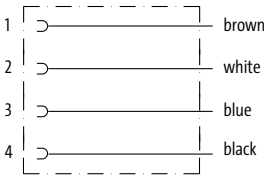
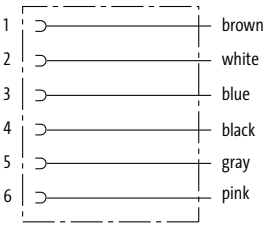
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– Deutsch DT 06

	Deutsch MDC 06-4S Male straight	**Deutsch MDC 06-6S** Male straight
		
1 Form	**72161**	**72221**
Type	**4-pole** **6...230 V AC/DC** **without components**	**6-pole** **6...230 V AC/DC** **without components**
Circuit diagram		
Contact layout	Male female contacts 	Male female contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL/CSA), robots/C-tracks	**569**	**572**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	6...230 V AC/DC	
Protection	IP68 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– Deutsch DT 06

Deutsch MDC 06-4S

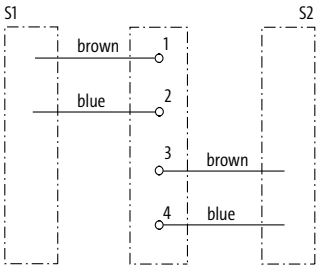
Y connector
Male



1 Form — 72191

Type	**4-/2-pole**
	6...230 V AC/DC
	without components

Circuit diagram



Contact layout

Male
female contacts



2 Cable Type — Jacket Color

Wire diameter 0.75 mm²	black	yellow
PUR (UL/CSA), robots/C-tracks	754	145

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	6...230 V AC/DC
Protection	IP68 inserted and tightened
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7072	–	72191	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

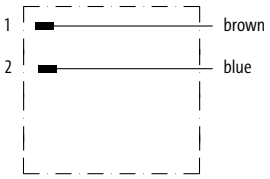
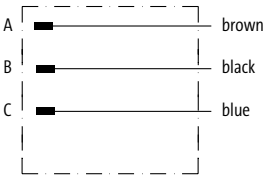
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– Deutsch DT 06

	Deutsch MDC 04-2P Female straight	**Deutsch MDC 04-3P** Female straight
		
1 Form	**72301**	**72381**
Type	**2-pole** **6...230 V AC/DC** **without components**	**3-pole** **6...230 V AC/DC** **without components**
Circuit diagram		
Contact layout	Female male contacts 	Female male contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black** / **yellow**	**black**
PUR/PVC	**750**	
PUR (UL/CSA), robots/C-tracks	**754** / **145**	**564**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	6...230 V AC/DC	
Protection	IP68 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

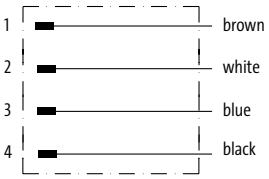
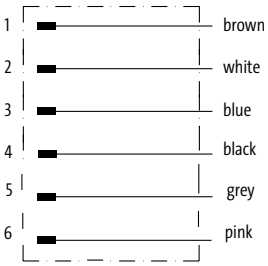
MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– Deutsch DT 06

	Deutsch MDC 04-4P Female straight	**Deutsch MDC 04-6P** Female straight
		
1 Form	**72461**	**72521**
Type	**4-pole** **6...230 V AC/DC** **without components**	**6-pole** **6...230 V AC/DC** **without components**
Circuit diagram		
Contact layout	Female male contacts 	Female male contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL/CSA), robots/C-tracks	**569**	**572**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	6...230 V AC/DC	
Protection	IP68 inserted and tightened	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

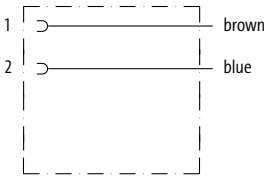
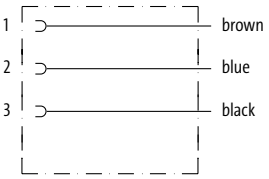
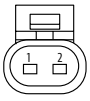
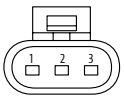
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– AMP SuperSeal 1.5

	SuperSeal MSC1.5-2S Male straight	**SuperSeal MSC1.5-3S** Male straight
		
1 Form	**73001**	**73081**
Type	**2-pole** **max. 24 V DC** **without components**	**3-pole** **max. 24 V DC** **without components**
Circuit diagram		
Contact layout	Male female contacts 	Male female contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL), C-tracks	**512**	**513**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 24 V DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+125 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

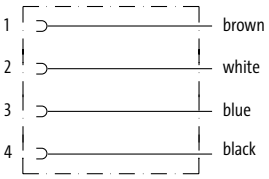
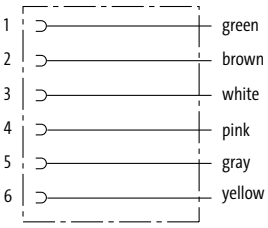
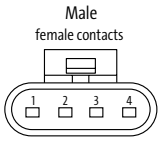
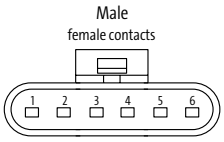
MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– AMP SuperSeal 1.5

	SuperSeal MSC1.5-4S Male straight	**SuperSeal MSC1.5-6S** Male straight
		
1 Form	**73161**	**73221**
Type	**4-pole** **max. 24 V DC** **without components**	**6-pole** **max. 24 V DC** **without components**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL), C-tracks	**514**	**516**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 24 V DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-40...+125 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7072	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

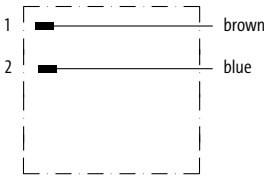
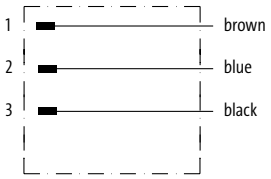
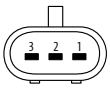
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– AMP SuperSeal 1.5

	SuperSeal MSC1.5-2P Female straight	**SuperSeal MSC1.5-3P** Female straight
		
1 Form	**73301**	**73381**
Type	**2-pole** **max. 24 V DC** **without components**	**3-pole** **max. 24 V DC** **without components**
Circuit diagram		
Contact layout	Female male contacts 	Female male contacts 
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL), C-tracks	**512**	**513**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 24 V DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+125 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 0 7 2 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

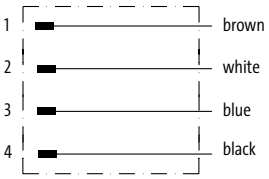
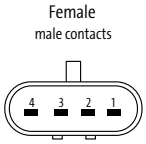
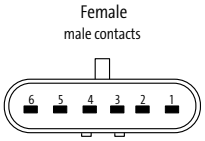
MURR ELEKTRONIK
stay connected

Xtreme - Mobile Applications

– with open ended wires

– compatible with:

– AMP SuperSeal 1.5

	SuperSeal MSC1.5-4P Female straight	**SuperSeal MSC1.5-6P** Female straight
		
1 Form	**73461**	**73521**
Type	**4-pole** **max. 24 V DC** **without components**	**6-pole** **max. 24 V DC** **without components**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**black**	**black**
PUR (UL), C-tracks	**514**	**516**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 24 V DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-40...+125 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7072 – _____ – ___ ____	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.



M23 ROUND PLUG CONNECTORS MADE FOR DISTRIBUTION BOXES

- **Highly resistant, halogen-free molding**
- **Safely sealed – acc. to IP67**
- **Reliable – 100% tested**

COMPACT CONNECTOR FOR SAFE SIGNAL TRANSFER

Murrelektronik's M23 connectors are specially designed for distribution systems with M23 connections. They ensure a safe signal transfer from the distribution box to the control cabinet and a safe power supply to the distributor as well as the sensors and actuators connected to it.

With Open Ended Wires



M23 female, 12-pole
- Straight/90°
- For unshielded distribution boxes

Page 3.9.1



M23 female, 19-pole
- Straight/90°
- For unshielded distribution boxes

Page 3.9.2



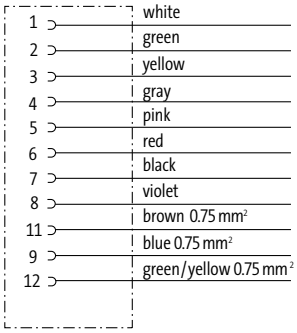
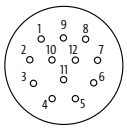
M23 female, 19-pole
- Straight
- For shielded distribution boxes

Page 3.9.4

MURR ELEKTRONIK
stay connected

With open ended wires

– 12-pole

	Female straight	**Female** 90°
		
1 Form	**23051**	**23151**
Type	**11-pole used for 8-way distribution box, 4-pole**	**11-pole used for 8-way distribution box, 4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC (UL/CSA), C-tracks	**362** – 8 × 0.34 + 3 × 0.75 mm²	**362** – 8 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	

Technical Data

Operating voltage	max. 125 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

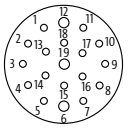
Other versions on request.

With open ended wires

– 19-pole

Female
straight



1	**Form**	**23251**	**23251**
	Approvals		**cULus**
	Type	**19-pole used** **for 8-way distribution boxes, 5-pole**	**19-pole used** **for 8-way distribution boxes, 5-pole**
	Circuit diagram	15 white 7 gray/ pink 5 green 4 red/blue 16 yellow 8 white/green 3 gray 14 brown/ green 17 pink 9 white/yellow 2 red 13 yellow/brown 11 black 10 white/gray 1 violet 18 gray/brown 19 brown 0.75mm² 6 blue 0.75mm² 12 green/yellow 0.75mm²	15 white 7 gray/pink 5 green 4 red/blue 16 yellow 8 white/ green 3 gray 14 brown/green 17 pink 9 white/yellow 2 red 13 yellow/brown 11 black 10 white/gray 1 violet 18 gray/brown 19 brown 1.0mm² 6 blue 1.0mm² 12 green/yellow 1.0mm²
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color** – No./diameter of wires	
		gray	**gray**
	PUR/PVC (UL/CSA), C-tracks	**398** – 16 × 0.34 + 3 × 0.75 mm²	
	PUR (UL/CSA), robots/C-tracks		**452** – 16 × 0.5 + 3 × 1.0 mm²
3	**Cable Length**		
	5.0 m	**0500**	
	10.0 m	**1000**	
	15.0 m	**1500**	
	Technical Data		
	Operating voltage	max. 125 V AC/DC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-5...+70 °C, depending on cable quality	-5...+70 °C, depending on cable quality
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**
	Notes		
		Other versions on request.	

With open ended wires

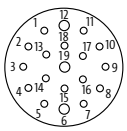
– 19-pole

Female

90°



1 Form

	23351	23351
Approvals		**cULus**
Type	**19-pole used**	**19-pole used**
	for 8-way distribution boxes, 5-pole	**for 8-way distribution boxes, 5-pole**
Circuit diagram	15 white 7 gray/ pink 5 green 4 red/blue 16 yellow 8 white/green 3 gray 14 brown/ green 17 pink 9 white/yellow 2 red 13 yellow/brown 11 black 10 white/gray 1 violet 18 gray/brown 19 brown 0.75mm² 6 blue 0.75mm² 12 green/yellow 0.75mm²	15 white 7 gray/pink 5 green 4 red/blue 16 yellow 8 white/ green 3 gray 14 brown/green 17 pink 9 white/yellow 2 red 13 yellow/brown 11 black 10 white/gray 1 violet 18 gray/brown 19 brown 1.0mm² 6 blue 1.0mm² 12 green/yellow 1.0mm²
Contact layout	Female 	

2 Cable Type

	Jacket Color – No./diameter of wires	
	gray	**gray**
PUR/PVC (UL/CSA), C-tracks	**398** – 16 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks		**452** – 16 × 0.5 + 3 × 1.0 mm²

3 Cable Length

5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	max. 125 V AC/DC	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-5...+70 °C, depending on cable quality	-5...+70 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

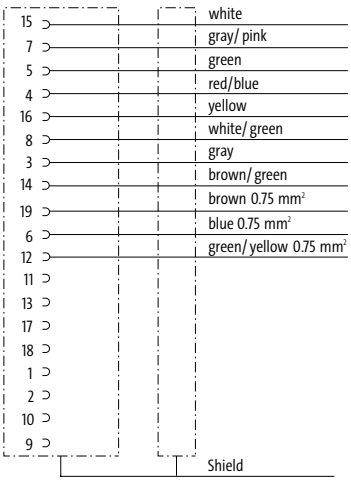
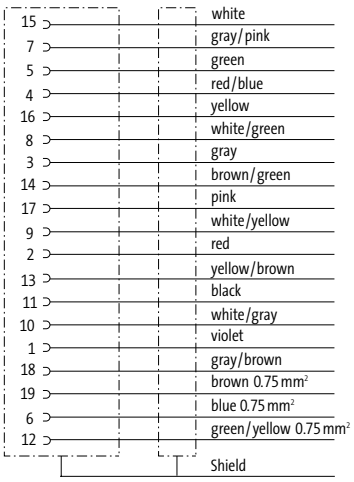
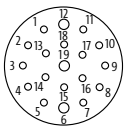
Other versions on request.

With open ended wires

– 19-pole

Female
straight



1 Form	**23711**	**23751**
Type	**11-pole used** **shielded** **for 4-way distribution boxes, 5-pole**	**19-pole used** **shielded** **for 8-way distribution boxes, 5-pole**
Circuit diagram		
Contact layout	Female 	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request.



ROUND PLUG CONNECTORS POWER
POWERFUL AND SAFE

- **Proven and reliable**
- **Molded and encapsulated plug connector**
- **Easy and safe connection**

PLUG CONNECTOR FOR HIGH POWER TRANSFER

Perfect electrical connection, tightness and media resistance are the basic requirements for all types of plug connectors. In the field of motor connection technology, additional special properties are required: large connection cross-sections, high power with the smallest possible design and – most importantly – integrated anti-vibration locks that keeps the connector securely in place even if severe vibrations occur.

- The **M12 Power** is an extremely compact and performant M12 plug connector.
- The **MQ15 X-Power** enables particularly fast installation.
- The **7/8" round plug connector** has been optimized for highest performance

As a matter of course, all our plug connectors are tested 100%.

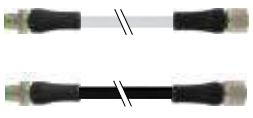
M12 Power



With open ended wires

M12 male/female
• Straight
• K-coded, L-coded, S-coded, T-coded

Page 3.10.1



Connection cables

M12 male – M12 female
• Straight
• K-coded, L-coded, S-coded, T-coded

Page 3.10.5



Field-wireable Screw terminals

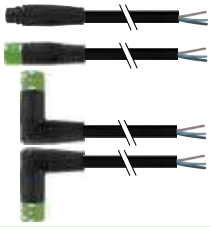
M12 male/female
• Straight
• S-coded, T-coded

Field-wireable Terminals with Insulation Displacement Technology (IDC)

M12 male/female
• Straight
• L-coded

Page 3.10.7

MQ15 X-Power



With open ended wires

MQ15 X-Power male/female
- Unshielded/shielded
- Straight
- 90°

Page 3.10.10

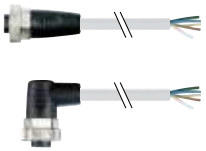


Connection cables

MQ15 X-Power male – MQ15 X-Power female
- Unshielded/shielded
- Straight

Page 3.10.25

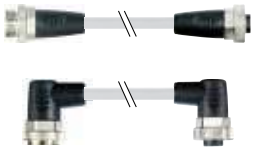
7/8"



With open ended wires

7/8" male/female
- Straight/90°

Page 3.10.29



Connection cables

7/8" male – 7/8" female
- Straight/90°

Page 3.10.30



Field-wireable
Screw terminals

7/8" male/female
- Straight/90°

Page 3.10.31



Field-wireable
Terminals with Insulation Displacement Technology (IDC)

7/8" male/female
- Straight

Page 3.10.33

M23 Drives (Motors)



We offer a wide range for M23 Drives. Just talk to us!

MURR ELEKTRONIK
stay connected

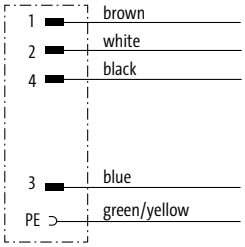
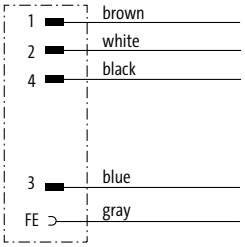
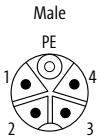
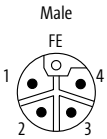
With open ended wires

– M12 Power

Male
straight



1 Form

	P3201	P4201
Type	**5-pole** **K-coded** **Operating current: max. 12 A**	**5-pole** **L-coded** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color	
Wire diameter 1.5 mm²	**black**	**gray**	**black**
PUR/PVC		**966**	
PUR (UL/CSA), robots/C-tracks	**P05**		**P04**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

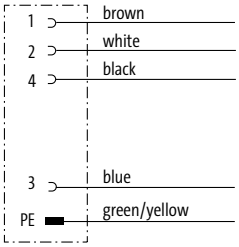
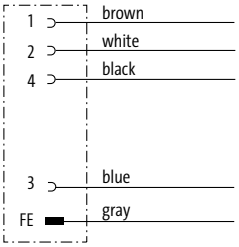
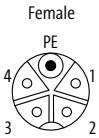
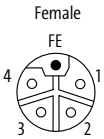
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

With open ended wires

– M12 Power

Female
straight



1 Form	P3221	P4221
Type	5-pole K-coded Operating current: max. 12 A	5-pole L-coded Operating current: max. 16 A
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	black	gray / black
PUR/PVC		966
PUR (UL/CSA), robots/C-tracks	P05	P04

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

With open ended wires

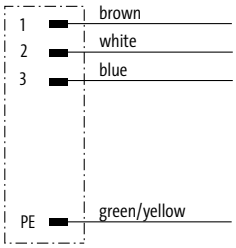
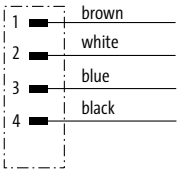
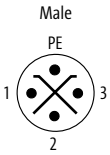
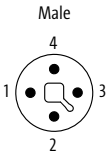
– M12 Power

Male

straight



1 Form

	P6201	P7201
Type	**4-pole** **S-coded** **Operating current: max. 12 A**	**4-pole** **T-coded** **Operating current: max. 12 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**black**	**black**
PUR (UL/CSA), robots/C-tracks	**P06**	**P07**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

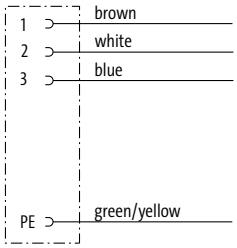
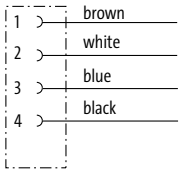
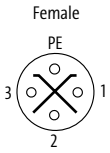
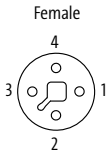
ROUND PLUG CONNECTORS POWER

With open ended wires

– M12 Power

Female
straight



1 Form	P6221	P7221
Type	**4-pole** **S-coded** **Operating current: max. 12 A**	**4-pole** **T-coded** **Operating current: max. 12 A**
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**black**	**black**
PUR (UL/CSA), robots/C-tracks	**P06**	**P07**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data		
Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

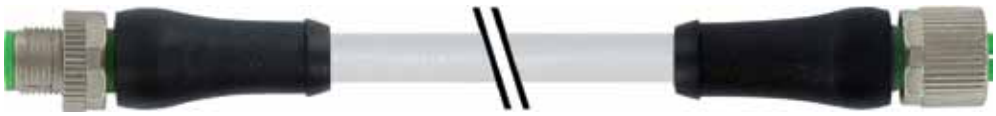
MURR ELEKTRONIK
stay connected

Connection cables

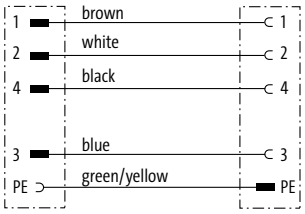
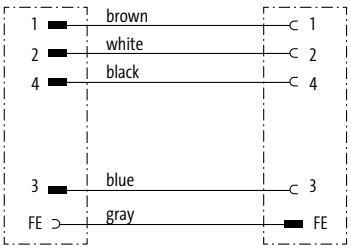
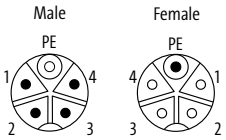
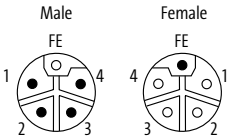
– M12 Power

Male
straight

Female
straight



1 Form

	P3241	P4241
Type	**5-pole** **K-coded** **Operating current: max. 12 A**	**5-pole** **L-coded** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color	
Wire diameter 1.5 mm²	**black**	**gray**	**black**
PUR/PVC		**966**	
PUR (UL/CSA), robots/C-tracks	**P05**		**P04**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

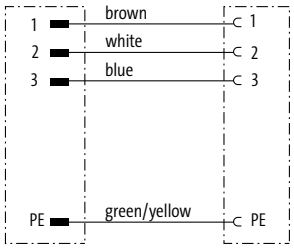
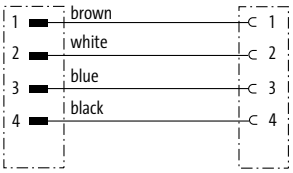
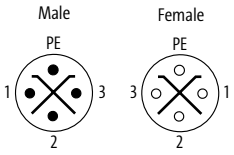
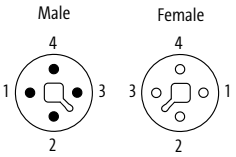
Connection cables

– M12 Power

Male
straight

Female
straight



1	**Form**	**P6241**	**P7241**
	Type	**4-pole** **S-coded** **Operating current: max. 12 A**	**4-pole** **T-coded** **Operating current: max. 12 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PUR (UL/CSA), robots/C-tracks	**P06**	**P07**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 630 V AC/DC	max. 63 V AC/DC
	Protection	IP65 and IP67 when plugged and screwed down (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

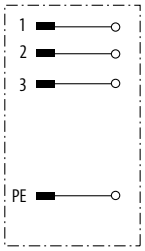
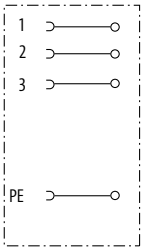
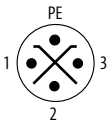
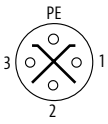
MURR ELEKTRONIK
stay connected

Field-wireable

– M12 Power

– Screw terminals

Approvals: cULus

	Male straight	**Female** straight
		
1 Form	**P6391**	**P6411**
Type	**4-pole** **S-coded**	**4-pole** **S-coded**
Circuit diagram		
Sealing range (cable Ø)	**8...10 mm**	
Contact layout	Male 	Female 

Technical Data

Operating voltage	max. 630 V AC/DC
Rated surge voltage	6 kV
Operating current per contact	max. 12 A
Material group	IEC 60664-1, category III
Connection cross section	max. 1.5 mm²
Coding	S-coded
Sealing range (cable Ø)	8...10 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Material	PA
suitable for corrugated tube (internal Ø)	without
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

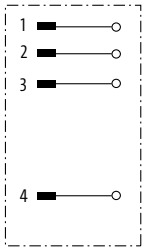
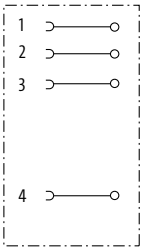
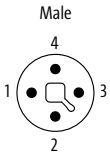
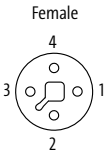
ROUND PLUG CONNECTORS POWER

Field-wireable

– M12 Power

– Screw terminals

Approvals: cULus

	Male straight	**Female** straight
		
1 Form	**P7391**	**P7411**
Type	**4-pole** **T-coded**	**4-pole** **T-coded**
Circuit diagram		
Sealing range (cable Ø)	**8...10 mm**	
Contact layout		

Technical Data

Operating voltage	max. 63 V AC/DC
Rated surge voltage	1.5 kV
Operating current per contact	max. 12 A
Material group	IEC 60664-1, category III
Connection cross section	max. 1.5 mm²
Coding	T-coded
Sealing range (cable Ø)	8...10 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Protection	IP67 inserted and tightened (EN 60529)
Material	PA
suitable for corrugated tube (internal Ø)	without
Compression gland	M12 (SW18)
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0
	1 Form		

Notes

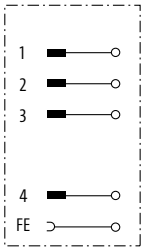
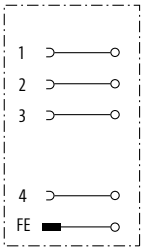
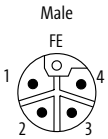
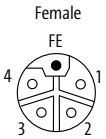
Other versions on request.

MURR ELEKTRONIK
stay connected

Field-wireable

– M12 Power

– IDC terminals

	Male straight	**Female** straight
		
1 Form	**P4391**	**P4421**
Type	**5-pole** **L-coded**	**5-pole** **L-coded**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	max. 63 V DC
Operating current per contact	max. 12 A
Connection cross section	max. 1.5 mm²
Coding	L-coded
Sealing range (cable Ø)	5.8...13.5 mm
Locking of ports	Screw thread M12 × 1 mm (recommended torque 0.6 Nm) self-securing
Compression gland	M12 (SW17)
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Material	Zinc die casting
suitable for corrugated tube (internal Ø)	without
Mating cycles	≥ 500
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	000	0000
		1 Form			

Notes

Other versions on request.

ROUND PLUG CONNECTORS POWER

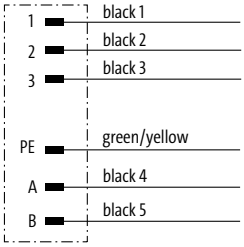
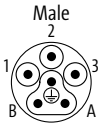
With open ended wires

– MQ15 X-Power

Male

straight



1 Form	P 8101	P 8101
Type	6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**black**	**black**
PVC (UL)	**P24**	
PUR (UL), C-tracks	**P84**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P01**
PVC (UL)		**P21**

3 Cable Length	
1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

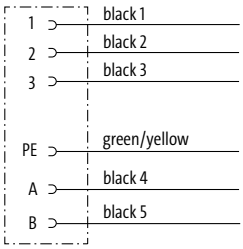
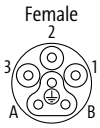
With open ended wires

– MQ15 X-Power

Female
straight



1 Form

	P 8121	P 8121
Type	**6-pole** **max. 13 A (Power); max. 10 A (Signal)**	**6-pole** **max. 16 A (Power); max. 10 A (Signal)**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
	black	**black**
Wire diameter 1.5 mm²		
PVC (UL)	**P24**	
PUR (UL), C-tracks	**P84**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P01**
PVC (UL)		**P21**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

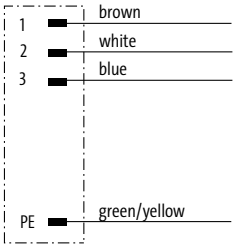
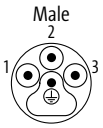
With open ended wires

– MQ15 X-Power

Male

straight



1	**Form**	**P8201**	**P8201**
	Type	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PVC (UL)	**P22**	
	PUR (UL), C-tracks	**P02**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P03**
	PVC (UL)		**P23**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

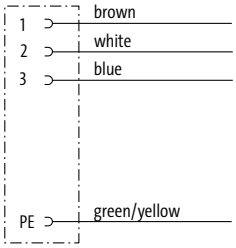
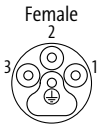
MURR ELEKTRONIK
stay connected

With open ended wires

– MQ15 X-Power

Female
straight



1	**Form**	**P8221**	**P8221**
	Type	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		

2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PVC (UL)	**P22**	
	PUR (UL), C-tracks	**P02**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P03**
	PVC (UL)		**P23**

3	**Cable Length**	
	1.0 m	**0100**
	2.0 m	**0200**
	3.0 m	**0300**
	5.0 m	**0500**
	10.0 m	**1000**

	Technical Data	
	Operating voltage	max. 600 V AC
	Protection	IP67 inserted and tightened (EN 60529)
	Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

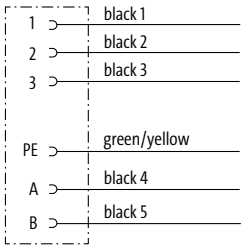
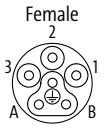
With open ended wires

– MQ15 X-Power

Female

90°



1 Form	P 8131	P 8131
Type	6-pole max. 13 A (Power); max. 10 A (Signal)	6-pole max. 16 A (Power); max. 10 A (Signal)
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	black	black
PVC (UL)	P24	
PUR (UL), C-tracks	P84	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		P01
PVC (UL)		P21

3 Cable Length	
1.0 m	0100
2.0 m	0200
3.0 m	0300
5.0 m	0500
10.0 m	1000

Technical Data	
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

With open ended wires

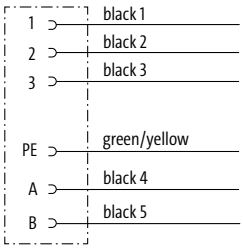
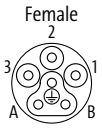
– MQ15 X-Power

Female

90°



1 Form

	P8132	P8132
Type	**6-pole**	**6-pole**
	max. 13 A (Power); max. 10 A (Signal)	**max. 16 A (Power); max. 10 A (Signal)**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
	black	**black**
Wire diameter 1.5 mm²		
PVC (UL)	**P24**	
PUR (UL), C-tracks	**P84**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P01**
PVC (UL)		**P21**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male

90°



1 Form

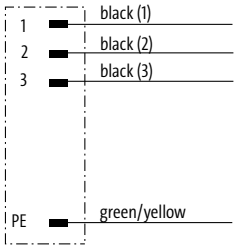
P 8211

Type

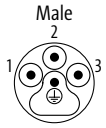
4-pole

Operating current: max. 13 A

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

Wire diameter 1.5 mm²	**black**
PVC (UL)	**P22**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	P8211	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

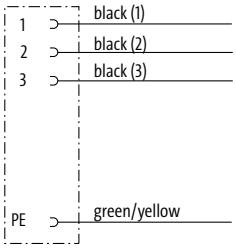
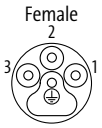
With open ended wires

– MQ15 X-Power

Female

90°



1	**Form**	**P 8231**	**P 8231**
	Type	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PVC (UL)	**P22**	
	PUR (UL), C-tracks	**P02**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P03**
	PVC (UL)		**P23**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

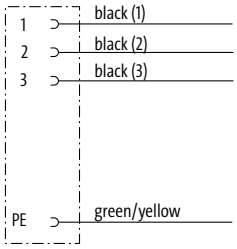
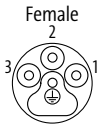
With open ended wires

– MQ15 X-Power

Female

90°



1	**Form**	**P8232**	**P8232**
	Type	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PVC (UL)	**P22**	
	PUR (UL), C-tracks	**P02**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P03**
	PVC (UL)		**P23**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7	0	0	0	–					–								
					1	**Form**		**2**	**Cable Type**		**3**	**Cable Length**	

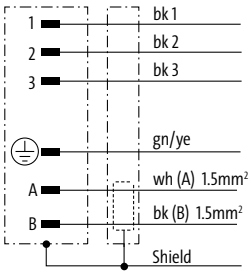
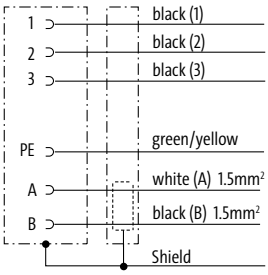
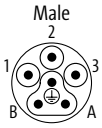
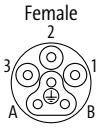
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

With open ended wires

– MQ15 X-Power

	Male straight	**Female** straight
		
1 Form	**P8301**	**P8321**
Type	**6-pole, shielded** **max. 16 A (Power); max. 10 A (Signal)**	**6-pole, shielded** **max. 16 A (Power); max. 10 A (Signal)**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
4×2.5 + 2×1.5 mm²	**orange**	**orange**
PUR (UL), C-tracks	**P11**	**P11**
3 Cable Length		
1.0 m	**0100**	
2.0 m	**0200**	
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

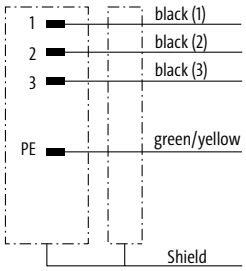
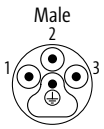
ROUND PLUG CONNECTORS POWER

With open ended wires

– MQ15 X-Power

Male
straight



1	**Form**	**P 8 0 0 1**	**P 8 0 0 1**
	Type	**4-pole, shielded** **Operating current: max. 13 A**	**4-pole, shielded** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**orange**	**orange**
	PUR (UL), C-tracks	**P12**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P13**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

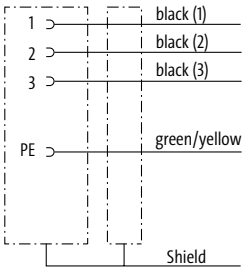
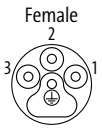
With open ended wires

– MQ15 X-Power

Female
straight



1 Form

Type	**P8021** **4-pole, shielded** **Operating current: max. 13 A**	**P8021** **4-pole, shielded** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**orange**	**orange**
PUR (UL), C-tracks	**P12**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P13**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

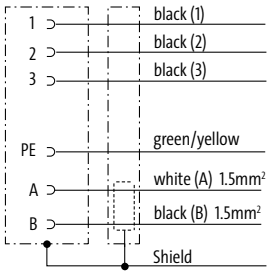
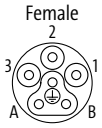
With open ended wires

– MQ15 X-Power

Female

90°



1	**Form**	**P8331**	**P8332**
	Type	**6-pole, shielded** **max. 16 A (Power); max. 10 A (Signal)**	**6-pole, shielded** **max. 16 A (Power); max. 10 A (Signal)**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	4×2.5 + 2×1.5 mm²	**orange**	**orange**
	PUR (UL), C-tracks	**P11**	**P11**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

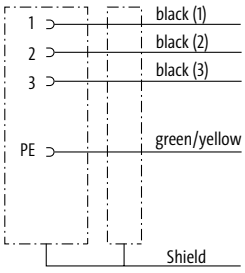
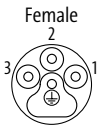
With open ended wires

– MQ15 X-Power

Female
90°



1 Form

Type	**P 8031** **4-pole, shielded** **Operating current: max. 13 A**	**P 8031** **4-pole, shielded** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**orange**	**orange**
PUR (UL), C-tracks	**P12**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P13**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

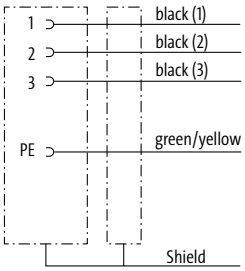
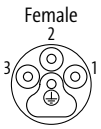
With open ended wires

– MQ15 X-Power

Female

90°



1	**Form**	**P 8 0 3 2**	**P 8 0 3 2**
	Type	**4-pole, shielded** **Operating current: max. 13 A**	**4-pole, shielded** **Operating current: max. 16 A**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**orange**	**orange**
	PUR (UL), C-tracks	**P12**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P13**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

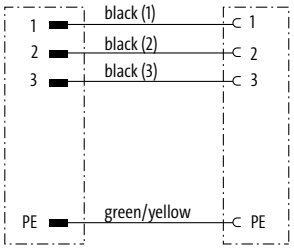
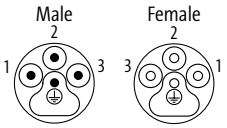
Connection cables

– MQ15 X-Power

	Male straight	**Female** straight



1 Form

	P 8241	**P 8241**
Type	**4-pole** **Operating current: max. 13 A**	**4-pole** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	**Jacket Color**
Wire diameter 1.5 mm²	**black**	**black**
PVC (UL)	**P22**	
PUR (UL), C-tracks	**P02**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P03**
PVC (UL)		**P23**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

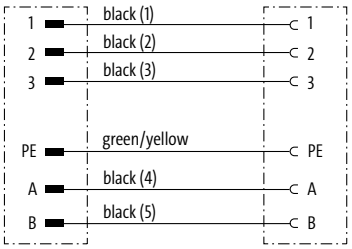
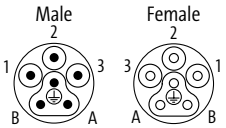
Connection cables

– MQ15 X-Power

Male
straight

Female
straight



1	**Form**	**P 8141**	**P 8141**
	Type	**6-pole** **max. 13 A (Power); max. 10 A (Signal)**	**6-pole** **max. 16 A (Power); max. 10 A (Signal)**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**black**	**black**
	PVC (UL)	**P24**	
	PUR (UL), C-tracks	**P84**	
	Wire diameter 2.5 mm²		
	PUR (UL), C-tracks		**P01**
	PVC (UL)		**P21**
3	**Cable Length**		
	1.0 m	**0100**	
	2.0 m	**0200**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	**7 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

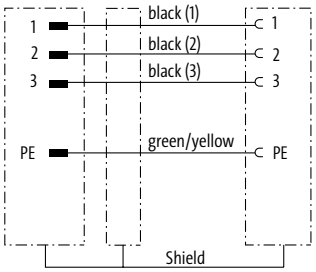
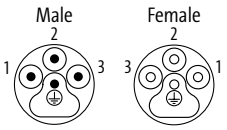
Connection cables

– MQ15 X-Power

	Male straight	**Female** straight



1 Form

	P 8041	**P 8041**
Type	**4-pole, shielded** **Operating current: max. 13 A**	**4-pole, shielded** **Operating current: max. 16 A**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	**Jacket Color**
Wire diameter 1.5 mm²	**orange**	**orange**
PUR (UL), C-tracks	**P12**	
Wire diameter 2.5 mm²		
PUR (UL), C-tracks		**P13**

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

ROUND PLUG CONNECTORS POWER

Connection cables

– MQ15 X-Power

Male
straight

Female
straight



1 Form

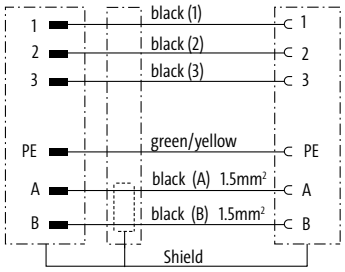
P 8341

Type

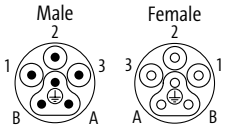
6-pole, shielded

max. 16 A (Power); max. 10 A (Signal)

Circuit diagram



Contact layout



2 Cable Type

4×2.5 + 2×1.5 mm²

PUR (UL), C-tracks

Jacket Color

orange

P11

3 Cable Length

1.0 m	**0100**
2.0 m	**0200**
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC (Power); max. 63 V AC/DC (Signal)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	P8341	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

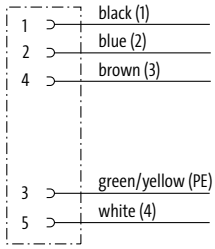
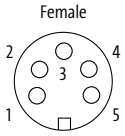
MURR ELEKTRONIK
stay connected

With open ended wires

– 7/8"

Approvals: cULus *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**78021**	**78051**
Type	**5-pole** **Power cable**	**5-pole** **Power cable**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.0 mm²	**gray**	**gray**
PUR/PVC	**965**	**965**
Wire diameter 2.5 mm²		
PUR (UL/CSA), robots/C-tracks	**962**	**962**
Wire diameter 1.5 mm²		
PUR (UL/CSA), robots/C-tracks	**961**	**961**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 230/400 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables

– 7/8"

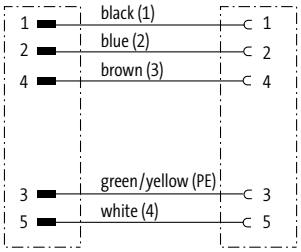
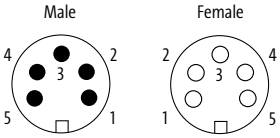
	Male	Female	Male	Female
	straight	straight	90°	90°





Approvals: cULus*

* only for products with UL/CSA approved cable

1	**Form**	**50021**	**50051**	
	Type	**5-pole** **Power cable**	**5-pole** **Power cable**	
	Circuit diagram			
	Contact layout			
2	**Cable Type**	**Jacket Color**	**Jacket Color**	
	Wire diameter 1.0 mm²	**gray**	**gray**	
	PUR/PVC	**965**	**965**	
	Wire diameter 2.5 mm²			
	PUR (UL/CSA), robots/C-tracks	**962**	**962**	
	Wire diameter 1.5 mm²			
	PUR (UL/CSA), robots/C-tracks	**961**	**961**	
3	**Cable Length**			
	0.3 m	**0030**		
	0.6 m	**0060**		
	1.0 m	**0100**		
	1.5 m	**0150**		
	2.0 m	**0200**		
	Technical Data			
	Operating voltage	max. 230/400 V AC/DC		
	Protection	IP67 inserted and tightened (EN 60529)		
	Temperature range	-25...+85 °C, depending on cable quality		
	Article No.			
	The composition of your article number is explained on page 3.1.i	**7 0 0 0** – _ _ _ _ _ – _ _ _		_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

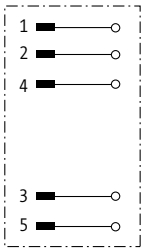
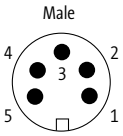
MURR ELEKTRONIK
stay connected

Field-wireable

– 7/8"

– Screw terminals

Approvals: cULus

	Male straight		**Male** 90°
			
1 Form	**78081** me	**78101** me	**78141** me
Type	**5-pole**	**5-pole**	**5-pole**
Circuit diagram			
Sealing range (cable Ø)	**6...8 mm**	**10...12 mm**	**6...8.7 mm**
Contact layout			

Technical Data

Operating voltage	max. 250 V AC/DC		
Operating current per contact	max. 9 A		
Connection cross section	max. 1.5 mm²		
Sealing range (cable Ø)	6...8 mm	10...12 mm	6...8.7 mm
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing		
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C		

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

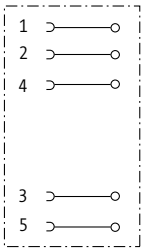
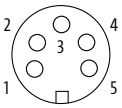
Other versions on request.

Field-wireable

– 7/8"

– Screw terminals

Approvals: cULus

	Female straight		**Female** 90°
			
1 Form	**78201** me	**78221** me	**78261** me
Type	**5-pole**	**5-pole**	**5-pole**
Circuit diagram			
Sealing range (cable Ø)	**6...8 mm**	**10...12 mm**	**6...8.7 mm**
Contact layout	Female 		

Technical Data

Operating voltage	max. 250 V AC/DC		
Operating current per contact	max. 9 A		
Connection cross section	max. 1.5 mm²		
Sealing range (cable Ø)	6...8 mm	10...12 mm	6...8.7 mm
Protection	IP67 inserted and tightened (EN 60529)		
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing		
Locking material	Zinc die casting, matte nickel plated		
Temperature range	-25...+85 °C		

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

Field-wireable

– 7/8"

– IDC terminals

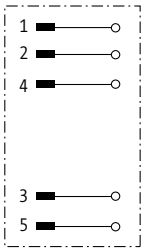
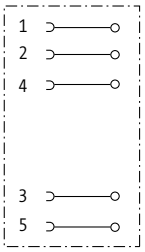
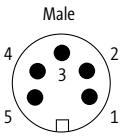
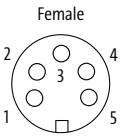
Male
straight



Female
straight



1 Form

	Male	Female
	78091 me	78211 me
Type	**5-pole**	**5-pole**
Circuit diagram		
Connection cross section	**0.75...1.5 mm²**	
Contact layout		

Technical Data

Operating voltage	max. 230/400 V AC/DC
Rated surge voltage	4 kV
Operating current per contact	max. 10 A
Material group	IEC 60664-1, category I
Connection cross section	0.75...1.5 mm² (conductor diameter min. 0.15 mm)
Coding	A-coded, 5-pole
Sealing range (cable Ø)	6.8...9.5 mm
Wire isolation	PVC, PP, TPE
Outer wire Ø	max. 2.8 mm
Locking of ports	Screw thread 7/8" (recommended torque 1.5 Nm) self-securing
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Locking material	Brass
Temperature range	-40...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

7000	– _____	– 000	0000
	1 Form		

Notes

Other versions on request.

ROUND PLUG CONNECTORS POWER

Connection accessories			Art-No.
	**Flange 7/8" male, pre-wired 0.2 m**		
	5-pole	7/8" Round Plug Connectors	**7000-78341-9780020**
	**Flange 7/8" female, pre-wired 0.2 m**		
	5-pole	7/8" Round Plug Connectors	**7000-78381-9780020**
	**Control cabinet entry system 7/8"**		
		7/8" Round Plug Connectors Ethernet CAT5	**7000-50111-0000000**
	**T-coupler 7/8"-7/8", female/male**		
	5-pole		**7000-50061-0000000**

Mounting accessories			Art-No.
	**Torque wrench set**		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	**7000-99104-0000000**
	**Torque wrench set**		
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	**7000-99105-0000000**
	**Torque wrench**		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	**7000-99096-0000000**
	**Torque wrench**		
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	**7000-99097-0000000**



TPE SERIES – THE NORTH AMERICAN STANDARD

- **Product range RJ45, M12, 7/8"**
- **High material resistance**
- **Reliable – 100% tested**

FROM SIGNAL AND DATA TO POWER

Our Ethernet products developed for the requirements of the North American market use shielded UL-approved cables and are approved for a voltage of 600 V.

The 4- and 8-pole cables are available in a great variety of configurations. The three cable types are suitable for moving applications, fulfil the CAT5 requirements and are resistant against different media such as welding sparks, oils and UV radiation. The S7V cable is ITC/PLTC/CMX-Outdoor-approved and suitable for PROFINET.

The MINI-A (7/8") cables are the perfect solution for current and switching circuit connections. The cables are cULus-listed. Available with 3, 4 and 5 pole and all configurations of head types. The range of 600 V cables in AWG 16 includes a TC-ER-approved TPR variant with flame rtpesistance FT4 and a halogen-free PUR type.

Signal



M12 male
- Straight
- 90°

Page 3.11.1



M12 female
- Straight
- 90°

Page 3.11.3



M12 male
- Straight
- 90°

M12 female
- Straight
- 90°

Page 3.11.5

Data



M12 male (shielded)
- Straight
- 90°

EtherNet/IP · PROFINET · EtherCAT

Page 3.11.9



M12 female flange plug (shielded)
- Straight

EtherNet/IP · PROFINET

Page 3.11.11



RJ45 male (shielded)
- Straight

EtherNet/IP · PROFINET

Page 3.11.12

EtherNet/IP · PROFINET · EtherCAT





M12 male (shielded)
- Straight
- 90°

M12 female flange plug (shielded)
- Straight

RJ45 male (shielded)
- Straight

M12 male (shielded)
- Straight
- 90°

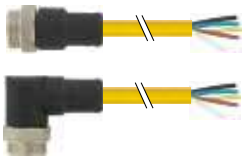
M12 female (shielded)
- Straight

M12 female flange plug (shielded)
- Straight

RJ45 male (shielded)
- Straight

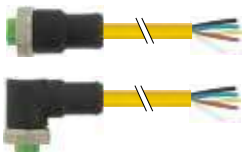
Page 3.11.17

Power



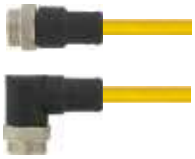
7/8" MINI male
- Straight
- 90°

Page 3.11.36



7/8" MINI female
- Straight
- 90°

Page 3.11.42





7/8" MINI male
- Straight
- 90°

7/8" MINI female
- Straight
- 90°

Page 3.11.48

TPE SERIES - THE NORTH AMERICAN STANDARD

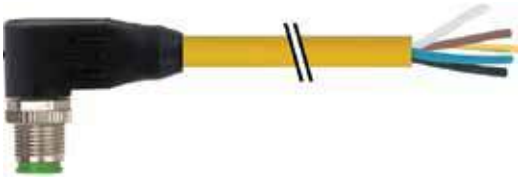
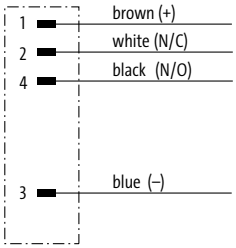
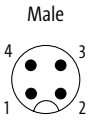
With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	Male 90°
		
1 Form	**12021**	**12101**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**yellow**	**yellow**
TPE (UL/CSA), welding spark, C-tracks	**150**	**150**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

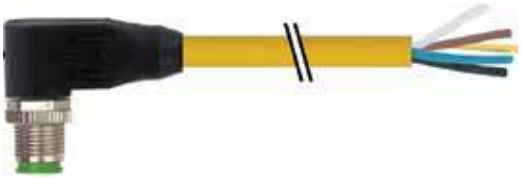
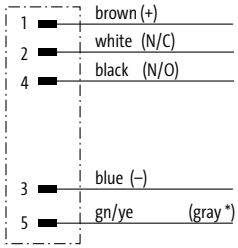
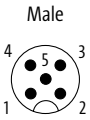
With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight	**Male** 90°
		
1 Form	**12041**	**12121**
Type	**5-pole**	**5-pole**
Circuit diagram	 (* for cable type 162)	
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**yellow**	**yellow**
TPE (UL/CSA), welding spark, C-tracks	**161 (162)**	**161 (162)**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

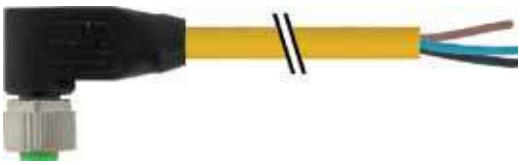
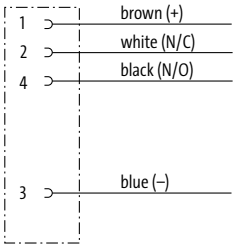
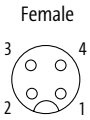
With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Female straight	Female 90°
		
1 Form	**12221**	**12341**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**yellow**	**yellow**
TPE (UL/CSA), welding spark, C-tracks	**150**	**150**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

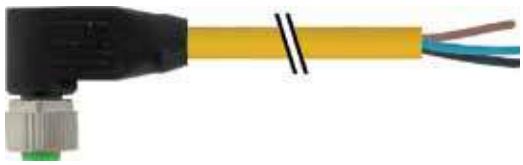
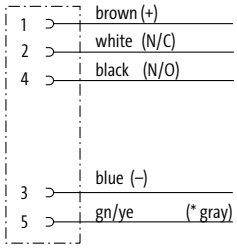
With open ended wires M12

– ITC, PLTC cable

– Signal

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Female straight	**Female** 90°
		
1 Form	**12241**	**12361**
Type	**5-pole**	**5-pole**
Circuit diagram	 (* for cable type 162)	
Contact layout	Female 	
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 0.75 mm²	**yellow**	**yellow**
TPE (UL/CSA), welding spark, C-tracks	**161 (162)**	**161 (162)**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

	Male	Female	Male	Female
	straight	straight	straight	90°





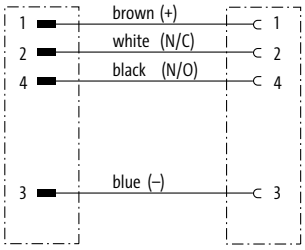
Approvals: cULus Listed *

* only for products with UL/CSA approved cable

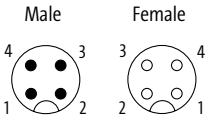
1 Form

	40021	40121
Type	**4-pole**	**4-pole**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 0.75 mm²	**yellow**	**yellow**
TPE (UL/CSA), welding spark, C-tracks	**150**	**150**

3 Cable Length

0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	max. 250 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

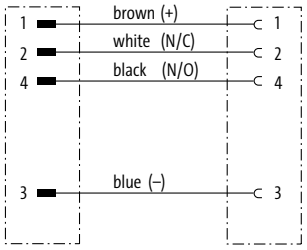
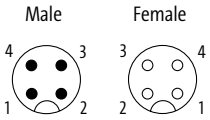
Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male 90°	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40201**		**40261**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.75 mm²	**yellow**		**yellow**	
TPE (UL/CSA), welding spark, C-tracks	**150**		**150**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 250 V AC/DC			
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

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stay connected

Connection cables M12 - M12

– ITC, PLTC cable

– Signal

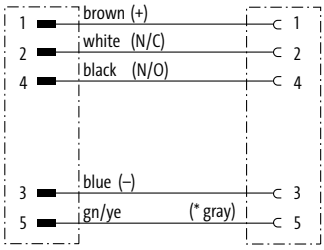
	Male	Female	Male	Female
	straight	straight	straight	90°



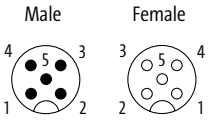


Approvals: cULus Listed *

* only for products with UL/CSA approved cable

1	**Form**	**40041**	**40141**
	Type	**5-pole**	**5-pole**
	Circuit diagram		

(* for cable type 162)

	Contact layout		

2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 0.75 mm²	**yellow**	**yellow**
	TPE (UL/CSA), welding spark, C-tracks	**161 (162)**	**161 (162)**
3	**Cable Length**		
	0.3 m	**0030**	
	0.6 m	**0060**	
	1.0 m	**0100**	
	1.5 m	**0150**	
	2.0 m	**0200**	
	Technical Data		
	Operating voltage	max. 125 V AC/DC	
	Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		

The composition of your article number is explained on page 3.1.i

7700	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

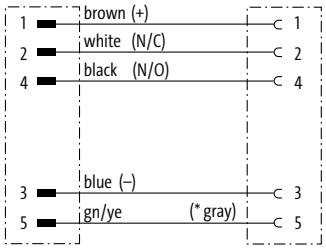
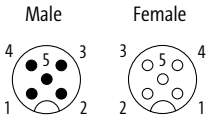
Connection cables M12 - M12

– ITC, PLTC cable

– Signal

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male 90°	**Female** straight	**Male** 90°	**Female** 90°
				
1 Form	**40221**		**40281**	
Type	**5-pole**		**5-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 0.75 mm²	**yellow**		**yellow**	
TPE (UL/CSA), welding spark, C-tracks	**161 (162)**		**161 (162)**	
3 Cable Length				
0.3 m	**0030**			
0.6 m	**0060**			
1.0 m	**0100**			
1.5 m	**0150**			
2.0 m	**0200**			
Technical Data				
Operating voltage	max. 125 V AC/DC			
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7700 – _____ –		___	____
		1 Form	**2 Cable Type**	**3 Cable Length**

(* for cable type 162)

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

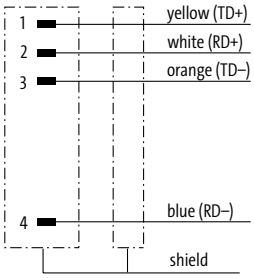
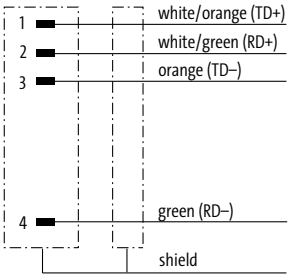
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male	Male
	straight	straight
	ITC, PLTC cable	
		
1 Form	**14541**	**14541**
Type	**4-pole, shielded** **D-coded**	**4-pole, shielded** **D-coded**
Circuit diagram		
Contact layout	Male 	

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

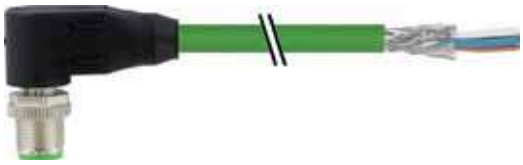
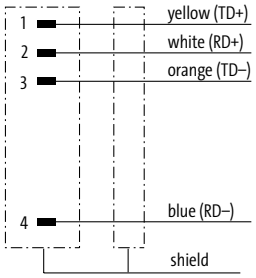
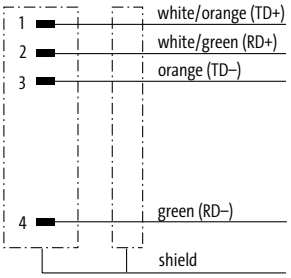
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	**Male**
	90°	90°
	ITC, PLTC cable	
		
1 Form	**14561**	**14561**
Type	**4-pole, shielded** **D-coded**	**4-pole, shielded** **D-coded**
Circuit diagram		
Contact layout	Male 	

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

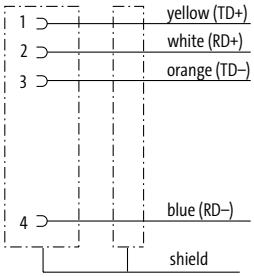
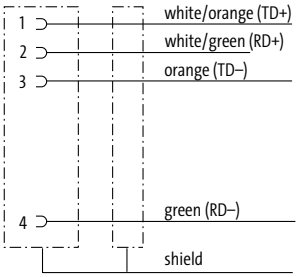
with open ended wires RJ45

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals:

		Flange female ITC, PLTC cable	**Flange female**
			
1	**Form**	**14511**	**14511**
	Type	**4-pole, shielded** **D-coded** **Rear mounting**	**4-pole, shielded** **D-coded** **Rear mounting**
	Circuit diagram		
	Contact layout	Female 	
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	2×2×0.34 mm²	**green**	**blue**
	TPE (UL/CSA), robots/C-tracks	**S7V**	
	2×2×0.25 mm²		
	TPE (UL/CSA), robots/C-tracks		**S4U**
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 60 V DC	
	Protection	IP67 inserted and tightened (EN 60529)	
	Temperature range	-25...+85 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7700 – _____ – ___ ____	
		1 Form	**2 Cable Type** / **3 Cable Length**
	Notes	Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

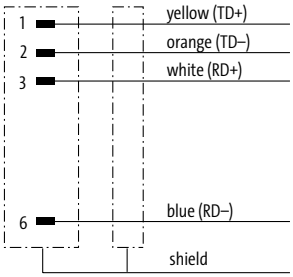
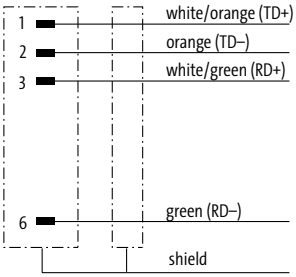
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Male** straight
		
1 Form	**74101**	**74101**
Type	**4-pole, shielded**	**4-pole, shielded**
Circuit diagram		
Contact layout	Male 6 321 	

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 7 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

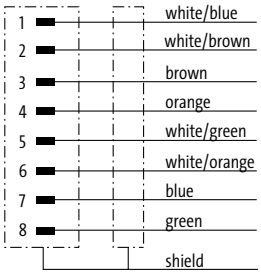
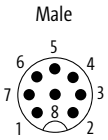
MURR ELEKTRONIK
stay connected

With open ended wires M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

	Male straight	**Male** 90°
		
1 Form	**17541**	**17561**
Type	**8-pole, shielded**	**8-pole, shielded**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
4×2×0.25 mm²	**blue**	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**	**S4W**
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 60 V AC/DC	
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	
Article No.		

The composition of your article number is explained on page 3.1.i

7700	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

With open ended wires M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP

Female

straight



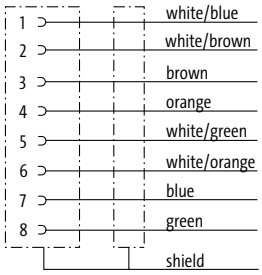
1 Form

17581

Type

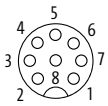
8-pole, shielded

Circuit diagram



Contact layout

Female



2 Cable Type

4×2×0.25 mm²

TPE (UL/CSA), robots/C-tracks

Jacket Color

blue

S4W

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	17581	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

With open ended wires M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Flange female



1 Form

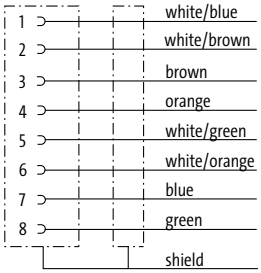
17511

Type

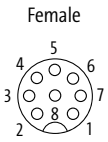
8-pole, shielded

Rear mounting

Circuit diagram



Contact layout



2 Cable Type

Jacket Color

4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	17511	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

with open ended wires RJ45

– CMX-Outdoor

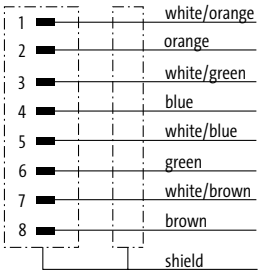
– Data

PROFINET® EtherNet/IP

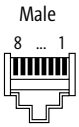
Male
straight



1 Form — 74118

Type	**8-pole, shielded**
Circuit diagram	

Contact layout



2 Cable Type — Jacket Color

4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	74118	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

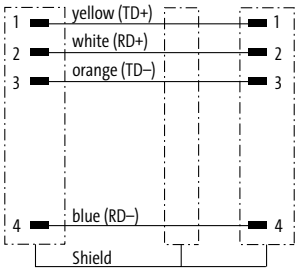
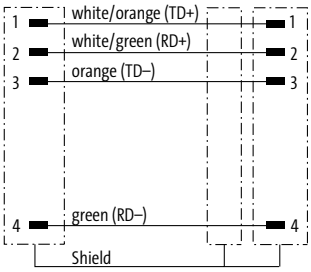
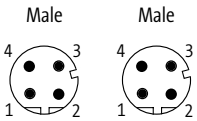
– CMX-Outdoor

– Data

EtherNet/IP PROFINET

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Male** straight	**Male** straight	**Male** straight
				
1 Form	**44511**		**44511**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

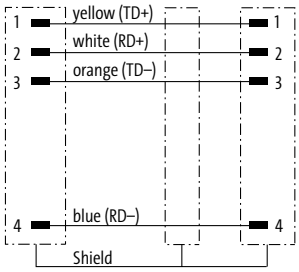
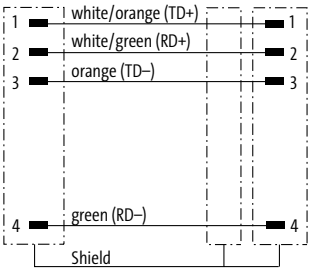
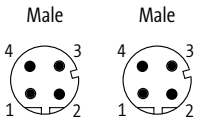
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed*

* only for products with UL/CSA approved cable

	Male straight	**Male** 90°	**Male** straight	**Male** 90°
	ITC, PLTC cable			
				
1 Form	**44541**		**44541**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

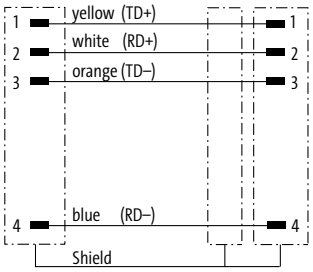
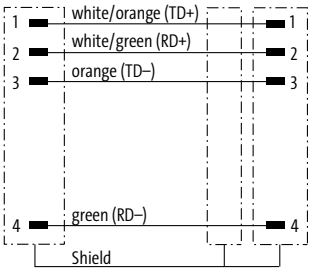
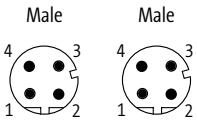
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male 90° ITC, PLTC cable	Male 90°	Male 90°	Male 90°
				
1 Form	**44561**		**44561**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

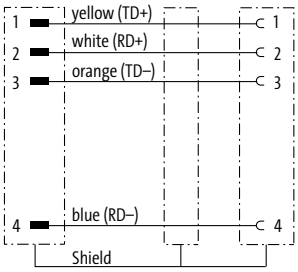
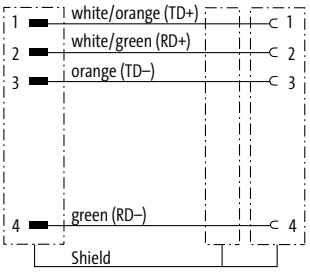
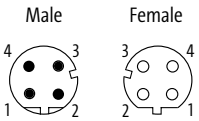
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed*

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Female** straight	**Male** straight	**Female** straight
				
1 Form	**44571**		**44571**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP65, IP66K, IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

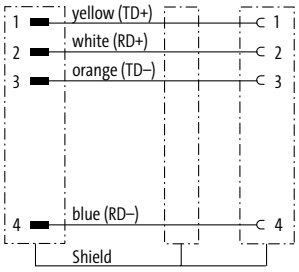
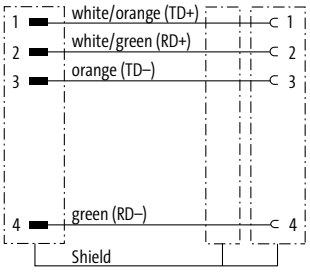
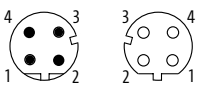
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Flange female**	**Male** straight	**Flange female**
				
1 Form	**44811**		**44811**	
Type	**4-pole, shielded** **D-coded** **Rear mounting**		**4-pole, shielded** **D-coded** **Rear mounting**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
2×2×0.34 mm²	**green**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S7V**			
2×2×0.25 mm²				
TPE (UL/CSA), robots/C-tracks			**S4U**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

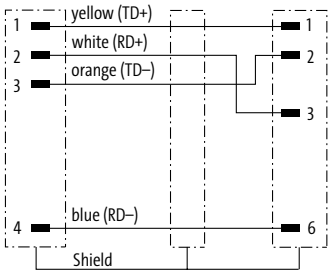
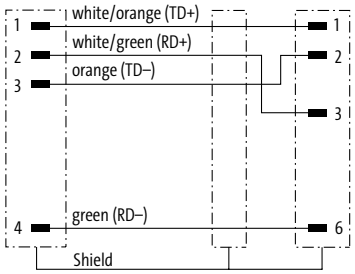
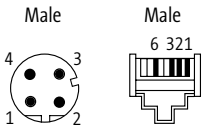
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Male** straight	**Male** straight	**Male** straight
				
1 Form	**44711**		**44711**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
2×2×0.34 mm²		**green**		**blue**
TPE (UL/CSA), robots/C-tracks		**S7V**		
2×2×0.25 mm²				
TPE (UL/CSA), robots/C-tracks				**S4U**
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP67 (M12) - IP20 (RJ45)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**			
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables M12 - RJ45

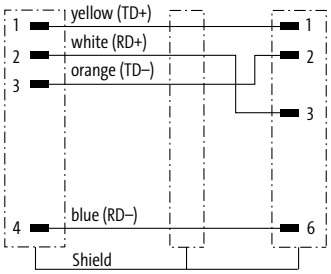
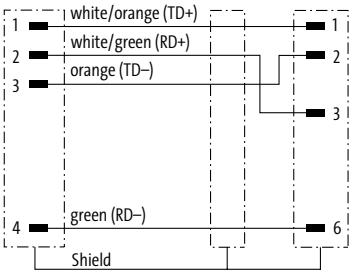
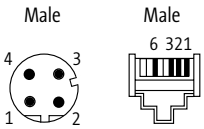
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male 90° ITC, PLTC cable	**Male** straight	**Male** 90°	**Male** straight
				
1 Form	**44761**		**44761**	
Type	**4-pole, shielded** **D-coded**		**4-pole, shielded** **D-coded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**	**Jacket Color**
2×2×0.34 mm²	**green**	**blue**
TPE (UL/CSA), robots/C-tracks	**S7V**	
2×2×0.25 mm²		
TPE (UL/CSA), robots/C-tracks		**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP67 (M12) - IP20 (RJ45)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - RJ45

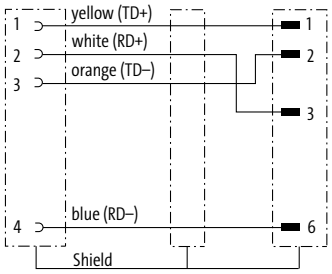
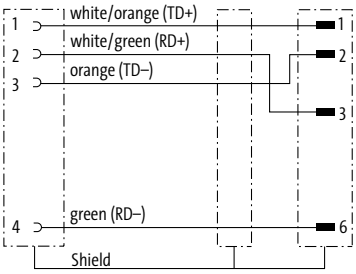
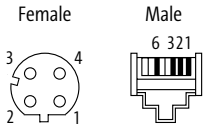
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Flange female ITC, PLTC cable	**Male** straight	**Flange female**	**Male** straight
				
1 Form	**44851**		**44851**	
Type	**4-pole, shielded** **D-coded** **Rear mounting**		**4-pole, shielded** **D-coded** **Rear mounting**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
2×2×0.34 mm²		**green**		**blue**
TPE (UL/CSA), robots/C-tracks		**S7V**		
2×2×0.25 mm²				
TPE (UL/CSA), robots/C-tracks				**S4U**
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP67 (M12) - IP20 (RJ45)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7700** – _____ –		___	____
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables RJ45 - RJ45

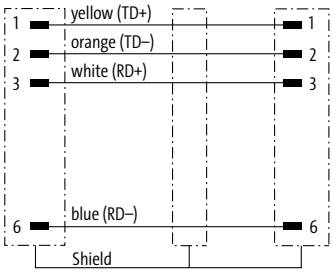
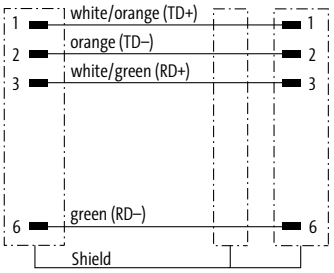
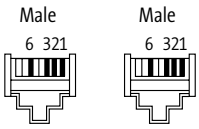
– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male straight ITC, PLTC cable	**Male** straight	**Male** straight	**Male** straight
				
1 Form	**74301**		**74301**	
Type	**4-pole, shielded**		**4-pole, shielded**	
Circuit diagram				
Contact layout				

2 Cable Type	**Jacket Color**		**Jacket Color**	
2×2×0.34 mm²		**green**		**blue**
TPE (UL/CSA), robots/C-tracks		**S7V**		
2×2×0.25 mm²				
TPE (UL/CSA), robots/C-tracks				**S4U**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

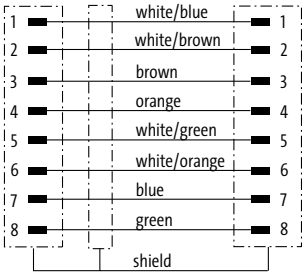
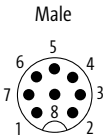
TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP

	Male straight	**Male** straight	**Male** straight	**Male** 90°
				
1 Form	**48511**		**48541**	
Type	**8-pole, shielded**		**8-pole, shielded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.25 mm²	**blue**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S4W**		**S4W**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V AC/DC			
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7700** – _____ –		___	____
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Male
90°

Male
90°

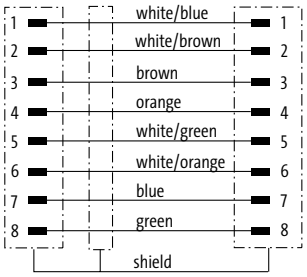


1 Form

48561

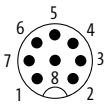
Type: **8-pole, shielded**

Circuit diagram



Contact layout

Male



2 Cable Type / Jacket Color

4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	48561	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Male
straight

Female
straight



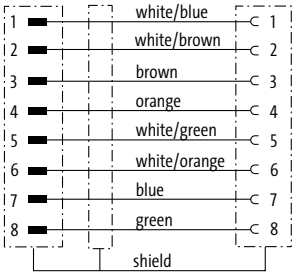
1 Form

48571

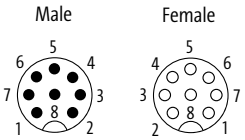
Type

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V AC/DC
Protection	IP65 and IP67 when plugged and screwed down (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	48571	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

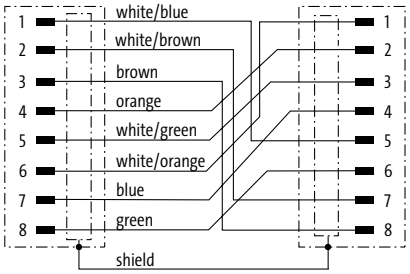
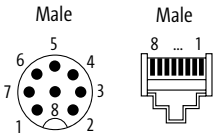
MURR ELEKTRONIK
stay connected

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

	Male straight	**Male** straight	**Male** 90°	**Male** straight
				
1 Form	**48521**		**48551**	
Type	**8-pole, shielded**		**8-pole, shielded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.25 mm²	**blue**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S4W**		**S4W**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 30 V AC/DC			
Protection	IP67 (M12) - IP20 (RJ45)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Flange female — **Male** straight



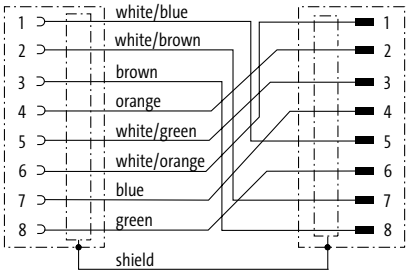
1 Form — 48851

Type

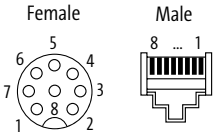
8-pole, shielded

Rear mounting

Circuit diagram



Contact layout



2 Cable Type — Jacket Color

4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 30 V AC/DC
Protection	IP67 (M12) - IP20 (RJ45)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	48851	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables RJ45 - RJ45

– CMX-Outdoor

– Data

PROFINET® EtherNet/IP™

Male	**Male**
straight	straight



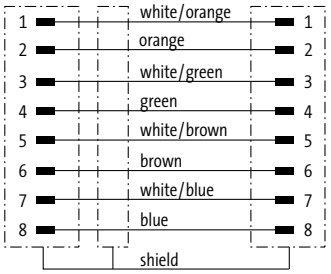
1 Form

74718

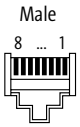
Type

8-pole, shielded

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color
4×2×0.25 mm²	**blue**
TPE (UL/CSA), robots/C-tracks	**S4W**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 60 V DC
Protection	IP20 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	74718	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

Connection cables M12 - M12

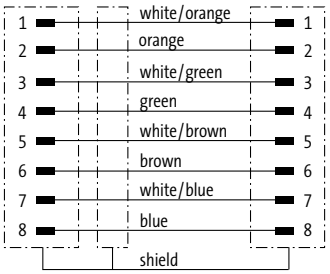
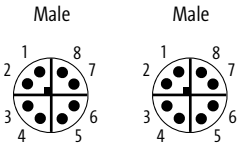
– CMX-Outdoor

– Data

– X-coded

PROFINET® EtherNet/IP

* only for products with UL/CSA approved cable

	Male straight	**Male** straight	**Male** straight	**Male** 90°
				
1 Form	**51001**		**51011**	
Approvals	**cULus ***			
Type	**8-pole, shielded**		**8-pole, shielded**	
	X-coded		**X-coded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.14 mm²	**blue**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S4X**		**S4X**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 50 V AC/60 V DC			
Protection	IP67 inserted and tightened (EN 60529)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				

The composition of your article number is explained on page 3.1.i

7700	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form	**2 Cable Type**		**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

Connection cables M12 - M12

– CMX-Outdoor

– Data

– X-coded

PROFINET® EtherNet/IP™

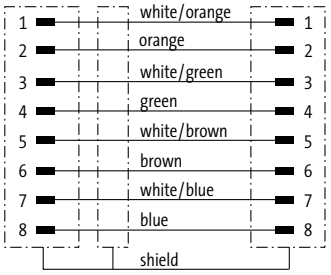
Male
90°

Male
90°

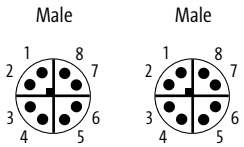


1 Form

51021

Type	**8-pole, shielded** **X-coded**
Circuit diagram	

Contact layout



2 Cable Type

4×2×0.14 mm²	**Jacket Color**
TPE (UL/CSA), robots/C-tracks	**blue** **S4X**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 50 V AC/60 V DC
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	51021	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

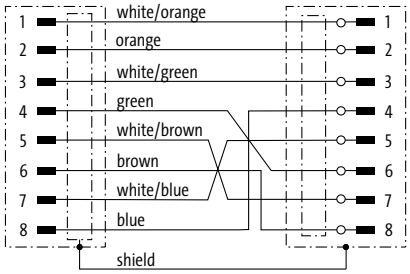
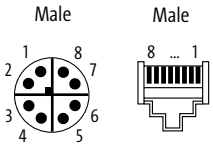
Connection cables M12 - RJ45

– CMX-Outdoor

– Data

– X-coded

PROFINET® EtherNet/IP™

	Male straight	**Male** straight	**Male** 90°	**Male** straight
				
1 Form	**51101**		**51201**	
Type	**8-pole, shielded**		**8-pole, shielded**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.14 mm²	**blue**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S4X**		**S4X**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP66K, IP67 (M12) - IP20 (RJ45)			
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7700** – _____ – ___		____	
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

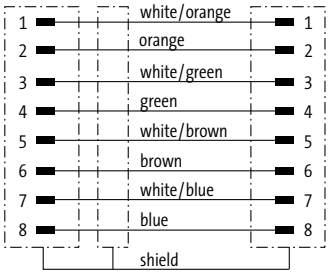
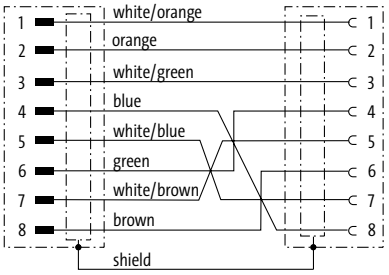
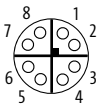
Connection cables RJ45 - RJ45

– CMX-Outdoor

– Data

– X-coded

PROFINET® EtherNet/IP™

	Male straight	**Male** straight	**Male** straight	**Flange female**
				
1 Form	**74315**		**51551**	
Type	**8-pole, shielded**		**8-pole, shielded** **Rear mounting**	
Circuit diagram				
Contact layout	Male 		Male 	Female 
2 Cable Type	**Jacket Color**		**Jacket Color**	
4×2×0.14 mm²	**blue**		**blue**	
TPE (UL/CSA), robots/C-tracks	**S4X**		**S4X**	
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 60 V DC			
Protection	IP20 inserted and tightened (EN 60529)		IP67 (M12) - IP20 (RJ45)	
Temperature range	-25...+85 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 7 0 0** – _ _ _ _ _ – _ _ _			_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

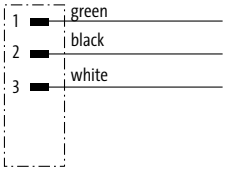
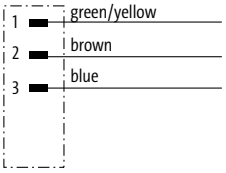
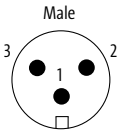
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Male** straight
		
1 Form	**A3001**	**A3001**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMB**
TPE (UL/CSA), robots	**U1B**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

MURR ELEKTRONIK
stay connected

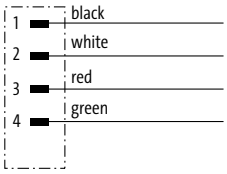
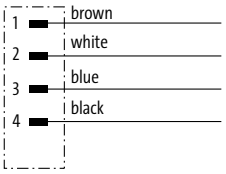
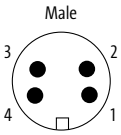
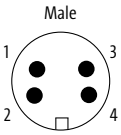
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Male** straight
		
1 Form	**A4001**	**A4001**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMC**
TPE (UL/CSA), robots	**U1C**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7700 – _____ – ___ ____	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

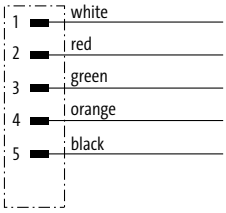
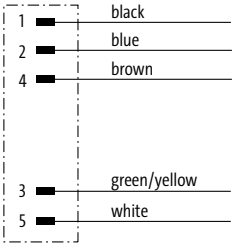
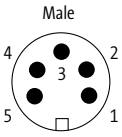
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Male** straight
		
1 Form	**A5001**	**A5001**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMD**
TPE (UL/CSA), robots	**U1D**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

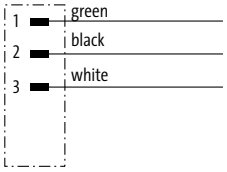
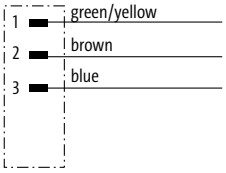
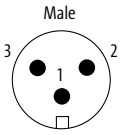
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	Male
	90°	90°
	TC-ER	
		
1 Form	**A3011**	**A3011**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMB**
TPE (UL/CSA), robots	**U1B**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

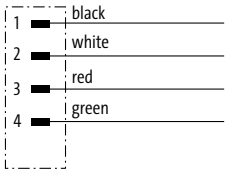
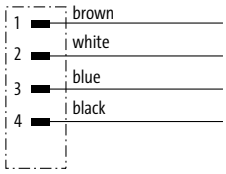
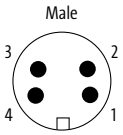
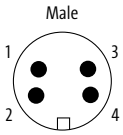
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	**Male**
	90°	90°
	TC-ER	
		
1 Form	**A4011**	**A4011**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMC**
TPE (UL/CSA), robots	**U1C**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

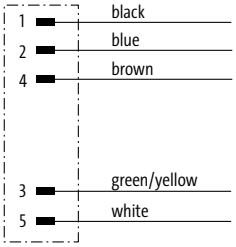
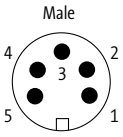
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	Male
	90°	90°
	TC-ER	
		
1 Form	**A5011**	**A5011**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMD**
TPE (UL/CSA), robots	**U1D**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

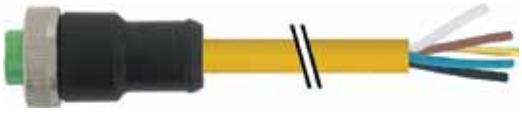
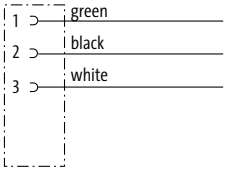
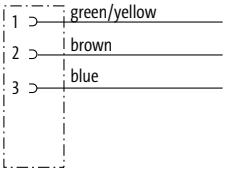
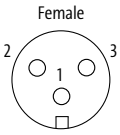
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Female straight TC-ER	**Female** straight
		
1 Form	**A3021**	**A3021**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		

2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMB**
TPE (UL/CSA), robots	**U1B**	

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data	
Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

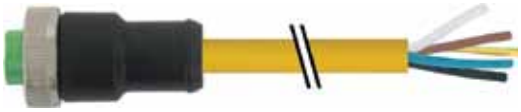
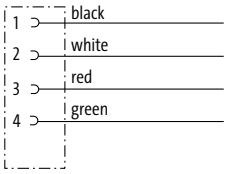
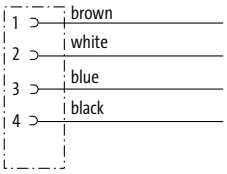
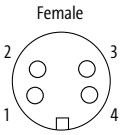
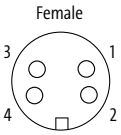
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Female straight TC-ER	**Female** straight
		
1 Form	**A4021**	**A4021**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMC**
TPE (UL/CSA), robots	**U1C**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

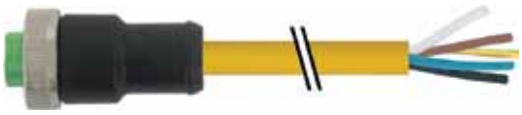
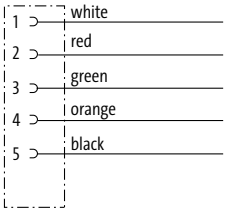
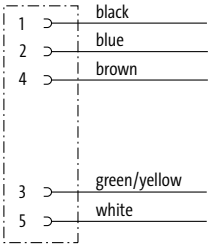
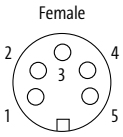
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Female straight TC-ER	**Female** straight
		
1 Form	**A5021**	**A5021**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMD**
TPE (UL/CSA), robots	**U1D**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	**7700 – _____ – ___ ____**	
		1 Form **2 Cable Type** **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

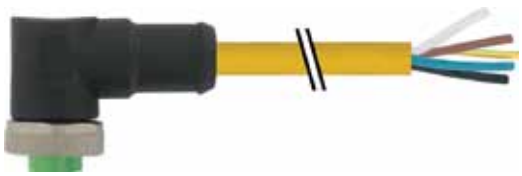
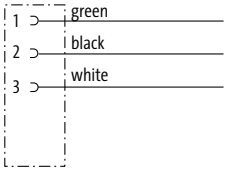
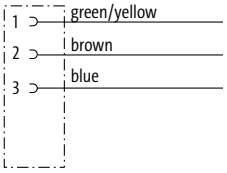
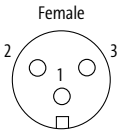
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

		Female 90° TC-ER	Female 90°
			
1	**Form**	**A3031**	**A3031**
	Type	**3-pole**	**3-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**yellow**	**black**
	PUR (UL/CSA), C-tracks		**UMB**
	TPE (UL/CSA), robots	**U1B**	
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC/DC	
	Protection	IP68 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

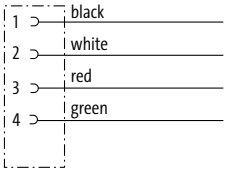
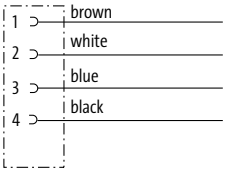
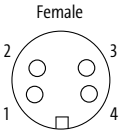
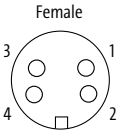
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Female	**Female**
	90°	90°
	TC-ER	
		
1 Form	**A4031**	**A4031**
Type	**4-pole**	**4-pole**
Circuit diagram		
Contact layout		
2 Cable Type	**Jacket Color**	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMC**
TPE (UL/CSA), robots	**U1C**	
3 Cable Length		
1.5 m	**0150**	
3.0 m	**0300**	
5.0 m	**0500**	
7.5 m	**0750**	
10.0 m	**1000**	
Technical Data		
Operating voltage	max. 600 V AC/DC	
Protection	IP68 inserted and tightened (EN 60529)	
Temperature range	-25...+80 °C, depending on cable quality	
Article No.		
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

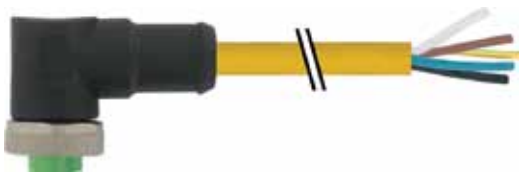
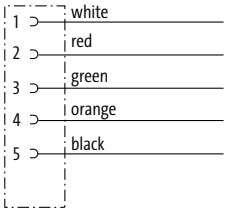
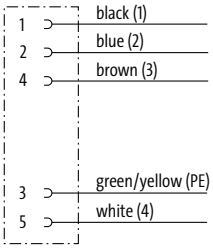
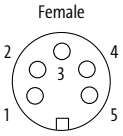
With open ended wires

– 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

		Female 90° TC-ER	Female 90°
			
1	**Form**	**A5031**	**A5031**
	Type	**5-pole**	**5-pole**
	Circuit diagram		
	Contact layout		
2	**Cable Type**	**Jacket Color**	**Jacket Color**
	Wire diameter 1.5 mm²	**yellow**	**black**
	PUR (UL/CSA), C-tracks		**UMD**
	TPE (UL/CSA), robots	**U1D**	
3	**Cable Length**		
	1.5 m	**0150**	
	3.0 m	**0300**	
	5.0 m	**0500**	
	7.5 m	**0750**	
	10.0 m	**1000**	
	Technical Data		
	Operating voltage	max. 600 V AC/DC	
	Protection	IP68 inserted and tightened (EN 60529)	
	Temperature range	-25...+80 °C, depending on cable quality	
	Article No.		
	The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
		1 Form	**2 Cable Type** / **3 Cable Length**
	Notes		
		Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.	

TPE SERIES - THE NORTH AMERICAN STANDARD

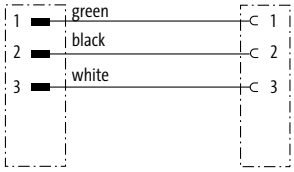
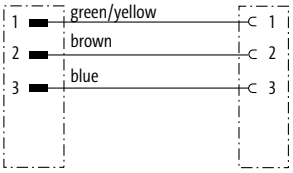
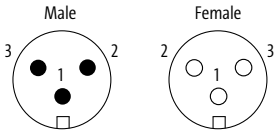
Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Female** straight	**Male** straight	**Female** straight
				
1 Form	**A3A01**		**A3A01**	
Type	**3-pole**		**3-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 1.5 mm²	**yellow**		**black**	
PUR (UL/CSA), C-tracks			**UMB**	
TPE (UL/CSA), robots	**U1B**			
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 600 V AC/DC			
Protection	IP68 inserted and tightened (EN 60529)			
Temperature range	-25...+80 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _		– _ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables

– 7/8" MINI - 7/8" MINI

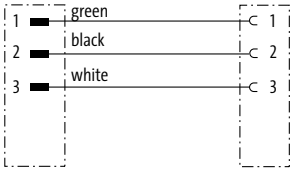
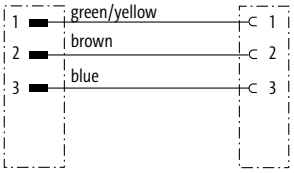
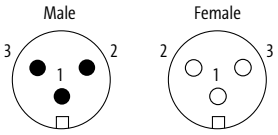
– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male 90° TC-ER	**Female** 90°	**Male** 90°	**Female** 90°
				

1 Form

	A3A31	**A3A31**
Type	**3-pole**	**3-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMB**
TPE (UL/CSA), robots	**U1B**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

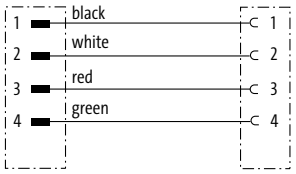
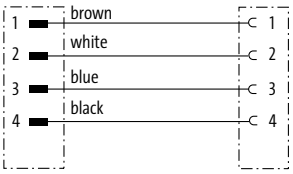
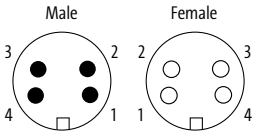
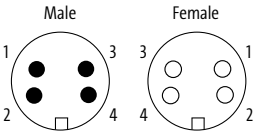
Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Female** straight	**Male** straight	**Female** straight
				
1 Form	**A4A01**		**A4A01**	
Type	**4-pole**		**4-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 1.5 mm²	**yellow**		**black**	
PUR (UL/CSA), C-tracks			**UMC**	
TPE (UL/CSA), robots	**U1C**			
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 600 V AC/DC			
Protection	IP68 inserted and tightened (EN 60529)			
Temperature range	-25...+80 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	7 7 0 0 – _ _ _ _ _ –		_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male	Female	Male	Female
	90°	90°	90°	90°
	TC-ER			

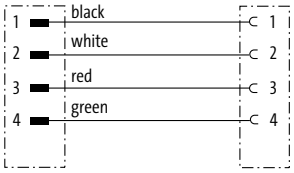


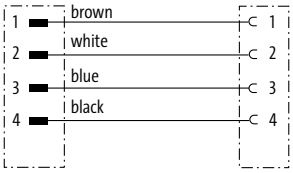


1 Form

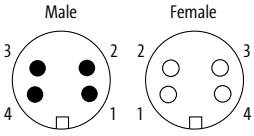
	A4A31	A4A31
Type	**4-pole**	**4-pole**

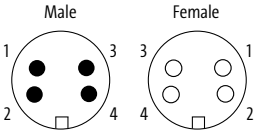
Circuit diagram





Contact layout





2 Cable Type

	Jacket Color	Jacket Color
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMC**
TPE (UL/CSA), robots	**U1C**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

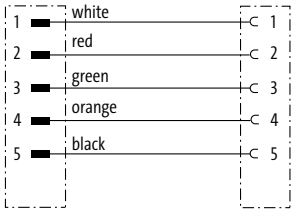
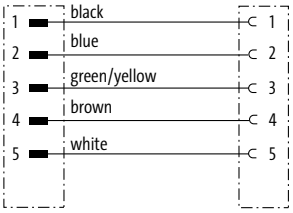
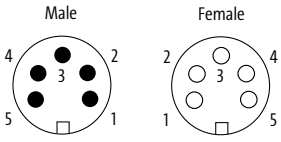
Connection cables

– 7/8" MINI - 7/8" MINI

– Power

Approvals: cULus Listed *

* only for products with UL/CSA approved cable

	Male straight TC-ER	**Female** straight	**Male** straight	**Female** straight
				
1 Form	**A5A01**		**A5A01**	
Type	**5-pole**		**5-pole**	
Circuit diagram				
Contact layout				
2 Cable Type	**Jacket Color**		**Jacket Color**	
Wire diameter 1.5 mm²	**yellow**		**black**	
PUR (UL/CSA), C-tracks			**UMD**	
TPE (UL/CSA), robots	**U1D**			
3 Cable Length				
1.5 m	**0150**			
3.0 m	**0300**			
5.0 m	**0500**			
7.5 m	**0750**			
10.0 m	**1000**			
Technical Data				
Operating voltage	max. 600 V AC/DC			
Protection	IP68 inserted and tightened (EN 60529)			
Temperature range	-25...+80 °C, depending on cable quality			
Article No.				
The composition of your article number is explained on page 3.1.i	**7 7 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _**			
		1 Form	**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

TPE SERIES - THE NORTH AMERICAN STANDARD

MURR ELEKTRONIK
stay connected

Connection cables

– 7/8" MINI - 7/8" MINI

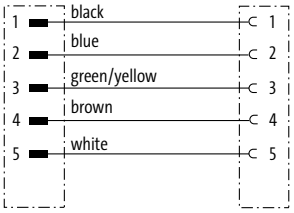
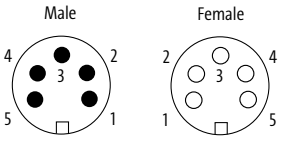
– Power

Approvals: c UL us Listed *

* only for products with UL/CSA approved cable

	Male 90° TC-ER	**Female** 90°	**Male** 90°	**Female** 90°
				

1 Form

	A5A31	**A5A31**
Type	**5-pole**	**5-pole**
Circuit diagram		
Contact layout		

2 Cable Type

	Jacket Color	**Jacket Color**
Wire diameter 1.5 mm²	**yellow**	**black**
PUR (UL/CSA), C-tracks		**UMD**
TPE (UL/CSA), robots	**U1D**	

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 600 V AC/DC
Protection	IP68 inserted and tightened (EN 60529)
Temperature range	-25...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7700	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.



VALVE CONNECTORS
MORE MODELS THAN EVER

- **Molded construction – resistant to shock and vibration**
- **Tested to ensure reliability**
- **IP65 to IP67 Rated**

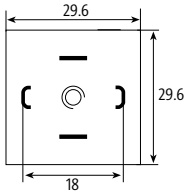
THE CONNECTOR FOR VALVES AND PRESSURE SWITCHES

25 years ago, Murrelekronik developed and produced the first pre-wired and molded valve connector. It was a revolution! Now, more than ever, Murrelektronik's valve plugs enjoy long-running success as a result of continuous improvement. A captive gasket, integrated LED status indicator and suppression are the top features of Murrelektronik's MSUD valve plug.

With Open Ended Wires

Valve Diagram

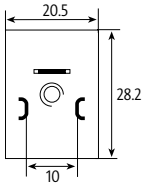




MSUD Valve Connector
• Form A
acc. to EN 175301-803 (ISO 4400)
Pin spacing 18 mm

Page 3.12.1

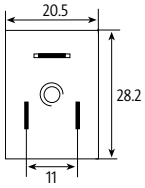




MSUD Valve Connector
• Form B
acc. to EN 175301-803 (ISO 6952)
Pin spacing 10 mm

Page 3.12.4

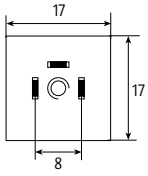




MSUD Valve Connector
• Form BI
Industrial standard
Pin spacing 11 mm

Page 3.12.6

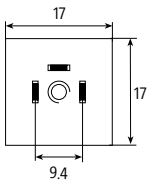




MSUD Valve Connector
• Form C
acc. to EN 175301-803 (ISO 6952)
Pin spacing 8 mm

Page 3.12.8

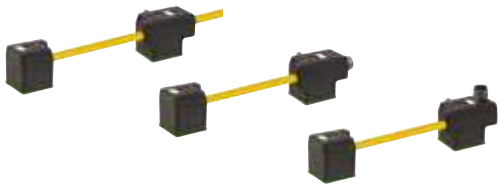




MSUD Valve Connector
• Form CI
Industrial standard
Pin spacing 9.4 mm

Page 3.12.10

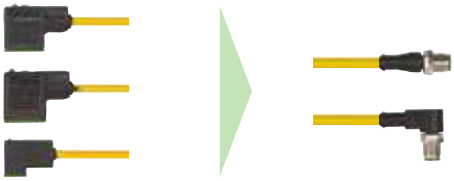
Connection Cables



MSUD Double Valve Connector
- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male
- Top connection
- Rear connection
- With connection cable

Page 3.12.12



MSUD Valve Connector
- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male
- Straight
- 90°

Page 3.12.19



MSUD Valve Connector Adapter
- Form A
- Form B
- Form BI
- Form C
- Form CI

M12 male
- Top connection
- Rear connection

Page 3.12.23

Field-Wireable



Screw Terminals

SVS Valve Connector
- Form A
- Form B
- Form BI

Page 3.12.27



Insulation Displacement Technology (IDC)

MOSA Valve Connector
- Form C
- Form CI

Page 3.12.35



Screw Terminals

SVS Eco Valve Connector
- Form A
- Form B
- Form BI
- Form C
- Form CI

Page 3.12.36

MURR ELEKTRONIK
stay connected

MSUD

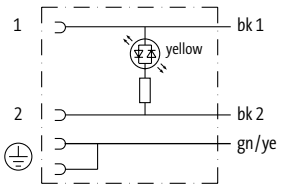
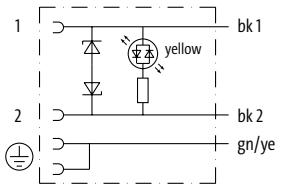
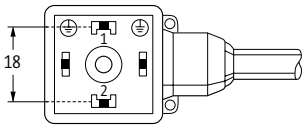
– with open ended wires

Form A (18 mm)



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form	**18001**	**18021**	**18041**
Type	**24 V AC/DC ±25%**	**24 V AC ±20% / DC ±25%**	**110 V AC/DC ±10%**
	LED	**LED and suppression**	**LED and suppression**
Circuit diagram			
Contact layout			

2 Cable Type	**Jacket Color**			**Jacket Color**			**Jacket Color**		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC (UL/CSA)	**026**	**226**	**626**	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA), robots/C-tracks	**036**	**236**	**636**	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark	**056**	**256**	**656**	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data			
Operating voltage	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

– with open ended wires

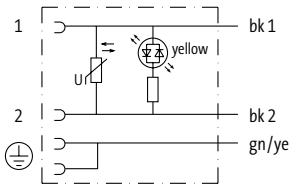
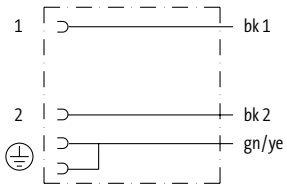
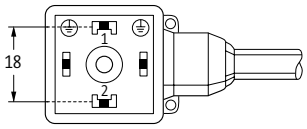
Approvals: cULus*

* only for products with UL/CSA approved cable

Form A (18 mm)



1 Form

	18061	18081
Type	230 V AC/DC ±10% LED and suppression	max. 230 V AC/DC without components
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	230 V AC/DC ±10%	max. 230 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

– for pressure switches

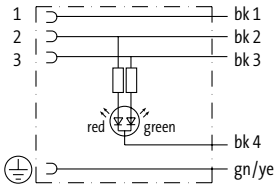
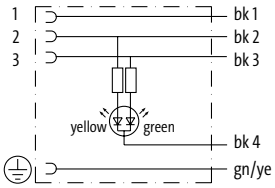
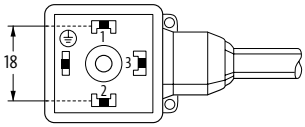
Form A (18 mm)



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

	18121	18141
Type	**24 V DC ±25%** **LED (red/green)**	**24 V DC ±25%** **LED (yellow/green)**
Circuit diagram		
Contact layout		

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	018	218	618	018	218	618
PUR/PVC (UL/CSA)	028	228	628	028	228	628
PUR (UL/CSA), robots/C-tracks	038	238	638	038	238	638

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

– with open ended wires

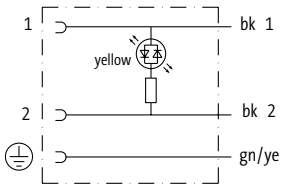
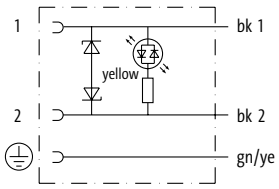
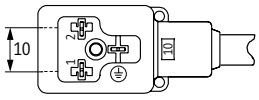
Form B (10 mm)



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

	10001	10021	10041
Type	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
	LED	LED and suppression	LED and suppression
Circuit diagram			
Contact layout			

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656	056	256	656

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

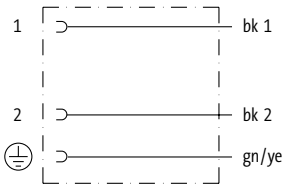
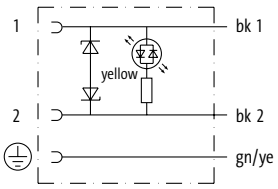
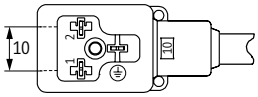
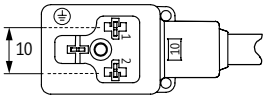
Form B (10 mm)



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

	10061	10081
Type	max. 230 V AC/DC without components	24 V AC ±20% / DC ±25% LED and suppression
Circuit diagram		
Contact figure	PE at cable entry (0°)	PE opposite cable entry (180°)
Contact layout		

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	max. 230 V AC/DC	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

– with open ended wires

Approvals: cULus*

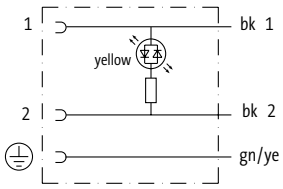
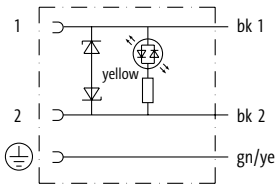
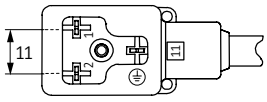
* only for products with UL/CSA approved cable

Form BI (11 mm)

Industrial standard



1 Form

	11001	11021	11041
Type	**24 V AC/DC ±25%**	**24 V AC ±20% / DC ±25%**	**110 V AC/DC ±10%**
	LED	**LED and suppression**	**LED and suppression**
Circuit diagram			
Contact layout			

2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656	056	256	656

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%	110 V AC/DC ±10%
Protection	IP67 inserted and tightened (EN 60529)		
Temperature range	-25...+85 °C, depending on cable quality		

Article No.

The composition of your article number is explained on page 3.1.i

7000	–		–		
	1 Form		2 Cable Type		3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

Approvals: cULus *

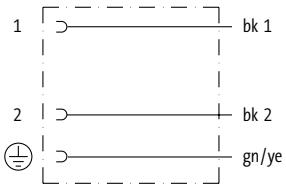
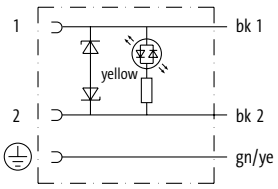
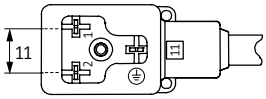
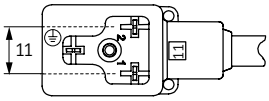
* only for products with UL/CSA approved cable

Form BI (11 mm)

Industrial standard



1 Form

	11061	11081
Type	**max. 250 V AC/DC** **without components**	**24 V AC ±20% / DC ±25%** **LED and suppression**
Circuit diagram		
Contact figure	**PE at cable entry (0°)**	**PE opposite cable entry (180°)**
Contact layout		

2 Cable Type

	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC (UL/CSA)	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA), robots/C-tracks	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	max. 250 V AC/DC	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

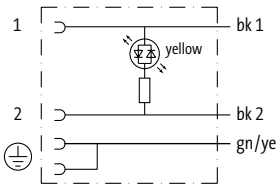
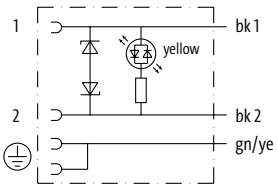
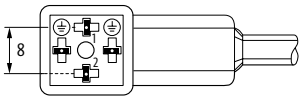
– with open ended wires

Form C (8 mm)



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form	80001	80021
Type	24 V AC/DC ±25% LED	24 V AC ±20% / DC ±25% LED and suppression
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

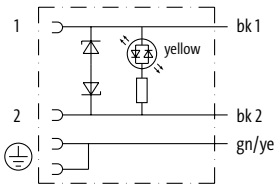
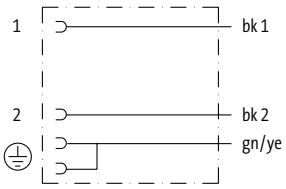
Form C (8 mm)



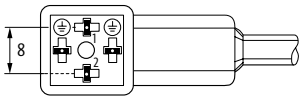
Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

	80041	80061
Type	110 V AC/DC ±10% LED and suppression	max. 230 V AC/DC without components
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	110 V AC/DC ±10%	max. 230 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD

– with open ended wires

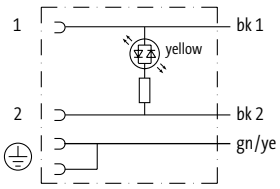
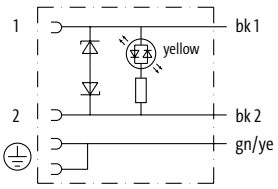
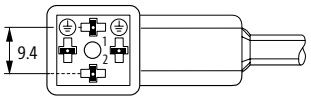
Approvals: cULus*

* only for products with UL/CSA approved cable

Form CI (9.4 mm)

Industrial standard



1 Form	94001	94021
Type	24 V AC/DC ±25% LED	24 V AC ±20% / DC ±25% LED and suppression
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data		
Operating voltage	24 V AC/DC ±25%	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD

– with open ended wires

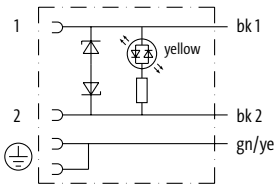
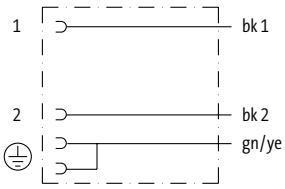
Form CI (9.4 mm)
Industrial standard



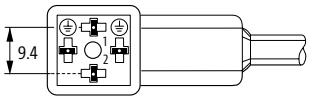
Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

	94041	94061
Type	**110 V AC/DC ±10%** **LED and suppression**	**max. 230 V AC/DC** **without components**
Circuit diagram		

Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color yellow	gray	black	Jacket Color yellow	gray	black
PVC	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636
PUR (UL/CSA), welding spark	056	256	656	056	256	656

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	110 V AC/DC ±10%	max. 230 V AC/DC
Protection	IP67 inserted and tightened (EN 60529)	
Temperature range	-25...+85 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Form A (18 mm)



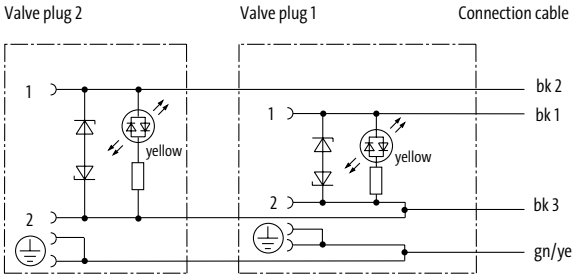
Approvals: cULus*

* only for products with UL/CSA approved cable

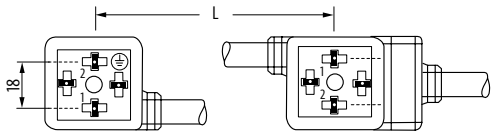
1 Form

	58001	58021	58041
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	LED and suppression	**LED and suppression**	**LED and suppression**
	L = 110 mm	**L = 150 mm**	**L = 200 mm**

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	017	217	617	017	217	617	017	217	617
PUR/PVC (UL/CSA)	027	227	627	027	227	627	027	227	627
PUR (UL/CSA), robots/C-tracks	037	237	637	037	237	637	037	237	637

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD - MSUD

– Double valve plugs with connection cable

Form B (10 mm)



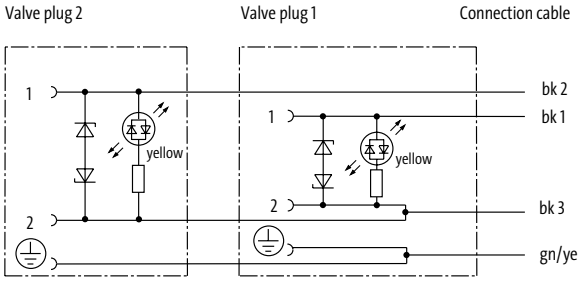
Approvals: cULus *

* only for products with UL/CSA approved cable

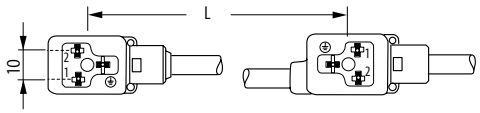
1 Form

	58201	58221	58241
Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%
	LED and suppression	LED and suppression	LED and suppression
	L = 100 mm	L = 150 mm	L = 200 mm

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	017	217	617	017	217	617	017	217	617
PUR/PVC (UL/CSA)	027	227	627	027	227	627	027	227	627
PUR (UL/CSA), robots/C-tracks	037	237	637	037	237	637	037	237	637

3 Cable Length

1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Form BI (11 mm)



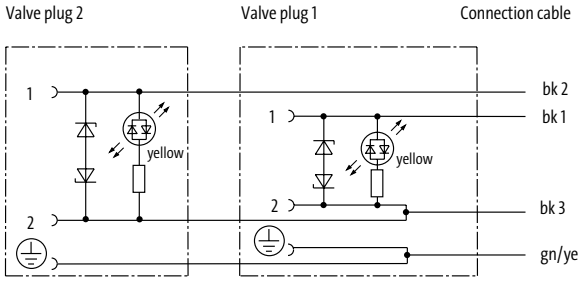
Approvals: c SP us *

* only for products with UL/CSA approved cable

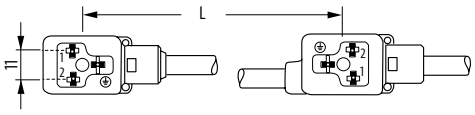
1 Form

	58101	58121	58141
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	LED and suppression	**LED and suppression**	**LED and suppression**
	L = 100 mm	**L = 150 mm**	**L = 200 mm**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**017**	**217**	**617**	**017**	**217**	**617**	**017**	**217**	**617**
PUR/PVC (UL/CSA)	**027**	**227**	**627**	**027**	**227**	**627**	**027**	**227**	**627**
PUR (UL/CSA), robots/C-tracks	**037**	**237**	**637**	**037**	**237**	**637**	**037**	**237**	**637**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD - MSUD

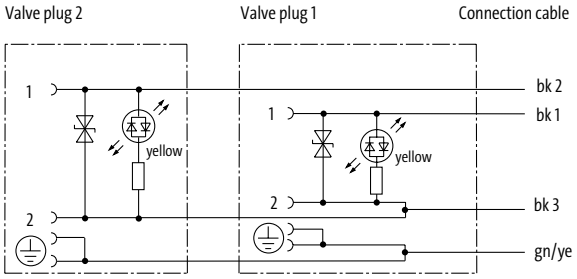
– Double valve plugs with connection cable

Form C (8 mm)

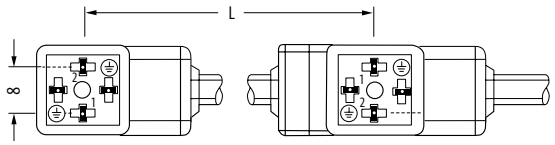


1 Form	58401	58411	58421
Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%
	LED and suppression	LED and suppression	LED and suppression
	L = 110 mm	L = 150 mm	L = 200 mm

Circuit diagram



Contact layout



2 Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	017	217	617	017	217	617	017	217	617
PUR/PVC (UL/CSA)	027		627	027		627	027		627

3 Cable Length	
1.5 m	0150
3.0 m	0300
5.0 m	0500
7.5 m	0750
10.0 m	1000

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with connection cable

Form CI (9.4 mm)

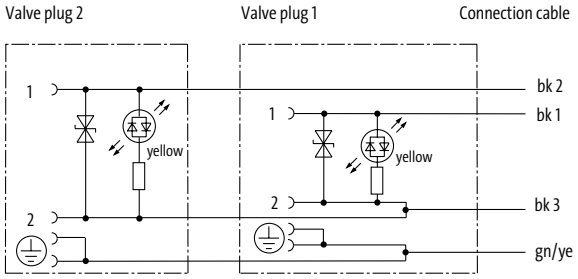
Industrial standard



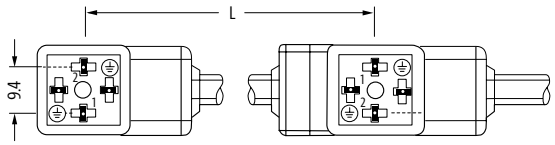
1 Form

	58431	58441	58451
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	LED and suppression	**LED and suppression**	**LED and suppression**
	L = 110 mm	**L = 150 mm**	**L = 200 mm**

Circuit diagram



Contact layout



2 Cable Type

	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**017**	**217**	**617**	**017**	**217**	**617**	**017**	**217**	**617**
PUR/PVC (UL/CSA)	**027**		**627**	**027**		**627**	**027**		**627**

3 Cable Length

1.5 m	**0150**
3.0 m	**0300**
5.0 m	**0500**
7.5 m	**0750**
10.0 m	**1000**

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0 –	_ _ _ _ _ –	_ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

Notes

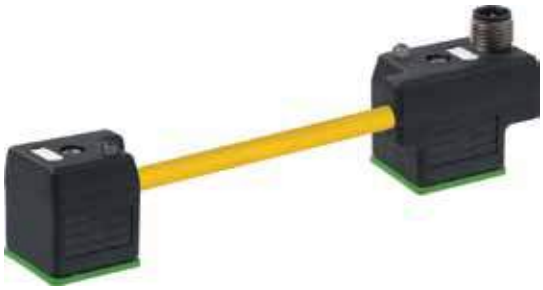
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MURR ELEKTRONIK
stay connected

MSUD - MSUD

– Double valve plugs with M12 male, connector top entry

Form A (18 mm)



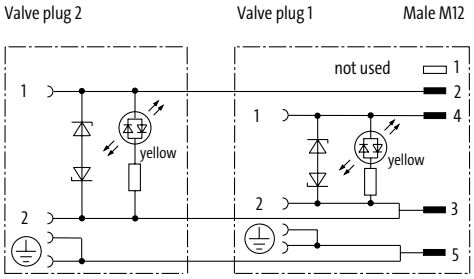
Approvals: cULus *

* only for products with UL/CSA approved cable

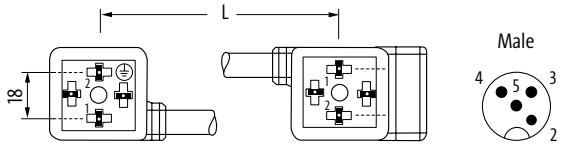
1 Form

	41501	41521	41541
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	LED and suppression	**LED and suppression**	**LED and suppression**
	L = 110 mm	**L = 150 mm**	**L = 200 mm**

Circuit diagram



Contact layout



2 Cable Type

Wire diameter 0.75 mm²	Jacket Color			Jacket Color			Jacket Color		
	yellow	gray	black	yellow	gray	black	yellow	gray	black
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	0000
		1 Form		2 Cable Type	

Notes

Other versions on request.

VALVE CONNECTORS

MSUD - MSUD

– Double valve plugs with M12 male, connector at the rear

Form A (18 mm)



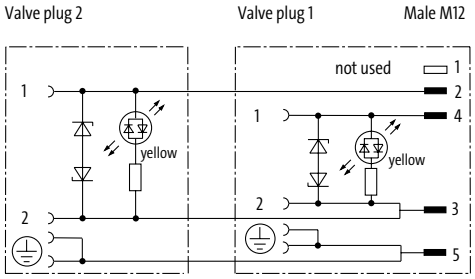
Approvals: cULus*

* only for products with UL/CSA approved cable

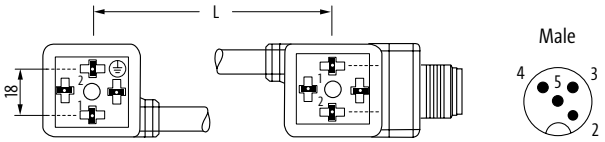
1 Form

	41561	41581	41601
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	LED and suppression	**LED and suppression**	**LED and suppression**
	L = 110 mm	**L = 150 mm**	**L = 200 mm**

Circuit diagram



Contact layout



2 Cable Type

Cable Type	Jacket Color			Jacket Color			Jacket Color		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	016	216	616	016	216	616	016	216	616
PUR/PVC (UL/CSA)	026	226	626	026	226	626	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636	036	236	636	036	236	636

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	0000
		1 Form		2 Cable Type	

Notes

Other versions on request.

MURR ELEKTRONIK
stay connected

MSUD - M12

– Connection cables

Form A (18 mm)

Male M12
straight



Approvals: cULus *

* only for products with UL/CSA approved cable

1 Form

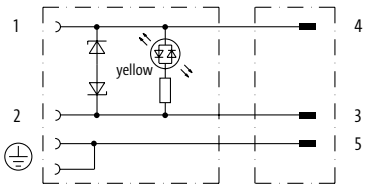
40881

Type

24 V AC ±20% / DC ±25%

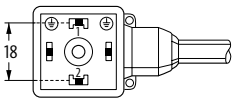
LED and suppression

Circuit diagram



Contact layout

Female



Male



2 Cable Type

Jacket Color

Wire diameter 0.75 mm²	yellow	gray	black
PVC	016	216	616
PUR/PVC (UL/CSA)	026	226	626
PUR (UL/CSA), robots/C-tracks	036	236	636
PUR (UL/CSA), welding spark	056	256	656

3 Cable Length

0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	40881	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - M12

– Connection cables

– for pressure switches

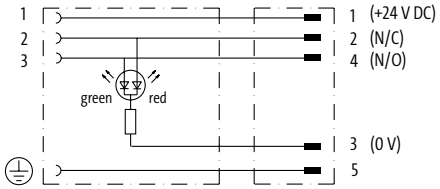
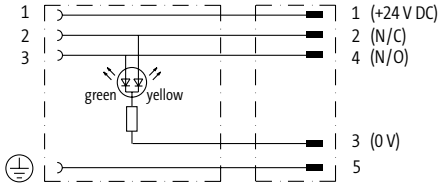
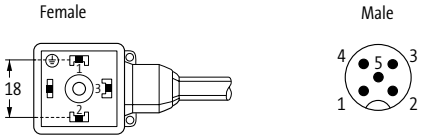
Form A (18 mm)

Male M12
straight



Approvals: cULus*

* only for products with UL/CSA approved cable

1 Form	40921	40931
Type	24 V DC ±25% LED (red/green)	24 V DC ±25% LED (yellow/green)
Circuit diagram		
Contact layout		

2 Cable Type	Jacket Color			Jacket Color		
Wire diameter 0.34 mm²	yellow	gray	black	yellow	gray	black
PVC (UL/CSA)	015	215 (219)	615 (619)	015	215 (219)	615 (619)
PUR/PVC (UL/CSA)	025	225	625	025	225	625
PUR (UL/CSA), robots/C-tracks	035	235	635	035	235	635
PUR (UL/CSA), welding spark	055	255	655	055	255	655

3 Cable Length	
0.3 m	0030
0.6 m	0060
1.0 m	0100
1.5 m	0150
2.0 m	0200

Technical Data

Operating voltage	24 V DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7000	–	_____	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

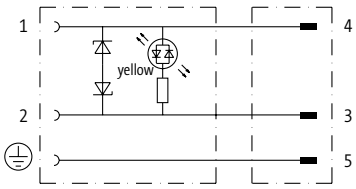
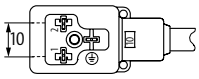
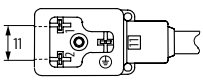
MURR ELEKTRONIK
stay connected

MSUD - M12

– Connection cables

Approvals: cULus *

* only for products with UL/CSA approved cable

	Form B (10 mm)	Male M12 straight	Form BI (11 mm) Industrial standard	Male M12 straight
				
1 Form	**41001**		**40961**	
Type	**24 V AC ±20% / DC ±25%** **LED and suppression**		**24 V AC ±20% / DC ±25%** **LED and suppression**	
Circuit diagram				
Contact layout	Female  Male 		Female  Male 	

2 Cable Type	**Jacket Color**			**Jacket Color**		
Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC (UL/CSA)	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA), robots/C-tracks	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

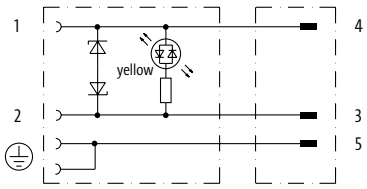
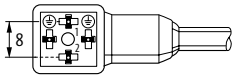
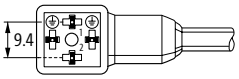
Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

VALVE CONNECTORS

MSUD - M12

– Connection cables

Approvals: * only for products with UL/CSA approved cable

	Form C (8 mm) Male M12 straight	**Form CI (9.4 mm)** Male M12 straight
		
1 Form	**41081**	**41041**
Type	**24 V AC ±20% / DC ±25%** **LED and suppression**	**24 V AC ±20% / DC ±25%** **LED and suppression**
Circuit diagram		
Contact layout	Female  Male 	Female  Male 
2 Cable Type	**Jacket Color**	**Jacket Color**

Wire diameter 0.75 mm²	**yellow**	**gray**	**black**	**yellow**	**gray**	**black**
PVC	**016**	**216**	**616**	**016**	**216**	**616**
PUR/PVC (UL/CSA)	**026**	**226**	**626**	**026**	**226**	**626**
PUR (UL/CSA), robots/C-tracks	**036**	**236**	**636**	**036**	**236**	**636**
PUR (UL/CSA), welding spark	**056**	**256**	**656**	**056**	**256**	**656**

3 Cable Length	
0.3 m	**0030**
0.6 m	**0060**
1.0 m	**0100**
1.5 m	**0150**
2.0 m	**0200**

Technical Data	
Operating voltage	24 V AC ±20% / DC ±25%
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

7 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

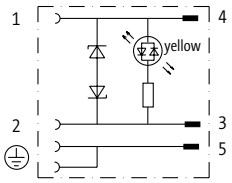
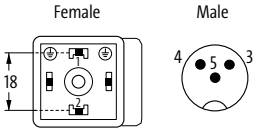
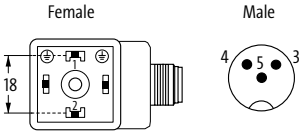
Notes

Other versions on request. Differing cable lengths up to 2 m can be ordered in 0.2 m steps, from 2 m on in 0.5 m steps.

MSUD - M12

– Adapter

Approvals:

	Form A (18 mm)	Form A (18 mm)
	Top connection	Rear connection
		
1 Form	**41301**	**41421**
Type	**24 V AC ±20% / DC ±25%** **M12, 3-pole** **LED and suppression**	**24 V AC ±20% / DC ±25%** **M12, 3-pole** **LED and suppression**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Configuration	2 contacts + bridged PE
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
7 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0

Notes

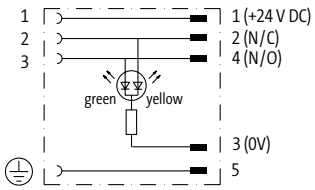
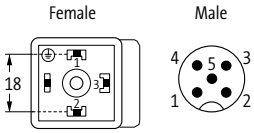
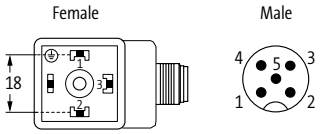
Other versions on request.

VALVE CONNECTORS

MSUD - M12

– Adapter

Approvals:

	Form A (18 mm) Top connection	**Form A (18 mm)** Rear connection
		
1 Form	**41321**	**41441**
Type	**24 V DC ±25%** **M12, 5-pole** **for pressure switches**	**24 V DC ±25%** **M12, 5-pole** **for pressure switches**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V DC ±25%
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Configuration	3 contacts + PE
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

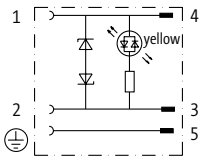
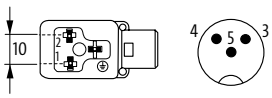
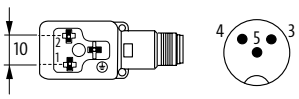
Other versions on request.

MURR ELEKTRONIK
stay connected

MSUD - M12

– Adapter

Approvals:

	Form B (10 mm)	Form B (10 mm)
	Top connection	Rear connection
		
1 Form	**41901**	**41961**
Type	**24 V AC ±20% / DC ±25%**	**24 V AC ±20% / DC ±25%**
	M12, 3-pole	**M12, 3-pole**
	LED and suppression	**LED and suppression**
Circuit diagram		
Contact layout	Female / Male 	Female / Male 

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Configuration	2 contacts + PE
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

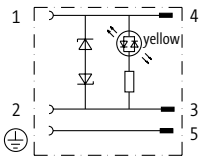
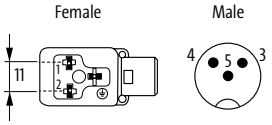
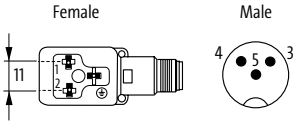
Notes

Other versions on request.

MSUD - M12

– Adapter

Approvals:

	Form BI (11 mm) Industrial standard Top connection	**Form BI (11 mm)** Industrial standard Rear connection
		
1 Form	**42021**	**42081**
Type	**24 V AC ±20% / DC ±25%** **M12, 3-pole** **LED and suppression**	**24 V AC ±20% / DC ±25%** **M12, 3-pole** **LED and suppression**
Circuit diagram		
Contact layout		

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%
Rated surge voltage	0.8 kV
Operating current per contact	max. 4 A
Configuration	2 contacts + PE
Locking of ports	M3/M12 × 1 mm (recommended torque 0.4/0.6 Nm)
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

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		1 Form			

Notes

Other versions on request.

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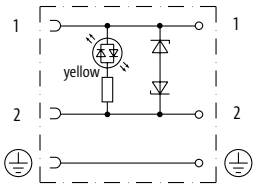
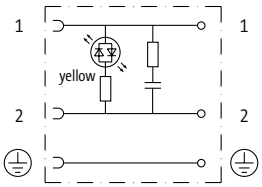
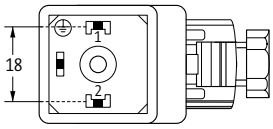
SVS

– Field-wireable

– Convenient connection, screw terminals

Form A (18 mm)



1 Form	29001	29021	29041	29061
Type	24 V AC ±20% / DC ±25% LED and Z-diode metric	24 V AC ±20% / DC ±25% LED and Z-diode PG9	max. 24 V AC/DC LED and RC metric	max. 24 V AC/DC LED and RC PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%	max. 24 V AC/DC
Operating current per contact	max. 4 A	max. 2 A
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

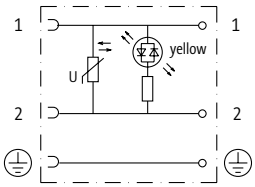
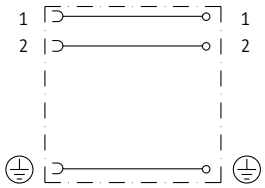
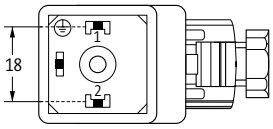
SVS

– Field-wireable

– Convenient connection, screw terminals

Form A (18 mm)



1 Form	**29081**	**29101**	**29241**	**29261**
Type	max. 110 V AC/DC	max. 110 V AC/DC	max. 230 V AC/DC	max. 230 V AC/DC
	LED and VDR	LED and VDR	without components	without components
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data

Operating voltage	max. 110 V AC/DC	max. 230 V AC/DC
Operating current per contact	max. 1 A	max. 10 A
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

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	1 Form		

Notes

Other versions on request.

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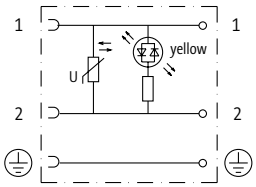
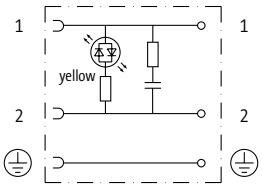
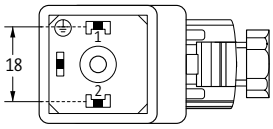
SVS

– Field-wireable

– Convenient connection, screw terminals

Form A (18 mm)



1 Form	29161	29181	29121	29141
Type	max. 230 V AC/DC	max. 230 V AC/DC	110 V AC/DC and 230 V AC/DC	110 V AC/DC and 230 V AC/DC
	LED and VDR	LED and VDR	LED and RC	LED and RC
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data

Operating voltage	max. 230 V AC/DC	110 V AC/DC and 230 V AC/DC
Operating current per contact	max. 1 A	
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

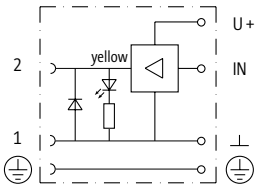
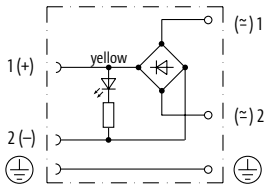
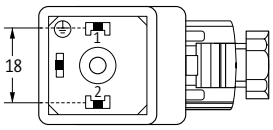
SVS

– Field-wireable

– Convenient connection, screw terminals

Form A (18 mm)



1 Form	29481	29501	29521	29541
Type	12...30 V DC	12...30 V DC	24...230 V AC/DC	24...230 V AC/DC
	LED and switching amplifier	LED and switching amplifier	LED and bridge rectifier	LED and bridge rectifier
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data		
Operating voltage	12...30 V DC	24...230 V AC/DC
Operating current per contact	max. 2 A (short-circuit protected)	max. 1 A
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

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Notes

Other versions on request.

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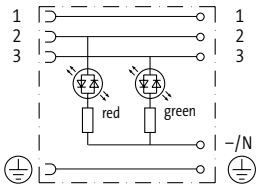
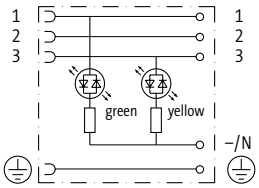
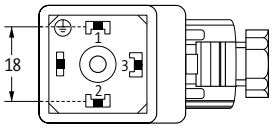
– Field-wireable

– Convenient connection, screw terminals

– for pressure switches

Form A (18 mm)



1 Form	29281	29301	29441	29461
Type	24...230 V AC/DC	24...230 V AC/DC	max. 24 V AC/DC	max. 24 V AC/DC
	LED red (2) green (3)	LED red (2) green (3)	LED green (1) yellow (3)	LED green (1) yellow (3)
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data

Operating voltage	24...230 V AC/DC	max. 24 V AC/DC
Operating current per contact	max. 4 A	
Configuration	3 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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Notes

Other versions on request.

VALVE CONNECTORS

SVS

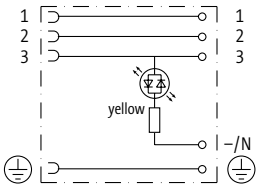
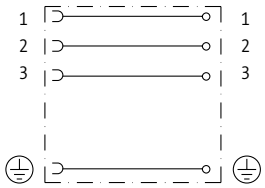
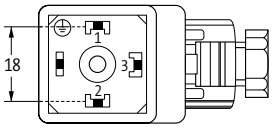
– Field-wireable

– Convenient connection, screw terminals

– for pressure switches

Form A (18 mm)



1 Form	29361	29381	29401	29421
Type	24...230 V AC/DC	24...230 V AC/DC	max. 230 V AC/DC	max. 230 V AC/DC
	LED yellow (3)	LED yellow (3)	without components	without components
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 90° steps			
Contact layout				

Technical Data

Operating voltage	24...230 V AC/DC	max. 230 V AC/DC
Operating current per contact	max. 4 A	max. 10 A
Configuration	3 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

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Notes

Other versions on request.

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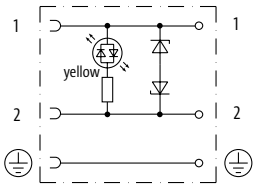
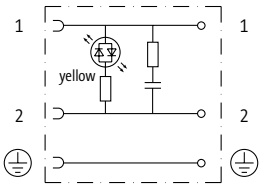
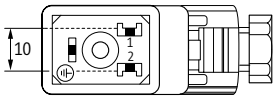
SVS

– Field-wireable

– Convenient connection, screw terminals

Form B (10 mm)



1 Form	29561	29581	29601	29621
Type	24 V AC ±20% / DC ±25% LED and Z-diode metric	24 V AC ±20% / DC ±25% LED and Z-diode PG9	max. 24 V AC/DC LED and RC metric	max. 24 V AC/DC LED and RC PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 180° steps			
Contact layout				

Technical Data

Operating voltage	24 V AC ±20% / DC ±25%	max. 24 V AC/DC
Operating current per contact	max. 4 A	max. 2 A
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

SVS

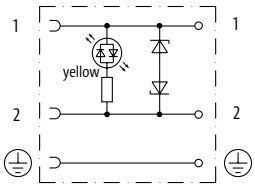
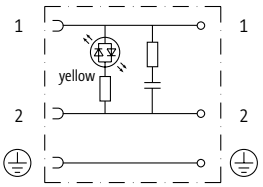
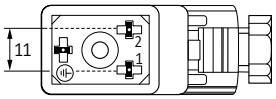
– Field-wireable

– Convenient connection, screw terminals

Form BI (11 mm)

Industrial standard



1 Form	29801	29821	29841	29861
Type	24 V AC ±20% / DC ±25%	24 V AC ±20% / DC ±25%	max. 24 V AC/DC	max. 24 V AC/DC
	LED and Z-diode	LED and Z-diode	LED and RC	LED and RC
	metric	PG9	metric	PG9
Circuit diagram				
Contact figure	Cable outlet can be turned in 180° steps			
Contact layout				

Technical Data		
Operating voltage	24 V AC ±20% / DC ±25%	max. 24 V AC/DC
Operating current per contact	max. 4 A	max. 2 A
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-20...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

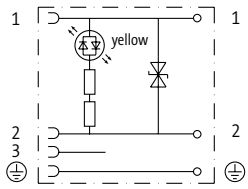
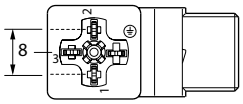
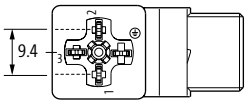
Other versions on request.

MURR ELEKTRONIK
stay connected

MOSA

– Field-wireable

– IDC terminals

	Form C (8 mm)	**Form CI (9.4 mm)** Industrial standard
		
1 Form	**80081**	**94081**
Type	**24 V AC/DC ±25%** **LED and suppression**	**24 V AC/DC ±25%** **LED and suppression**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 90° steps**	
Contact layout		

Technical Data

Operating voltage	24 V AC/DC ±25%
Operating current per contact	max. 3 A
Configuration	3 contacts + PE
Contact figure	Cable outlet can be turned in 3 × 90° steps
Protection	IP65 inserted and tightened (EN 60529)
Temperature range	-25...+85 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

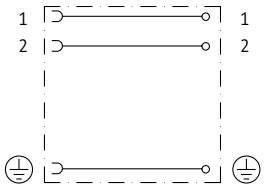
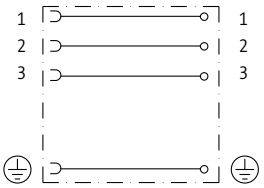
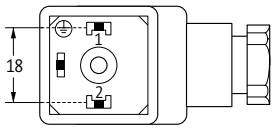
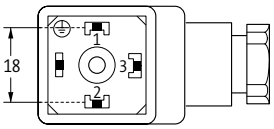
VALVE CONNECTORS

SVS Eco

– Field-wireable

– Screw terminals

– without components

	Form A (18 mm)	**Form A (18 mm)** for pressure switches
		
1 Form	**29245**	**29405**
Type	**max. 250 V AC/DC** **without components** **metric**	**max. 250 V AC/DC** **without components** **metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 90° steps**	
Contact layout		

Technical Data

Operating voltage	max. 250 V AC/DC	
Operating current per contact	max. 10 A	
Configuration	2 contacts + PE	3 contacts + PE
Locking of ports	M3 (recommended torque 0.4 Nm)	
Contact figure	Cable outlet can be turned in 90° steps	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-40...+90 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

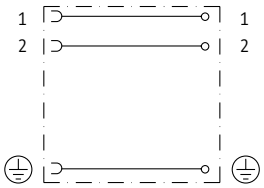
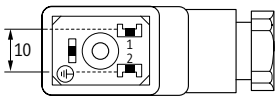
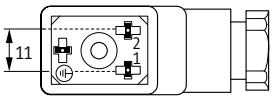
MURR ELEKTRONIK
stay connected

SVS Eco

– Field-wireable

– Screw terminals

– without components

	Form B (10 mm)	Form BI (11 mm)
		
1 Form	**29765**	**30005**
Type	**max. 250 V AC/DC**	**max. 250 V AC/DC**
	without components	**without components**
	metric	**metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 180° steps**	
Contact layout		

Technical Data

Operating voltage	max. 250 V AC/DC
Operating current per contact	max. 10 A
Configuration	2 contacts + PE
Locking of ports	M3 (recommended torque 0.4 Nm)
Contact figure	Cable outlet can be turned in 180° steps
Protection	IP65 inserted and tightened (EN 60529)
Temperature range	-40...+90 °C

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

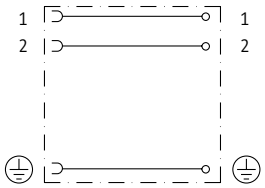
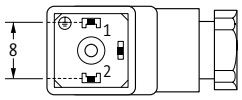
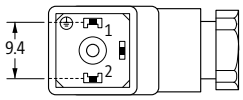
VALVE CONNECTORS

SVS Eco

– Field-wireable

– Screw terminals

– without components

	Form C (8 mm)	**Form CI (9.4 mm)** Industrial standard
		
1 Form	**30055**	**30155**
Type	**max. 250 V AC/DC** **without components** **metric**	**max. 250 V AC/DC** **without components** **metric**
Circuit diagram		
Contact figure	**Cable outlet can be turned in 90° steps**	
Contact layout		

Technical Data

Operating voltage	max. 250 V AC/DC	
Operating current per contact	max. 6 A	
Configuration	2 contacts + PE	
Locking of ports	M2.5 (recommended torque 0.4 Nm)	M3 (recommended torque 0.4 Nm)
Contact figure	Cable outlet can be turned in 90° steps	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-40...+90 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

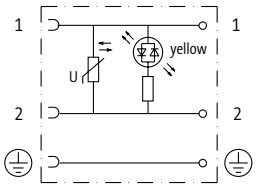
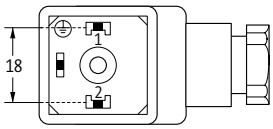
SVS Eco, LED

– Field-wireable

– Screw terminals

Form A (18 mm)



1 Form	29005	29085	29165
Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 90° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
Operating current per contact	max. 1.5 A		
Configuration	2 contacts + PE		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Contact figure	Cable outlet can be turned in 90° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-40...+60 °C		

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

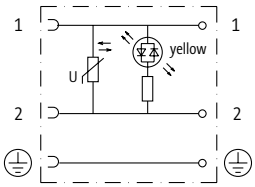
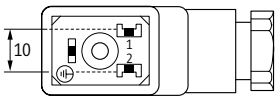
SVS Eco, LED

– Field-wireable

– Screw terminals

Form B (10 mm)



1 Form	29565	29645	29685
Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 180° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
Operating current per contact	max. 1.5 A		
Configuration	2 contacts + PE		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Contact figure	Cable outlet can be turned in 180° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-40...+60 °C		

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

SVS Eco, LED

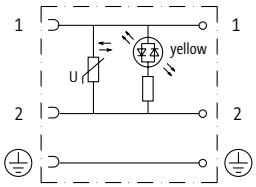
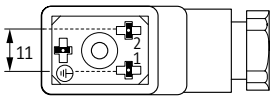
– Field-wireable

– Screw terminals

Form BI (11 mm)

Industrial standard



1 Form	29805	29885	29925
Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC ±10%
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 180° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC ±10%
Operating current per contact	max. 1.5 A		
Configuration	2 contacts + PE		
Locking of ports	M3 (recommended torque 0.4 Nm)		
Contact figure	Cable outlet can be turned in 180° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-40...+60 °C		

Article No.

The composition of your article number is explained on page 3.1.i

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	1 Form		

Notes

Other versions on request.

VALVE CONNECTORS

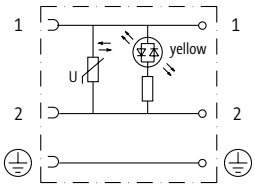
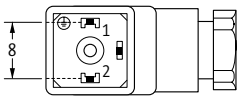
SVS Eco, LED

– Field-wireable

– Screw terminals

Form C (8 mm)



1 Form	30105	30115	30125
Type	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
	LED and VDR	LED and VDR	LED and VDR
	metric	metric	metric
Circuit diagram			
Contact figure	Cable outlet can be turned in 90° steps		
Contact layout			

Technical Data			
Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%	230 V AC/DC ±10%
Operating current per contact	max. 1.5 A		
Configuration	2 contacts + PE		
Locking of ports	M2.5 (recommended torque 0.4 Nm)		
Contact figure	Cable outlet can be turned in 90° steps		
Protection	IP65 inserted and tightened (EN 60529)		
Temperature range	-40...+60 °C		

Article No.

The composition of your article number is explained on page 3.1.i

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Notes

Other versions on request.

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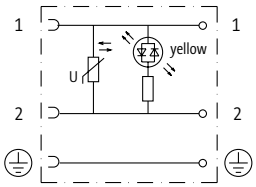
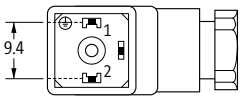
SVS Eco, LED

– Field-wireable

– Screw terminals

Form CI (9.4 mm)
Industrial standard



1 Form	30205	30215
Type	24 V AC/DC ±10%	110 V AC/DC ±10%
	LED and VDR	LED and VDR
	metric	metric
Circuit diagram		
Contact figure	Cable outlet can be turned in 90° steps	
Contact layout		

Technical Data		
Operating voltage	24 V AC/DC ±10%	110 V AC/DC ±10%
Operating current per contact	max. 1.5 A	
Configuration	2 contacts + PE	
Locking of ports	M3 (recommended torque 0.4 Nm)	
Contact figure	Cable outlet can be turned in 90° steps	
Protection	IP65 inserted and tightened (EN 60529)	
Temperature range	-40...+60 °C	

Article No.

The composition of your article number is explained on page 3.1.i

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		1 Form			

Notes

Other versions on request.

VALVE CONNECTORS

Labeling accessories			Art-No.
	**ACS label plate (KM 5)**		
	for self marking (9 × 20 mm)		**7000-99001-0000000**
	for self marking with ADEMARK markers		**7000-99003-0000000**

Gasket accessories			Art-No.
	Silicon gasket	Valve plug (form A)	**7000-99011-0000000**
	Flat gasket, NBR	Valve plug (form A)	**7000-99012-0000000**
	Silicon gasket	Valve plug (form B, BI)	**7000-99013-0000000**
	Flat gasket, NBR	Valve plug (form B, BI)	**7000-99014-0000000**
	**Accessories set**		
	Screw, isolation plate, label plate, flat gasket	Valve plug (form A)	**7000-99015-0000000**
	Screw, isolation plate, label plate, flat gasket	Valve plug (form A), field wireable	**7000-99016-0000000**
	Screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI)	**7000-99017-0000000**
	Screw, isolation plate, label plate, flat gasket	Valve plug (form B, BI), field wireable	**7000-99018-0000000**
	Screw, isolation plate, label plate, flat gasket	Valve plug (form C)	**7000-99019-0000000**
	Screw, isolation plate, label plate, flat gasket	Valve plug (form CI)	**7000-99020-0000000**
	**Hexagonal screw**		
	Metal	Valve plug (form A)	**7000-99021-0000000**
	Metal	Valve plug (form A, B, BI), field wireable	**7000-99022-0000000**
	Stainless Steel 1.4404 (V4A)	Valve plug (form A)	**7000-99024-0000000**
	Plastic	Valve plug (form A)	**7000-99023-0000000**
	**Gasket for valve plug socket**		
	2 contacts + PE and 3 contacts + PE	Valve plug (form A)	**7000-99251-0000000**
	2 contacts + PE and 3 contacts + PE FPM	Valve plug (form A)	**7000-99255-0000000**
	2 contacts + PE	Valve plug (form B)	**7000-99271-0000000**
	2 contacts + PE	Valve plug (form BI)	**7000-99261-0000000**
	2 contacts + PE and 3 contacts + PE	Valve plug (form C)	**7000-99291-0000000**
	2 contacts + PE and 3 contacts + PE	Valve plug (form CI)	**7000-99281-0000000**

End fitting accessories			Art-No.
	**Cable compression gland PG 9**		
	(gray)	Valve plug (form A, B, BI), field wireable	**7000-99025-0000000**
	(black)	Valve plug (form A, B, BI), field wireable	**7000-99026-0000000**

End fitting accessories			Art-No.
	**Tube adapter**		
	snap-in for corrugated tube (size 13mm)	Cable diameter (4...7 mm)	**7000-99081-0000000**
	**Valve plug socket**		
	2 contacts + PE	Valve plug (form A)	**7000-99201-0000000**
	2 contacts + PE	Valve plug (form B)	**7000-99221-0000000**
	2 contacts + PE	Valve plug (form BI)	**7000-99211-0000000**
	2 contacts + PE	Valve plug (form C)	**7000-99241-0000000**
	2 contacts + PE	Valve plug (form CI)	**7000-99231-0000000**
	**Valve plug socket**		
	3 contacts + PE	Valve plug (form A)	**7000-99205-0000000**
	3 contacts + PE	Valve plug (form C)	**7000-99245-0000000**
	3 contacts + PE	Valve plug (form CI)	**7000-99235-0000000**

Cables

yellow	gray	black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
010	210	610	3 × 0.25 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	4.5 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
011	211	611	4 × 0.25 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	4.8 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
013	213	613	3 × 0.34 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	4.6 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
014	214	614	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	5.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
015	215	615	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
–	219	619	5 × 0.34 mm²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
015	215	615	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
016	216	616	3 × 0.75 mm²	PVC (bk num, gnye)		PVC	5.9 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
017	217	617	4 × 0.75 mm²	PVC (bk num, gnye)		PVC	6.5 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
018	218	618	5 × 0.75 mm²	PVC (bk num, gnye)		PVC	7.0 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
020	220	620	3 × 0.25 mm²	PVC (br, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.5 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
021	221	621	4 × 0.25 mm²	PVC (br, wh, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.8 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
023	223	623	3 × 0.34 mm²	PVC (br, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	4.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
024	224	624	4 × 0.34 mm²	PVC (br, wh, bl, bk)	2 Mio.	PUR/PVC (UL/CSA)	5.2 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
025	225	625	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
025	225	625	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
026	226	626	3 × 0.75 mm²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	5.9 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
027	227	627	4 × 0.75 mm²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	6.5 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
028	228	628	5 × 0.75 mm²	PVC (bk num, gnye)	2 Mio.	PUR/PVC (UL/CSA)	7.0 ±5%	15 × outer Ø	-30...+80 °C	-5...+80 °C
030	230	630	3 × 0.25 mm²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
031	231	631	4 × 0.25 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
033	233	633	3 × 0.34 mm²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
034	234	634	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
035	235	635	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
126	–	732	5 × 0.34 mm²	PP (br, wh, bl, bk, gr)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
035	235	635	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
036	236	636	3 × 0.75 mm²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	5.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
037	237	637	4 × 0.75 mm²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
038	238	638	5 × 0.75 mm²	PP (bk num, gnye)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
050	250	650	3 × 0.25 mm²	PP (br, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
051	251	651	4 × 0.25 mm²	PP (br, wh, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
053	253	653	3 × 0.34 mm²	PP (br, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
054	254	654	4 × 0.34 mm²	PP (br, wh, bl, bk)	10 Mio.	PUR (UL/CSA),welding spark	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
055	255	655	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
055	255	655	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
056	256	656	3 × 0.75 mm²	PP (bk num, gnye)	10 Mio.	PUR (UL/CSA),welding spark	5.2 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
114	292	722	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)	5 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

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green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
659 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)	2 Mio.	PUR (UL/CSA)	7.4 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C
794 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.5 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C

green	black	red	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
478	**380**	**578**	4×2×0.14 mm²	PE (bkor, or, bkgn, gn, bkbl, bl, bkbr, br)		FRNC	5.9 ±5%	3 × outer-Ø	0...+50 °C	-20...+60 °C
796 shielded	**851 shielded**	**792 shielded**	2×2×0.34 mm²	PO (wh, ye, bl, or)	3 Mio.	PUR (UL/CSA)	6.7 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C

gray	black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
200 shielded	**600 shielded**	3 × 0.34 mm²	PVC (br, bl, bk)		PVC (UL/CSA)	5.0 ±5%		-30...+80 °C	-5...+80 °C
201 shielded	**601 shielded**	4 × 0.34 mm²	PVC (br, wh, bl, bk)		PVC (UL/CSA)	5.3 ±5%		-30...+80 °C	-5...+80 °C
202 shielded	**602 shielded**	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
203 shielded	**603 shielded**	5 × 0.34 mm²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
204 shielded	**604 shielded**	8 × 0.25 mm²	PVC (bl, wh, gn, ye, gr, pk, rd, br)		PVC (UL/CSA)	7.0 ±5%		-30...+80 °C	-5...+80 °C
205 shielded	**605 shielded**	8 × 0.25 mm²	PVC (br, wh, bl, bk, gr, pk, vi, or)		PVC (UL/CSA)	7.0 ±5%		-30...+80 °C	-5...+80 °C
206 shielded	**706 shielded**	12 × 0.14 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
207	**607**	8 × 0.25 mm²	PVC (bl, wh, gn, ye, gr, pk, rd, br)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
208	**608**	8 × 0.25 mm²	PVC (br, wh, bl, bk, gr, pk, vi, or)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
209	**609**	12 × 0.14 mm²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)		PVC (UL/CSA)	6.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
240 shielded	**640 shielded**	3 × 0.34 mm²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
241 shielded	**641 shielded**	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	5.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
242 shielded	**642 shielded**	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	5.6 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
243 shielded	**643 shielded**	5 × 0.34 mm²	PP (br, wh, bl, bk, gr)	5 Mio.	PUR (UL/CSA)	5.6 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
291 shielded	**717 shielded**	8 × 0.25 mm²	PP (wh, br, gn, ye, gr, pk, bl, rd)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
294 shielded	**715 shielded**	8 × 0.25 mm²	PP (br, wh, bl, bk, gr, pk, vi, or)	5 Mio.	PUR (UL/CSA)	7.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

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black	violet	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
838 shielded	**803 shielded**	2×0.25 + 2×0.34 mm²	PE (rd, bk), (bl, wh)		PUR (UL/CSA)	6.9 ±5%	10 × outer Ø	-40...+80 °C	-30...+70 °C

black	green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
805	**831**	4×0.5 + 1×4×0.14 mm²	PUR (bl, wh, br, bk, (whor, or)) + (whgn, gn)	5 Mio.	PUR (UL/CSA)	8.1 ±5%	10 × outer Ø	-50...+80 °C	-40...+80 °C

black	yellow	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
754	**145**	2 × 0.75 mm²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

multi-colored	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
901	4 × 0.34 mm²	PVC (br, wh, bl, bk)			1.3 ±5%		-40...+105 °C	-5...+105 °C
902	5 × 0.34 mm²	PVC (br, wh, bl, bk, gr)			1.4 ±5%		-40...+105 °C	-5...+105 °C
903	8 × 0.25 mm²	PVC (bl, wh, gn, ye, gr, pk, rd, br)			1.15 ±5%		-40...+105 °C	-5...+105 °C
910	3 × 0.25 mm²	PVC (br, bl, bk)			1.15 ±5%		-40...+105 °C	-5...+105 °C
911	4 × 0.25 mm²	PVC (br, wh, bl, bk)			2.0 ±5%		-40...+105 °C	-5...+105 °C
940	4 × 1.5 mm²	PPE (bk num, gnye)					-40...+85 °C	
941	4 × 1.5 mm²	PVC (br, wh, bl, bk)					-40...+85 °C	
969	4 × 0.25 mm²	PP (br, bk, bl, wh)			1.1 ±5%		-40...+90 °C	-25...+90 °C
970	3 × 0.25 mm²	PP (br, bk, bl)			1.1 ±5%		-40...+90 °C	-25...+90 °C
971	4 × 0.34 mm²	PP (br, wh, bl, bk)			1.3 ±5%		-40...+90 °C	-25...+90 °C
973	8 × 0.25 mm²	PUR (wh, br, gn, ye, gr, pk, bl, rd)			1.25 ±5%		-40...+90 °C	-25...+90 °C
975	5 × 0.34 mm²	PUR (br, wh, bl, bk, gnye)			1.3 ±5%		-40...+90 °C	-25...+90 °C
972	5 × 0.34 mm²	PUR (br, wh, bl, bk, gr)			1.3 ±5%		-40...+90 °C	-25...+90 °C
978	5 × 0.75 mm²	PVC (br, wh, bl, bk, gnye)			3.1 ±5%		-25...+85 °C	-10...+50 °C
980	5 × 1.5 mm²	PUR (br, wh, bl, bk, gr)			2.4 ±5%		-40...+90 °C	-25...+90 °C
P80	6 × 2.5 mm²	PVC (bk, bl, num, gnye)			3.7 ±5%		-40...+70 °C	
P81	4 × 1.5 mm²	PVC (bk num, gnye)			3.1 ±5%		-40...+70 °C	
P82	4 × 2.5 mm²	PVC (bk num, gnye)			3.7 ±5%		-40...+70 °C	

gray	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
202 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
203 shielded	5 × 0.34 mm²	PVC (br, wh, bl, bk, gr)		PVC (UL/CSA)	5.6 ±5%		-30...+80 °C	-5...+80 °C
215	5 × 0.34 mm²	PVC (br, wh, bl, bk, gnye)		PVC (UL/CSA)	5.2 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
295	8 × 0.25 mm²	PP (br, wh, bl, bk, gr, pk, vi, or)	5 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C

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gray	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
301	12 × 0.25 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	3 Mio.	PUR (UL/CSA)	6.9 ±5%	15 × outer Ø	-40...+80 °C	-20...+80 °C
302	12 × 0.25 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	5 Mio.	PUR (UL/CSA),welding spark	6.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
336	4 × 0.34 mm²	TPE-S (br, wh, bl, bk)		TPE-S	5.2 ±5%	15 × outer Ø	-50...+125 °C	-30...+105 °C
414	2 × 0.5 mm²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	4.4 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
588	2 × 1.5 mm²	PP (br, bl)	5 Mio.	PUR (UL/CSA)	8.0 ±5%	15 × outer Ø	-50...+80 °C	-25...+80 °C
777	2×2×AWG26	FRNC (wh, bl, wh, or)		FRNC	5.0 ±5%	10 × outer Ø	0...+50 °C	-20...+60 °C
862	4 × 0.75 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
961	5 × 1.5 mm²	PP (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
962	5 × 2.5 mm²	PP (br, wh, bl, bk num, gnye)	5 Mio.	PUR (UL/CSA)	9.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
965	5 × 1.0 mm²	PP (br, wh, bl, bk num, gnye)		PUR/PVC	7.2 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C
966	5 × 1.5 mm²	PP (br, wh, bl, bk, gr)		PUR/PVC	8.7 ±5%	10 × outer Ø	-30...+70 °C	-5...+70 °C

yellow	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
150	4 × 0.75 mm²	PVC (br, wh, bl, bk)	10 Mio.	TPE (UL/CSA)	7.2 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
161	5 × 0.75 mm²	PVC (br, wh, bl, bk, gnye)	10 Mio.	TPE (UL/CSA)	7.7 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
162	5 × 0.75 mm²	PVC (br, wh, bl, bk, gr)	10 Mio.	TPE (UL/CSA)	7.7 ±5%	15 × outer Ø	-40...+105 °C	-20...+90 °C
U1B	3 × 1.5 mm²	PVC (bk, gn, wh)		TPE (UL/CSA)	8.4 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C
U1C	4 × 1.5 mm²	PVC (bk, gn, rd, wh)		TPE (UL/CSA)	9.0 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C
U1D	5 × 1.5 mm²	PVC (bk, or, gn, rd, wh)		TPE (UL/CSA)	9.8 ±5%	10 × outer Ø	-50...+105 °C	-20...+90 °C

green	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
659 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)	2 Mio.	PUR (UL/CSA)	7.4 ±5%	12 × outer Ø	-40...+80 °C	-30...+70 °C
790 shielded	4×2×0.14 mm²	PE (whbl, bl, whor, or, whgn, gn, whbr, br)		PUR (UL/CSA)	6.4 ±5%	12 × outer Ø	-30...+80 °C	-10...+50 °C
791 shielded	1×4×0.15 mm²	PO (wh, ye, bl, or)	5 Mio.	PUR (UL/CSA)	4.9 ±5%	12 × outer Ø	-20...+80 °C	-20...+50 °C
793 shielded	1×4×0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.6 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
794 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)		PUR (UL/CSA)	6.5 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
800 shielded	2×2×0.34 mm²	PE (wh, ye, bl, or)	2 Mio.	PVC (UL/CSA)	6.5 ±5%	15 × outer Ø	-30...+80 °C	-10...+70 °C
802 shielded	4×0.5 + 2×0.25 mm²	TPE (bl, wh, br, bk), (gr, pk)	5 Mio.	PUR (UL/CSA)	7.9 ±5%	10 × outer Ø	-50...+80 °C	-40...+80 °C
S7V shielded	2×2×0.34 mm²	HDPE (wh, ye, bl, or)	1 Mio.	TPE (UL)	7.9 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C

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violet	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
840 shielded	1×2×0.25 mm²	PE (rd, gn)	5 Mio.	PUR (UL/CSA)	7.8 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
841 shielded	1×2×0.25 mm²	PE (rd, gn)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	12 × outer Ø	-40...+80 °C	-20...+60 °C
843 shielded	1×2×0.25 mm²	PE (rd, gn)		PUR (UL/CSA)	8.0 ±5%	12 × outer Ø	-40...+80 °C	-20...+50 °C
850 shielded	1×2×0.25 mm²	PE (rd, gn)	2 Mio.	PVC (UL)	7.8 ±5%	12 × outer Ø	-25...+70 °C	-20...+60 °C

black	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
512	2 × 0.75 mm²	PP (br, bl)	4 Mio.	PUR (UL)	5.0 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
513	3 × 0.75 mm²	PP (br, bl, bk)	4 Mio.	PUR (UL)	5.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
514	4 × 0.75 mm²	PP (br, wh, bl, bk)	2 Mio.	PUR (UL)	5.7 ±5%	6 × outer Ø		-25...+80 °C
516	6 × 0.75 mm²	PP (br, gn, ye, gr, pk, wh)	4 Mio.	PUR (UL)	6.9 ±5%	12 × outer Ø	-40...+80 °C	-25...+80 °C
564	3 × 0.75 mm²	PP (br, bl, bk)	5 Mio.	PUR (UL/CSA)	5.9 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
569	4 × 0.75 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	6.5 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
572	6 × 0.75 mm²	PP (br, wh, bl, bk, gr, pk)	5 Mio.	PUR (UL/CSA)	7.3 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
634	4 × 0.34 mm²	PP (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	4.7 ±5%	10 × outer Ø	-40...+80 °C	-25...+80 °C
703 shielded	12 × 0.14 mm²	PVC (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)		PVC (UL/CSA)	6.5 ±5%	10 × outer Ø	-30...+80 °C	-5...+80 °C
705	12 × 0.14 mm²	PP (br, bl, wh, gn, pk, ye, bk, gr, rd, vi, grpk, rdbl)	2 Mio.	PUR (UL/CSA)	6.0 ±5%	10 × outer Ø	-40...+85 °C	-25...+85 °C
740	2 × 0.5 mm²	TPE (bk, wh)	2 Mio.	PUR	5.0 ±5%	10 × outer Ø	-50...+90 °C	-30...+90 °C
750	2 × 0.75 mm²	PVC (br, bl)		PUR/PVC	5.9 ±5%	15 × outer Ø	-40...+80 °C	-5...+80 °C
P01	6 × 2.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	11.1 ±5%	10 × outer Ø	-40...+80 °C	-20...+60 °C
P02	4 × 1.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	7.4 ±5%	10 × outer Ø	-50...+80 °C	-20...+70 °C
P03	4 × 2.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	9.0 ±5%	10 × outer Ø	-50...+80 °C	-20...+70 °C
P04	5 × 1.5 mm²	PP (br, wh, bl, bk, gr, num)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P05	5 × 1.5 mm²	PP (br, wh, bl, bk num, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P06	4 × 1.5 mm²	PP (br, wh, bl, num; gnye longi-tudinally striped)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P07	4 × 1.5 mm²	PP (br, wh, bl, bk, num)	5 Mio.	PUR (UL/CSA)	7.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
P21	6 × 2.5 mm²	PP (bk num, gnye)		PVC (UL)	11.0 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P22	4 × 1.5 mm²	PP (bk num, gnye)		PVC (UL)	7.4 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P23	4 × 2.5 mm²	PP (bk num, gnye)		PVC (UL)	9.1 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P24	6 × 1.5 mm²	PP (bk num, gnye)		PVC (UL)	9.0 ±5%	15 × outer Ø	-20...+80 °C	-5...+80 °C
P84	6 × 1.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	9.0 ±5%	6.8 × outer-Ø	-50...+80 °C	-20...+70 °C
UMB	3 × 1.5 mm²	TPM (br, bl, gnye)	5 Mio.	PUR (UL/CSA)	7.4 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
UMC	4 × 1.5 mm²	TPM (br, wh, bl, bk)	5 Mio.	PUR (UL/CSA)	8.0 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C
UMD	5 × 1.5 mm²	TPM (br, wh, bl, bk, gnye)	5 Mio.	PUR (UL/CSA)	8.7 ±5%	10 × outer Ø	-50...+80 °C	-20...+80 °C

Cables

orange	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
P11 shielded	4×2.5 + 2×1.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	12.8 ±5%	10 × outer Ø	-25...+80 °C	-20...+80 °C
P12 shielded	4 × 1.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	8.0 ±5%	10 × outer Ø	-40...+80 °C	-20...+60 °C
P13 shielded	4 × 2.5 mm²	TPM (bk num, gnye)	5 Mio.	PUR (UL)	10.6 ±5%	7.5 × outer Ø	-50...+80 °C	-35...+70 °C

pastel blue	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
315	3 × 0.34 mm²	PP (br, bl, bk)	4 Mio.	TPE-S (UL)	4.3 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C
321	4 × 0.34 mm²	PP (br, wh, bl, bk)	4 Mio.	TPE-S	4.7 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C
339	5 × 0.34 mm²	PP (br, wh, bl, bk, gnye)	4 Mio.	TPE (UL)	5.0 ±5%	10 × outer Ø	-40...+105 °C	-25...+105 °C

blue	No./diameter of wires	Wire isolation	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
S4U shielded	2×2×0.25 mm²	HDPE (whor, or, whgn, gn)	1 Mio.	TPE (UL/CSA)	6.6 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
S4W shielded	4×2×0.25 mm²	HDPE (whbl, bl, whor, or, whgn, gn, whbr, br)	1 Mio.	TPE (UL/CSA)	7.6 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C
S4X shielded	4×2×0.14 mm²	HDPE (whbl, bl, whor, or, whgn, gn, whbr, br)	1 Mio.	TPE (UL/CSA)	7.4 ±5%	10 × outer Ø	-40...+80 °C	-20...+80 °C

gray	No./diameter of wires	C-track properties	Material (jacket)	Outer Ø	Bend radius (moving)	Temperature range (fixed)	Temperature range (mobile)
333	4×0.34 + 3×0.75 mm²	2 Mio.	PUR/PVC	7.4 ±5%	12 × outer Ø	-30...+80 °C	-5...+80 °C
334	4×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	7.6 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
337	4×0.34 + 2×0.75 mm²	2 Mio.	PUR/PVC	6.9 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
350	6×0.34 + 2×0.75 mm²	2 Mio.	PUR/PVC	7.8 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
356	6×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	8.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
357	8×0.34 + 2×0.75 mm²	2 Mio.	PUR/PVC	8.6 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
358	8×0.34 + 2×0.75 mm²	1.5 Mio.	PUR/PVC	8.6 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
359	8×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	9.2 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
360	8×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	9.2 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
362	8×0.34 + 3×0.75 mm²	2 Mio.	PUR/PVC (UL/CSA)	8.1 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
363	8×0.34 + 3×0.75 mm²	2 Mio.	PUR/PVC (UL/CSA)	8.1 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
373 shielded	8×0.34 + 3×0.75 mm²	5 Mio.	PUR (UL/CSA)	9.3 ±5%	12 × outer Ø	-40...+90 °C	-40...+90 °C
374	8×0.34 + 5×0.75 mm²	1.5 Mio.	PUR/PVC	9.2 ±5%	12 × outer Ø	-30...+80 °C	-30...+80 °C
384	10×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	9.3 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
385	10×0.34 + 2×0.75 mm²	2 Mio.	PUR/PVC	8.3 ±5%	10 × outer Ø	-30...+80 °C	-5...+60 °C
386	12×0.34 + 2×0.75 mm²	1.5 Mio.	PUR/PVC	8.8 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
389	12×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	9.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
395	16×0.34 + 2×0.75 mm²	1.5 Mio.	PUR/PVC	9.6 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
396	16×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	10.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
398	16×0.34 + 3×0.75 mm²	2 Mio.	PUR/PVC (UL/CSA)	10.0 ±5%	10 × outer Ø	-30...+80 °C	-5...+70 °C
401 shielded	16×0.34 + 3×0.75 mm²	5 Mio.	PUR (UL/CSA)	11.7 ±5%	12 × outer Ø	-40...+90 °C	-40...+90 °C
403	16×0.34 + 5×0.75 mm²	5 Mio.	PUR (UL/CSA)	11.5 ±5%	10 × outer Ø	-40...+90 °C	-40...+90 °C
404	16×0.34 + 5×0.75 mm²	1.5 Mio.	PUR/PVC	12.5 ±5%	12 × outer Ø	-30...+80 °C	-30...+80 °C
407	20×0.34 + 3×0.75 mm²	2 Mio.	PUR/PVC (UL/CSA)	10.0 ±5%	12 × outer Ø	-30...+80 °C	-5...+60 °C
408	20×0.34 + 3×0.75 mm²	5 Mio.	PUR (UL/CSA)	10.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C
411	20×0.34 + 2×0.75 mm²	5 Mio.	PUR (UL/CSA)	11.3 ±5%	10 × outer Ø	-40...+80 °C	-5...+60 °C
412	20×0.34 + 2×0.75 mm²	1.5 Mio.	PUR/PVC	10.4 ±5%	12 × outer Ø	-30...+70 °C	-5...+60 °C
447	8×0.5 + 3×1.0 mm²	5 Mio.	PUR (UL/CSA)	9.4 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C
448	8×0.5 + 3×1.0 mm²	5 Mio.	PUR (UL/CSA)	9.1 ±5%	10 × outer Ø	-40...+90 °C	-40...+90 °C
452	16×0.5 + 3×1.0 mm²	5 Mio.	PUR (UL/CSA)	11.5 ±5%	10 × outer Ø	-40...+80 °C	-5...+80 °C



4 I/O SYSTEMS

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4

I/O SYSTEMS

Cube67	4.1
Cube20	4.2
Cube20S	4.3
MVK Metal	4.4
SOLID67	4.5
Impact67	4.6
IO-Link Devices	4.7
MASI Control Cabinet	4.8
MASI Field Installation	4.9
MASI Installation Technology	4.10
M8 Distribution Systems	4.11
M12 Distribution Systems (Metal)	4.12
M12 Distribution Systems (Plastic)	4.13



CUBE67
MODULAR I/O STATION IP67

- **Distributed**
- **Flexible**
- **Open system**

THE COMPACT MODULAR I/O SYSTEM

Cube is a modular field bus system for perfect distributed installation concepts. Its flexibility facilitates developing the perfect solution for any application – with consistent degrees of protection from IP20 to IP69K.

Cube's characteristics are: great functionality, plug-in connections, a robust and compact design, encapsulated modules, and multi-functional inputs and outputs. The modules are installed next to the sensors and actuators.

Cube67 I/O modules



Bus nodes
- PROFIBUS DP
- PROFINET IO
- EtherNet/IP
- EtherCAT

Page 4.1.1



Diagnostic gateway
- Diagnostics made easy
- Ethernet TCP/IP

Page 4.1.3



Digital inputs
- NPN
- VPN

Page 4.1.4



Digital inputs/outputs
- Multifunctional

Page 4.1.7



Function modules IO-Link
- IO-Link
- Counter module
- Communication module

Page 4.1.14



Analog inputs/outputs
- Voltage/current
- For resistors and temperature
- For thermo elements

Page 4.1.17



Safe outputs
- Passive

Page 4.1.20



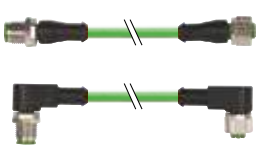
Function modules hygenic design IO-Link
- Multifunctional
- IO-Link

Page 4.1.21



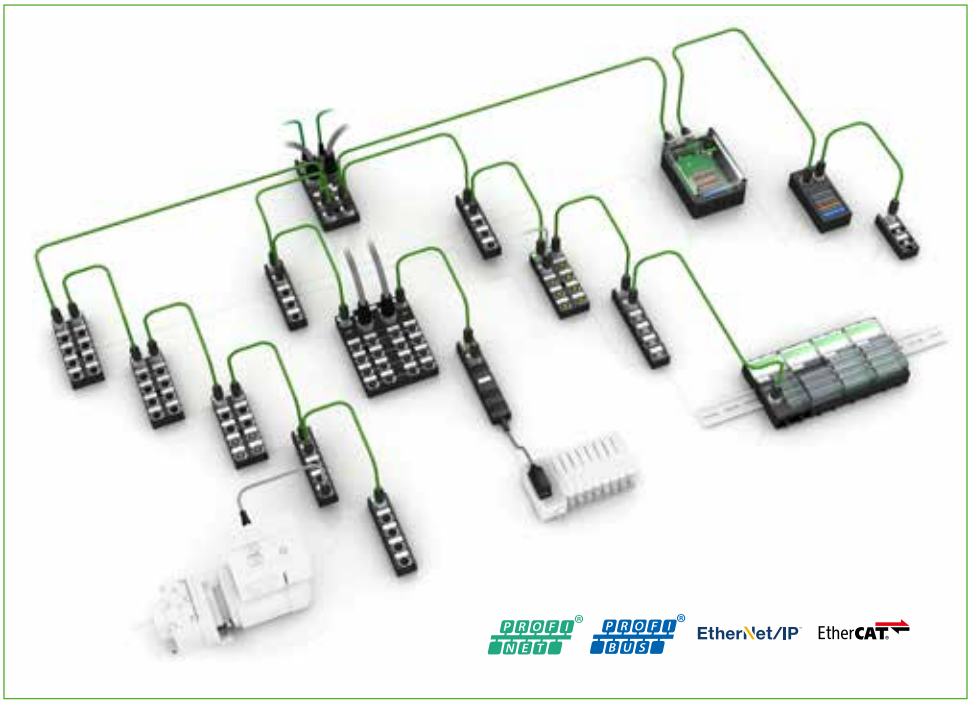
Cable/Valve
- Digital outputs
- Digital inputs/outputs (multifunctional)
- Safe outputs
- Valve connections
- With open ended wires

Page 4.1.23



Please do not hesitate to contact us. We offer a wide range for Cube67 system cables.

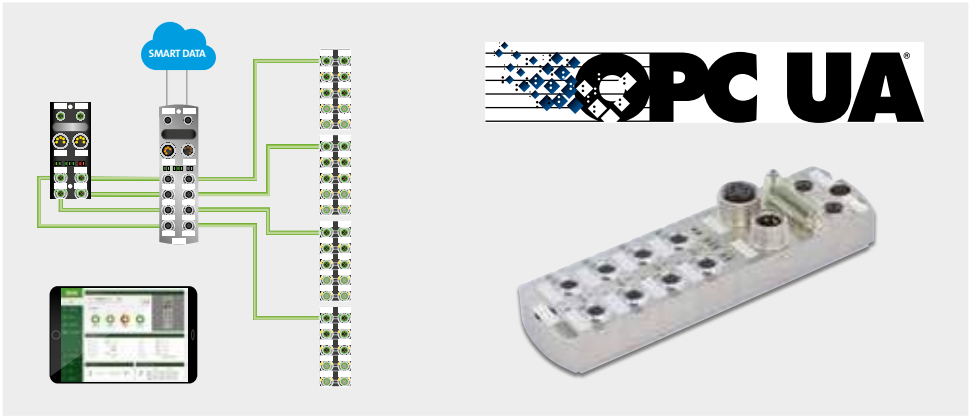
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stay connected



HIGHLIGHTS OF THE CUBE SYSTEM

- **Customer-oriented installation concepts**, perfectly customized solutions for any given application
- **Great cost-benefit ratio** through lower planning and installation effort
- **Extreme flexibility** through multi-functional slots and numerous function modules (IO-Link, RS485/ MOVIMOT®...)
- System-independent through "**bus replacement without system replacement**" for all common bus systems worldwide
- **Maximized transparency** through precise and detailed diagnostics options



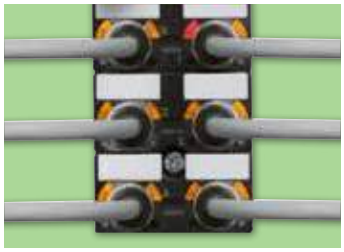


CUBE67 DIAGNOSTICS GATEWAY

Diagnostics made easy

- **Commissioning engineers** use the diagnostics gateway to examine the topology of the Cube system and to detect installation faults at an early stage.
- The service personnel of the machine or system builder quickly identifies errors by temporarily integrating the diagnostics gateway. Moreover, this system is a perfect solution for machine acceptance tests. Permanent integration is also of great interest in order to be able to guide, for example the electrician, in the field via remote access.
- The **operator of a machine or system** who incorporates the diagnostics gateway permanently is able to react to potential problems at an early stage. In a best-case scenario, instructions for troubleshooting have already been implemented, allowing the installer to bring the required spare part right with him when he comes for repairs.

FUNCTIONALITY WITH GREAT UTILIZABLE VALUE



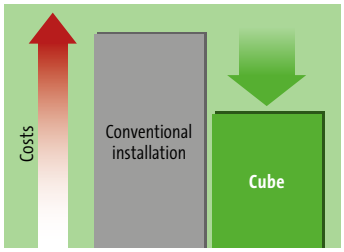
Diagnostics

Detailed diagnostics messages to the controller and LED status indicators at the slots facilitate fast localization of errors. **This reduces commissioning time and downtimes.**



Multi-functional I/Os

Connections can – depending on the requirement at any given location in the distributed installation – be parameterized as inputs, diagnostic inputs or outputs. This allows the connection of various components to a module. **As a result, there is great flexibility and a reduced number of variants.**



Saves time and money

Maximized economy through reduced effort in design and installation of hardware and software. Increased production capacities and shorter lead times. **This is how Cube secures you a competitive edge.**



Safety

Cube enables passive safety technology solutions. The M12 outputs and connections for the valve terminals can be used in installations up to category 3 and performance level d (according DIN EN ISO 13849). **This facilitates easy integration of safety technology without great wiring effort.**



Cable

Cube67 only needs a single system bus cable for both power supply and data transmission. Prefabricated cables minimize error sources. **The installation requires just half the space and can be completed in half the time.**



IO-Link by Murrelektronik

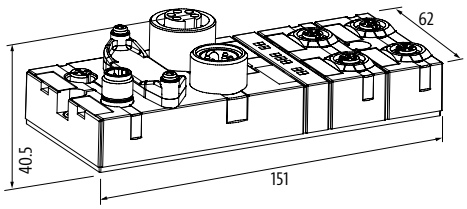
The integration of up to 128 smart IO-Link devices in Cube67+ opens up additional possibilities in using variable machines. Cube67+ in combination with IO-Link offers this additional functionality for M12 ports. **This enables flexible and automated parameterization of devices.**

Bus nodes, Cube67+

– up to 32 modules

Approvals: cULus Listed

	Cube67+ BN-P PROFIBUS DP	**Cube67+ BN-PNIO** PROFINET IO
		
Order Data	**Art-No.**	**Art-No.**
PROFIBUS DP	**56521**	
PROFINET IO		**56526**
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	Ethernet 10/100Mbit/s; M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A	
Internal system connection	4 × M12 (female) A-coded, 6-pole, 2 × max. 4 A	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 120 mA	max. 200 mA
PROFIBUS		
Addressing	Rotary switch 0...99	–
PROFINET		
Addressing	–	DCP
Specification	–	V2.2, Conformance Class B
Cube system		
Module capacity	max. 32	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Machine Option Management	yes	
No. of masterports (IO-Link)	max. 12	max. 128
Diagnostic		
Communication status	via LED and BUS	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes	
	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

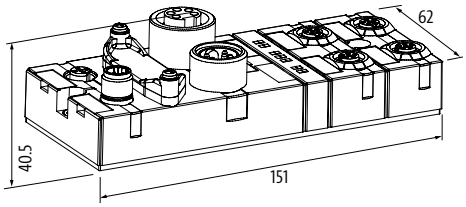
Bus nodes, Cube67+

– up to 32 modules

EtherNet/IP EtherCAT

Approvals: cULus Listed

	Cube67+ BN-E	Cube67+ BN-EC	
	EtherNet/IP	EtherCAT	
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
EtherNet/IP	**56535**		
EtherCAT		**56527**	
EtherCAT Rotary Switch			**5652701**
Connections			
Fieldbus	Ethernet 10/100Mbit/s; M12, D-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 8 A		
Internal system connection	4 × M12 (female) A-coded, 6-pole, 2 × max. 4 A		
Module Supply			
Operating voltage	24 V DC (EN 61131-2)		
Current consumption	max. 200 mA		
EtherNet/IP			
Addressing	DHCP, BOOTP or IP address by rotary switch	–	
EtherCAT			
Addressing	–	automatic	Rotary switch 0...999
Cube system			
Module capacity	max. 32		
I/O capacity	max. 504 Byte (Input), max. 500 Byte (Output)	max. 65 636 Byte (Input), max. 65 636 Byte (Output)	
Machine Option Management	yes	–	
No. of masterports (IO-Link)	max. 128	–	
Diagnostic			
Communication status	via LED and BUS		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes	
	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Diagnostic gateway

– Ethernet TCP/IP

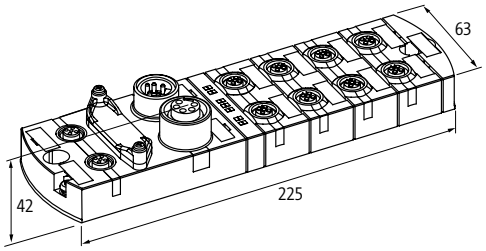
Approvals: c UL us Listed

Cube67

Diagnostics made easy



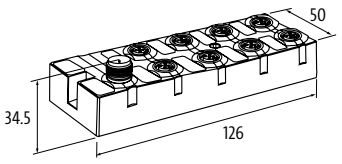
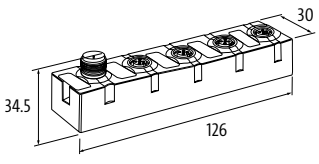
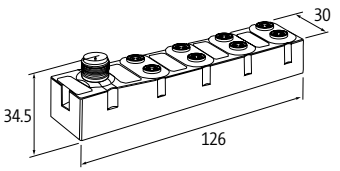
Order Data		Art-No.
Diagnostic Gateway		56968
Connections		
Fieldbus	2 × M12 (female), D-coded	
Internal system connection	8 × M12 (female), 6-pole	
Supply	2 × 7/8" (male/female), 5-pole	
Module Supply		
Operating voltage	24 V DC ±25%	
Current consumption	max. 200 mA	
Cube system		
Cube67 system connection	yes	
Protection		
Reverse polarity protection module	yes	
Over voltage protection	yes	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	
	Current manuals can be downloaded at: www.murrelektronik.com

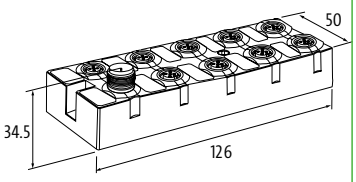
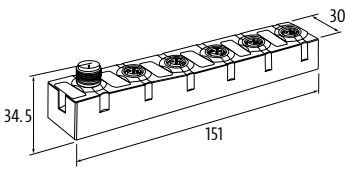
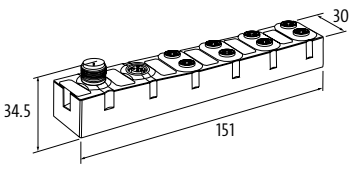
Digital inputs

Approvals: cULus Listed

	Cube67 DI16 C - 8×M12 Compact module	Cube67 DI8 C - 4×M12 Compact module	Cube67 DI8 C - 8×M8 Compact module
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (C) 8×M12	**56602**		
DI8 - (C) 4×M12		**56612**	
DI8 - (C) 8×M8			**56622**
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Terminating resistor	integrated into the module		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		M8 (female) 3-pole, A-coded
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

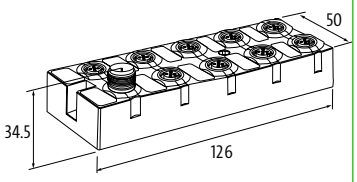
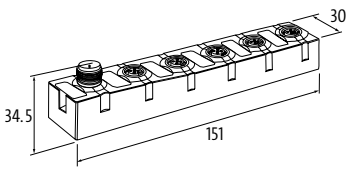
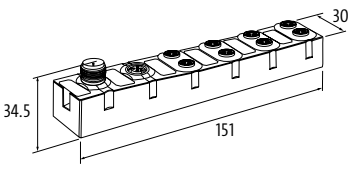
Digital inputs

Approvals: c UL us Listed

	Cube67 DI16 E - 8×M12 Expansion module	Cube67 DI8 E - 4×M12 Expansion module	Cube67 DI8 E - 8×M8 Expansion module
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (E) PNP (8×M12)	**56603**		
DI8 - (E) PNP (4×M12)		**56613**	
DI8 - (E) PNP (8×M8)			**56623**
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		M8 (female) 3-pole, A-coded
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

Digital inputs

Approvals: cULus Listed

	Cube67 DI16 E - 8×M12	Cube67 DI8 E - 4×M12	Cube67 DI8 E - 8×M8
	Expansion module Form NPN	Expansion module Form NPN	Expansion module Form NPN
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DI16 - (E) NPN (8×M12)	**56606**		
DI8 - (E) NPN (4×M12)		**56616**	
DI8 - (E) NPN (8×M8)			**56626**
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	M12 (female) 5-pole, A-coded		M8 (female) 3-pole, A-coded
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, NPN, (EN 61131-2)		
Input filter	1 ms		
Parameterization			
PIN 2	Input/Diagnostic		–
PIN 4	Input		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

Digital inputs/outputs (multifunctional)

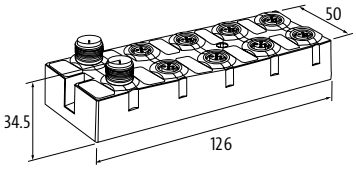
Cube67 DIO16 C - 8×M12

Compact module
additional actuator supply 1 × 4 A



Approvals: c UL us Listed

Order Data	Art-No.	Art-No.
DIO16 - 0.5 A (C) 8×M12	**56600**	
DIO16 - 1.6 A (C) 8×M12		**56640**
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Terminating resistor	integrated into the module	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A) + right actuators via supply right (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 1.6 A (short-circuit and overload protected)
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes

Digital inputs/outputs (multifunctional)

Approvals: cULus Listed

Cube67 DIO8 C - 4×M12

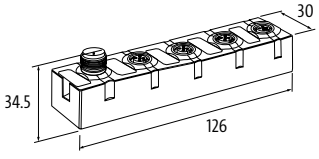
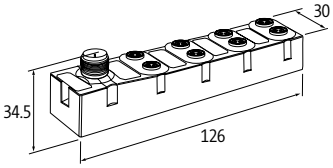
Compact module



Cube67 DIO8 C - 8×M12

Compact module



Order Data	Art-No.	Art-No.
DIO8 - 0.5 A (C) 4×M12	**56610**	
DIO8 - 0.5 A (C) 8×M8		**56620**
Internal communication		
Current consumption	max. 50 mA	max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Terminating resistor	integrated into the module	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	M8 (female) 3-pole, A-coded
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	–
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		
		
Notes		

Digital inputs/outputs (multifunctional)

Approvals: c UL us Listed

Cube67 DIO16 E - 8×M12

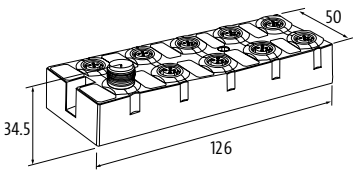
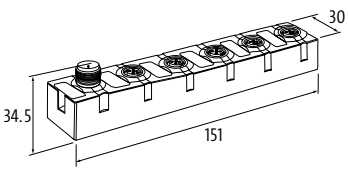
Expansion module



Cube67 DIO8 E - 4×M12

Expansion module



Order Data	Art-No.	Art-No.
DIO16 - 0.5 A (E) 8×M12	**56601**	
DIO8 - 0.5 A (E) 4×M12		**56611**
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		
		
Notes		

Digital inputs/outputs (multifunctional)

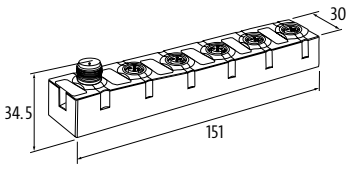
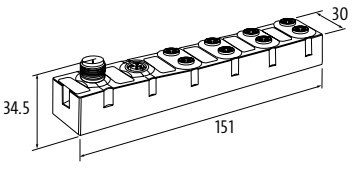
Approvals: cULus Listed

Cube67 DIO8 E - 4×M12
Expansion module



Cube67 DIO8 E - 8×M8
Expansion module



Order Data	Art-No.	Art-No.
DIO8 - 1.0 A (E) 4×M12	**56631**	
DIO8 - 0.5 A (E) 8×M8		**56621**
Internal communication		
Current consumption	max. 50 mA	max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	M8 (female) 3-pole, A-coded
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 1 A (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Parameterization		
PIN 2	Input/Output/Diagnostic	–
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		
		
Notes		

Digital inputs/outputs (multifunctional)

Approvals: c UL us Listed

Cube67 DIO8 C - 4×M8

Compact module
4-pole



Cube67 DIO8 E - 0.5 A 8×M8

Expansion module
4-pole



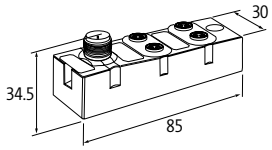
Contact layout

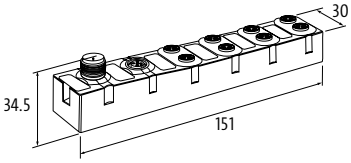
Female



PIN 1: Us: +24 V
PIN 2: DIO 0.5 A 0.×
PIN 3: 0 V DC
PIN 4: DIO 0.5 A 1.×

Order Data	Art-No.	Art-No.
DIO8 - 0.5 A (C) 4×M8	**56627**	
DIO16 - 0.5 A (E) 8×M8		**56625**
Internal communication		
Current consumption	max. 30 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M8 (female), 4-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M8 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 4	Input/Output	
PIN 2	Input/Output/Diagnostic	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		





Digital inputs/outputs (multifunctional)

Cube67 DIO32 E - 16×M12

Expansion module

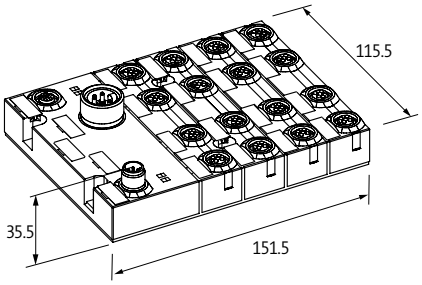


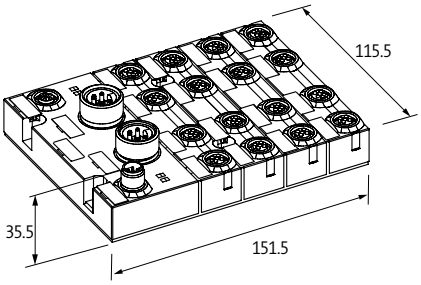
Cube67 DIO16 DO16 E - 1.6/2 A 16×M12

Expansion module



Order Data	Art-No.	Art-No.
DIO32 - 0.5 A (E) 16×M12	**56642**	
DIO16 - 1.6 A DO16 - 2 A (E) 16×M12		**56641**
Internal communication		
Current consumption	max. 60 mA	max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply (8×M12 left side)	24 V DC (EN 61131-2), via 7/8" male (max. 1 × 9 A)	24 V DC (EN 61131-2), via 7/8" male (max. 2 × 9 A)
Actuator supply (8×M12 right side)	24 V DC (EN 61131-2), via 7/8" male (max. 1 × 9 A)	24 V DC (EN 61131-2), via 7/8" male (max. 2 × 9 A)
Switching current per output (8×M12 left)	max. 0.5 A (short-circuit and overload protected)	max. 1.6 A (short-circuit and overload protected), coincidence factor 50% per port
Switching current per output (8×M12 right)	max. 0.5 A (short-circuit and overload protected)	max. 2 A (short-circuit and overload protected), coincidence factor 50% per port
Parameterization		
PIN 2 (8 × M12 left side)	Input/Output/Diagnostic	
PIN 4 (8 × M12 left side)	Input/Output	
PIN 2 (8 × M12 right side)	Input/Output/Diagnostic	Output
PIN 4 (8 × M12 right side)	Input/Output	Output
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	4 hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		

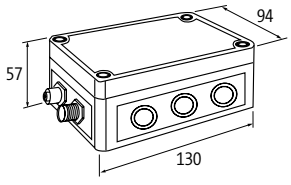
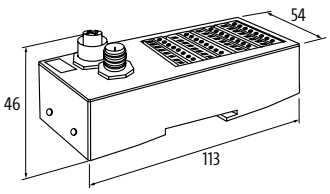




Terminal modules

– Digital inputs/outputs (multifunctional)

– Digital inputs

	Cube67 DIO8/DI8 E (TB-Box) Expansion module	**Cube67 DIO8/DI8 E (TB-Box)** Expansion module with additional potential terminals	**Cube67 DIO8/DI8 E (TB-Rail)** Expansion module
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DIO8/DI8 - (E) TB-Box	**56681**	**5668100**	
DIO8/DI8 - (E) TB-Rail			cULus **56691**
Internal communication			
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm²		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 8 × 200 mA		
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Parameterization			
Terminal row X0 (8 channels)	Input		
Terminal row X1 (8 channels)	Input/Output		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via LED and BUS		
General data			
Protection	IP66		IP20
Mounting method	screw fixing		DIN-rail mountable (EN 60715)
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

Function modules

– multifunctional

– IO-Link Master

IO-Link

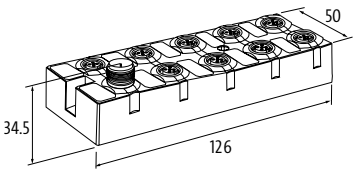
Approvals: UL Listed

Cube67+ DIO12 IOL4 - E 8×M12

Expansion module



Order Data	Art-No.
DIO12/IOL4 - (E) 8×M12	**56766**
Internal communication	
Current consumption	max. 100 mA
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)
I/O ports	M12 (female) 5-pole, A-coded
IO-Link	
IO-Link	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)
Transfer parameters	32 Byte (via IO-Link Port)
Port class	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (port 0...3); max. 700 mA (port 4...7)
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Parameterization	
PIN 2	Input/Output/Diagnostic
PIN 4	Input/Output (port 0...3); IO-Link Master (port 4...7)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



Notes	
	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Function modules

– Counter module with preprocessing

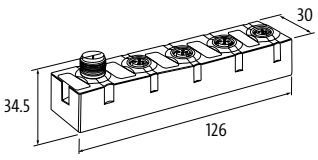
Approvals: c UL us Listed

Cube67 CNT2 - C 4×M12

Compact module



Order Data		Art-No.
Compact module		56750
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Counter		
Counter frequency	max. 300 kHz	
Counter input	EN 61131-2	
Counter depth	32 Bit (31 Bit + sign)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes	
	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Function modules

– Communication module

Cube67+ DIO4 RS232/485 - E 4×M12 MOVIMOT®

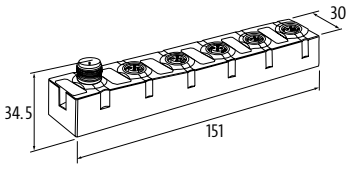
Expansion module

Serial interface



Approvals: c UL us Listed

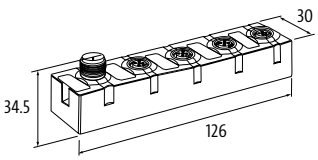
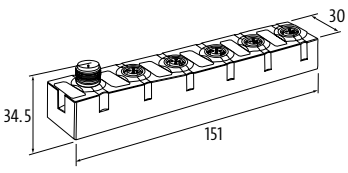
Order Data		Art-No.
DIO4 - (E) RS232/485 (4×M12) MOVIMOT®		56761
Internal communication		
Current consumption	max. 80 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Technical Data		
Transfer parameters	RS232: 230.4 kBaud, full duplex; RS485: 230.4 kBaud, half duplex	
RS232-Type	galvanically separated, M12 female 5-pole, B-coded	
RS485-Type	galvanically separated, M12 female 5-pole, B-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		



Notes	
	Cube67+ modules can only be operated on Cube67+, EtherNet/IP, Profibus + ProfiNet bus nodes.

Analog inputs

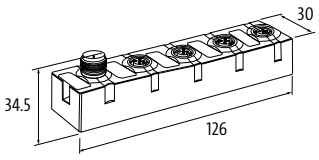
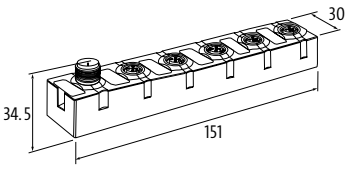
– Voltage/current

	Cube67 AI4 C - 4×M12 Compact module Voltage	Cube67 AI4 C - 4×M12 Compact module Current	Cube67 AI4 E - 4×M12 Expansion module Voltage	Cube67 AI4 E - 4×M12 Expansion module Current
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
AI4 - (C) 4×M12 (U)	cULus **56700**			
AI4 - (C) 4×M12 (I)		cULus **56730**		
AI4 - (E) 4×M12 (U)			cULus **56701**	
AI4 - (E) 4×M12 (I)				**56731**
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Input				
Conversion time (analog)	approx. 2 ms (per channel)			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected			
Resolution (analog)	15 Bit + sign	15 Bit	15 Bit + sign	15 Bit
Accuracy	max. ±0.5% (of range limit)			
Voltage inputs				
Input resistor	approx. 1 MOhm, differential input	–	approx. 1 MOhm, differential input	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current input signals				
Load	–	approx. 300 Ohm, differential input	–	approx. 300 Ohm, differential input
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				
				
Notes				

Analog inputs

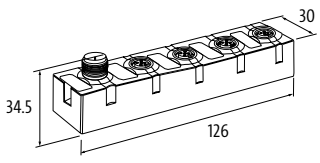
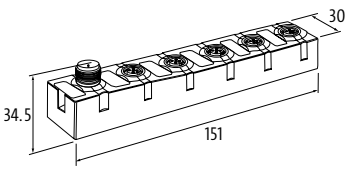
– for resistors and temperature

– for thermo elements

	Cube67 AI4 C (RTD) - 4×M12 Compact module for resistors and temperature	Cube67 AI4 C (TH) - 4×M12 Compact module for thermo elements	Cube67 AI4 E (RTD) - 4×M12 Expansion module for resistors and temperature	Cube67 AI4 E (TH) - 4×M12 Expansion module for thermo elements
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
AI4 - (C) 4×M12 (RTD)	cULus **56740**			
AI4 - (C) 4×M12 (TH)		cULus **56748**		
AI4 - (E) 4×M12 (RTD)			**56741**	
AI4 - (E) 4×M12 (TH)				**56749**
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Input				
Sensor type	Pt100, 200, 500, 1000; Ni100, 120, 200, 500, 1000; R 0...3000 Ohm	K, N, J, E, R	Pt100, 200, 500, 1000; Ni100, 120, 200, 500, 1000; R 0...3000 Ohm	K, N, J, E, R
Conversion time (analog)	approx. 58 ms per channel	approx. 65 ms per channel	approx. 58 ms per channel	approx. 65 ms per channel
Resolution (analog)	15 Bit + sign			
Accuracy	max. ±0.5% (of range limit)			
Accuracy (Ni)	max. ±1% (of range limit)	–	max. ±1% (of range limit)	–
Connection	2-, 3-, 4-wire technology	2-wire technology	2-, 3-, 4-wire technology	2-wire technology
Cold junction compensation	–	inside M12 connector	–	inside M12 connector
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				
				
Notes				

Analog outputs

– Voltage/current

	Cube67 AO4 C 4×M12	Cube67 AO4 C 4×M12	Cube67 AO4 E 4×M12	Cube67 AO4 E 4×M12
	Compact module Voltage	Compact module Current	Expansion module Voltage	Expansion module Current
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
AO4 - (C) 4×M12 (U)	cULus **56710**			
AO4 - (C) 4×M12 (I)		cULus **56720**		
AO4 - (E) 4×M12 (U)			**56711**	
AO4 - (E) 4×M12 (I)				**56721**
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)			
I/O ports	M12 (female) 5-pole, A-coded			
Output				
Supply voltage	24 V DC (EN 61131-2), via system connection (max. 4 A)			
Conversion time (analog)	approx. 1 ms (per channel)			
Actuator supply UA	24 V DC (EN 61131-2), max. 1.6 A per M12 female, (short-circuit and overload protected)			
Resolution (analog)	11 Bit + sign	11 Bit	11 Bit + sign	11 Bit
Accuracy	max. ±0.5% (of range limit)			
Voltage output signals				
Load	min. 500 Ohm	–	min. 500 Ohm	–
Input range	±10 V DC, 0...10 V DC	–	±10 V DC, 0...10 V DC	–
Current outputs				
Load	–	max. 500 Ohm	–	max. 500 Ohm
Input range	–	0...20 mA, 4...20 mA	–	0...20 mA, 4...20 mA
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via LED and BUS			
Wire break upper/lower limit overload	per channel via LED and BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+75 °C)			
Dimension drawing				
				
Notes				

Safe outputs (Safety)

– passive safety

– Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

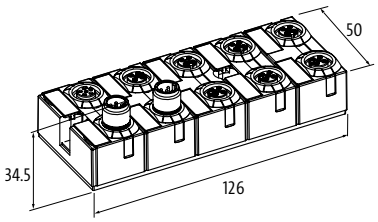
Approvals: c UL us Listed

Cube67 DO6/DO6 - E 6×M12 (K3)

Expansion module



Order Data		Art-No.
DO6/DO6 - (E) 6×M12 (K3)		56605
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Output		
Actuator supply UA	24 V DC (EN 61131-2), 2 circuits, (max. 2 × 4 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Function modules

– Hygienic Design

– multifunctional

– IP69K

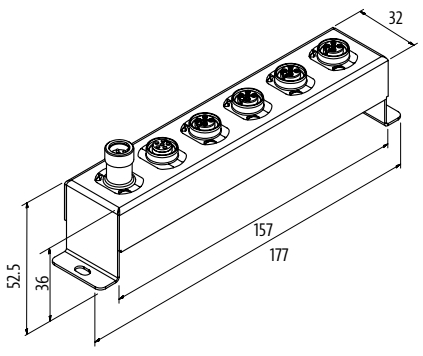
IO-Link

Cube67+ DIO12 IOL4 - E 8×M12 HD

Expansion module
IO-Link Master



Order Data	Art-No.
DIO12/IOL4 - (E) 8×M12	**5676660**
Internal communication	
Current consumption	max. 100 mA
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)
Connections	
Fieldbus	via internal system connection
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)
I/O ports	M12 (female) 5-pole, A-coded
IO-Link	
IO-Link	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)
Transfer parameters	32 Byte (via IO-Link Port)
Port class	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (port 0...3); max. 700 mA (port 4...7)
Type	for 3-wire sensors or mechanical switches, PNP
Input filter	1 ms
Output	
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Parameterization	
PIN 2	Input/Output/Diagnostic
PIN 4	Input/Output (port 0...3); IO-Link Master (port 4...7)
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	yes
Short-circuit and overload	yes
Actuator warning	per channel via LED and BUS
General data	
Protection	IP69K
Mounting method	2-hole screw mounting
Temperature range	0...+55 °C (storage temperature -20...+75 °C)
Dimension drawing	



Hygienic Design

– multifunctional

– IP69K

Cube67 DIO8 E - 4×M12 HD

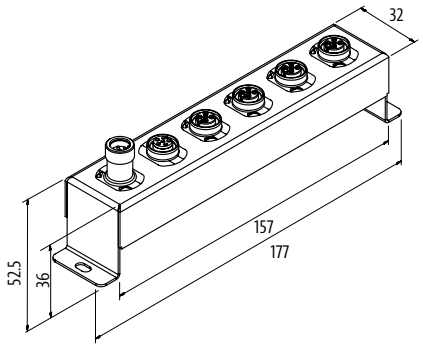
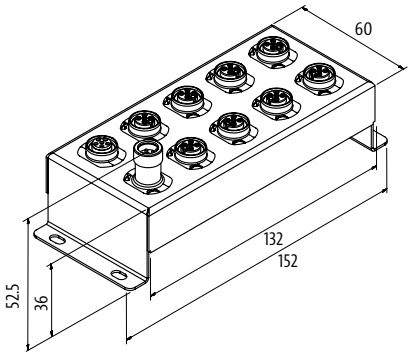
Expansion module



Cube67 DIO16 E - 8×M12 HD

Expansion module



Order Data	Art-No.	Art-No.
DIO8 - 0.5 A (E) 4×M12	**5661160**	
DIO16 - 0.5 A (E) 8×M12		**5660160**
Internal communication		
Current consumption	max. 50 mA	
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)	
Connections		
Fieldbus	via internal system connection	
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)	
I/O ports	M12 (female) 5-pole, A-coded	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Input filter	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Parameterization		
PIN 2	Input/Output/Diagnostic	
PIN 4	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	yes	
Short-circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
General data		
Protection	IP69K	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+75 °C)	
Dimension drawing		
		
Notes		

Digital outputs

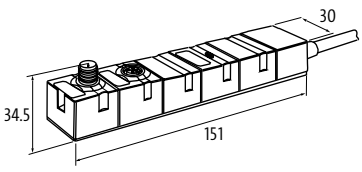
– with open ended wires

Approvals: cULus Listed

	Cube67 DO8 - Valve	Cube67 DO16 - E Valve	Cube67 DO32 - E Valve
	Expansion module	Expansion module	Expansion module



Order Data	Art-No.	Art-No.	Art-No.
DO8 - 0.5 A (E) 0.5 m (open cable)	**56655**		
DO16 - 60 mA (E) 0.5 m (open cable)		**56651**	
DO32 - 0.5 A (E) 0.5 m (open cable)			**56656**
Internal communication			
Current consumption	max. 50 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Open cable		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 60 mA (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Cables			
No./diameter of wires	10 × 0.34 mm²	18 × 0.25 mm²	36 × 0.14 mm²
Material (jacket)	PUR	PVC	
Cable length	0.5 m		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

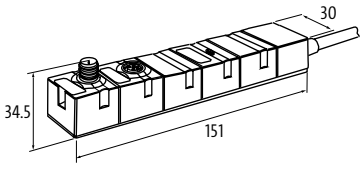
Digital inputs/outputs (multifunctional)

Cube67 DIO8 E - Cable

Expansion module



Order Data		Art-No.	Art-No.
DIO8 - 60 mA (E) 0.5 m (open cable)	cULus	**56661**	
DIO8 - 60 mA (E) 2 m (open cable)			**5666100**
Internal communication			
Current consumption	max. 30 mA		
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Open cable		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 1.6 A		
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 60 mA (short-circuit and overload protected)		
Cables			
No./diameter of wires	10 × 0.34 mm²		
Material (jacket)	PVC		
Cable length	0.5 m		2.0 m
Parameterization			
I/O channels	Input/Output		
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes	

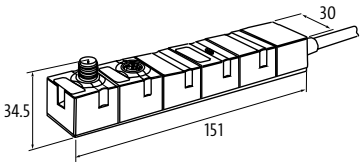
Digital inputs/outputs (multifunctional)

Cube67 DIO16 E - Cable
Expansion module

Cube67 DI16 DO16 E - Cable
Expansion module



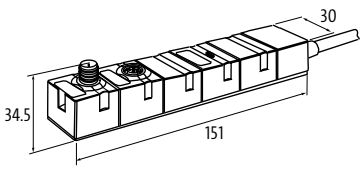
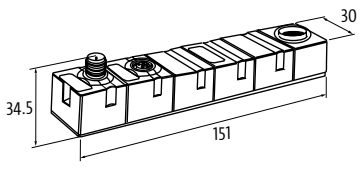
Order Data	Art-No.	Art-No.	Art-No.
DIO16 - 0.5 A (E) 0.5 m (open cable)	cULus **56662**		
DIO16 - 0.5 A (E) 1.5 m (open cable)		**5666200**	
DI16/DO16 - 0.5 A (E) 0.5 m (open cable)			**56671**
Internal communication			
Current consumption	max. 30 mA		max. 50 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Open cable		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 0.5 A		24 V DC (EN 61131-2), max. 0.2 A
Type	for 3-wire sensors or mechanical switches, PNP		
Input filter	1 ms		
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)		
Cables			
No./diameter of wires	20 × 0.14 mm²		36 × 0.14 mm²
Material (jacket)	PVC		
Cable length	0.5 m	1.5 m	0.5 m
Parameterization			
I/O channels	Input/Output		–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			



Notes

Digital inputs/outputs (multifunctional)

– Digital outputs

	Cube67 DO7 - E Cable M12 for Modlight70 Pro basic Expansion module	Cube67 DIO8 E - Cable M12 Expansion module	Cube67 DIO8 - E M16 female Expansion module
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
DO7 - 0.5 A (E) 0.5 m (M12)	Modlight70 Pro - M12 (female) 8-pole **5665503**		
DIO8 - 60 mA (E) 0.5 m (M12)		cULus **5666201**	
DIO8 - 0.5 A (E) M16			cULus **56663**
Internal communication			
Current consumption	max. 50 mA		max. 30 mA
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)		
Connections			
Fieldbus	via internal system connection		
Sensor-system/actuator supply	via internal system connection (max. 2×4 A)		
I/O ports	Modlight70 Pro - M12 (female) 8-pole	M12 (male) 5-pole, A-coded	M16 (female)
Input			
Sensor supply US	–	24 V DC (EN 61131-2), max. 0.5 A	24 V DC (EN 61131-2), max. 200 mA
Type	–	for 3-wire sensors or mechanical switches, PNP	
Input filter	–	1 ms	
Output			
Actuator supply UA	24 V DC (EN 61131-2), via system connection (max. 4 A)		
Switching current per output	max. 0.5 A (short-circuit and overload protected)	max. 60 mA (short-circuit and overload protected)	max. 0.5 A (short-circuit and overload protected)
Cables			
No./diameter of wires	8 × 0.25 mm²		–
Material (jacket)	PUR		–
Cable length	0.5 m		–
Parameterization			
I/O channels	7 outputs	Input/Output	
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module		
Diagnostic via BUS	per module and channel		
Monitoring - under voltage	yes		
Monitoring - no voltage	yes		
Short-circuit and overload	yes		
Actuator warning	per channel via BUS		
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	0...+55 °C (storage temperature -20...+75 °C)		
Dimension drawing			
			
Notes			

Safe outputs (Safety)

– passive safety

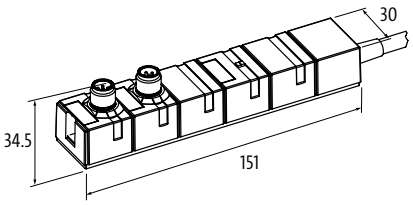
– Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Cube67 DO16 - C Valve (K3)
Compact module

Cube67 DO8 - C Valve (K3)
Compact module

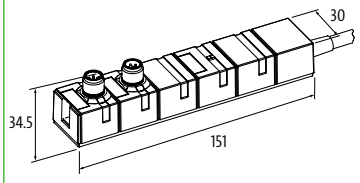
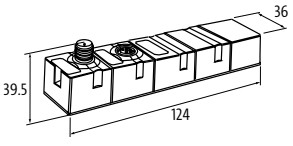


Order Data		Art-No.		Art-No.
DO16 - 0.5 A Valve (C) 0.5 m (K3)	FESTO - CPV (SUB-D25) – cULus	**56650**		
DO8 - 0.5 A Valve (C) 0.5 m (K3)			FESTO - CPV (SUB-D9)	**5665003**
Internal communication				
Current consumption	max. 50 mA			
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)			
Connections				
Fieldbus	via internal system connection			
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)			
I/O ports	FESTO - CPV (SUB-D25)		FESTO - CPV (SUB-D9)	
Output				
Actuator supply UA	24 V DC (EN 61131-2), max. 4 × 2 A			
Switching current per output	max. 0.5 A (short-circuit and overload protected)			
Cables				
No./diameter of wires	4×4×0.14 mm²			
Material (jacket)	PVC, cross-link safe			
Cable length	0.5 m			
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module			
Diagnostic via BUS	per module and channel			
Monitoring - under voltage	yes			
Monitoring - no voltage	yes			
Short-circuit and overload	yes			
Actuator warning	per channel via BUS			
General data				
Protection	IP67			
Mounting method	2-hole screw mounting			
Temperature range	0...+55 °C (storage temperature -20...+70 °C)			
Dimension drawing				



Notes

Digital outputs

	Cube67 DO16 - C Valve Compact module (4 × actuator supply UA)		Cube67 DO32 - E Valve Expansion module		Cube67 DO16 - E Valve Expansion module	
						
Order Data		**Art-No.**		**Art-No.**		**Art-No.**
DO16 - 0.5 A Valve (C) 0.5 m	SMC - SUB-D25	**5665000**				
	SMC - Series SV/VQ	**5665002**				
	FESTO - MPA (SUB-D25)	**5665001**				
	FESTO - CPV (SUB-D25)	**5665004**				
DO32 - 0.5 A Valve (E)			MAC - SUB-D44	**56657**		
DO16 - 0.5 A Valve (E)					MAC - SUB-D44	**56653**
Internal communication						
Current consumption	max. 50 mA					
LED display	US: sensor supply and internal supply voltage (green: OK); UA: actuator supply (green: OK)					
Connections						
Fieldbus	via internal system connection					
Sensor-system/actuator supply	via internal system connection (max. 1×4 A) / actuators via external cable (max. 4×2 A)		via internal system connection (max. 2×4 A)			
I/O ports	SMC - SUB-D25		MAC - SUB-D44			
Output						
Actuator supply UA	24 V DC (EN 61131-2), max. 4 × 2 A		24 V DC (EN 61131-2)			
Switching current per output	max. 0.5 A (short-circuit and overload protected)					
Cables						
No./diameter of wires	4×4×0.14 mm²		–			
Material (jacket)	PVC, cross-link safe		–			
Cable length	0.5 m		–			
Diagnostic						
Communication status	via LED					
Diagnostic via LED	per module					
Diagnostic via BUS	per module and channel					
Monitoring - under voltage	yes					
Monitoring - no voltage	yes					
Short-circuit and overload	yes					
Actuator warning	per channel via BUS					
General data						
Protection	IP67					
Mounting method	2-hole screw mounting					
Temperature range	0...+55 °C (storage temperature -20...+70 °C)					
Dimension drawing						
						
Notes						

Versions			Art-No.
	**based of: Art.-No. 56655**		
	Multipole plug (70 mA)	FESTO - CPV	**5665500**
	Multipole plug (70 mA)	FESTO - CPV (SUB-D9)	**5665501**
	Multipole plug (0.5 A)	FESTO - MPA	**5665502**
	**based of: Art.-No. 56651**		
	Multipole plug (70 mA)	SMC - Series SV/VQ	**5665119**
	Multipole plug (0.5 A)	SMC - Series SV/VQ	**5665120**
	Multipole plug (0.5 A)	FESTO - CPV-VA (SUB-D25)	**5665151**
	**based of: Art.-No. 56651**		
	Multipole plug (70 mA)	FESTO - CPV (cULus-Listed)	**5665100**
	Multipole plug (70 mA)	PARKER - Series V	**5665101**
	Multipole plug (70 mA)	NORGREN - V20/22	**5665110**
	Multipole plug (70 mA)	NORGREN - VM10	**5665111**
	Multipole plug (70 mA)	NORGREN - V20/22	**5665112**
	Multipole plug (70 mA)	SMC - Series SV/VQ	**5665113**
	Multipole plug (70 mA)	SMC - M27	**5665114**
	Multipole plug (70 mA)	NORGREN - V20/220	**5665115**
	Multipole plug (0.5 A)	MAC Valves	**5665116**
	Multipole plug (70 mA)	FESTO - MPA	**5665118**
	Multipole plug (70 mA)	FESTO - VTSA	**5665105**
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D15)	**5665102**
	Multipole plug (70 mA)	FESTO - CPV-SC (SUB-D26)	**5665103**
	Multipole plug (0.5 A)	HDM (SUB-D25)	**5665106**
	**based of: Art.-No. 56656**		
	Multipole plug (0.5 A)	NORGREN - VM10	**5665600**
	Multipole plug (0.5 A)	FESTO - MPA	**5665601**
	Multipole plug (0.5 A)	AVENTICS - HF03	**5665602**
	Multipole plug (0.5 A)	NORGREN - VM10	**5665603**
	Multipole plug (0.5 A)	SMC - Series SV	**5665604**
	Multipole plug (0.5 A)	FESTO - CPA	**5665605**
	Multipole plug (0.5 A)	AVENTICS - HF04	**5665621**
	Multipole plug (0.5 A)	AVENTICS - HF02/03-LG	**5665606**
	Multipole plug (0.5 A)	SMC - M27	**5665607**
	Multipole plug (0.5 A)	MAC Valves (UL-Listed)	**5665609**
	Multipole plug (0.5 A)	VESTA (SUB-D37)	**5665610**
	Multipole plug (0.5 A)	VESTA (SUB-D25)	**5665611**
	Multipole plug (0.5 A)	FESTO - VTSA	**5665613**
	Multipole plug (0.5 A)	SMC - SUB-D25	**5665614**
	Multipole plug (0.5 A)	FESTO - CPA-SC	**5665615**
	Multipole plug (0.5 A)	FESTO - MPA-L	**5665616**
	Multipole plug (0.5 A)	AVENTICS - HF02/03-LG	**5665617**
	Multipole plug (0.5 A)	Numatics Generation 2000 (UL-Listed)	**5665618**
	Multipole plug (0.5 A)	FESTO - MPA-L	**5665619**
	**based of: Art.-No. 56671**		
	DI16/DO16 - 0.5 A (E) AMP (0.5 m)	with AMP connector 32-pole (female)	**5667100**
	DI16/DO16 - 0.5 A (E) SUB-D37 (0.5 m)	with SUB-D37 (female)	**5667101**
	DI16/DO16 - 0.5 A (E) SUB-D37 (5 m)	with SUB-D37 (female)	**5667102**
	DI16/DO16 - 0.5 A E (0.72 m)	with open ended wires	**5667103**
	DI16/DO16 - 0.5 A E (2 m)	with open ended wires	**5667104**
	DI16/DO16 - 0.5 A E (3 m)	with open ended wires	**5667106**
	DI16/DO16 - 0.5 A E (5 m)	with open ended wires	**5667105**

CUBE67

Labeling accessories			Art-No.
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**
	**Label plates 20 × 8 mm**		
	(20 pieces per plate)	Safety	**55316**

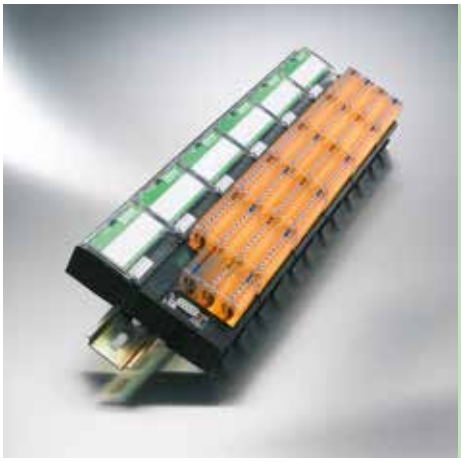
Blind Plug/caps			Art-No.
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**3858627**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**
	Plastic, hex without gasket	Quantity: 4 pcs.	**56952**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**
	**Screw plug 7/8" (for male)**		
	Plastic		**55385**
	**Blind plug diagnostic M12 × 1 mm**		
	Bridge PIN 1 and PIN 2		**7000-13481-0000000**

Connection accessories			Art-No.
	**Ground strap 4 mm²**		
	100 mm for screw (M4)		**4000-71001-0410004**
	**T-coupler M12 – M12**		
	Male straight - female straight straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	**7000-46101-0000000**
	**T-coupler M12/M12, female/male**		
	straight, A-coded, 6-pole, shielded	Cube67 additional actuator power supply	**7000-46091-0000000**

Connection accessories			Art-No.
	**T-coupler 7/8"-7/8", female/male**		
	5-pole		**7000-50061-0000000**
	**Terminator M12 (male)**		
	straight, A-coded, 6-pole	Cube67	**7000-15041-0000000**
	**Control cabinet entry system M12**		
	straight, A-coded, 6-pole, shielded	Cube67	**7000-46111-0000000**
	**Cube67 FSC Connector Set**		
	with mounting socket Han-Brid®, 6-pole - M12, 6-pole	Cable length (120 mm)	**56953**
	**DIN-rail adapter**		
		for bus nodes	**56961**
	**DIN-rail adapter**		
	for extension modules	50 mm	**56962**
	**DIN-rail adapter**		
	for extension modules	30 mm	**56963**
	**Power distributor 4 × M12**		
	for additional actuator supply		**56955**
	**Repeater PROFIBUS DP + PROFIsafe**		
	2 segments		**56960**
	3 segments		**56965**

CUBE67

Connection accessories			Art-No.
	**Male M12, field-wireable, screw terminals**		
	Analog input with integrated compensation	Cube67	**56945**
	**Male M12, field-wireable, screw terminals**		
	Analog input with integrated compensation	Cube67	**56946**
	**Male M12**		
	Internal system connection		**56947**
	**Female M12**		
	Internal system connection with mounting socket		**56948**
	**Female M12**		
	Internal system connection		**56949**



CUBE20
MODULAR I/O STATION IP20

- **High channel density due to compact design**
- **Modular structure**
- **I/O connections with maintenance-free terminals**

INNOVATIVE INSTALLATION TECHNOLOGY

Cube20 is an expandable modular fieldbus I/O system for control cabinets. It can be operated as a stand-alone unit or with a Cube67. Cube20 is consistently designed for the requirements of modern control cabinet wiring. High costs due to handling of many individual components can be reduced to a minimum with Cube20.

PROFIBUS®
PROFINET®
EtherNet/IP™

Cube20 I/O Modules



Bus nodes
- PROFIBUS DP
- PROFINET IO
- EtherNet/IP

Page 4.2.1



System connection to Cube67

Page 4.2.3



Digital inputs

Page 4.2.5



Digital inputs/outputs

Page 4.2.5



Digital outputs

Page 4.2.6



Analog inputs

Page 4.2.8



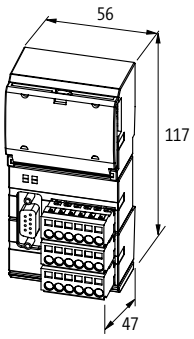
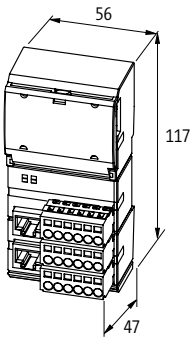
Analog outputs

Page 4.2.10

Bus Nodes

– Digital inputs

Approvals: cULus Listed

	Cube20 BN-P DI8	Cube20 BN-PNIO DI8
	PROFIBUS DP	PROFINET IO
		
Order Data	**Art-No.**	**Art-No.**
PROFIBUS DP	**56001**	
PROFINET IO		**56006**
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
Internal system connection	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 150 mA	
PROFIBUS		
Addressing	Rotary switch 0...99	–
PROFINET		
Addressing	–	DCP
Specification	–	V2.2, Conformance Class B
Cube system		
Module capacity	max. 15	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Machine Option Management	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module	
Type	PNP (EN 61131-2)	
Input filter	1 ms	
Galvanic isolation	500 V DC between I/O and system electronics	
Parameterization		
Terminal row X2 (4 channels)	Input	
Terminal row X3 (4 channels)	Input	
Diagnostic		
Communication status	via LED and BUS	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		
		

Bus Nodes

– Digital inputs

EtherNet/IP

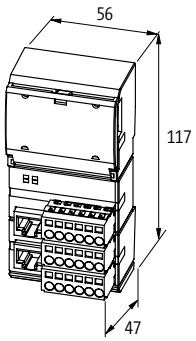
Approvals: cULus Listed

Cube20 BN-E DI8

EtherNet/IP



Order Data	Art-No.
EtherNet/IP	56005
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)
Internal system connection	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm²
Module Supply	
Operating voltage	24 V DC (EN 61131-2)
Current consumption	max. 150 mA
EtherNet/IP	
Addressing	DHCP, BOOTP or IP address by rotary switch
Cube system	
Module capacity	max. 15
I/O capacity	max. 504 Byte (Input), max. 500 Byte (Output)
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module
Type	PNP (EN 61131-2)
Input filter	1 ms
Galvanic isolation	500 V DC between I/O and system electronics
Parameterization	
Terminal row X2 (4 channels)	Input
Terminal row X3 (4 channels)	Input
Diagnostic	
Communication status	via LED and BUS
Diagnostic via LED	per module
Diagnostic via BUS	per module and channel
Monitoring - under voltage	yes
Monitoring - no voltage	no
Short circuit and overload	yes
General data	
Protection	IP20
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0…+55 °C (storage temperature -20…+85 °C)
Dimension drawing	



Notes	

Cube20/67-Interface

– Digital inputs/outputs (multifunctional)

– Cube67

Approvals: c UL us Listed

Cube20 BN-67 DIO8

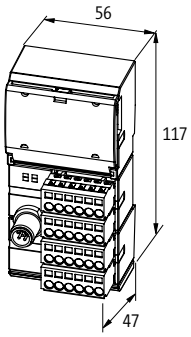
Power external



Cube20 BN-67 DIO8

M12 Power
via internal system connection

Order Data	Art-No.	Art-No.
Cube67 system connection	**56450**	**564501**
Connections		
Fieldbus	M12 (male) 6-pole	M12 (female) 6-pole
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	via internal system connection (max. 2×4 A)
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 100 mA	
Cube system		
Module capacity	max. 3	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module, short-circuit and overload protected	
Type	PNP (EN 61131-2)	
Input filter	1 ms	
Galvanic isolation	500 V DC between I/O and system electronics	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	24 V DC (EN 61131-2), max. 4 A
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between I/O and system electronics	
Lamp load	10 W	
Parameterization		
Terminal row X2 (4 channels)	Input/Output	
Terminal row X3 (4 channels)	Input/Output	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel (only outputs)	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Cube20/67-Interface

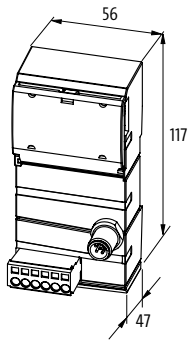
– Cube67

Approvals: c UL us Listed

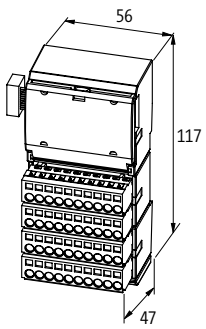
Cube20/67-Interface



Order Data		Art-No.
Cube67 system connection		**56140**
Connections		
Fieldbus	M12 (female) 6-pole	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	8 × Spring clamp plug-in terminals, max. 2.5 mm²	
Module Supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 25 mA	
Cube system		
Module capacity	max. 15	
Sensor supply US	24 V DC (18...30.2 V DC) EN 61131-2, max. 4 A	
Actuator supply UA	24 V DC (18...30.2 V DC) EN 61131-2, max. 4 A	
Diagnostic		
Communication status	via LED	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Digital inputs/outputs	Cube20 DI32 E Expansion module	Cube20 DI16 DO16 E Expansion module
		
Order Data	**Art-No.**	**Art-No.**
DI32 - (E)	cULus **56112**	
DI16/DO16 - (E)		**56168**
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	32 × Spring clamp plug-in terminals, max. 2.5 mm²	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 700 mA per module	
Type	PNP (EN 61131-2)	
Input filter	1 ms	
Galvanic isolation	500 V DC between inputs and internal communication	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A
Galvanic isolation	–	500 V DC between outputs and internal communication
Switching current per output	–	max. 0.5 A (short-circuit and overload protected)
Lamp load	–	10 W
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	per module and channel (only outputs)
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		
		
Notes		

Digital outputs

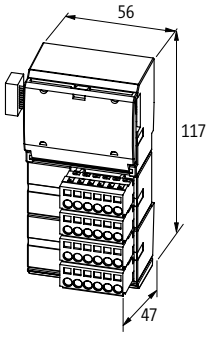
Cube20 DO16 E - 2 A

Expansion module



Approvals: cULus Listed

Order Data		Art-No.
DO16 - 2 A (E)		56117
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm²	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	
Switching current per output	max. 2 A	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	40 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Digital outputs

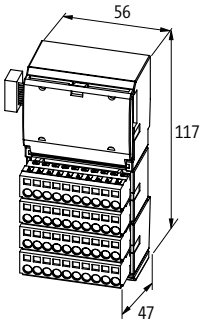
Cube20 DO32 E

Expansion module



Approvals: c UL us Listed

Order Data		Art-No.
DO32 - (E)		56118
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	8 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	32 × Spring clamp plug-in terminals, max. 2.5 mm²	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	10 W	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Analog inputs

– Voltage/current

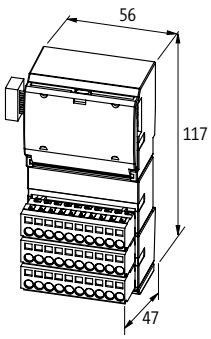
Approvals: c UL us Listed

Cube20 AI4 E

Expansion module
Voltage/current



Order Data		Art-No.
AI4 - (E)		56200
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA from system, max. 60 mA externally (UI)	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	24 × Spring clamp plug-in terminals, max. 2.5 mm²	
Input		
Conversion time (analog)	max. 2 ms (per channel)	
Resolution (analog)	15 Bit + sign	
Accuracy	max. 0.3%	
Connection	Differential voltage/current input	
Voltage inputs		
Input resistor	min. 1 MOhm, (EN 61131-2)	
Input range	±10 V DC, 0...10 V DC	
Current input signals		
Load	max. 300 Ohm (20 mA), (EN 61131-2)	
Input range	0...20 mA, 4...20 mA	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -40...+85 °C)	
Dimension drawing		



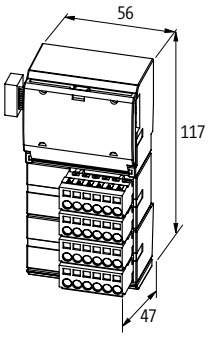
Notes	

Analog inputs

– Temperature converter

Approvals: c UL us Listed

	Cube20 AI4 E RTD	Cube20 AI4 E TH
	Expansion module for resistors and temperature	Expansion module for thermo elements
		
Order Data	**Art-No.**	**Art-No.**
AI4 - (E) RTD	**56230**	
AI4 - (E) TH		**56240**
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA from system, max. 70 mA externally (UI)	max. 25 mA from system, max. 45 mA externally (UI)
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	16 × Spring clamp plug-in terminals, max. 2.5 mm²	12 × Spring clamp plug-in terminals, max. 2.5 mm²
Input		
Conversion time (analog)	max. 600 ms (per channel)	max. 300 ms (per channel)
Type	Pt100, 200, 500; Ni100, 120, 200, 500, 1000, R 0...3000 Ohm	K, N, E, J, R
Resolution (analog)	15 Bit + sign	
Accuracy	0.7...1.4%	max. ±2%, cold junction compensation
Connection	2-wire input: +Rx, -Rx / 3-wire input: +Rx, RLx, -Rx	2-wire input; TH+x, TH-x
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Analog outputs

– Voltage/current

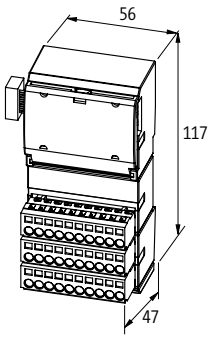
Approvals: c UL us Listed

Cube20 AO4 E

Expansion module
Voltage/current



Order Data		Art-No.
AO4 - (E) U/I		56220
Internal communication		
Module Supply	via system connection	
Current consumption	max. 25 mA from system, max. 90 mA externally (UI), idle load	
Connections		
Fieldbus	Ribbon cable connection	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 2.5 mm² (max. 12 A)	
I/O ports	24 × Spring clamp plug-in terminals, max. 2.5 mm²	
Output		
Conversion time (analog)	max. 1 ms (per channel)	
Resolution (analog)	15 Bit + sign	
Accuracy	max. 0.5%	
Galvanic isolation	500 V DC between inputs and internal communication	
Voltage output signals		
Load	min. 1 kOhm, (EN 61131-2)	
Input range	±10 V DC, 0...10 V DC	
Current outputs		
Load	max. 60 Ohm, (EN 61131-2)	
Input range	0...20 mA, 4...20 mA	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module and channel	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Actuator warning	per channel via LED and BUS	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	
Dimension drawing		



Notes	

Connection accessories			Art-No.
	**Bus Connection Plug 90°**		
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**
	SUB-D9 (female), screw terminals	CANopen	**55760**
	**Bus Connection Plug 180°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55584**
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	**55583**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55585**
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	**55587**
	**Bus Connection Plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	**55586**
	SUB-D9 (male), IDC terminals, flexible cable, programming device conn.	PROFIBUS	**55588**
	**Bus Connection Plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**
	Label-sheet		
	Quantity: 40 pcs.		**56113**
	**Potential terminal block**		
	gray/gray/brown/blue		**56078**
	gray/gray/yellow/blue		**56079**
	yellow/blue/yellow/blue		**56080**
	brown/blue/brown/blue		**56081**
	blue/yellow/brown/blue		**56111**
	gray/gray/gray/gray		**56084**
	blue/blue/blue/blue		**56085**
	brown/brown/brown/brown		**56077**
	brown/brown/blue/blue		**56109**
	blue/yellow		**56110**

CUBE20

Connection accessories			Art-No.
	**Potential terminal block**		
	Multi color		**56083**
	**Potential terminal block**		
	Slim Line		**56082**



CUBE20S
SMALL, SPEEDY, SAFE

- **Extremely modular**
- **Up to 64 modules per bus node**
- **Quick reaction time: up to 20 µs**

A MEMBER OF THE CUBE-FAMILY

Murrelektronik's modular Cube20S I/O system expands the field-tested Cube family with another product line that is extremely useful.

The compact modules are only 12.9 millimeters wide and have modular design, allowing them to be installed in series easily, quickly and according to individual requirements – the integrated backplane bus connects the modules to energy and data.

Bus nodes for Cube20S are available for standard fieldbus protocols.

PROFIBUS®
PROFINET®
EtherNet/IP
EtherCAT®
CANopen
Modbus

Cube20S I/O Modules



Bus nodes/Power modules

Page 4.3.1



Supply module

Page 4.3.4



Digital inputs

Page 4.3.6



Digital outputs

Page 4.3.8



Analog inputs

Page 4.3.11



Analog outputs

Page 4.3.13



Safety modules
- Digital inputs
- Digital outputs

Page 4.3.7/4.3.10

MURR ELEKTRONIK
stay connected

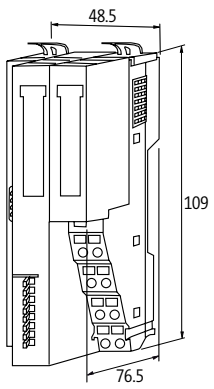
Bus Nodes

– Power module included

PROFIBUS PROFINET

Approvals: cULus Listed

	Cube20S	Cube20S
		
Order Data	**Art-No.**	**Art-No.**
PROFIBUS DP	**57101**	
PROFINET IO		**57106**
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
PROFIBUS		
Addressing	Adress switch 1...125	–
PROFINET		
Addressing	–	DCP
Shared Device/Input	–	yes, for 3 controls
Specification	–	V2.2, Conformance Class B
MRP	–	yes
Cube system		
Module capacity	max. 64	
I/O capacity	max. 244 Byte (Input), max. 244 Byte (Output)	max. 512 Byte (Input), max. 512 Byte (Output)
Machine Option Management	–	yes
Output		
Output voltage (I/Os /Backplane)	24 V DC/5 V DC	
Output current (I/Os /Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Bus Nodes

– Power module included

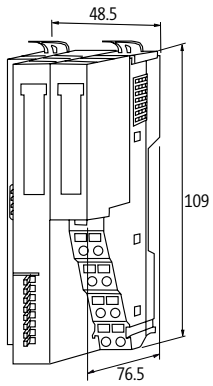
EtherNet/IP EtherCAT

Approvals: cULus Listed

Cube20S



Order Data	Art-No.	Art-No.
EtherNet/IP	**57105**	
EtherCAT		**57103**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; 1 × RJ45 (female)	Ethernet 10/100 Mbit/s; 2 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	–
EtherCAT		
Addressing	–	automatic
Operating modes	–	FreeRun, SyncManager-Event, Distributed Clock, HotConnect
Cube system		
Module capacity	max. 64	
I/O capacity	max. 1024 Byte (Input), max. 1024 Byte (Output)	
Output		
Output voltage (I/Os /Backplane)	24 V DC/5 V DC	
Output current (I/Os /Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	

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stay connected

Bus Nodes

– Power module included

CANopen Modbus

Approvals: cULus Listed

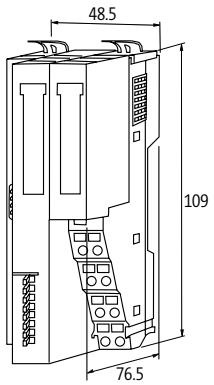
Cube20S



Cube20S



Order Data	**Art-No.**	**Art-No.**
CANopen	**57104**	
Modbus TCP		**57108**
Connections		
Fieldbus	CAN 1 Mbit/s; SUB-D9	Ethernet 10/100 Mbit/s; 1 × RJ45 (female)
Internal system connection	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Sensor-system/actuator supply	4 × Spring clamp plug-in terminals, max. 1.5 mm² (max. 10 A)	
Module supply		
Operating voltage	24 V DC (EN 61131-2)	
Current consumption	max. 95 mA	
CANopen		
Addressing	DIP switch	–
Modbus		
Addressing	–	Webserver
Cube system		
Module capacity	max. 64	
I/O capacity	max. 128 Byte (Input), max. 128 Byte (Output)	max. 1024 Byte (Input), max. 1024 Byte (Output)
Output		
Output voltage (I/Os /Backplane)	24 V DC/5 V DC	
Output current (I/Os /Backplane)	10 A/3 A	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
Actuator warning	no	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (max. 10 A)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	

Power supplies

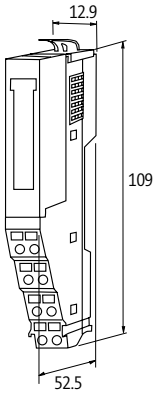
Cube20S

Potential distributor



Approvals: cULus Listed

Order Data	Art-No.	Art-No.	Art-No.
8 × 24 V DC	**57120**		
8 × 0 V DC		**57121**	
4×24 + 4×0 V DC			**57122**
Module supply			
Operating voltage	max. 30 V DC	max. 0 V DC	max. 30 V DC
Total current	max. 10 A		
General data			
Protection	IP20		
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...14)		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

Power supplies

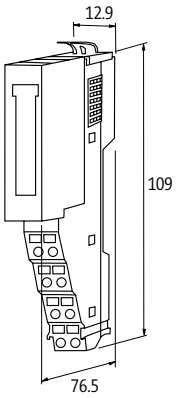
Approvals: c UL us Listed

Cube20S
for external voltage supply



Cube20S
for external voltage supply and internal backplane

Order Data	Art-No.	Art-No.
Power module	**57130**	**57131**
Module supply		
Operating voltage	max. 28.8 V DC	
Total current	max. 10 A	max. 6 A
Output		
Output current (I/Os /Backplane)	10/0 A	4 A/2 A
Output voltage (I/Os /Backplane)	24 V AC	24 V DC/5 V DC
General data		
Protection	IP20	
Connection	Spring clamp terminals: 0.08...2.5 mm² (AWG 28...14)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

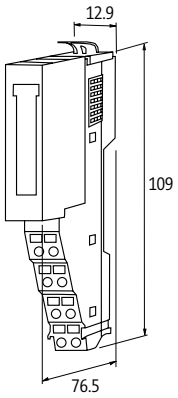
Digital inputs

Cube20S



Approvals: c UL us Listed

Order Data		Art-No.
DI2 - (E) NPN		**57220**
DI4 - (E)		**57240**
DI8 - (E)		**57280**
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA per module	
Type	PNP (EN 61131-2)	
Input filter	3 ms	
Galvanic isolation	500 V DC between inputs and internal communication	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	no	
Monitoring - no voltage	yes	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Safe inputs (Safety)

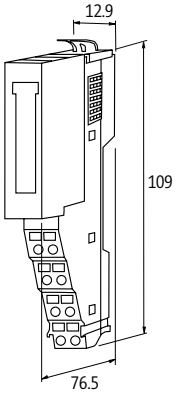
– active safety

Approvals: c UL us Listed

Cube20S FDI4/2



Order Data	Art-No.
FDI4/2 - (E)	57290
Internal communication	
Module supply	via system connection
Current consumption	max. 95 mA
Safety Indicators	
PL	up to e
Category	up to 4
PFH	0.25E-9
DC	high
SIL	up to 3
SIL CL	up to 3
Service life	20 years
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA per module
Type	PNP (EN 61131-2)
Input filter	3 ms
Galvanic isolation	500 V DC between inputs and internal communication
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Short circuit and overload	yes
General data	
Protection	IP20
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+60 °C (storage temperature -20...+70 °C)
Dimension drawing	



Notes

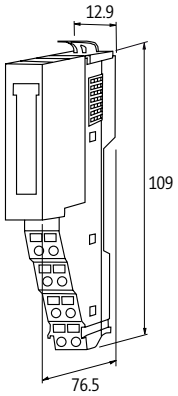
Digital outputs

Cube20S



Approvals: cULus Listed

Order Data		Art-No.
DO2 - (E)		**57320**
DO4 - (E)		**57340**
DO8 - (E)		**57380**
Internal communication		
Module supply	via system connection	
Current consumption	max. 55 mA	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 1 A	
Switching current per output	max. 0.5 A (short-circuit and overload protected)	
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	5 W	
Output delay time	175 ns	
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



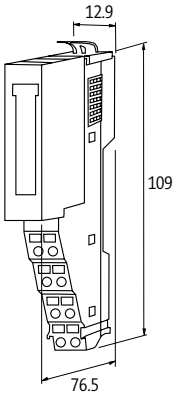
Notes	

Digital outputs

Approvals: cULus Listed



Order Data	Cube20S - 2 A Art-No.	Cube20S - 230 V AC (Relays) Art-No.
DO2 - (E)	**57325**	**57327**
DO4 - (E)	**57345**	
Internal communication		
Module supply	via system connection	
Current consumption	max. 60 mA	max. 130 mA
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	max. 30 V DC/230 V AC
Switching current per output	max. 2 A (short-circuit and overload protected)	max. 3 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication	
Lamp load	10 W	–
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

Safe outputs (Safety)

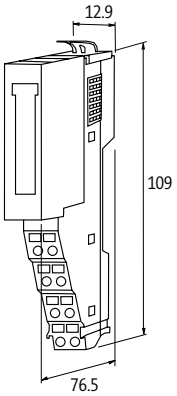
– active safety

Approvals: cULus Listed

Cube20S FDO4/2



Order Data	Art-No.
FDO4/2 - (E)	57390
Internal communication	
Module supply	via system connection
Current consumption	max. 75 mA
Safety Indicators	
PL	up to e
Category	up to 4
PFH	0.22E-9
DC	high
SIL	up to 3
SIL CL	up to 3
Service life	20 years
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 2 A
Switching current per output	max. 0.5 A (short-circuit and overload protected)
Galvanic isolation	500 V DC between outputs and internal communication
Lamp load	5 W
Output delay time	175 µs
Diagnostic	
Communication status	via LED
Diagnostic via LED	per module and channel
Diagnostic via BUS	per module and channel
Short circuit and overload	yes
General data	
Protection	IP20
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)
Mounting method	DIN-rail mountable (EN 60715)
Temperature range	0...+60 °C (storage temperature -25...+70 °C)
Dimension drawing	

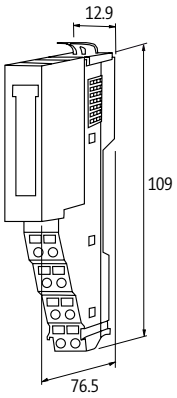


Notes	

Analog inputs

Approvals: c UL us Listed

	Cube20S Voltage	Cube20S Current	Cube20S Voltage
			
Order Data	**Art-No.**	**Art-No.**	**Art-No.**
AI2 - (E)	**57231**	**57232**	**57233**
AI4 - (E)	**57261**	**57262**	**57263**
Internal communication			
Module supply	via system connection		
Current consumption	max. 60 mA from system, max. 25 mA externally (UI)	max. 60 mA from system, max. 15 mA externally (UI)	max. 60 mA from system, max. 25 mA externally (UI)
Input			
Conversion time (analog)	240 µs (all channels)		
Resolution (analog)	15 Bit + sign		
Accuracy	max. ±0.2%	max. 0.3%	max. ±0.2%
Connection	Differential voltage input	Differential current input	Differential voltage input
Voltage inputs			
Input resistor	200 kOhm	–	200 kOhm
Input range	0...10 V	–	-10 V DC...+10 V DC
Current input signals			
Load	–	max. 60 Ohm, (EN 61131-2)	–
Input range	–	0...20 mA, 4...20 mA	–
Diagnostic			
Communication status	via LED		
Diagnostic via LED	per module and channel		
Diagnostic via BUS	per module		
Monitoring - under voltage	yes		
Monitoring - no voltage	no		
Short circuit and overload	yes		
Wire break upper/lower limit overload	per module via LED and BUS		
General data			
Protection	IP20		
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)		
Mounting method	DIN-rail mountable (EN 60715)		
Temperature range	0...+60 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

Analog inputs

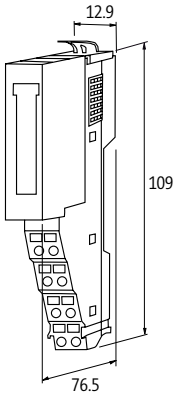
Cube20S (TH)
for thermo elements



Cube20S (RTD)
for resistors and temperature

Approvals: cULus Listed

Order Data	Art-No.	Art-No.
AI2 - (E)	**57230**	
AI4 - (E)		**57265**
Internal communication		
Module supply	via system connection	
Current consumption	max. 75 mA from the system, max. 30 mA externally (UI)	max. 75 mA
Input		
Conversion time (analog)	max. 4.2...324.1 ms, 50 Hz (per channel)	
Type	B, C, E, J, K, L, N, R, S, T	Pt100, Pt1000, Ni100, Ni1000, R 0...3000 Ohm
Resolution (analog)	15 Bit + sign	
Accuracy	max. ±0.3%, cold junction compensation	0.7...1.4%
Connection	2-wire input; TH+x, TH-x	2-wire (4 input); 3-, 4-wire (2 input)
Diagnostic		
Communication status	via LED	
Diagnostic via LED	per module and channel	
Diagnostic via BUS	per module	
Monitoring - under voltage	yes	
Monitoring - no voltage	no	
Short circuit and overload	yes	
Wire break upper/lower limit overload	per channel via LED and BUS	
General data		
Protection	IP20	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	
Mounting method	DIN-rail mountable (EN 60715)	
Temperature range	0...+55 °C (storage temperature -20...+85 °C)	0...+60 °C (storage temperature -25...+70 °C)
Dimension drawing		



Notes	

Analog outputs

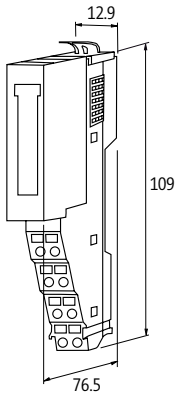
Cube20S

Voltage



Approvals: c UL us Listed

Order Data	Art-No.	Art-No.	Art-No.	Art-No.
AO2 - (E)	**57331**		**57333**	
AO4 - (E)		**57361**		**57363**
Internal communication				
Module supply	via system connection			
Current consumption	max. 60 mA from system, max. 25 mA externally (UI), idle load			
Output				
Conversion time (analog)	200 µs (all channels)			
Resolution (analog)	15 Bit + sign			
Accuracy	max. 0.5%		max. 0.2%	
Galvanic isolation	500 V DC between inputs and internal communication			
Voltage output signals				
Load	5 kOhm			
Input range	0...10 V		-10 V DC...+10 V DC	
Diagnostic				
Communication status	via LED			
Diagnostic via LED	per module and channel			
Diagnostic via BUS	per module			
Monitoring - under voltage	yes			
Monitoring - no voltage	no			
Short circuit and overload	yes			
Actuator warning	per module via LED and BUS			
Wire break upper/lower limit overload	per module via LED and BUS			
General data				
Protection	IP20			
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)			
Mounting method	DIN-rail mountable (EN 60715)			
Temperature range	0...+60 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Connection accessories			Art-No.
	**Bus cover**		
	Black plastic		**57190**
	**Shield bus carrier**		
	Black plastic	Quantity: 10 pcs.	**57191**
	**Bus connection plug 90°**		
	SUB-D9 (male), screw terminals	PROFIBUS	**55762**
	SUB-D9 (female), screw terminals	CANopen	**55760**
	**Bus connection plug 180°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55584**
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	**55583**
	**Bus connection plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable	PROFIBUS	**55585**
	SUB-D9 (male), IDC terminals, flexible cable	PROFIBUS	**55587**
	**Bus connection plug 90°**		
	SUB-D9 (male), IDC terminals, rigid cable, programming device conn.	PROFIBUS	**55586**
	SUB-D9 (male), IDC terminals, flexible cable, programming device conn.	PROFIBUS	**55588**
	**Bus connection plug 90°**		
	SUB-D9 (male); M12 × 1, B-coded	PROFIBUS	**7000-99441-0000000**



MVK METAL
COMPACT I/O MODULES FOR DEMANDING REQUIREMENTS

- **Tough and reliable**
- **Safe (safety circuits according to EN 13849-1 up to PLe)**
- **PROFINET – versions compliant with AIDA**

MAXIMUM FLEXIBILITY

MVK Metal features a robust metal housing and is extremely resistant to vibration, media, and weld splatter.

- Double valves occupy only one M12 port
- PROFINET versions with Fast Start Up (< 500 ms)
- Models with multi-functional I/Os
- Fewer variations required, minimizes inventory costs
- Maximum flexibility for expansions

DON'T LOOK FOR ERRORS, FIND THEM

MVK Metal's diagnostic options offer detailed information about the type and location of the failure or the error.

- Only the affected port shuts down, not the whole module
- Detailed message sent to controls and device LED
- Minimizes downtime – failures are fixed faster

PROFIBUS
PROFINET
EtherNet/IP
PROFIsafe
IO-Link

MVK Metal I/O Modules



MVK-MP
- Multifunctional I/Os
- Digital I/Os
- Safety outputs
- Analog I/Os

PROFIBUS

Page 4.4.1



MVK-MPNIO
- Multifunctional I/Os
- Digital I/Os
- Push Pull
- IO-Link
- Safety inputs/outputs

PROFINET
PROFIsafe
IO-Link

Page 4.4.6



MVK-ME
- Multifunctional I/Os
- IO-Link

EtherNet/IP
IO-Link

Page 4.4.14



MIRO BT
- Bluetooth Master/Slave

PROFINET

Page 4.4.16

Expanded diagnostic

– 7/8"

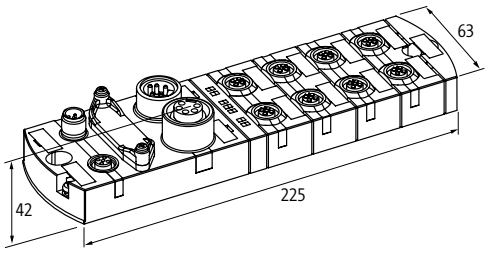
PROFIBUS

Approvals: cULus Listed

MVK-MP



Order Data	Art-No.	Art-No.	Art-No.
DI8 (DI8)	**55307**		
DIO8 (DI8)		**55308**	
DIO8 (DIO8)			**55309**
Connections			
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded		
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A		
I/O ports	M12, 5-pole, A-coded		
PROFIBUS			
Addressing	Rotary switch 1...99		
Input			
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		
Type	for 3-wire sensors or mechanical switches, PNP		
Output			
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	–	max. 1.6 A (short-circuit and overload protected)	
Lamp load	–	10 W	
Parameterization			
PIN 4	Input	Input/Output	
PIN 2	Input/Diagnostic		Input/Output/Diagnostic
General data			
Protection	IP67		
Mounting method	2-hole screw mounting		
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)		
Dimension drawing			



Notes

Expanded diagnostic

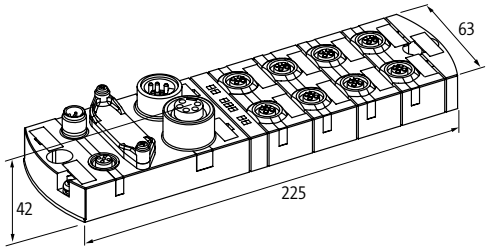
– 7/8"

PROFIBUS

MVK-MP



Order Data	Art-No.	Art-No.
DO8 (DO8)	**55290**	
DO4 (DO4) DI4 (DI4)		**55274**
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFIBUS		
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	–	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	–	for 3-wire sensors or mechanical switches, PNP
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

MURR ELEKTRONIK
stay connected

Expanded diagnostic

– passive safety

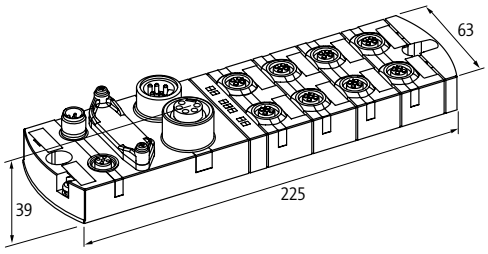
– Output groups up to PLd (EN ISO 13849-1) can be switched off via safety relays

Approvals:

MVK-MP Safety



Order Data		Art-No.
K3 DO4 (DO4) DIO4 (DIO4)		55291
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	
I/O ports	M12, 5-pole, A-coded	
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, safe circuits (1 + 2) via separate 7/8" supply (yellow), 2-pole disconnectable	
PROFIBUS		
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), 3 circuits, (max. 9 A)	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Safe output		
Switching current by safe output	max. 2 A short-circuit and overload protected, (EN13849-1) PLd	
M12-(yellow) PIN 4	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd	
M12-(yellow) PIN 2	2 safety circuits (UA1/UA2) with 2 digital outputs each (EN13849-1) PLd	
Parameterization		
PIN 4	4 × input/output	
PIN 2	4 × Input/Output/Diagnostic	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Expanded diagnostic

– Analog outputs

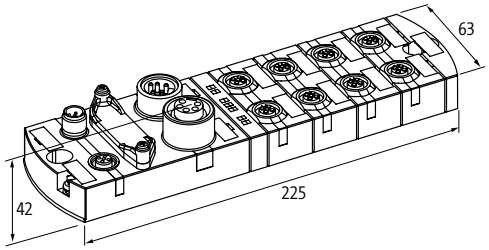
– Current

Approvals: cULus Listed

MVK-MP



Order Data		Art-No.
AO4 (I) DIO4 (DIO4)		55292
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFIBUS		
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Input range (analog)	0...20 mA, 4...20 mA (0...10 V via adapter Art.-No. 7000-42252-0000000)	
Conversion time (analog)	1 ms	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Expanded diagnostic

– Analog inputs

– Voltage

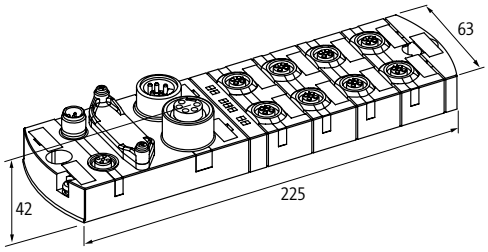
PROFIBUS

Approvals: cULus Listed

MVK-MP



Order Data		Art-No.
AI4 (U) DIO4 (DIO4)		55293
Connections		
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFIBUS		
Addressing	Rotary switch 1...99	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Resolution (analog)	16 Bit	
Input range (analog)	0...10 V, (0...20 mA and 4...20 mA via adapter Art.-No. 7000-42251-0000000)	
Input resistor (analog)	approx. 1 MOhm, differential input	
Conversion time (analog)	1 ms	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Lamp load (8×M12 left)	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Galvanic isolation K3

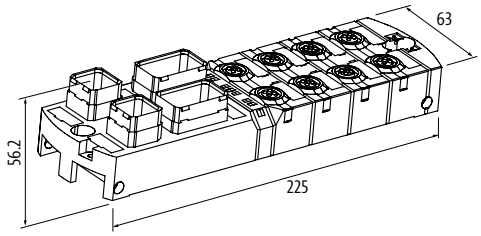
– POF Push Pull

Approvals: cULus Listed

MVK+ MPNIO POF



Order Data	Art-No.	Art-No.
DI8 DI8 IRT	**55254**	
DI8 DO8 IRT		**55255**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; 2 × SCRJ45 POF-Push Pull	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Parameterization		
PIN 4	Input	Input (port 4...7); Output (port 0...3)
PIN 2	Input	Input (port 4...7); Output (port 0...3)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

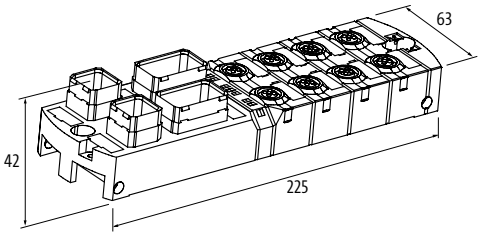
Galvanic isolation K3

– Push Pull

MVK+ MPNIO



Order Data	Art-No.	Art-No.
DI8 DI8 IRT	**55528**	
DI8 DO8 IRT		**55529**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 12 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Lamp load	–	10 W
Parameterization		
PIN 4	Input	Input (port 4...7); Output (port 0...3)
PIN 2	Input	Input (port 4...7); Output (port 0...3)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes

Galvanic isolation K3

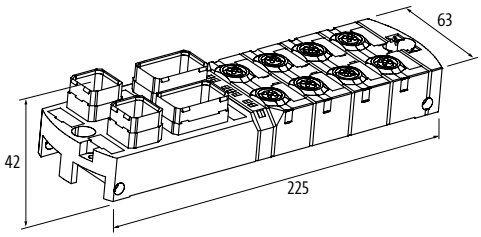
– Push Pull

PROFINET

MVK+ MPNIO



Order Data		Art-No.
DIO8 (DIO8)		55283
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Specification	V2.2, Conformance Class B	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 12 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output	
PIN 2	Input/Output/Diagnostic	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	0...+55 °C (storage temperature -20...+70 °C)	
Dimension drawing		



Notes	

Galvanic isolation K3

– FSU (Fast-Start-Up)

– 7/8"

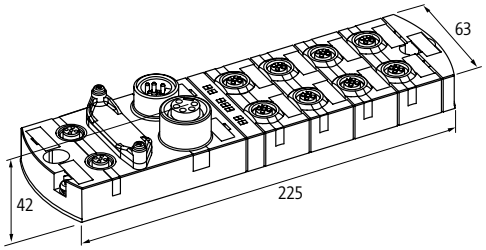
PROFINET

Approvals: cULus Listed

MVK+ MPNIO



Order Data		Art-No.
DO8 (DI4 DI4)		55339
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, max. 9 A, protection against reverse polarization	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Specification	V2.2, Conformance Class B	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 2 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input (port 4...7); Output (port 0...3)	
PIN 2	Input (port 4...7); Output (port 0...3)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	

FSU (Fast-Start-Up)

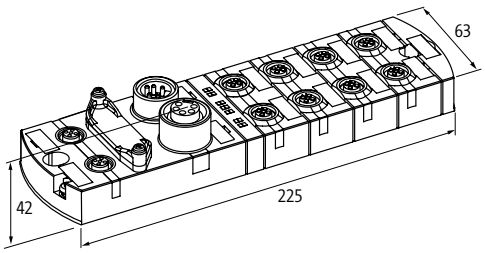
– 7/8"

PROFINET

MVK-MPNIO



Order Data		Art-No.
DIO16 IRT		55530
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	

FSU (Fast-Start-Up)

– 7/8"

PROFINET IO-Link

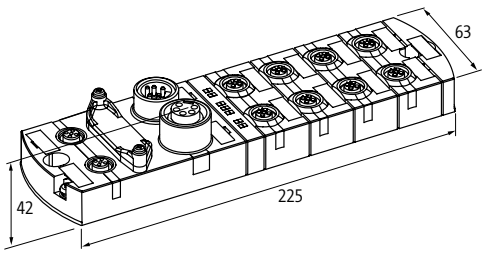
MVK-MPNIO IO-Link



MVK-MPNIO IO-Link



Order Data	**Art-No.**	**Art-No.**
DIO14 IOL2 IRT	**55531**	
DIO12 IOL4 IRT		**55532**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input (port X0...X7); Output (port X0...X5); IO-Link Master (port X6, X7)	Input (port X0...X7); Output (port X0...X3); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+60 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes	

Active safety

– safe inputs/outputs up to cat.4/PLe (EN ISO 13849-1), up to SIL3 (IEC 61508), up to SILCL3 (IEC 62061)

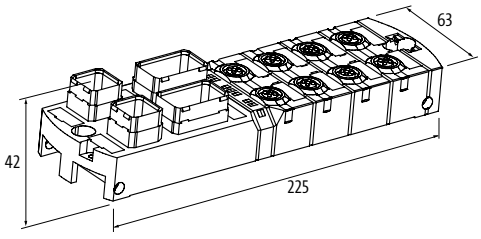
Approvals:

MVK-MPNIO Safety

Push Pull



Order Data	Art-No.	Art-No.
DI16/8 F	**55562**	
DI8/4 F DO4		**55563**
Safety Indicators		
PL	up to e	
Category	up to 4	
PFH	1.70E-9	1.653E-9
DC	98%	
SIL	up to 3	
SIL CL	up to 3	
Service life	20 years	
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; Push Pull RJ45 Data connector	
Sensor-system/actuator supply	Power plug, Push Pull, max. 12 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Shared Device/Input	yes, for 2 controls	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronical sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes	

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Active safety

– **safe inputs/outputs up to cat.4/PLe (EN ISO 13849-1), up to SIL3 (IEC 61508), up to SILCL3 (IEC 62061)**

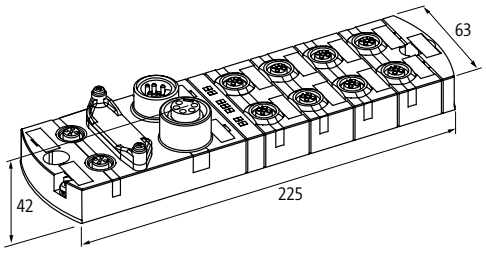
Approvals: c UL us Listed

MVK-MPNIO Safety

7/8"



Order Data	Art-No.	Art-No.
DI16/8 F IRT	**55556**	
DI8/4 F DO4 IRT		**55557**
Safety Indicators		
PL	up to e	
Category	up to 4	
PFH	1.70E-9	1.653E-9
DC	98%	
SIL	up to 3	
SIL CL	up to 3	
Service life	20 years	
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Shared Device/Input	yes, for 2 controls	
Specification	V2.2, Conformance Class C (IRT)	
MRP	yes	
Addressing	DCP	
Safety input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (PIN 1+5), short-circuit and overload protected, or max. 700 mA for only one PIN	
Type	for electronical sensors or mechanical switches	
Safe output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current by safe output	–	max. 2 A (short-circuit and overload protected)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+55 °C (storage temperature -40...+70 °C)	
Dimension drawing		



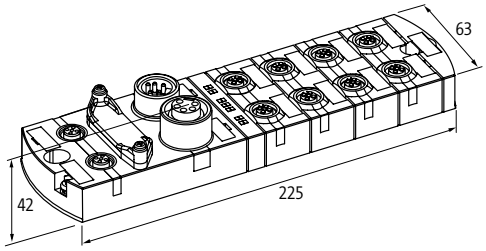
Notes

Expanded diagnostic

– 7/8"

EtherNet/IP

Approvals: cULus Listed, cCSAus

	MVK-ME DIO8 (DIO8) DLR (Device Level Ring)	**MVK-ME** DIO16 DLR (Device Level Ring)
		
Order Data	**Art-No.**	**Art-No.**
DIO8 (DIO8)	**55099**	
DIO16		**55542**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	7/8", 4-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	DHCP, BOOTP or IP address by DIP switch
DLR (Device Level Ring)	yes	
QC (Quick Connect)	–	max. 360 ms
Multiple connections	–	yes
CIP Sync	–	yes
Composite Test Revision	–	CT14
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	-25...+60 °C (storage temperature -40...+85 °C)
Dimension drawing		
		
Notes		

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Expanded diagnostic

– 7/8"

EtherNet/IP IO-Link

Approvals: cULus Listed cCSAus

MVK-ME IO-Link

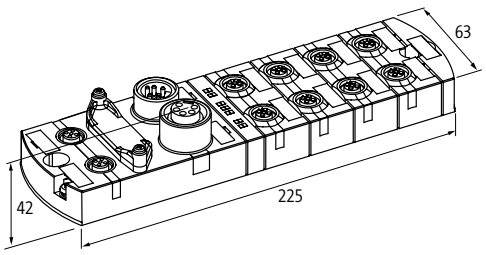
DIO14 IOL2
DLR (Device Level Ring)

MVK-ME IO-Link

DIO12 IOL4
DLR (Device Level Ring)



Order Data	Art-No.	Art-No.
DIO14 IOL2	**55543**	
DIO12 IOL4		**55544**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 4-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by DIP switch	
QC (Quick Connect)	max. 360 ms	
Multiple connections	yes	
CIP Sync	yes	
Composite Test Revision	CT14	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7); IO-Link Master (port X6, X7)	Input/Output (port X0...X7); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X4...X7)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes	

Accessories for MVK PROFINET

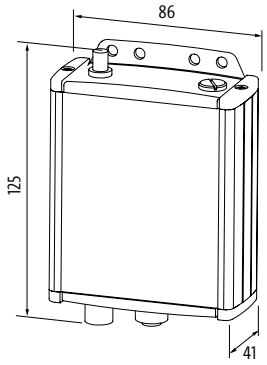
– Wireless transmission

MIRO BT

Bluetooth Master/Slave
PROFINET



Order Data	Art-No.
Master/Slave	57018
Connections	
Fieldbus	Ethernet 10/100Mbit/s; M12, D-coded
Supply	M12, 5-pole, A-coded
Technical Data	
Operating voltage	24 V DC (EN 61131-2)
Operating current	max. 150 mA
Wireless technology	
Frequency	2.4 GHz Bluetooth
Transmission power	100 mW
No. of wireless slaves/devices	max. 4/max. 6
Coverage indoor	100 m
Coverage outdoor	300 m
Antenna connection	SMA (50 Ohm)
General data	
Standards	approved in: BE, DK, DE, EE, FI, FR (restricted), GR, GB, IE, IS, IT, CA, LV, LT, LU, MT, NL, NO (without Spitzbergen), AT, PL, PT, SE, CH, SK, SI, ES, CZ, HU, US, CY
Housing	Metal black
Protection	IP65
Mounting method	screw fixing, M4
Temperature range	-20...+60 °C (storage temperature -40...+75 °C)
Dimension drawing	



Notes	

Blind Plug/caps			Art-No.
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**
	**Blind cap 7/8"**		
	Metal		**55390**
	**Blind plug diagnostic M12 × 1 mm**		
	Bridge PIN 1 and PIN 2		**7000-13481-0000000**
	**Addressing cap**		
	Metal		**55317**
Labeling accessories			**Art-No.**
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**
Connection accessories			**Art-No.**
	**Adapter**		
	Current /voltage converter		**7000-42251-0000000**
	Voltage/current converter		**7000-42252-0000000**
	**MVK Push Pull**		
	Dust Protection Set		**553260**
	**Ground strap 4 mm²**		
	100 mm for screw (M4)		**4000-71001-0410004**
	**Screw plug M23**		
	Metal		**55352**
	**Adapter plug M12/M12 for inputs**		
			7030-42291-0000000

MVK METAL

Connection accessories			Art-No.
	**T-coupler (Slim Line)**		
	Male straight - female/male straight M12 - M12, 4-pole for 8-pole units	AIDA conform Connection cable L = 200 mm	**7030-42602-0000000**
	**T-coupler (Slim Line)**		
	Male straight - female/male straight M12 - M12, 2-pole	AIDA conform Connection cable L = 200 mm	**7030-42612-0000000**
	**T-coupler (SlimLine) M12 - M12**		
	5-pole		**7000-41155-0000000**
	**Cable fixation 8×M12**		
	Cable diameter (4...7 mm)		**55554**



SOLID67
COMPACT I/O-MODULES

- **Shorter installation times and Using all slots**
- **Minimizing space requirements**
- **Simplifying storage**

PROTOCOL CHANGE IN THE BLINK OF AN EYE

SOLID67 are the new compact I/O modules from Murrelektronik. They make installation in the field easier and are very attractive for applications with IO-Link sensors and actuators. They provide eight IO-Link slots directly adjacent to the process and can easily incorporate classic IOs into the system.

Full encapsulation and impressive vibration and shock values (15 and 50 G) prepare the modules for use in harsh industrial environments – within a temperature range of –20 to +70 °C. This opens a door to numerous applications. Comprehensive diagnostic options at the module, through the control unit, and through an integrated web server, make trouble-shooting a simple exercise.

PROFINET

EtherNet/IP

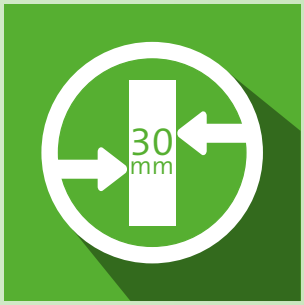
IO-Link



Shorter installation times



Using all slots



Minimizing space requirements



Simplifying storage

SOLID67 I/O-Modules



SOLID67 PN/E 60 mm
• Multi protocol

PROFINET
EtherNet/IP

Page 4.5.1



SOLID67 PN/E 60 mm
• Multi protocol
• IOL8

PROFINET
EtherNet/IP
IO-Link

Page 4.5.3



SOLID67 PN/E 30 mm
• Multi protocol
• IOL8

PROFINET
EtherNet/IP
IO-Link

Page 4.5.4

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Multi protocol

PROFINET® EtherNet/IP™

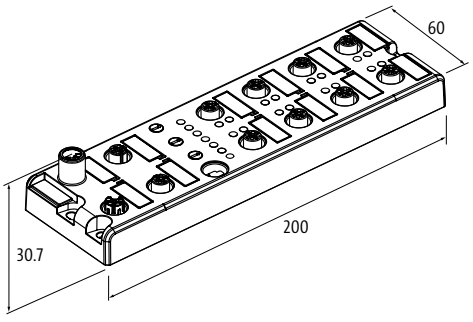
Approvals: c UL us Listed

SOLID67 PN/E

60 mm



Order Data	Art-No.	Art-No.
DI16	**54500**	
DI8 DO8		**54501**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Addressing	DCP	
Shared Device/Input	–	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
QC (Quick Connect)	max. 500 ms	
DLR (Device Level Ring)	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	–	24 V DC (EN 61131-2), max. 9 A
Switching current per output	–	max. 2 A (short-circuit and overload protected)
Parameterization		
PIN 4	Input (port X1...X8)	Input (port X1...X4); Output (port X5...X8)
PIN 2	Input (port X1...X8)	Input (port X1...X4); Output (port X5...X8)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



Notes

Multi protocol

PROFINET® EtherNet/IP™

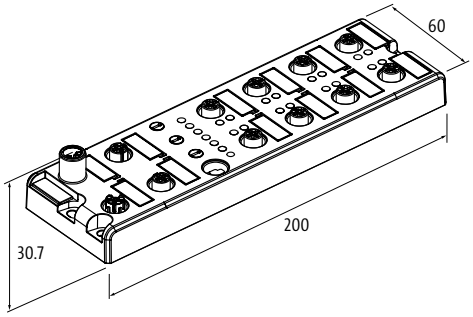
Approvals: c UL us Listed

SOLID67 PN/E

60 mm



Order Data	Art-No.	Art-No.
DIO16	**54503**	
DO16		**54502**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Addressing	DCP	
Shared Device/Input	–	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
QC (Quick Connect)	max. 500 ms	
DLR (Device Level Ring)	yes	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	–
Type	for 3-wire sensors or mechanical switches, PNP	–
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 2 A (short-circuit and overload protected)	
Parameterization		
PIN 4	Input/Output (port X1...X8)	Output (port X1...X8)
PIN 2	Input/Output (port X1...X8)	Output (port X1...X8)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



Notes	

MURR ELEKTRONIK
stay connected

Multi protocol

PROFINET® EtherNet/IP™
IO-Link

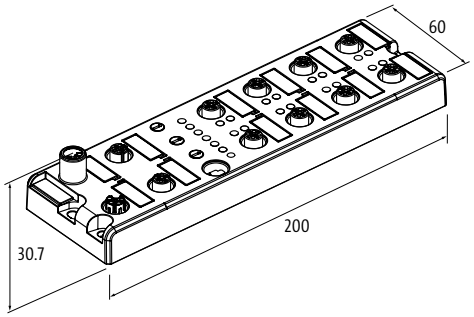
Approvals: c UL us Listed

SOLID67 PN/E

IOL8
60 mm



Order Data		Art-No.
IOL8		**54504**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
Addressing	DCP	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	II	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	8 × Master	
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Input byte and/or 32 Output byte (per IO-Link port)	
Port class	4 × A (port X1...X4), 4 × B (port X5...X8, galvanically separated, max. 2 A per port)	
Specification	IO-Link Master V1.1	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 0.5 A (PIN 4, X1...X8); 2 A (PIN 2/5 Uaux, X5...X8), short-circuit and overload protected	
Parameterization		
PIN 4	Input (port X1...X8); Output (port X1...X8); IO-Link Master (port X1...X8)	
PIN 2	Input (port X1...X4); Output (port X5...X8)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		



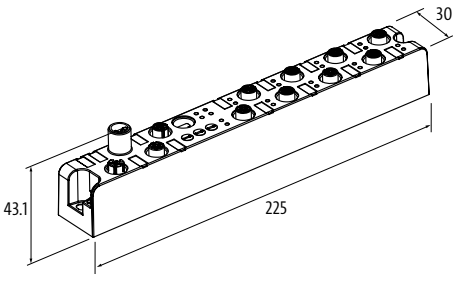
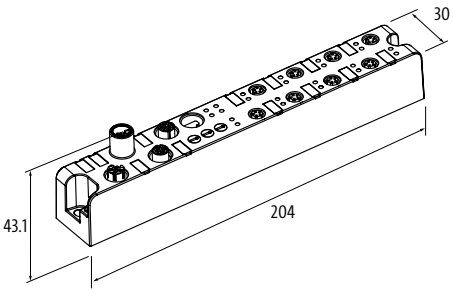
Notes	

Multi protocol

PROFINET® EtherNet/IP

IO-Link

Approvals: cULus Listed

	SOLID67 PN/E	SOLID67 PN/E
	IOL8 30 mm	IOL8 30 mm
		
Order Data	**Art-No.**	**Art-No.**
IOL8	**54505**	**54506**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	M12 Power, 5-pole, L-coded	
I/O ports	M12, 5-pole, A-coded	M8, 5-pole, B-coded
PROFINET		
Addressing	DCP	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	II	
Specification	V2.3, Conformance Class C (IRT)	
MRP	yes	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	8 × Master	
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Input byte and/or 32 Output byte (per IO-Link port)	
Port class	4 × A (port X1...X4), 4 × B (port X5...X8, galvanically separated, max. 4 A per module)	
Specification	IO-Link Master V1.1	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 500 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 0.5 A (PIN 4, X1...X8), short-circuit and overload protected	
Parameterization		
PIN 4	Input (port X1...X8); Output (port X1...X8); IO-Link Master (port X1...X8)	
PIN 2	Input (port X1...X4)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-20...+70 °C	
Dimension drawing		
		
Notes		

Blind plug/caps			Art-No.
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**

Labeling accessories			Art-No.
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**
	**Label plate (KM 4)**		
	5 × 10 mm		**90931**



IMPACT67
COMPACT I/O MODULES FOR THE FIELD

- **Application oriented**
- **Easy to Install**
- **Cost-effective**

ECONOMIC DECENTRALIZATION

Impact67 is the perfect fieldbus solution for basic applications that need to be cost-effective. The modules in this series are available with different bus protocols, they feature pluggable connections, diagnostics and IP67 tested seals.

This makes Impact67 the perfect choice for an electrical engineer whose objective is to minimize costs while maintaining digital inputs and outputs under ordinary conditions.

FOCUSED ON ESSENTIALS

- **Single channel diagnostic via LED** – don't look for errors, find them
- **Group diagnostics via the bus** – easy remote diagnostics
- **Port-related shut off** – only the affected port is shut off

PROFIBUS
PROFINET
EtherNet/IP
EtherCAT
CANopen
DeviceNet
IO-Link

Impact67 I/O Modules



Impact67-P
• Digital I/Os

PROFIBUS

Page 4.6.1



Impact67-PN
• Multifunctional I/Os
• Digital I/Os
• IO-Link

PROFINET
IO-Link

Page 4.6.2



Impact67-E
• Multifunctional I/Os
• Digital I/Os
• IO-Link

EtherNet/IP
IO-Link

Page 4.6.5



Impact67-EC
• Digital I/Os

EtherCAT

Page 4.6.8



Impact67-C
• Digital I/Os

CANopen

Page 4.6.9



Impact67-DN
• Digital I/Os

DeviceNet

Page 4.6.10

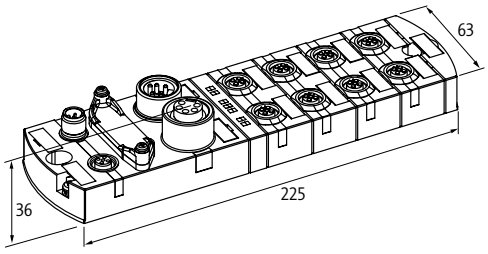
Basic diagnostic

Approvals:

	Impact67-P	Impact67-P	Impact67-P	Impact67-P
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55345**			
DI8/DO8 - 2 A		**55346**		
DO8 - 2 A			**55347**	
DO16 - 0.5 A				**55348**
Connections				
Fieldbus	PROFIBUS 12 Mbit/s; M12, B-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
PROFIBUS				
Addressing	Rotary switch 3...99			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	0...+55 °C (storage temperature -25...+70 °C)			
Dimension drawing				

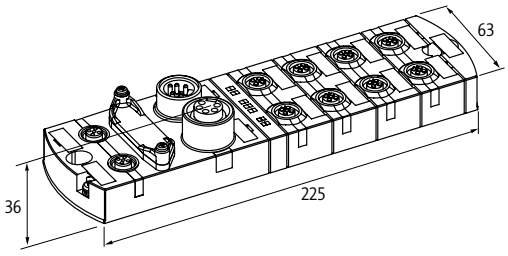


Notes

Basic diagnostic

Approvals:

	Impact67-PN DI16	Impact67-PN DI8/DO8 - 2 A	Impact67-PN DO8 - 2 A	Impact67-PN DO16 - 0.5 A
				
Order Data	**Art-No.**	**Art-No.**	**Art-No.**	**Art-No.**
DI16	**55091**			
DI8/DO8 - 2 A		**55092**		
DO8 - 2 A			**55093**	
DO16 - 0.5 A				**55094**
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
PROFINET				
Addressing	DCP			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Expanded diagnostic

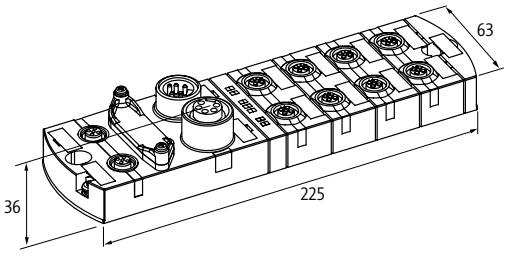
PROFINET

Impact67-PN

DIO16 IRT



Order Data	Art-No.
DIO16 IRT	**55130**
Connections	
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded
PROFINET	
FSU (Fast-Start-Up)	max. 500 ms
Shared Device/Input	yes, for 2 controls
Profinet Netload Class	III
Specification	V2.3, Conformance Class C (IRT)
Addressing	DCP
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected
Type	for 3-wire sensors or mechanical switches, PNP
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A
Switching current per output	max. 1.6 A (short-circuit and overload protected)
Lamp load	10 W
Parameterization	
PIN 4	Input/Output (port X0...X7)
PIN 2	Input/Output (port X0...X7)
General data	
Protection	IP67
Mounting method	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)
Dimension drawing	

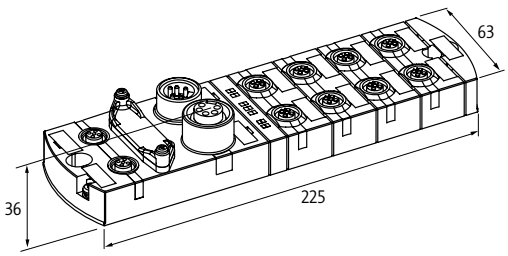


Notes	

Expanded diagnostic

PROFINET® IO-Link

	Impact67-PN IO-Link DIO14 IOL2 IRT	**Impact67-PN IO-Link** DIO12 IOL4 IRT
		
Order Data	**Art-No.**	**Art-No.**
DIO14 IOL2 IRT	**55131**	
DIO12 IOL4 IRT		**55132**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
PROFINET		
FSU (Fast-Start-Up)	max. 500 ms	
Shared Device/Input	yes, for 2 controls	
Profinet Netload Class	III	
Specification	V2.3, Conformance Class C (IRT)	
Addressing	DCP	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	Class A + B (not galvanically separated)
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input (port X0...X7); Output (port X0...X4, X6); IO-Link Master (port X5, X7)	Input (port X0...X7); Output (port X0, X2, X4, X6); IO-Link Master (port X1, X3, X5, X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X5, X7)	
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	2 hole screw mounting, compatible with I/O modules of MVK model range
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	
Dimension drawing		



Notes

Basic diagnostic

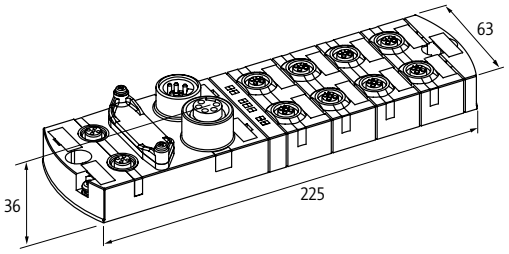
EtherNet/IP

Approvals: cULus Listed, cCSAus

	Impact67-E	Impact67-E	Impact67-E	Impact67-E
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55085**			
DI8/DO8 - 2 A		**55086**		
DO8 - 2 A			**55087**	
DO16 - 0.5 A				**55088**
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
EtherNet/IP				
Addressing	DHCP, BOOTP or IP address by rotary switch			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			0...+55 °C (storage temperature -25...+70 °C)
Dimension drawing				



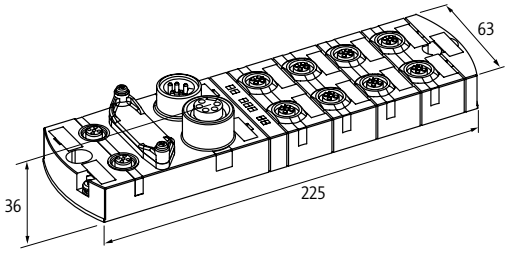
Notes

Expanded diagnostic

EtherNet/IP

Approvals:

	Impact67-E	Impact67-E
	DIO8 (DIO8) DLR (Device Level Ring)	DIO16 DLR (Device Level Ring)
Order Data	**Art-No.**	**Art-No.**
DIO8 (DIO8)	**55089**	
DIO16		**55142**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A	7/8", 4-pole, 2 × max. 9 A
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by rotary switch	DHCP, BOOTP or IP address by DIP switch
DLR (Device Level Ring)	yes	
QC (Quick Connect)	–	max. 360 ms
Multiple connections	–	yes
CIP Sync	–	yes
Composite Test Revision	–	CT14
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7)	
PIN 2	Input/Output (port X0...X7)	
General data		
Protection	IP67	
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range	2-hole screw mounting
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)	-25...+55 °C (storage temperature -40...+85 °C)
Dimension drawing		
Notes		



MURR ELEKTRONIK
stay connected

Expanded diagnostic

EtherNet/IP IO-Link

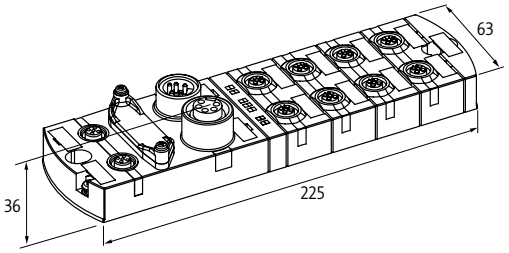
Approvals: cULus Listed cCSAus

Impact67-E IO-Link
DIO14 IOL2
DLR (Device Level Ring)

Impact67-E IO-Link
DIO12 IOL4
DLR (Device Level Ring)



Order Data	Art-No.	Art-No.
DIO14 IOL2	**55143**	
DIO12 IOL4		**55144**
Connections		
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded	
Sensor-system/actuator supply	7/8", 4-pole, 2 × max. 9 A	
I/O ports	M12, 5-pole, A-coded	
EtherNet/IP		
Addressing	DHCP, BOOTP or IP address by DIP switch	
QC (Quick Connect)	max. 360 ms	
Multiple connections	yes	
CIP Sync	yes	
Composite Test Revision	CT14	
DLR (Device Level Ring)	yes	
IO-Link		
IO-Link	2 × Master	4 × Master
Operating modes	COM1; COM2; COM3 (automatic)	
Transfer parameters	32 Byte (via IO-Link Port)	
Port class	Class B (not galvanically separated)	
Specification	IO-Link Master V1.12	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected	
Type	for 3-wire sensors or mechanical switches, PNP, IO-Link Devices	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 9 A	
Switching current per output	max. 1.6 A (short-circuit and overload protected)	
Lamp load	10 W	
Parameterization		
PIN 4	Input/Output (port X0...X7); IO-Link Master (port X6, X7)	Input/Output (port X0...X7); IO-Link Master (port X4...X7)
PIN 2	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X6, X7)	Input/Output (port X0...X7); U-Actuator IO-Link Class B (port X4...X7)
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+55 °C (storage temperature -40...+85 °C)	
Dimension drawing		



Notes

Basic diagnostic

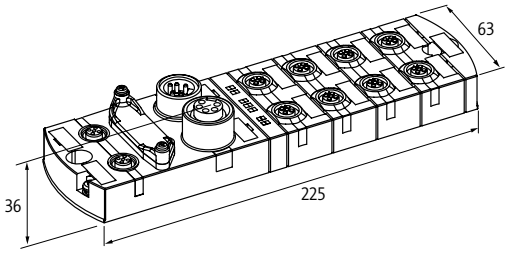
EtherCAT

Approvals:

	Impact67-EC	Impact67-EC	Impact67-EC	Impact67-EC
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55081**			
DI8/DO8 - 2 A		**55082**		
DO8 - 2 A			**55083**	
DO16 - 0.5 A				**55084**
Connections				
Fieldbus	Ethernet 10/100 Mbit/s; M12, D-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
EtherCAT				
Addressing	automatic or Device ID by rotary switch			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+55 °C (storage temperature -25...+70 °C)			0...+55 °C (storage temperature -25...+70 °C)
Dimension drawing				



Notes

MURR ELEKTRONIK
stay connected

Basic diagnostic

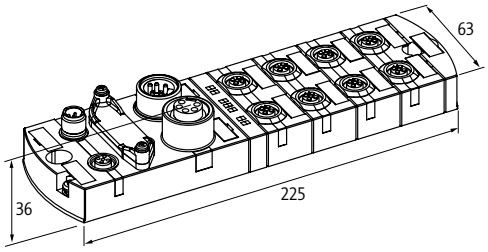
CANopen

Approvals: cULus Listed, cCSAus

	Impact67-C	Impact67-C	Impact67-C	Impact67-C
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55075**			
DI8/DO8 - 2 A		**55076**		
DO8 - 2 A			**55077**	
DO16 - 0.5 A				**55078**
Connections				
Fieldbus	CAN 1 Mbit/s; M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
CANopen				
Addressing	Rotary switch 1...99			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP	–		
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+70 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Basic diagnostic

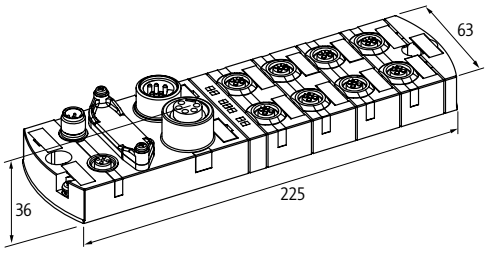
DeviceNet

Approvals:

	Impact67-DN	Impact67-DN	Impact67-DN	Impact67-DN
	DI16	DI8/DO8 - 2 A	DO8 - 2 A	DO16 - 0.5 A



Order Data	Art-No.	Art-No.	Art-No.	Art-No.
DI16	**55071**			
DI8/DO8 - 2 A		**55072**		
DO8 - 2 A			**55073**	
DO16 - 0.5 A				**55074**
Connections				
Fieldbus	DN 125 kbit/s; 250 kbit/s; 500 kbit/s; M12, A-coded			
Sensor-system/actuator supply	7/8", 5-pole, 2 × max. 9 A			
I/O ports	M12, 5-pole, A-coded			
DeviceNet				
Addressing	Rotary switch 0...63			
Input				
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA (M12 female), short-circuit and overload protected		–	
Type	for 3-wire sensors or mechanical switches, PNP		–	
Output				
Switching current per output	–	max. 2 A (short-circuit and overload protected)		max. 0.5 A (short-circuit and overload protected)
General data				
Protection	IP67			
Mounting method	2 hole screw mounting, compatible with I/O modules of MVK model range			
Temperature range	-25...+70 °C (storage temperature -25...+70 °C)			
Dimension drawing				



Notes

Accessories			Art-No.
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**
	**Screw plug 7/8" (for male)**		
	Plastic		**55385**



IO-LINK DEVICES
INTELLIGENT NETWORKING

- **Flexible**
- **Easy handling**
- **Economical**

IO-LINK ANALOG CONVERTER

The IO-Link analog converter from Murrelektronik can be used to connect regular analog sensors and actuators easily to the IO-Link master.

IO-LINK COUPLER

The IO-Link inductive couplers from Murrelektronik are designed for a non-contact transmission of energy and bi-directional IO-Link communication through an air gap. This prevents mechanical wear and is ideally suited to replace intensively stressed plug-in or looped connections.

IO-LINK HUB

The IO-Link hubs from Murrelektronik can be used to connect several digital sensors and actuators easily to the IO-Link master ports via a standard sensor cable.

IO-Link
by Murrelektronik

IO-LINK DEVICES



IO-Link/Analog Converters
- Analog inputs
- Analog outputs

Page 4.7.1



IO-Link Coupler
- Primary
- Secondary

Page 4.7.7



IO-Link Hubs
- Metal version
- Plastic version

Page 4.7.8

MURR ELEKTRONIK
stay connected

Analog inputs

– Plug & Play

– IO-Link V1.1

IO-Link

Approvals: c UL us Listed

IO-Link/Analog Converter

Current



Contact layout

Male



PIN 1: +24 V (L+)
PIN 2: n.c.
PIN 3: GND
PIN 4: C/Q, IO-Link

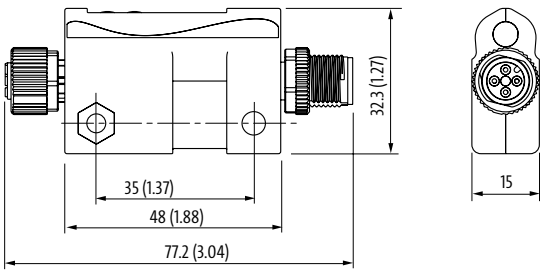
Female



PIN 1: +Us
PIN 2: A+
PIN 3: GND (Analog Us)
PIN 4: A–

Order Data	Art-No.
INPUT: 0...20 mA	**5000-00501-1100000**
INPUT: 4...20 mA	**5000-00501-1110000**

Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog input	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Analog inputs

– Plug & Play

– IO-Link V1.1

IO-Link

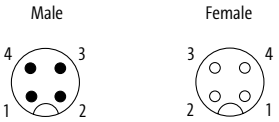
Approvals: cULus Listed

IO-Link/Analog Converter

Voltage



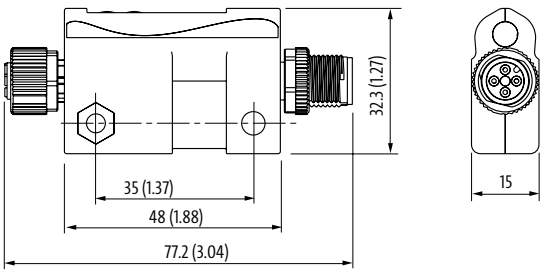
Contact layout	



PIN 1: +24 V (L+)
PIN 2: n.c.
PIN 3: GND
PIN 4: C/Q, IO-Link

PIN 1: +Us
PIN 2: A+
PIN 3: GND (Analog Us)
PIN 4: A–

Order Data	**Art-No.**
INPUT: 0...10 V	**5000-00501-1200000**
INPUT: -10...+10 V	**5000-00501-1210000**
Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog input	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Input	
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes	

MURR ELEKTRONIK
stay connected

Analog inputs

– Multifunctional

– IO-Link V1.1

IO-Link

Approvals: c UL us Listed

IO-Link/Analog Converter

Current/Voltage



Contact layout

Male



PIN 1: +24 V (L+)
PIN 2: n.c.
PIN 3: GND
PIN 4: C/Q, IO-Link

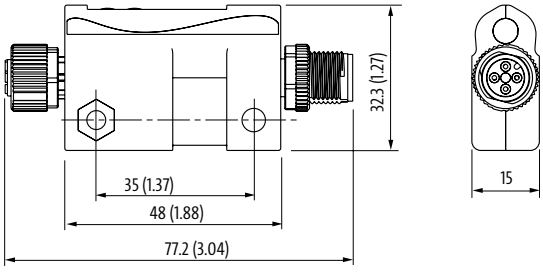
Female



PIN 1: +Us
PIN 2: A+
PIN 3: GND (Analog Us)
PIN 4: A–

Order Data		Art-No.
INPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V		5000-00501-1300001
Connections		
IO-Link	M12 (male) 5-pole, A-coded	
Analog input	M12 (female) 5-pole, A-coded, shielded	
Module Supply		
Operating voltage	24 V DC (18...30 V DC)	
IO-Link		
Specification	IO-Link V1.1	
Operating modes	COM2 (38.4 kBit/s)	
Port class	A	
Cycle time	min. 2.3 ms	
Data width	16 Bit / 2 Byte	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 200 mA	
Resolution (analog)	15 Bit + sign	
Accuracy	0.10% (25° C)	
Conversion time (analog)	max. 5 ms	
Parameterization		
Diagnostics	2 Byte	
General data		
Protection	IP65/IP67	
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)	

Dimension drawing



Notes

Analog outputs

– Plug & Play

– IO-Link V1.1

IO-Link

Approvals: cULus Listed

IO-Link/Analog Converter

Current



Contact layout	

Male



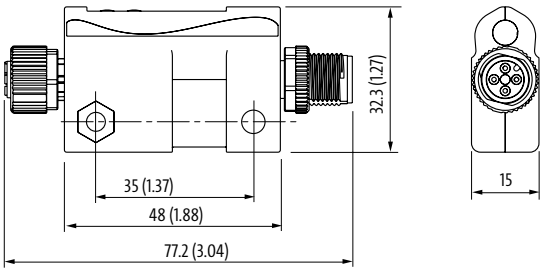
PIN 1: +24 V (L+)
PIN 2: n.c.
PIN 3: GND
PIN 4: C/Q, IO-Link

Female



PIN 1: +Us
PIN 2: n.c.
PIN 3: GND (Analog Us)
PIN 4: AOUT (U/I)

Order Data	**Art-No.**
OUTPUT: 0...20 mA	**5000-00501-2100000**
OUTPUT: 4...20 mA	**5000-00501-2110000**
Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes	

MURR ELEKTRONIK
stay connected

Analog outputs

– Plug & Play

– IO-Link V1.1

IO-Link

Approvals: c UL us Listed

IO-Link/Analog Converter

Voltage



Contact layout

Male



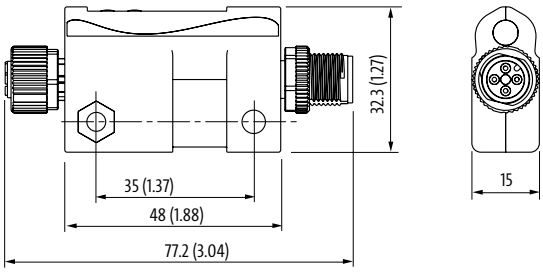
PIN 1: +24 V (L+)
PIN 2: n.c.
PIN 3: GND
PIN 4: C/Q, IO-Link

Female



PIN 1: +Us
PIN 2: n.c.
PIN 3: GND (Analog Us)
PIN 4: AOUT (U/I)

Order Data	Art-No.
OUTPUT: 0...10 V	**5000-00501-2200000**
OUTPUT: -10...+10 V	**5000-00501-2210000**
Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes

Analog outputs

– Multifunctional

– IO-Link V1.1

IO-Link

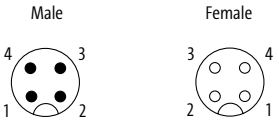
Approvals: cULus Listed

IO-Link/Analog Converter

Current/Voltage

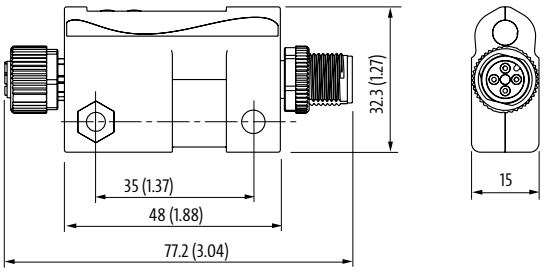


Contact layout	



PIN 1: +24 V (L+)	PIN 1: +Us
PIN 2: n.c.	PIN 2: n.c.
PIN 3: GND	PIN 3: GND (Analog Us)
PIN 4: C/Q, IO-Link	PIN 4: AOUT (U/I)

Order Data	**Art-No.**
OUTPUT: 0...20 mA, 4...20 mA, 0...10 V, -10...+10 V	**5000-00501-2300001**
Connections	
IO-Link	M12 (male) 5-pole, A-coded
Analog output	M12 (female) 5-pole, A-coded, shielded
Module Supply	
Operating voltage	24 V DC (18...30 V DC)
IO-Link	
Specification	IO-Link V1.1
Operating modes	COM2 (38.4 kBit/s)
Port class	A
Cycle time	min. 2.3 ms
Data width	16 Bit / 2 Byte
Output	
Actuator supply UA	24 V DC (EN 61131-2), max. 200 mA
Resolution (analog)	15 Bit + sign
Type	2-, 3-, 4-wire technology
Accuracy	0.10% (25° C)
Conversion time (analog)	max. 5 ms
Over voltage protection	30 V DC
Parameterization	
Diagnostics	lower limit, upper limit, over heated, supply over voltage, supply under voltage, defective device, sensor cable break, sensor supply over current, overrun
General data	
Protection	IP65/IP67
Temperature range	-30...+70 °C (storage temperature -40...+85 °C)
Dimension drawing	



Notes	

IO-Link V1.1

IO-Link

IO-Link Coupler (prim.)

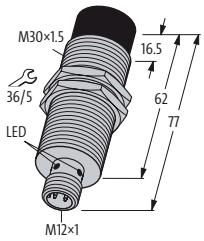


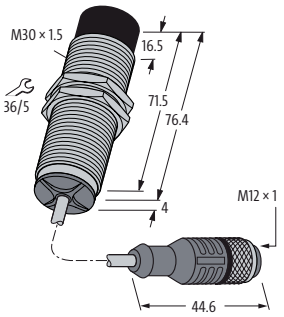
IO-Link Coupler (sec.)

Connection cable L = 300 mm



Order Data	Art-No.	Art-No.
Primary	59450	
Secondary		59451
Accessories		**Art-No.**
M30 holder		59452
Connections		
IO-Link	M12 (male) 4-pole, A-coded	M12 (female) 4-pole, A-coded
Technical Data		
Nominal distance	0...7 mm (prim./sec.)	
Standby power (coupled)	4 W	
Standby power (uncoupled)	1 W	
Short circuit protection	yes	
Invers-polarity protection	yes	
Start-/coupling time	–	10 ms
Rotation	1 250 rpm	
Standby time	–	160 ms
Supply (prim.)		
Operating voltage	24 V DC ±10%	–
Operating current	750 mA	–
Output (sec.)		
Operating voltage	–	24 V DC ±10%
Output current	–	500 mA
Highest current	–	2.4 A (0.1 ms); 10 A (0.02 ms)
IO-Link		
Specification	IO-Link V1.1	
Operating modes	COM2 (38.4 kBit/s)	
Port class	A	
General data		
Protection	IP67/IP68	
Temperature range	-20...+55 °C	
Dimension drawing		





Notes		

Expanded diagnostic

– IO-Link V1.1

– Single channel diagnostic

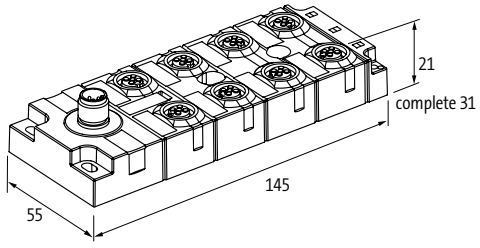
IO-Link

IO-Link Hub
Galvanic isolation



IO-Link Hub

Order Data	**Art-No.**	**Art-No.**
DI8 DO8 IOL - K3	**55518**	
DI16 IOL		**55519**
Internal communication		
Current consumption	max. 35 mA	
LED display	US: sensor supply (green: OK); IOL: (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	4 hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes		

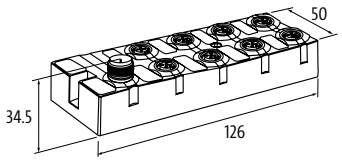
IO-Link V1.1

IO-Link

IO-Link Hub



Order Data	Art-No.	Art-No.
DI8 DO8 IOL	**59402**	
DI16 IOL		**59401**
Internal communication		
Current consumption	max. 35 mA	
LED display	US-IOL: sensor supply-IOL (green: OK); UA: actuator supply (green: OK)	US: sensor supply (green: OK); IOL: (green: OK)
IO-Link		
IO-Link	Device	
Operating modes	COM2 (38.4 kBaud)	
Transfer parameters	1 Byte (Inputs), 1 Byte (Outputs), 2 Byte (Diagnostic)	2 Byte (Inputs), 1 Byte (Diagnostic)
Port class	B	A
Specification	IO-Link V1.1	
Cycle time	2.3 ms	
Input		
Sensor supply US	24 V DC (EN 61131-2), max. 100 mA (M12 female), short-circuit and overload protected	
Type	PNP (EN 61131-2) Type 3	
Input filter	1 ms	
Input delay time	max. 8 ms (incl. IO-Link cycle time)	
Output		
Actuator supply UA	24 V DC (EN 61131-2), max. 4 A	–
Switching current per output	max. 0.4 A (short-circuit and overload protected)	–
Parameterization		
PIN 2	Input (port 0...3); Output (port 4...7)	Input
PIN 4	Input (port 0...3); Output (port 4...7)	Input
General data		
Protection	IP67	
Mounting method	2-hole screw mounting	
Temperature range	-25...+70 °C (storage temperature -40...+70 °C)	
Dimension drawing		



Notes	

Accessories			Art-No.
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**
	**M30 holder**		
			59452
	**Holding plate**		
	for T-couplers M12 (SlimLine)	without mounting set	**7000-99061-0000000**
	**Holding plate**		
	for T-couplers M12 (SlimLine)	with mounting set	**7000-99062-0000000**
	**T-coupler (Slim Line)**		
	IO-Link IO-Link supply power		**7000-42771-0000000**



MASI
FOR THE CONTROL CABINET

- **High signal density in a miniumum amount of space**
- **Pluggable insulation displacement or spring clamp connections**
- **Sensor power supply from AS-Interface or 24 V DC**

MASI – THE CLEVER AS-INTERFACE SYSTEM FROM MURRELEKTRONIK

The modules are designed in a way that the wiring method with single strands is optimally supported in order to offer the user the best possible benefit during installation, commissioning and maintenance.

The design according to the latest AS-Interface specification 3.0 and the AS-Interface certificate with worldwide validity guarantee the user interoperability and a high investment security. Furthermore, safety shutdowns according to EN 13849-1 up to PL d can be realized using a special K3 module.

MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop**:

shop.murrelektronik.com

Gateway



Gateway Singlemaster

PROFIBUS PROFINET CC-Link EtherNet/IP

Page 4.8.1



Gateway Doublemaster

EtherCAT

Page 4.8.1

MASI00/MASI20



MASI00

- Digital inputs/outputs
- Degree of protection IP00

Page 4.8.2



MASI20

- Digital inputs/outputs
- Passively safe outputs
- Degree of protection IP20

Page 4.8.3

Power Supply Units



Primary switched power supply

- Single-phase, three-phase

Page 4.8.4

PROFIBUS DP			Art-No.
	**Gateway-Singlemaster**		
	AS-Interface/PROFIBUS DP	Protection IP20	**56471**
	No. of slaves	max. 62	
	ASI-Power 24	Specification 3.0	
	Serial interface/diagnostic	-	
	AS-Interface data decoupling integrated	Protection AS-i side, 4 A	
PROFINET			**Art-No.**
	**Gateway-Singlemaster**		
	AS-Interface/PROFINET	Protection IP20	**56470**
	No. of slaves	max. 62	
	ASI-Power 24	Specification 3.0	
	Serial interface/diagnostic	RJ45/Fieldbus	
	AS-Interface data decoupling integrated	Protection AS-i side, 4 A	
EtherNet/IP			**Art-No.**
	**Gateway-Singlemaster**		
	AS-Interface/EtherNet/IP	Protection IP20	**56469**
	No. of slaves	max. 62	
	ASI-Power 24	Specification 3.0	
	Serial interface/diagnostic	RJ45/Fieldbus	
	AS-Interface data decoupling integrated	Protection AS-i side, 4 A	
CC-Link			**Art-No.**
	**Gateway-Singlemaster**		
	AS-Interface/CC-Link	Protection IP20	**56473**
	No. of slaves	max. 62	
	ASI-Power 24	Specification 3.0	
	Serial interface/diagnostic	-	
	AS-Interface data decoupling integrated	Protection AS-i side, 4 A	
EtherCAT			**Art-No.**
	**Gateway-Doublemaster**		
	AS-Interface/EtherCAT	Protection IP20	**56458**
	No. of slaves	max. 2 × 62	
	AS-Interface data decoupling integrated	Specification 3.0	
	Serial interface/diagnostic	RJ45/Ethernet	
		Protection AS-i side, 4 A	

MASI CONTROL CABINET

MASI00			Art-No.
	**Digital inputs/outputs**		
	DI4/DO4 - 0.2 A Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA S-7.F.F 1...31 via plug terminals Specification 3.0	**55700**
	DI4/DO4 - 0.2 A (AB) Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA S-7.A.7 1...62 (1...31 A or B) via plug-in terminal Specification 3.0	**55701**
	**Digital inputs/outputs**		
	DI4/DO4 - 0.2 A Sensor supply US Switching current per output Connection cable for pin cable lug Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA 250 mm S-7.F.F 1...31 via plug terminals Specification 3.0	**556625**
	DI4/DO4 - 0.2 A (AB) Sensor supply US Switching current per output Connection cable for pin cable lug Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP00 max. 200 mA (AS-Interface) max. 30 mA 250 mm S-7.A.7 1...62 (1...31 A or B) via plug-in terminal Specification 3.0	**556639**
	**Connection cable MASI00**		
	with open ended wires	1 000 mm	**556510**
	**Connection cable MASI00**		
	with cable fork	150 mm	**556511**

MASI20			Art-No.
	**Digital inputs/outputs**		
	DI4 - 0.2 A DO4 - 0.5 A (AB) K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 0.5 A S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	**56440**
	**Digital inputs/outputs**		
	DI4 - 0.15 A DO4 - 2A K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range Standard-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 2 A S-7.0.E 1...31 Specification 3.0 can be switched off via safety relays	**56475**
	DI4 - 0.15 A DO4 - 2 A (AB) K3 Sensor supply US Switching current per output Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) max. 2 A S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	**56476**
	**Digital inputs/relay outputs**		
	DI4 - 0.15 A DO4R - 2A Sensor supply US Switching current per output Relay outputs Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) 2 A - S-7.0.E 1...31 Specification 3.0	**56477**
	DI4 - 0.15 A DO4R - 2A (AB) Sensor supply US Switching current per output Relay outputs Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP20 from AS-Interface or 24 V DC (EN 61131-2) 2 A - S-7.A.7 1...62 (1...31 A or B) Specification 3.0	**56478**

MASI CONTROL CABINET

Power Supply Units			Art-No.
	**Switch mode power supplies**		
	Single-phase, primary switched	Protection IP20	**85381**
	Input voltage	95...265 V AC	
	Output voltage	30.5 V DC (SELV), ±2%	
	Efficiency	83% (110 V AC); 85% (240 V AC)	
	Output current	max. 4.0 A (+40 °C); 3.4 A (+55 °C)	
	**Switch mode power supplies**		
	Single-phase, primary switched	Protection IP20	**85382**
	Input voltage	95...265 V AC	
	Output voltage	30.5 V DC (SELV), ±2%	
	with EFD (earth fault detection)	-	
	Efficiency	83% (110 V AC); 85% (240 V AC)	
	Output current	max. 4.0 A (+40 °C); 3.4 A (+55 °C)	
	**Switch mode power supplies**		
	3-phase, primary switched	Protection IP20	**85383**
	Input voltage	3×324...572 V AC/2×340...572 V AC/450...745 V DC	
	Output voltage	30.5 V DC (SELV), ±1%; 30...32 V adjustable	
	Efficiency	92.5% (3 × 400 V AC); 91.8% (3 × 480 V AC)	
	Output current	4.8 A (45 °C); 4.0 A (60 °C); 2.9 A (70 °C)	



MASI
FOR FIELD INSTALLATION

- **Flexible use**
- **Quick installation**
- **Efficient technology**

APPLICATION VARIETY – FOR EFFICIENT AND DECENTRALIZED INSTALLATION

MASI, the AS-Interface product series by Murrelektronik, is the simple solution for cost-efficient integration of I/O signals from machine tools or storage and logistics systems to superordinate control systems. MASI allows the user to build highly flexible I/O systems without being tied to rigid topologies.

Who wants to wire control cabinets or set up complex bus solutions when this can be also done in a more simple, flexible, efficient, and robust way? The MASI I/O system allows you to install all the components at the place where they are needed. This allows a clearly arranged wiring and reduces the installation effort to a minimum.

MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop**:

shop.murrelektronik.com

MASI65



Valve plug (form A)
- M12
- Degree of protection IP67

Page 4.9.1

MASI67



I/O modules
- Digital inputs
- Digital inputs/outputs
- Degree of protection IP67

Page 4.9.1

MASI68



I/O modules
- Digital inputs
- Digital inputs/outputs
- Analog outputs
- Analog inputs
- Degree of protection IP67

Page 4.9.3

MASI65			Art-No.
	**Digital inputs/outputs**		
	DO1 - 2A, DO1 - 2 A, DI2	Protection IP67	**55680**
	Sensor supply US	max. 200 mA (AS-Interface)	
	Switching current per output	max. 2 A	
	Valve Plug (Form A), M12, M12	-	
	Profile (IO/ID/ID2 code)	S-3.F.E	
	Address range	1...31	
	Standard-Slave	Specification 2.1	
	**Digital outputs**		
	DO1 - 2A, DO1 - 2 A	Protection IP67	**55681**
	Switching current per output	max. 2 A	
	Standard-Slave	Specification 2.1	
	Valve Plug (Form A), M12	-	
	Profile (IO/ID/ID2 code)	S-3.F.E	
	Address range	1...31	
	DO1 - 2A	Protection IP67	**55682**
	Switching current per output	max. 2 A	
	Standard-Slave	Specification 2.1	
	Valve plug (form A)	-	
	Profile (IO/ID/ID2 code)	S-3.F.E	
	Address range	1...31	
	**Digital inputs/outputs**		
	DO1 - 2A, DO1 - 2 A, DI2	Protection IP67	**556613**
	Sensor supply US	max. 200 mA (AS-Interface)	
	Switching current per output	max. 2 A	
	Ventilstecker (Form BI), M12, M12	-	
	Profile (IO/ID/ID2 code)	S-3.F.E	
	Address range	1...31	
	Standard-Slave	Specification 2.1	
	**Digital outputs**		
	DO1 - 2A	Protection IP67	**556614**
	Switching current per output	max. 2 A	
	Standard-Slave	Specification 2.1	
	Valve plug (form BI)	-	
	Profile (IO/ID/ID2 code)	S-3.F.E	
	Address range	1...31	

MASI67			Art-No.
	**Digital inputs**		
	DI4 - 0.2 A (AB) 4×M8	Protection IP67	**56405**
	Sensor supply US	max. 170 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Profile (IO/ID/ID2 code)	S-0.A.0	
	Address range	1...62 (1...31 A or B)	

MASI FIELD INSTALLATION

MASI67			Art-No.
	**Digital inputs**		
	DI8 - 0.24 A (AB) 8×M8	Protection IP67	**56406**
	Sensor supply US	max. 180 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Profile (IO/ID/ID2 code)	2 × S-0.A.0	
	Address range	1...62 (2 × 1...31 A or B)	
	**Digital inputs/outputs**		
	DI4 - 0.2 A DO4 - 0.5 A 8×M8	Protection IP67	**56408**
	Sensor supply US	max. 180 mA (AS-Interface)	
	Standard-Slave	Specification 3.0	
	Profile (IO/ID/ID2 code)	S-7.0.E	
	Address range	1...31	
	**Digital inputs**		
	DI4 - 0.2 A (AB) 4×M12	Protection IP67	**56400**
	Sensor supply US	max. 170 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Configuration	PIN 2 = 4	
	Profile (IO/ID/ID2 code)	S-0.A.0	
	Address range	1...62 (1...31 A or B)	
	DI4 - 0.2 A (AB) 4×M12	Protection IP67	**56413**
	Sensor supply US	max. 170 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Configuration	Y-wiring	
	Profile (IO/ID/ID2 code)	S-0.A.2	
	Address range	1...62 (1...31 A or B)	
	DI8 - 0.24 A (AB) 4×M12	Protection IP67	**56401**
	Sensor supply US	max. 180 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Configuration	PIN 2 + 4	
	Profile (IO/ID/ID2 code)	2 × S-0.A.2	
	Address range	1...62 (2 × 1...31 A or B)	
	**Digital inputs/outputs**		
	DI4 - 1.6 A DO4 - 2 A 4×M12	Protection IP67	**56404**
	Sensor supply US	max. 1.6 A external	
	Switching current per output	max. 2 A	
	Configuration	PIN 2 + 4	
	Profile (IO/ID/ID2 code)	S-7.F.E	
	Address range	1...31	
	Standard-Slave	Specification 3.0	
	DI4 - 0.2 A DO4 - 1.6 A (C) 4×M12 (AB) K3	Protection IP67	**56414**
	Sensor supply US	max. 200 mA (AS-Interface)	
	Switching current per output	max. 1.6 A	
	Configuration	PIN 2 + 4	
	Profile (IO/ID/ID2 code)	S-7.A.7	
	Address range	1...62 (1...31 A or B)	
	AB-Slave	Specification 3.0	
	passive safe outputs	can be switched off via safety relays	

MASI67			Art-No.
	**Digital inputs/outputs**		
	DI8 - 0.34 A DO8 - 1.6 A (AB) 8×M12 (K3)	Protection IP67	**56415**
	Sensor supply US	max. 340 mA (AS-Interface)	
	Switching current per output	max. 1.6 A	
	Configuration	PIN 2 + 4	
	Profile (IO/ID/ID2 code)	2 × S-7.A.7	
	Address range	1...62 (2 × 1...31 A or B)	
	AB-Slave	Specification 3.0	
	passive safe outputs	can be switched off via safety relays	
	**Digital outputs**		
	DO8 - 1.6 A (AB) 8×M12 (K3) Safety	Protection IP67	**56445**
	Switching current per output	max. 1.6 A	
	passive safe outputs	can be switched off via safety relays	
	Configuration	Y-wiring	
	Profile (IO/ID/ID2 code)	S-7.A.7	
	Address range	1...62 (1...31 A or B)	
	AB-Slave	Specification 3.0	

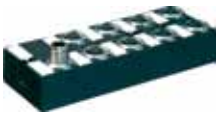
MASI68			Art-No.
	**Digital inputs**		
	DI4 - 0.18 A (C) 4×M8 (AB)	Protection IP68	**56434**
	Sensor supply US	max. 180 mA (AS-Interface)	
	AB-Slave	Specification 3.0	
	Compact module	-	
	Profile (IO/ID/ID2 code)	S-0.A.2	
	Address range	1...62 (1...31 A or B)	
	DI4 - 0.18 A (C) 4×M8	Protection IP68	**56435**
	Sensor supply US	max. 180 mA (AS-Interface)	
	Standard-Slave	Specification 3.0	
	Compact module	-	
	Profile (IO/ID/ID2 code)	S-0.0.0	
	Address range	1...31	
	**Digital inputs/outputs**		
	DI2 - 0.1 A DO2 - 0.5 A (C) 4×M8 (AB)	Protection IP68	**56446**
	Sensor supply US	max. 100 mA (AS-Interface)	
	Switching current per output	max. 0.5 A	
	Compact module	-	
	Profile (IO/ID/ID2 code)	S-7.A.E	
	Address range	1...62 (1...31 A or B)	
	AB-Slave	Specification 3.0	

MASI FIELD INSTALLATION

MASI68			Art-No.
	**Digital inputs**		
	DI8 - 0.2 A (C) 8×M8 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 - 2 × S-0.A.0 1...62 (2 × 1...31 A or B)	**56420**
	DI8 - 0.2 A (C) 8×M8 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 Slave 1: 1 A; Slave2: 2 A 2 × S-0.A.0 1...62 (1...31 A or B)	**564201**
	**Digital inputs/outputs**		
	DI4 - 0.19 A DO3 - 0.5 A (C) 7×M8 (AB) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.A.0 1...62 (1...31 A or B) Specification 2.1	**56418**
	DI4 - 0.19 A DO4 - 0.5 A (C) 8×M8 Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.0.0 1...31 Specification 3.0	**56419**
	DI4 - 0.2 A DO4 - 0.5 A (C) 8×M8 (AB) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 0.5 A - S-7.A.7 1...62 (1...31 A or B) Specification 3.0	**56462**
	**Digital inputs**		
	DI8 - 0.19 A (E) 8×M8 (AB) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 - 2 × S-0.A.E 1...62 (1...31 A or B)	**56436**

MASI68			Art-No.
	**Digital inputs**		
	DI4 - 0.19 A (C) 4×M12 (AB) (Y) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	**56421**
	DI8 - 0.19 A (C) 4×M12 (AB) Sensor supply US AB-Slave Compact module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	**56424**
	**Digital inputs**		
	DI4 - 0.2 A (E) 4×M12 (AB) (Y) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 200 mA (AS-Interface) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	**56425**
	DI4 - 0.19 A (E) 4×M12 (AB) (Y) AUX Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AUX Power) Specification 3.0 Y-wiring S-0.A.2 1...62 (1...31 A or B)	**56443**
	DI8 - 0.19 A (E) 4×M12 (AB) Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AS-Interface) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	**56426**
	DI8 - 0.19 A (E) 4×M12 (AB) AUX Sensor supply US AB-Slave Expansion module Profile (IO/ID/ID2 code) Address range	Protection IP68 max. 190 mA (AUX Power) Specification 3.0 PIN 2 + 4 2 × S-0.A.2 1...62 (2 × 1...31 A or B)	**56444**
	**Digital inputs/outputs**		
	DI4 - 0.19 A DO4 - 1 A (E) 4×M12 (AB) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 1 A PIN 2 + 4 S-7.A.7 1...62 (1...31 A or B) Specification 3.0	**56439**

MASI FIELD INSTALLATION

MASI68			Art-No.
	**Digital outputs**		
	DO8 - 0.5 A (AB) 4×M12 (K3) Switching current per output passive safe outputs Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave	Protection IP68 max. 0.5 A can be switched off via safety relays PIN 2 + 4 S-7.A.7 1...62 (1...31 A or B) Specification 3.0	**56447**
	**Digital inputs/outputs**		
	DI4 - 0.19 A DO4 - 2 A (C) 8×M12 (Y) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 2 A Y-wiring S-7.F.E 1...31 Specification 3.0	**56422**
	DI4 - 0.19 A DO4 - 2 A (C) 8×M12 Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 190 mA (AS-Interface) max. 2 A PIN 4 S-7.0.7 1...31 Specification 3.0	**56438**
	DI4 - 0.2 A DO4 - 1.6 A (C) 8×M12 (AB) (Y) (K3) Sensor supply US Switching current per output Compact module Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP68 max. 200 mA (AS-Interface) max. 1.6 A Y-wiring S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	**56423**
	**Digital inputs/outputs**		
	DI4 - 0.2 A DO4 - 2 A (E) 8×M12 (Y) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range Standard-Slave	Protection IP68 max. 200 mA (AS-Interface) max. 2 A Y-wiring S-7.F.E 1...31 Specification 3.0	**56427**
	**Digital inputs/outputs**		
	DI4 - 0.2 A DO4 - 1.6 A (E) 8×M12 (AB) (Y) (K3) Sensor supply US Switching current per output Expansion module Profile (IO/ID/ID2 code) Address range AB-Slave passive safe outputs	Protection IP68 max. 200 mA (AS-Interface) max. 1.6 A Y-wiring S-7.A.7 1...62 (1...31 A or B) Specification 3.0 can be switched off via safety relays	**56428**

MASI68			Art-No.
	**Analog inputs**		
	AI4 - (E) RTD	Protection IP68	**56442**
	Measuring current	Pt100 - 1.25 mA	
	Standard-Slave	Specification 3.0	
	Expansion module	-	
	Profile (IO/ID/ID2 code)	S-7.3.E	
	Address range	1...31	
	AI4 - (E) 4×M12 (UI)	Protection IP68	**56448**
	Input range (current)	-22...22 mA	
	Input range (voltage)	-10...+10 V	
	Expansion module	-	
	Profile (IO/ID/ID2 code)	S-7.3.E	
	Address range	1...31	
	Standard-Slave	Specification 3.0	
	**Analog outputs**		
	AO2 - (E) 2×M12 (UI)	Protection IP68	**56474**
	Output current	0...22 mA	
	Output voltage	-10...+10 V	
	Expansion module	-	
	Profile (IO/ID/ID2 code)	S-7.3.5	
	Address range	1...31	
	Standard-Slave	Specification 3.0	



MASI
INSTALLATION TECHNOLOGY

- **Versatile**
- **Leak-proof for industrial use**
- **Simplest installation**

AS-INTERFACE SYSTEM

In connection with the installation technology, the AS-Interface system from Murrelektronik provides consistent solutions from the operating panel through the control cabinet to the field - from IP00 to IP68.

Due to the application-oriented optimization of the modules, a safe installation and extension of the system can be realized very easily.

- **Easy** – Connection using the cable penetration technology, plug-in connectors or M12
- **Consistent** – products adapted to the fields of application from IP00 to IP68
- **Up-to-date** – latest technology according to the AS-interface specification 3.0

MASI

I/O modules, accessories and accompanying information material regarding MASI can be found in the **online shop**:

shop.murrelektronik.com

MASI20/67/68



- Distributor
- Converter
- Adapter

Page 4.10.1

System/Torque wrenches



- Programming device
- Z-plug
- T-coupler
- Mounting plates

Page 4.10.3



- Torque wrench M8
- Torque wrench M12
- Torque wrench 7/8"

Page 4.10.3

Cables



Profile cables
- Coding elements
- Adapter, terminals

Page 4.10.4



Round plug connector
- T-coupler
- DIN-rail adapter
- Connecting cables

Page 4.10.6

MASI20			Art-No.
	**Bus or Power distributor**		
	2 AS-Interface + 3 power ports potentially separated	5 plug terminals included	**55575**
	3 AS-Interface + 2 power ports potentially separated	5 plug terminals included	**55606**
	**Bus or Power distributor**		
	1 × 3 AS-Interface + 2 × 1 power ports 5 ports, universal potentially separated	5 plug terminals included	**55605**
	1 × 5 AS-Interface/power ports 5 ports, universal not potentially separated	5 plug terminals included	**55611**
	**Bus or Power distributor**		
	1 × 3 AS-Interface + 2 × 1 power ports 5 ports, universal potentially separated	without plug terminals	**55607**
	**Plug terminal**		
	for bus or power distributor	AS-Interface profile cable	**55604**

MASI67			Art-No.
	**MASI67 connection**		
	2 × on 2 × profile cable Total current: max. 8 A		**55033**
	1 × on 3 × profile cable Total current: max. 8 A		**55034**
	**MASI67 converter**		
	2 × profile cable to 7/8" (female) Total current: max. 8 A	5-pole	**55035**
	**MASI67 converter**		
	2 × profile cable to 7/8" (male) Total current: max. 8 A	5-pole	**55036**
	**MASI67 converter**		
	2 × profile cable to M12 (female) Total current: max. 4 A	M12, 4-pole, A-coded	**55037**

MASI67			Art-No.
	**MASI67 converter**		
	2 × profile cable to M12 (male) Total current: max. 4 A	M12, 4-pole, A-coded	**55038**
	**AS-Interface distributor**		
	from profile to profile cable Operating current: max. 3 A		**55749**
	**AS-Interface breakout**		
	from profile cable to M12 Operating current: max. 2 A	M12, 2-pole, A-coded	**55741**
MASI67/68			**Art-No.**
	**MASI67 passive distribution box**		
	2 × profile cable to 4 × M12 (female) Current (M12): max. 4 A Total current: max. 8 A Ext. supply: 1 × aux power	M12, 4-pole, A-coded	**56412**
	2 × profile cable to 4 × M12 (female) Current (M12): max. 4 A Total current: max. 2 × 8 A Ext. supply: 2 × separately aux power	M12, 4-pole, A-coded	**56416**
MASI68			**Art-No.**
	**MASI68 passive distribution box**		
	1×7/8 AUX + 1×M12 AS-Interface to 3×M12 (female) Current (M12): max. 4 A Total current: max. 2 × 8 A	M12, 4-pole, A-coded 2 separate circuits	**56454**
	**T-coupler (SlimLine) M12 - M12**		
	Male straight - female straight Parallel circuit	5-pole	**7000-41151-0000000**
	**T-coupler M12 – M12**		
	Male straight - female straight Parallel circuit	5-pole	**7000-41141-0000000**
	**Holding plate**		
	for T-couplers M12 (SlimLine)	without mounting set	**7000-99061-0000000**
	for T-couplers M12 (SlimLine)	with mounting set	**7000-99062-0000000**

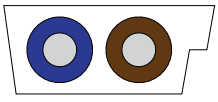
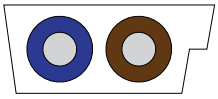
System			Art-No.
	**Programming device**		
	AS-Interface programming device	AS-Interface addressing cable	**55696**
	**Addressing cable**		
	Spare cable	for AS-Interface programming device	**55727**
	**MASI Z-Plug**		
	Passive bus terminator		**55779**
	**T-coupler (SlimLine) M12 - M12**		
	Male straight - female straight Distribution function (NO)	5-pole - 4-pole	**7000-41131-0000000**
	**T-coupler M12 – M12**		
	Male straight - female straight Distribution function (NO)	5-pole - 4-pole	**7000-41121-0000000**
	**Holding plate**		
	for T-couplers M12 (SlimLine)	without mounting set	**7000-99061-0000000**
	for T-couplers M12 (SlimLine)	with mounting set	**7000-99062-0000000**

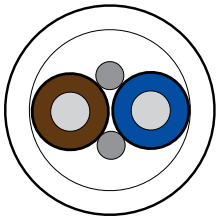
Torque wrench			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99109-0000000**
	M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	**7000-99108-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	**7000-99094-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	**7000-99103-0000000**
	**Torque wrench set**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99101-0000000**

MASI INSTALLATION TECHNOLOGY

Torque wrench			Art-No.
	**Torque wrench**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99091-0000000**
	**Torque wrench set**		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	**7000-99104-0000000**
	**Torque wrench**		
	7/8" (1.5 Nm, SW22)	7/8" data connenctor moulded (IDC terminal)	**7000-99096-0000000**
	7/8" (1.5 Nm, SW24)	7700-XXXXX - 7/8" data connenctor moulded (screw terminals)	**7000-99097-0000000**

For profile cable			Art-No.
	**Coding element - short**		
	for MASI67 AS-i	Quantity: 2 pcs.	**55059**
	**Coding element - long**		
	for MASI67 AUX	Quantity: 2 pcs.	**55060**
	**Mounting bracket**		
	for AS-Interface profile cable	Quantity: 50 pcs.	**55742**
	**Adapter**		
	from profile cable to M16		**56453**
	**Plug terminal**		
	for bus or power distributor	AS-Interface profile cable	**55604**
	**AS-Interface distributor**		
	from profile to profile cable Operating current: max. 3 A		**55749**
	**AS-Interface breakout**		
	from profile cable to M12 Operating current: max. 2 A	M12, 2-pole, A-coded	**55741**

For profile cable			Art-No.
	**Middle gasket**		
	for profile cable	Quantity: 2 pcs.	**55062**
	**End gasket**		
	for Profile cable left/right	Quantity: 2 pieces right + 2 pieces left	**55061**
	**End gasket**		
	for profile cable right	Quantity: 100 pcs.	**56432**
	**End gasket**		
	for Profile cable left	Quantity: 100 pcs.	**56433**
	**End gasket**		
	for Profile cable left/right	Quantity: 5 pcs. right + 5 pcs. left	**55746**
	**Bulk cable**		
	Profie cable yellow, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	1 m	**55743**
	**Bulk cable**		
	Profie cable yellow, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	**7000-C9901-1660000**
	Profie cable yellow, 2 × 2.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	**7000-C9901-1780000**
	**Bulk cable**		
	Profile cable black, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	1 m	**55744**
	**Bulk cable**		
	Profile cable black, 2 × 1.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	**7000-C9901-7840000**
	Profile cable black, 2 × 2.5 mm² PUR (UL/CSA), C-tracks	Cable ring: 100 m Other versions on request.	**7000-C9901-7790000**

Round cable MASI68			Art-No.
	**T-coupler M12 – M12**		
	Female straight - male/male straight A-coded, 4-pole	MASI68 additional actuator power supply	**7060-42701-0000000**
	Female straight - male/male straight Distribution function (NO) MASI68 additional actuator power supply MVK Metall Safety	4-pole	**7060-42703-0000000**
	**DIN-rail adapter**		
	for extension modules	30 mm	**56963**
	**DIN-rail adapter**		
	for extension modules	50 mm	**56962**
	**Cable drum (100 m)**		
	2 × 1.5 mm², gray Suitable for C-tracks	AS-Interface, MASI68	**7000-C0201-5880000**

Round plug connectors MASI68			Art-No.
	**Connection cable**		
	Male straight - female straight 2 × 1.5 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole Suitable for C-tracks Other versions on request.	**7060-40005-5880100**
	Male straight - female straight 4 × 0.75 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole Suitable for C-tracks Other versions on request.	**7060-40021-8620100**
	**Connection cable**		
	Male 90° - female 90° 2 × 1.5 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole Suitable for C-tracks Other versions on request.	**7060-40245-5880100**
	Male 90° - female 90° 4 × 0.75 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole Suitable for C-tracks Other versions on request.	**7060-40261-8620100**

Round plug connectors MASI68			Art-No.
	**Connection cable**		
	Male straight - female straight 2 × 1.0 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 2-pole, shielded Suitable for C-tracks Other versions on request.	**7060-40485-5420100**
	Male straight - female straight 2 × 0.75 mm² + 2 × 0.75 mm², gray PUR (UL/CSA) 1.0 m	M12 - M12 4-pole, shielded Suitable for C-tracks Other versions on request.	**7060-40505-4940100**
	**With open ended wires**		
	Female straight 4 × 0.75 mm², gray PUR (UL/CSA) 1.0 m	M12 4-pole Suitable for C-tracks Other versions on request.	**7060-12221-8620100**

Labeling accessories			Art-No.
	**Label plates**		
	20 × 8 mm	(20 pieces per plate)	**55318**

Blind plug/caps			Art-No.
	**Screw plug M12 × 1 mm**		
	Plastic, hex with gasket	Quantity: 4 pcs.	**55468**
	Plastic, hex with gasket	Quantity: 100 pcs.	**56455**
	Plastic, hex without gasket	Quantity: 4 pcs.	**56952**
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**3858627**



M8 DISTRIBUTION SYSTEMS
EXACT8

- **Saves space**
- **Versatile**
- **Application oriented**

EXACT8 – THE NEW GENERATION OF MURRELEKTRONIK'S M8 DISTRIBUTION BOXES

- Small dimensions (30 mm width)
- PUR/PVC cable for flexible and fixed assembly
- High-quality, halogen-free PUR cable suitable for C-tracks, UL/CSA approved
- Standard or side mounting for limited space
- Quick and easy replacement of connection cables

For Sensors and Actuators – Molded Homerun Cables or Connection Caps



Exact8
- 4-, 6-, 8-, 10-way
- PUR or PUR/PVC homerun cable

Page 4.11.1



Exact8 basic modules
- 4-, 6-, 8-, 10-way

Page 4.11.5



Exact8 connection caps
- Pre-wired
- PUR or PUR/PVC homerun cable

Page 4.11.8



Exact8 set
- 4-, 6-, 8-, 10-way
- Field-wireable

Page 4.11.11

For Sensors – with M12 Connection



Exact8
- 4-, 6-, 8-, 10-way
- With 8- or 12-pole M12 connection

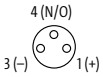
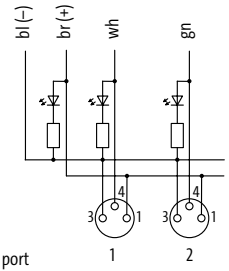
Page 4.11.12

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84010**	**86010**	**88010**	**80010**
Type	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**
Contact layout	M8-Females 3-pole   for 1 signal per port			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
3.0 m	**0300**			
5.0 m	**0500**			
10.0 m	**1000**			
15.0 m	**1500**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 8 A			
Protection	IP65/IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
LED display	LED (green): Power / LED (yellow): (S1)			
PIN 1	(+)			
PIN 3	(-)			
PIN 4	(NO)/(S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _		– _ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

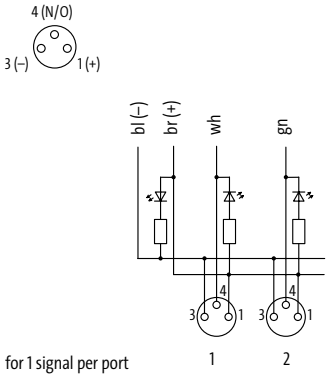
Notes

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	**Exact8** 6-way	**Exact8** 8-way	**Exact8** 10-way
				
1 Form	**84011**	**86011**	**88011**	**80011**
Type	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			

2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²

3 Cable Length	
5.0 m	**0500**
10.0 m	**1000**

Technical Data	
Operating voltage	24 V DC
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+80 °C, depending on cable quality

Contact Layout	
LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

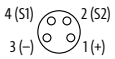
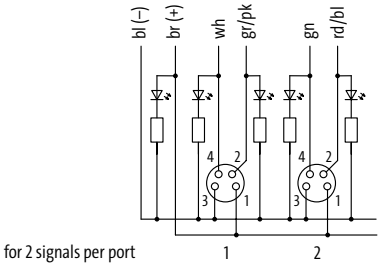
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84110**	**86110**	**88110**	**80110**
Type	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M8-Females 4-pole  			

2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 0.34 + 2 × 0.75 mm²

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data	
Operating voltage	24 V DC
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+80 °C, depending on cable quality

Contact Layout	
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
1 Form	**2 Cable Type** / **3 Cable Length**

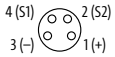
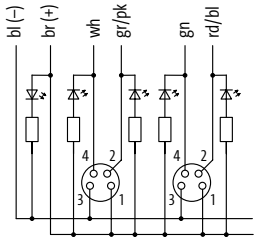
Notes

For sensors and actuators

– with molded homerun cable

– Inline face or side mounting

Approvals: cULus Listed

	Exact8 4-way	**Exact8** 6-way	**Exact8** 8-way	**Exact8** 10-way
				
1 Form	**84111**	**86111**	**88111**	**80111**
Type	**NPN, 4-pole**	**NPN, 4-pole**	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M8-Females 4-pole   for 2 signals per port 1 2			
2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²	**412** – 20 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²	**411** – 20 × 0.34 + 2 × 0.75 mm²
3 Cable Length				
5.0 m	**0500**			
10.0 m	**1000**			
Technical Data				
Operating voltage	24 V DC			
Total current	max. 8 A			
Protection	IP65/IP67			
Temperature range	-20...+80 °C, depending on cable quality			
Contact Layout				
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)			
PIN 1	(+)			
PIN 2	(NC)/(S2)			
PIN 3	(-)			
PIN 4	(NO)/(S1)			
Article No.				
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form	**2 Cable Type**	**3 Cable Length**

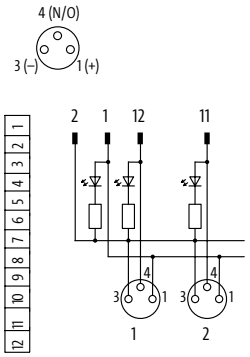
Notes

For sensors and actuators

– Base modules

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84000**	**86000**	**88000**	**80000**
Type	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**	**PNP, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000 –	_____ –	000	0000
	1 Form		

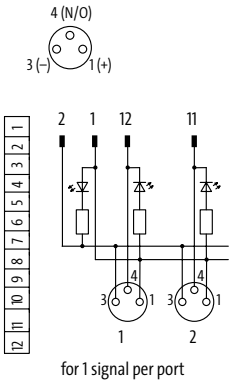
Notes

For sensors and actuators

– Base modules

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84001**	**86001**	**88001**	**80001**
Type	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**	**NPN, 3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port			

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

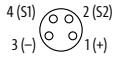
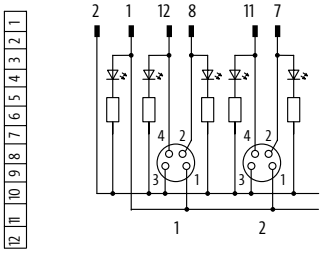
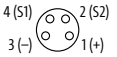
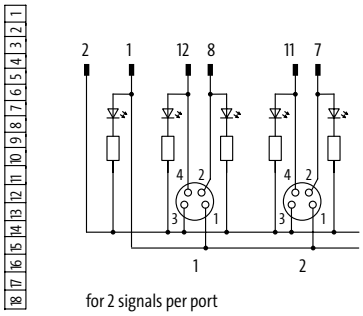
Notes

For sensors and actuators

– Base modules

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way
			
1 Form	**84100**	**86100**	**88100**
Type	**PNP, 4-pole**	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M8 Females 4-pole   	M8-Females 4-pole   	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

For sensors and actuators

– Connection cap with homerun cable

Approvals: c UL us Listed

Exact8

Connection cap short

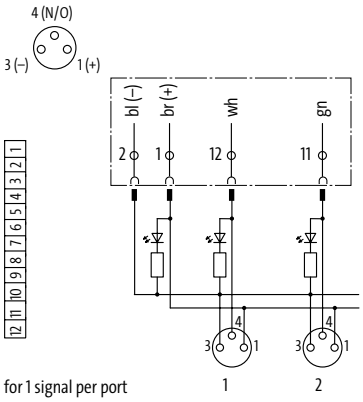


1 Form

	84049	86049	88049	80049
Type	**for 4-way distribution box, 3-pole** Spring clamp plug-in terminals	**for 6-way distribution box, 3-pole** Spring clamp plug-in terminals	**for 8-way distribution box, 3-pole** Spring clamp plug-in terminals	**for 10-way distribution box, 3-pole** Spring clamp plug-in terminals

Contact layout

M8-Females 3-pole



for 1 signal per port

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray	gray
PUR/PVC	**337** – 4 × 0.34 + 2 × 0.75 mm²	**350** – 6 × 0.34 + 2 × 0.75 mm²	**357** – 8 × 0.34 + 2 × 0.75 mm²	**385** – 10 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– ___	____
	1 Form	2 Cable Type	3 Cable Length

Notes

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stay connected

For sensors and actuators

– Connection cap with homerun cable

Approvals: cULus Listed

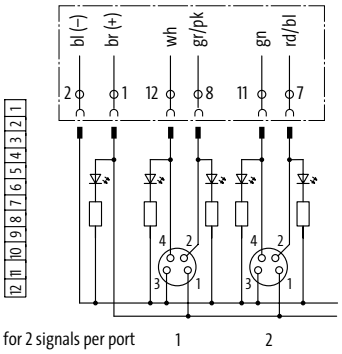
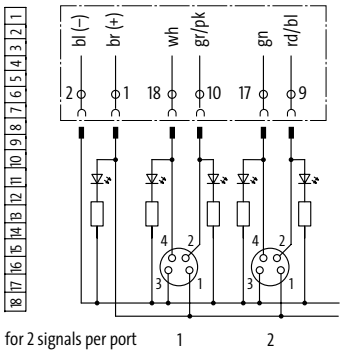
Exact8
Connection cap short



Exact8
Connection cap long



1 Form

	84149	86149	88149
Type	**for 4-way distribution box, 4-pole** **Spring clamp plug-in terminals**	**for 6-way distribution box, 4-pole** **Spring clamp plug-in terminals**	**for 8-way distribution box, 4-pole** **Spring clamp plug-in terminals**
Contact layout	M8-Females 4-pole 4 (S1) 2 (S2) 3 (–) 1 (+)  	M8-Females 4-pole 4 (S1) 2 (S2) 3 (–) 1 (+)  	

2 Cable Type

Jacket Color – No./diameter of wires

	gray	gray	gray
PUR/PVC	**358** – 8 × 0.34 + 2 × 0.75 mm²	**386** – 12 × 0.34 + 2 × 0.75 mm²	**395** – 16 × 0.34 + 2 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks	**360** – 8 × 0.34 + 2 × 0.75 mm²	**389** – 12 × 0.34 + 2 × 0.75 mm²	**396** – 16 × 0.34 + 2 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

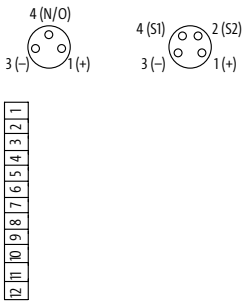
8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		**2 Cable Type**	**3 Cable Length**

Notes

For sensors and actuators

– **Connection cap without homerun cable**

– **Field-wireable**

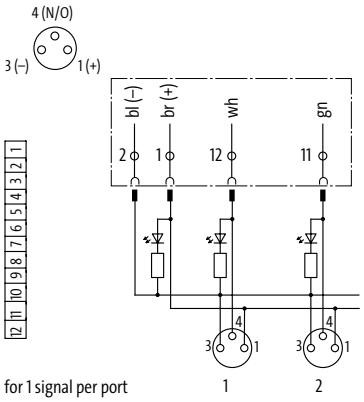
	Exact8 Connection cap short	**Exact8** Connection cap long
		
1 Form	**84949**	**80949**
Type	**for 4-way distribution box, 3/4-pole, for 4...10-way, 3-pole** **Spring clamp plug-in terminals**	**6-, and 8-way distribution box, 4-pole** **Spring clamp plug-in terminals**
Contact layout	3-pole M8-Females 4-pole 	M8-Females 4-pole 
Technical Data		
Total current	max. 8 A	
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – 0 0 0 0 0 0 0**	
	1 Form	
Notes		

For sensors and actuators

– Sets (basic module and cap)

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84040**	**86040**	**88040**	**80040**
Type	**3-pole**	**3-pole**	**3-pole**	**3-pole**
Contact layout	M8-Females 3-pole  for 1 signal per port 1 2			

2 Cable Type	**Jacket Color** – No./diameter of wires			
	gray	**gray**	**gray**	**gray**
PUR (UL/CSA), robots/C-tracks	**334** – 4 × 0.34 + 2 × 0.75 mm²	**356** – 6 × 0.34 + 2 × 0.75 mm²	**359** – 8 × 0.34 + 2 × 0.75 mm²	**384** – 10 × 0.34 + 2 × 0.75 mm²

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data	
Operating voltage	24 V DC
Total current	max. 8 A
Protection	IP67 inserted and tightened (EN 60529)
Temperature range	-20...+80 °C, depending on cable quality

Contact Layout	
LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 – _ _ _ _ _ – _ _ _	_ _ _ _
1 Form	**2 Cable Type** / **3 Cable Length**

Notes

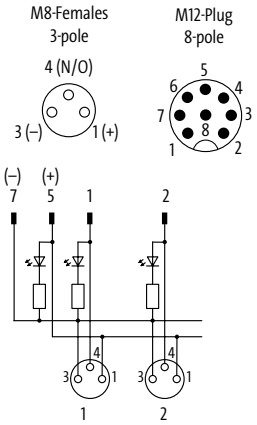
For sensors

– M12 plug connection

– 8-pole

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	**Exact8** 6-way
		
1 Form	**84070**	**86070**
Type	**3-pole**	**3-pole**
Contact layout	 for 1 signal per port	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 2 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	_____	–	000	0000
		1 Form			

Notes

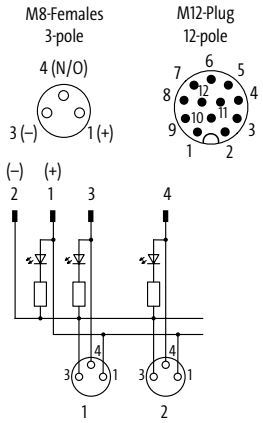
For sensors

– M12 plug connection

– 12-pole

– Inline face or side mounting

Approvals: c UL us Listed

	Exact8 4-way	Exact8 6-way	Exact8 8-way	Exact8 10-way
				
1 Form	**84060**	**86060**	**88060**	**80060**
Type	**3-pole**	**3-pole**	**3-pole**	**3-pole**
Contact layout				

for 1 signal per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP67 inserted and tightened (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0 –	_ _ _ _ _ –	0 0 0	0 0 0 0
	1 Form		

Notes

For sensors

– M12 plug connection

– 12-pole

– Inline face or side mounting

Approvals: c UL us Listed

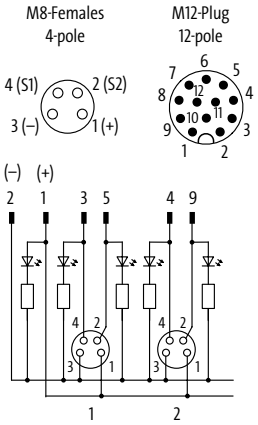
Exact8

4-way



1 Form

84160

Type	**4-pole**
Contact layout	

for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 1.5 A
Protection	IP67 inserted and tightened (EN 60529)
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)

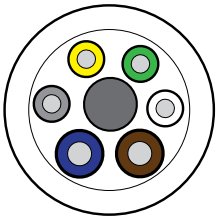
Article No.

The composition of your article number is explained on page 3.1.i

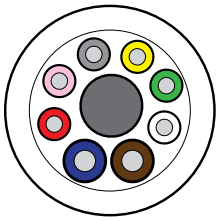
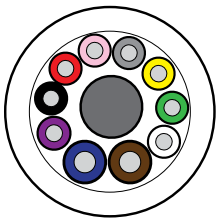
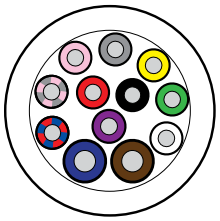
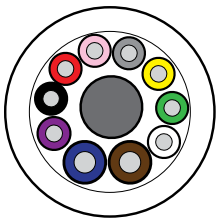
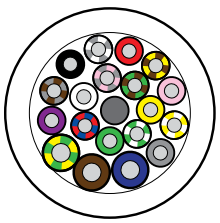
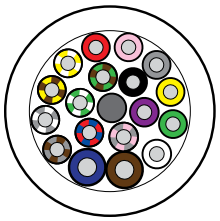
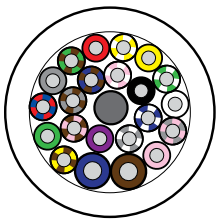
8000	–	84160	–	000	0000
		1 Form			

Notes

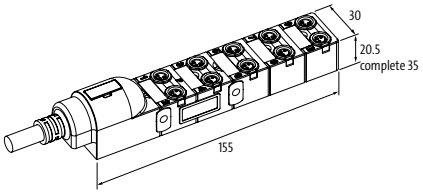
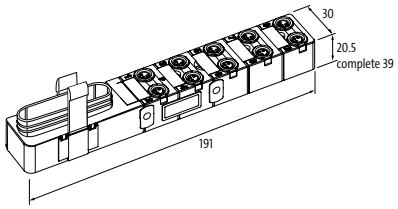
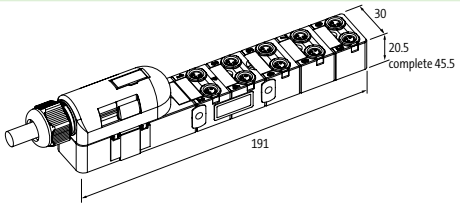
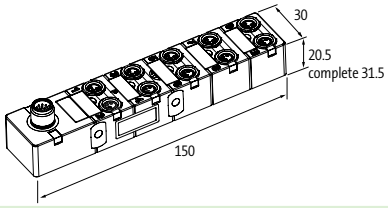
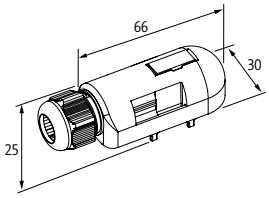
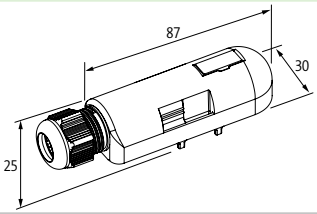
Plug accessories			Art-No.
	**Torque wrench set**		
	M8 (0.4 Nm, SW9)	M8 data connectors	**7000-99101-0000000**
	**Screw plug M8 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**3858627**
	**Adapter M8/M12**		
	3-pole	M8 Distribution Systems	**7000-88521-0000000**
	4-pole	M8 Distribution Systems	**7000-88531-0000000**
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**T-coupler (Nano)**		
	Distribution function (NO)	M8 distribution systems, 4-pole	**7000-88602-0000000**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**

Homerun cable accessories			Art-No.
	**Connection cap short**		
	Spring clamp terminals, 12-pole	4-way distribution box, 3/4-pole, 4...10-way, 3-pole Cable diameter (7.4...13 mm)	**8000-84949-0000000**
	**Connection cap long**		
	Spring clamp terminals, 18-pole	6-, and 8-way distribution box, 4-pole Cable diameter (7.4...13 mm)	**8000-80949-0000000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3375000**
	4×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3345000**

M8 DISTRIBUTION SYSTEMS

Homerun cable accessories			Art-No.
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3505000**
	6×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3565000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3575000**
	8×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3595000**
	**Cable rings (50 m), 3-pole, PUR/PVC**		
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3855000**
	10×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-3845000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3585000**
	8×0.34 + 2×0.75 mm²	4-way distribution boxes M8	**8000-00000-3605000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3865000**
	12×0.34 + 2×0.75 mm²	6-way distribution boxes M8	**8000-00000-3895000**
	**Cable rings (50 m), 4-pole, PUR/PVC**		
	16×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3955000**
	16×0.34 + 2×0.75 mm²	8-way distribution boxes M8	**8000-00000-3965000**
	**Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free**		
	20×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-4115000**
	20×0.34 + 2×0.75 mm²	10-way distribution boxes M8	**8000-00000-4125000**

M8 Distribution Systems Technical Data

	Description	4-way	6-way	8-way	10-way
	**Exact8** Molded homerun cable	96 mm	109 mm	132 mm	155 mm
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** Basic module 3-pole Basic module 4-pole	132 mm 132 mm	145 mm 166 mm	168 mm 189 mm	191 mm –
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** Sets 3-pole Sets 4-pole	132 mm 132 mm	145 mm 166 mm	168 mm 189 mm	191 mm –
	Description	**4-way**	**6-way**	**8-way**	**10-way**
	**Exact8** M12 plug connection	91.5 mm	104 mm	127 mm	150 mm
	Description				
	**Exact8** Short connection cap				
	Description				
	**Exact8** Long connection cap				



M12 DISTRIBUTION SYSTEMS
METAL

- **Rugged**
- **Resistant to media**
- **Sealed**

POTTED FORMS FOR HARSH ENVIRONMENTS

- Metal housing withstands mechanical and thermal stress, with molded cable or maintenance-friendly M23 plug connection
- High quality PUR cable: suitable for C-tracks, halogen-free, wider wire cross sections for higher current capacity
- Shielded models for sensitive digital or analog signals for an EMC compatible installation
- Universal configuration - contacts designed 1:1
- Fully potted

With molded homerun cable or M23 plug connection



MVP12 Metal

• 4-, 8-way
• With LED for PNP or NPN signals
• Without LED for analog signals and voltages up to 125 V AC/DC
• With PUR homerun cable or M23 connection

Page 4.12.1



MVP12 Metal UNIVERSAL

• 4-way
• M12 Pin 1, 2, 3, and 4 freely configurable

Page 4.12.8

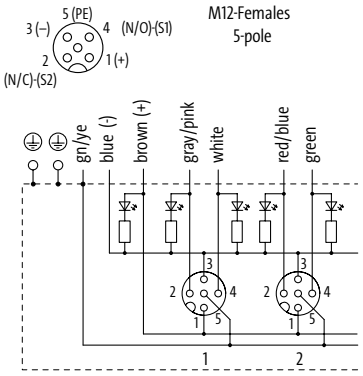
MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: c UL us Listed

	MVP12 Metal	**MVP12 Metal**
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**54510**	**58510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	

2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data	
Operating voltage	24 V DC
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout	
LED display	LED (green): Power / LED (yellow): (S1/S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	– _ _ _ _ _	– _ _ _	_ _ _ _
	1 Form	**2 Cable Type**	**3 Cable Length**

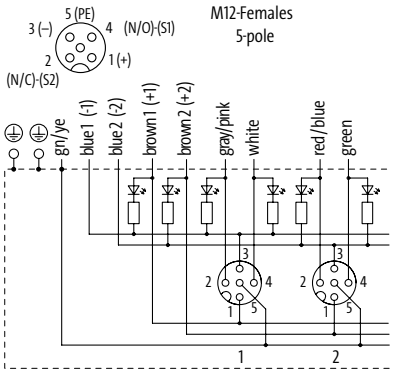
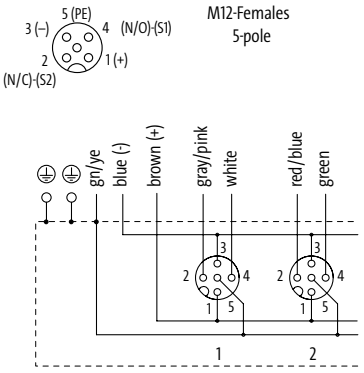
Notes

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed

	MVP12 Metal 8-way with potential separation	**MVP12 Metal** 4-way without LED
		
1 Form	**58610**	**54512**
Type	**PNP, 5-pole**	**without LED, 5-pole (for analog signals)**
Contact layout	 for 2 signals per port	 for 2 signals per port
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**403** – 16 × 0.34 + 5 × 0.75 mm²	**448** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	max. 125 V AC/DC
Total current	max. 7.5 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1/S2)	–
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _	_ _ _ _
	1 Form	**2 Cable Type** / **3 Cable Length**

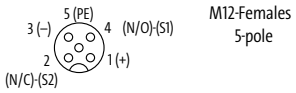
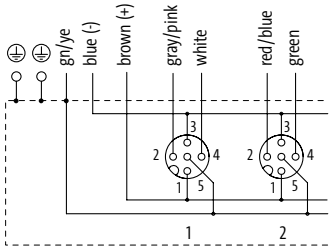
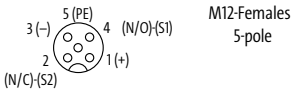
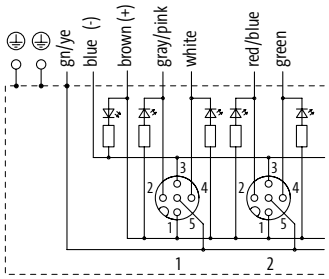
Notes

For sensors and actuators

– with molded homerun cable

– unshielded

Approvals: cULus Listed

	MVP12 Metal 8-way without LED	**MVP12 Metal** 8-way for NPN signals 24 V DC
		
1 Form	**58512**	**58511**
Type	**without LED, 5-pole (for analog signals)**	**NPN, 5-pole**
Contact layout	  for 2 signals per port	  for 2 signals per port
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**452** – 16 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	24 V DC
Total current	max. 7.5 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
LED display	–	LED (green): Power / LED (yellow): (S1/S2)
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		

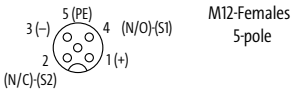
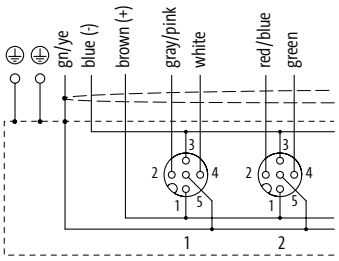
M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– with molded homerun cable

– shielded

Approvals: cULus Listed

	MVP12 Metal 4-way	**MVP12 Metal** 8-way
		
1 Form	**54515**	**58515**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**
Contact layout	  for 2 signals per port	
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	max. 125 V AC/DC	
Total current	max. 7.5 A	
Protection	IP65, IP67, IP68	
Temperature range	-20...+90 °C, depending on cable quality	
Contact Layout		
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Shield	via M12 thread	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _	_ _ _ _
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

– shielded

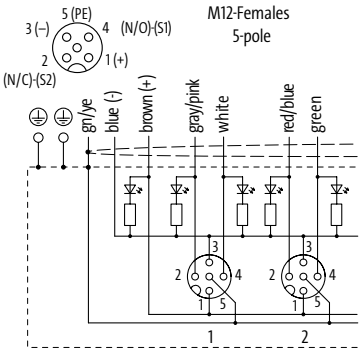
Approvals: cULus Listed

MVP12 Metal
4-way
for PNP signals 24 V DC



MVP12 Metal
8-way
for PNP signals 24 V DC



1 Form	54513	58513
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	 for 2 signals per port	

2 Cable Type	Jacket Color – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**373** – 8 × 0.34 + 3 × 0.75 mm²	**401** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data	
Operating voltage	24 V DC
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout	
LED display	LED (green): Power / LED (yellow): (S1/S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)
Shield	via M12 thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

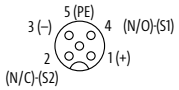
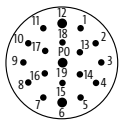
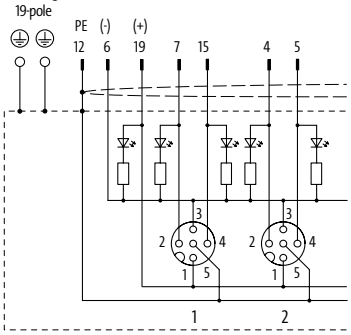
M12 DISTRIBUTION SYSTEMS (METAL)

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use

Approvals: c UL us Listed

	MVP12 Metal	**MVP12 Metal**
	4-way for PNP signals 24 V DC	8-way for PNP signals 24 V DC
		
1 Form	**54520**	**58520**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	M12-Females 5-pole  M23-Plug 19-pole  M23-Plug 19-pole  for 2 signals per port	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+90 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1/S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)
Shield	via M12 outer thread and M23 outer thread

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

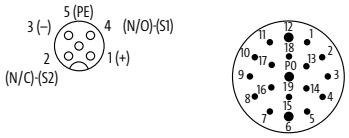
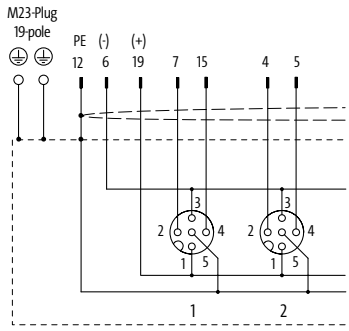
MURR ELEKTRONIK
stay connected

For sensors and actuators

– M23 plug connection, 19-pole

– for unshielded or shielded use

Approvals: c UL us Listed

	MVP12 Metal	MVP12 Metal
	4-way	8-way
		
1 Form	**54522**	**58522**
Type	**without LED, 5-pole (for analog signals)**	**without LED, 5-pole (for analog signals)**
Contact layout	M12-Females 5-pole / M23-Plug 19-pole   for 2 signals per port	

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Temperature range	-25...+80 °C

Contact Layout

PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)
Shield	via M12 outer thread and M23 outer thread

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	0 0 0	0 0 0 0
		1 Form			

Notes

M12 DISTRIBUTION SYSTEMS (METAL)

For harsh environments

– for unshielded or shielded use

MVP12 Metal UNIVERSAL

with molded homerun cable

4-way



1 Form

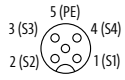
54712

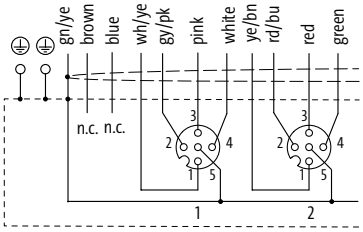
Type

without LED, 5-pole (for analog signals)

Contact layout

M12-Females 5-pole





for 4 signals per port
free arrangeable, PE bridged

2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA), robots/C-tracks	**401** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	max. 42 V AC/DC
Total current	max. 10 A
Protection	IP65, IP67, IP68
Temperature range	-20...+90 °C, depending on cable quality

Contact Layout

PIN 1	(S1)
PIN 2	(S2)
PIN 3	(S3)
PIN 4	(S4)
PIN 5	(Earth)
Shield	via M12 thread

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	54712	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For harsh environments

– for unshielded or shielded use

Approvals: c UL us Listed

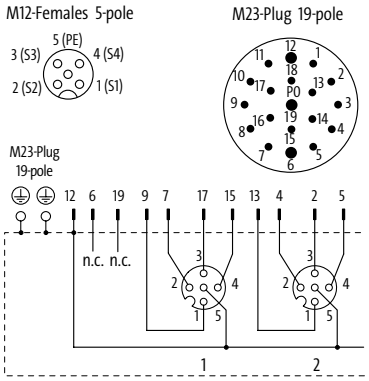
MVP12 Metal UNIVERSAL

M23 plug connection, 19-pole
4-way



1 Form

54722

Type	**without LED, 5-pole (for analog signals)**
Contact layout	

for 4 signals per port

Technical Data

Operating voltage	max. 125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 7.5 A
Protection	IP65, IP67, IP68
Housing	Zinc die casting, matte nickel plated
Locking of ports	Screw thread M12 × 1 mm
Temperature range	-25...+90 °C

Contact Layout

PIN 1	(S1)
PIN 2	(S2)
PIN 3	(S3)
PIN 4	(S4)
PIN 5	(S5)/(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– 54722 –	000	0000
	1 Form		

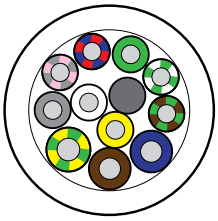
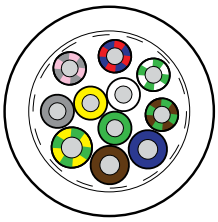
Notes

M12 DISTRIBUTION SYSTEMS (METAL)

Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99109-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	**7000-99108-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	**7000-99094-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	**7000-99103-0000000**
	**DIN-rail adapter**		
	with fixing screws, plastic		**27905**
	**Earth connection set**		
			996064
	**V2A-base plate**		
		MVP12 Metal, 4-way	**996065**
		MVP12 Metal, 8-way	**996066**
	**Ground strap 4 mm²**		
	100 mm for hole (M3)		**4000-71001-0410003**
	**End fitting set M3**		
		Ground straps	**4000-71003-0101403**

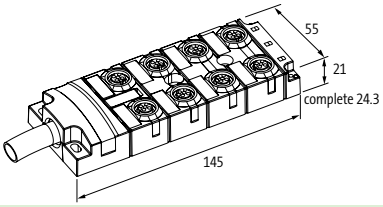
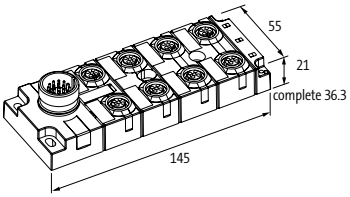
Plug accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**

Plug accessories			Art-No.
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**Adapter M8/M12**		
	3-pole	M12 Distribution Systems	**7000-42201-0000000**
	4-pole	M12 Distribution Systems	**7000-42211-0000000**

Homerun cable accessories			Art-No.
	**Screw plug M23**		
	Metal		**55352**
	**Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free**		
	8×0.5 + 3×1.0 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4035000**
	**Cable rings (50 m), 5-pole, PUR (UL/CSA), halogen free**		
	8×0.34 + 3×0.75 mm²	4-way distribution boxes M12, shielded	**8000-00000-3735000**
	16×0.34 + 3×0.75 mm²	8-way distribution boxes M12, shielded	**8000-00000-4015000**

M12 DISTRIBUTION SYSTEMS (METAL)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	**MVP Metal and MVP Metal UNIVERSAL** Molded homerun cable	95 mm	145 mm
	Description	**4-way**	**8-way**
	**MVP Metal and MVP Metal UNIVERSAL** M23 plug connection	95 mm	145 mm



M12 DISTRIBUTION SYSTEMS
PLASTIC

- **Fully potted, sealed**
- **Highly resistant**
- **Application oriented**

PLUGGABLE CONNECTIONS FROM THE PROCESS TO THE CONTROL

- Quick installation with pre-wired and tested cables
- Easy to separate during transportation and simple when redesigning your system, rapid replacement of damaged cables
- Double assignment of M12 ports saves space
- Safety models for inputs and outputs according to EN ISO 13849-2
- Universal configuration – contacts designed 1:1

Pluggable or pre-wired homerun cable



Exact12
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals
- ATEX

Page 4.13.1



Exact12
- 4-, 8-way
- With pluggable 8- or 12-pole M12 connection
- With pluggable 12- or 19-pole M23 connection

Page 4.13.27



Exact12 basic modules
- 4-, 8-way
- With LED for PNP or NPN signals
- Without LED for voltages up to 125 V AC/DC
- Analog signals

Page 4.13.8



Exact12/MVP12 connection caps
- Field-wireable with screw or spring clamp terminals
- With pre-wired homerun cable and screw plug terminals

Page 4.13.14



Exact12 set
- 4-, 8-way
- With pluggable cap and screw plug terminals or spring clamp terminals

Page 4.13.17



Exact12 with connection on the back
- 8-way
- With pluggable connection on the back
- Potential separation optional

Page 4.13.25



Exact12 UNIVERSAL
- 4-way
- M12 pin 1, 2, 3, and 4 freely configurable

Page 4.13.30



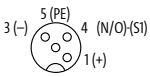
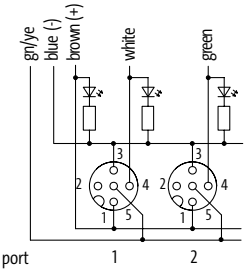
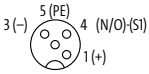
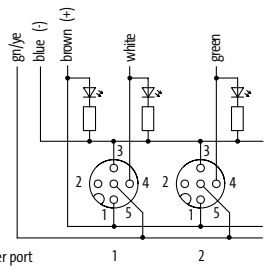
Exact12 – safety distribution system
- 8-way
- Potential separation optional

Page 4.13.31

For sensors and actuators

– with molded homerun cable

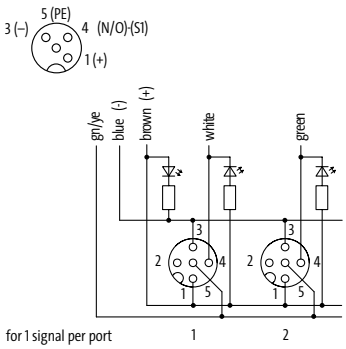
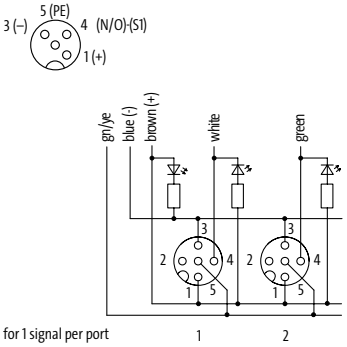
Approvals: c UL us Listed

	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84410**	**88410**
Type	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	
PUR/PVC (UL/CSA), C-tracks		**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1)	
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

For sensors and actuators

– with molded homerun cable

Approvals: c UL us Listed

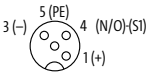
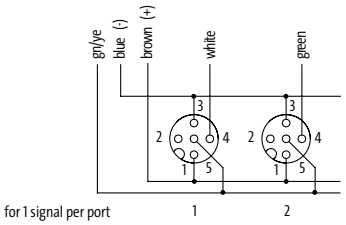
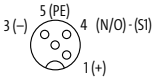
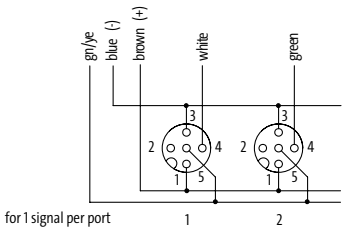
	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84411**	**88411**
Type	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M12-Females 4-pole 	M12-Females 4-pole 
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	
PUR/PVC (UL/CSA), C-tracks		**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 8 A	max. 10 A
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1)	
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _**	
		1 Form / **2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

MURR ELEKTRONIK
stay connected

For sensors and actuators

– with molded homerun cable

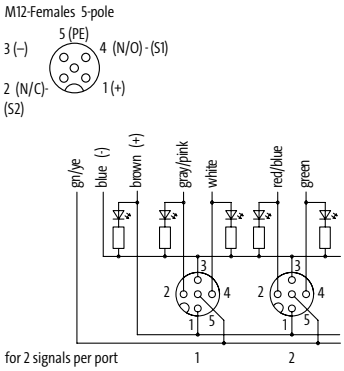
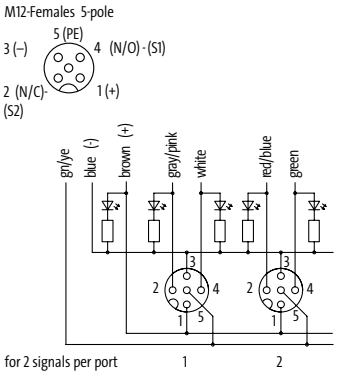
Approvals: c UL us Listed

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84412**	**88412**
Type	**without LED, 4-pole**	**without LED, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	
PUR/PVC (UL/CSA), C-tracks		**362** – 8 × 0.34 + 3 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks		**447** – 8 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	125 V AC/DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed

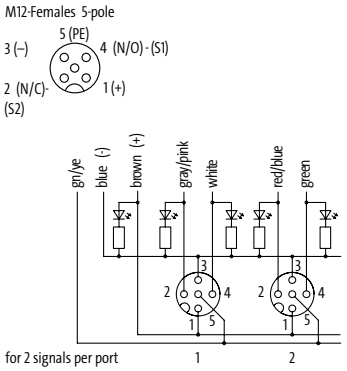
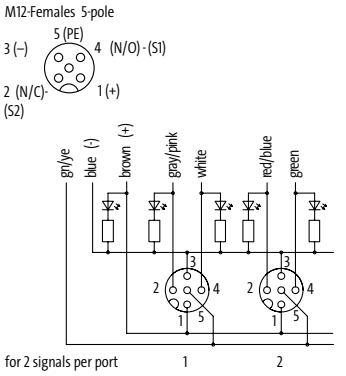
	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84510**	**88510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
PUR/PVC (UL/CSA), C-tracks		**398** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

Approvals: cULus Listed, Ex Zone 2/22

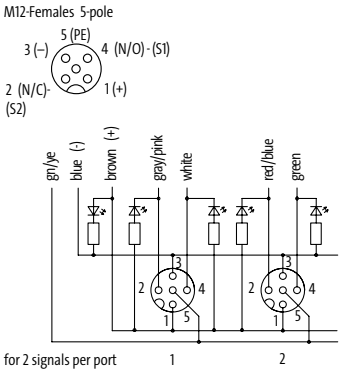
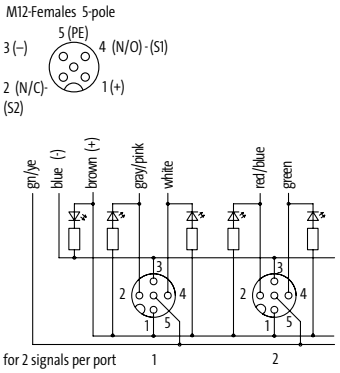
	Exact12 4-way for PNP signals 24 V DC ATEX Zone 2 and 22	**Exact12** 8-way for PNP signals 24 V DC ATEX Zone 2 and 22
		
1 Form	**84510**	**88510**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR (UL/CSA), robots/C-tracks	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
3 Cable Length		
3.0 m	**0300**	
5.0 m	**0500**	
10.0 m	**1000**	
15.0 m	**1500**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8099** – _____ – ___ ____	
	1 Form	**2 Cable Type** **3 Cable Length**
Notes		
	Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– with molded homerun cable

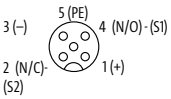
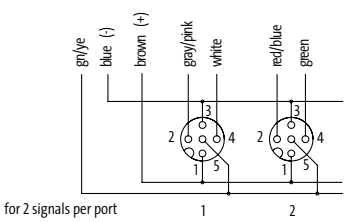
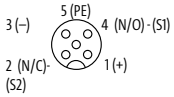
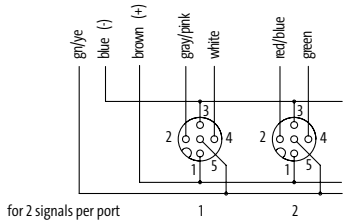
Approvals: cULus Listed

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84511**	**88511**
Type	**NPN, 5-pole**	**NPN, 5-pole**
Contact layout		
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
PUR/PVC (UL/CSA), C-tracks		**398** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	24 V DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
		1 Form **2 Cable Type** **3 Cable Length**
Notes		
	Further cable lengths on request.	

For sensors and actuators

– with molded homerun cable

Approvals: c UL us Listed

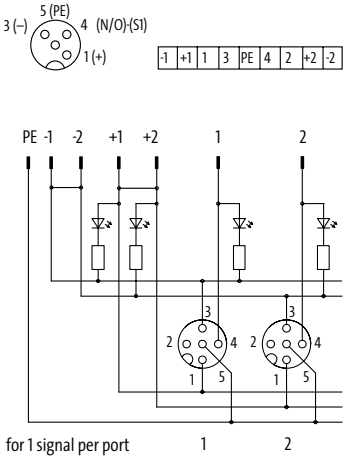
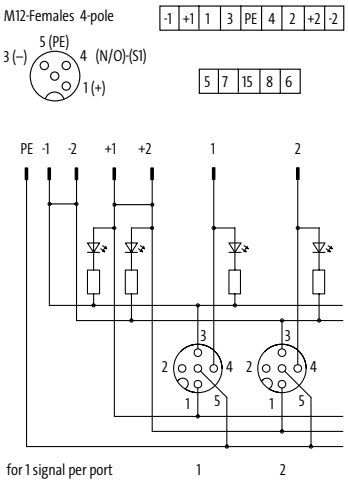
	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84512**	**88512**
Type	**without LED, 5-pole**	**without LED, 5-pole**
Contact layout	M12-Females 5-pole  	M12-Females 5-pole  
2 Cable Type	**Jacket Color** – No./diameter of wires	
	gray	**gray**
PUR/PVC	**363** – 8 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks	**448** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²
PUR/PVC (UL/CSA), C-tracks		**398** – 16 × 0.34 + 3 × 0.75 mm²
3 Cable Length		
5.0 m	**0500**	
10.0 m	**1000**	
Technical Data		
Operating voltage	125 V AC/DC	
Total current	max. 8 A	
Protection	IP65/IP67	
Temperature range	-20...+70 °C, depending on cable quality	
Contact Layout		
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0** – _ _ _ _ _ – _ _ _ _ _ _ _ _	
	1 Form	**2 Cable Type** / **3 Cable Length**
Notes		
	Further cable lengths on request.	

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: cULus Listed

	Exact12 4-way for PNP signals 24 V DC	**Exact12** 8-way for PNP signals 24 V DC
		
1 Form	**84400**	**88400**
Type	**PNP, 4-pole**	**PNP, 4-pole**
Contact layout	M12-Females 4-pole 	M12-Females 4-pole 
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1)	
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	8 0 0 0 – _ _ _ _ _ – 0 0 0	0 0 0 0
	1 Form	

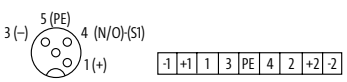
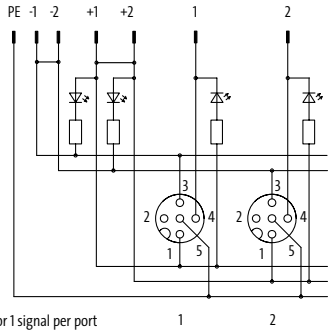
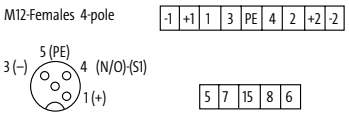
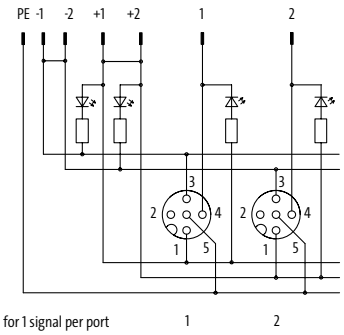
Notes

MURR ELEKTRONIK
stay connected

For sensors and actuators

– Base modules

Approvals: c UL us Listed

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84401**	**88401**
Type	**NPN, 4-pole**	**NPN, 4-pole**
Contact layout	M12-Females 4-pole  	M12-Females 4-pole  

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

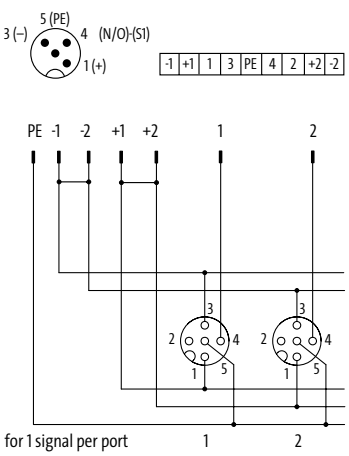
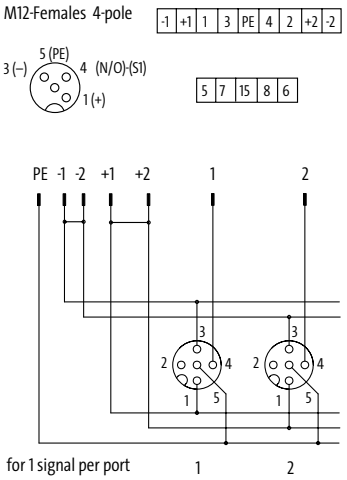
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: c UL us Listed

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84402**	**88402**
Type	**without LED, 4-pole**	**without LED, 4-pole**
Contact layout	M12 Females 4-pole 	M12-Females 4-pole 

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

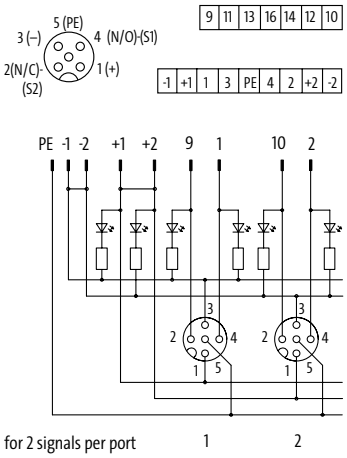
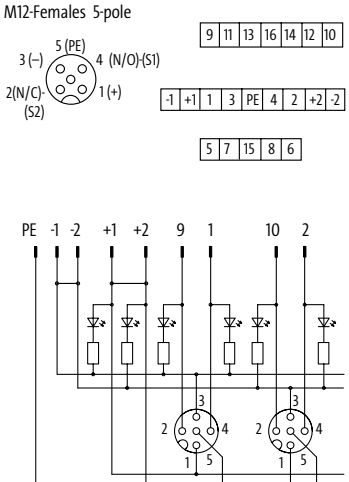
1 Form			
8 0 0 0	– _ _ _ _ _	– 0 0 0	0 0 0 0

Notes

For sensors and actuators

– Base modules

Approvals: c UL us Listed

	Exact12	**Exact12**
	4-way	8-way
	for PNP signals 24 V DC	for PNP signals 24 V DC
		
1 Form	**84500**	**88500**
Type	**PNP, 5-pole**	**PNP, 5-pole**
Contact layout	M12-Females 5-pole  	M12-Females 5-pole 

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	0 0 0	0 0 0 0
		1 Form			

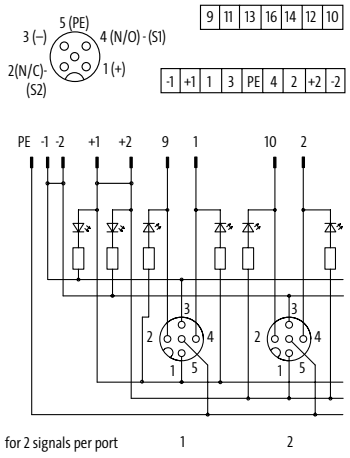
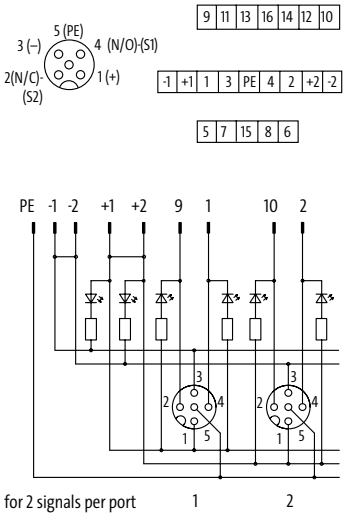
Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Base modules

Approvals: cULus Listed

	Exact12 4-way for NPN signals 24 V DC	**Exact12** 8-way for NPN signals 24 V DC
		
1 Form	**84501**	**88501**
Type	**NPN, 5-pole**	**NPN, 5-pole**
Contact layout	M12-Females 5-pole 	M12-Females 5-pole 

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

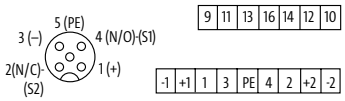
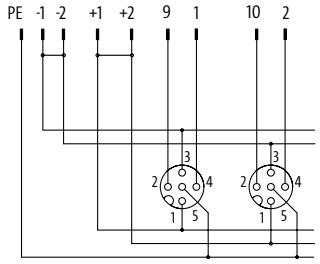
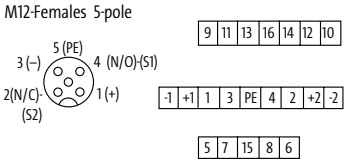
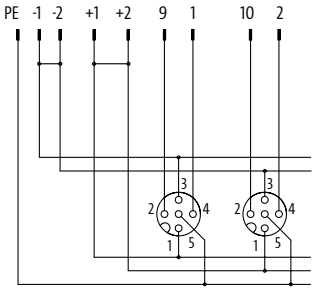
8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Base modules

Approvals: cULus Listed

	Exact12 4-way without LED	**Exact12** 8-way without LED
		
1 Form	**84502**	**88502**
Type	**without LED, 5-pole**	**without LED, 5-pole**
Contact layout	M12-Females 5-pole  	M12-Females 5-pole  

Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
8000	– _____	– 000	0000

Notes

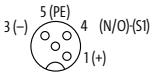
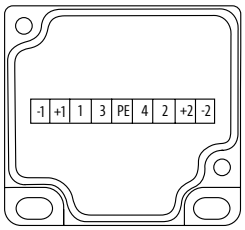
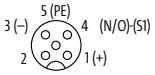
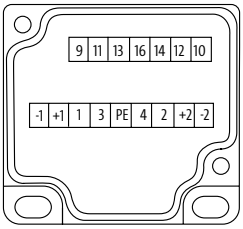
For sensors and actuators

– Connection cap with homerun cable

Exact12

for 4-way distribution boxes



1 Form	84459	84559	84659
Type	4-pole Screw plug-in terminals	5-pole Screw plug-in terminals	5-pole Screw plug-in terminals with potential separation
Contact layout	M12-Females 4-pole   for 1 signal per port	M12-Females 5-pole  Exact12  for 2 signals per port	

2 Cable Type	Jacket Color – No./diameter of wires		
	gray	gray	gray
PUR/PVC	**333** – 4 × 0.34 + 3 × 0.75 mm²	**363** – 8 × 0.34 + 3 × 0.75 mm²	**374** – 8 × 0.34 + 5 × 0.75 mm²
PUR (UL/CSA), robots/C-tracks		**448** – 8 × 0.5 + 3 × 1.0 mm²	

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**
25.0 m	**2500**
30.0 m	**3000**

Technical Data	
Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

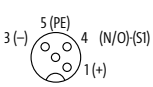
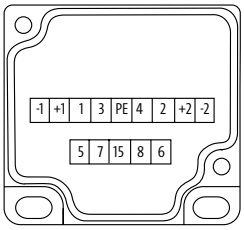
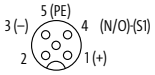
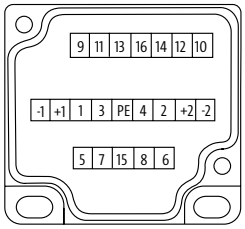
For sensors and actuators

– Connection cap with homerun cable

Exact12

for 8-way distribution boxes



1 Form	88459	88559	88659
Type	4-pole Screw plug-in terminals	5-pole Screw plug-in terminals	5-pole Screw plug-in terminals with potential separation
Contact layout	M12 Females 4-pole   for 1 signal per port	M12-Females 5-pole   for 2 signals per port	

2 Cable Type	Jacket Color – No./diameter of wires		
	gray	gray	gray
PUR/PVC			**404** – 16 × 0.34 + 5 × 0.75 mm²
PUR/PVC (UL/CSA), C-tracks	**362** – 8 × 0.34 + 3 × 0.75 mm²	**398** – 16 × 0.34 + 3 × 0.75 mm²	
PUR (UL/CSA), robots/C-tracks	**447** – 8 × 0.5 + 3 × 1.0 mm²	**452** – 16 × 0.5 + 3 × 1.0 mm²	

3 Cable Length	
3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**
25.0 m	**2500**
30.0 m	**3000**

Technical Data

Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	_ _ _	_ _ _ _
		1 Form		2 Cable Type	3 Cable Length

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

– Connection cap without homerun cable

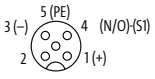
– Field-wireable

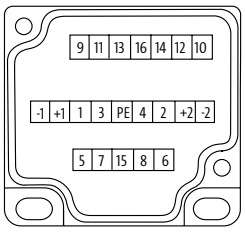
Exact12

for 4-, and 8-way distribution boxes



1 Form	88549	88559
Type	5-pole Spring clamp plug-in terminals	5-pole Screw plug-in terminals
Contact layout	M12-Females 5-pole	





for 2 signals per port

Technical Data

Total current	max. 2 × 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Housing	Plastic, flame retardant	
Temperature range	-20...+80 °C, depending on cable quality	

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Approvals: cULus Listed

Exact12

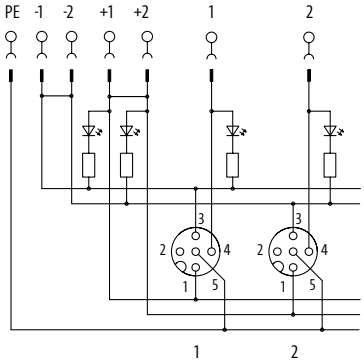
4-way



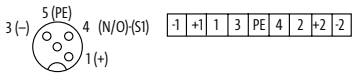
1 Form

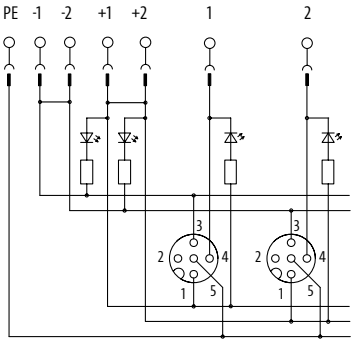
	84440	84450	84451
Type	**PNP, 4-pole** **Spring clamp plug-in terminals**	**PNP, 4-pole** **Screw plug-in terminals**	**NPN, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole		M12-Females 4-pole





for 1 signal per port





for 1 signal per port 1 2

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
8000	– _____	– 000	0000

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

Exact12

4-way

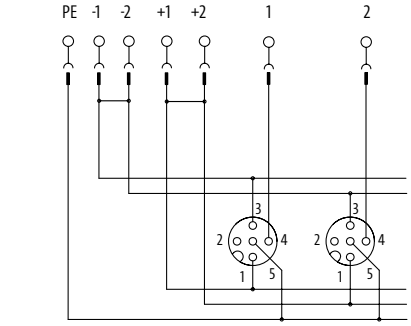


1 Form

84452

Type	**without LED, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole





Technical Data

Operating voltage	125 V AC/DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
8000	– 84452	– 000	0000

Notes

For sensors and actuators

– Sets (basic module and cap)

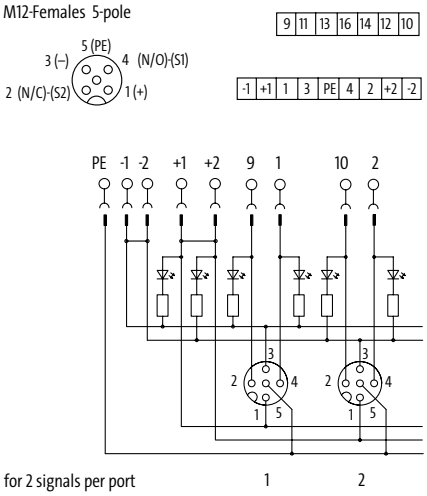
– Field-wireable

Approvals: c UL us Listed

Exact12

4-way



1 Form	84540	84550
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Screw plug-in terminals
Contact layout		

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

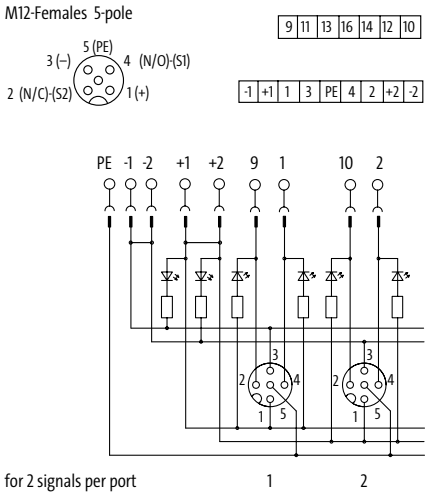
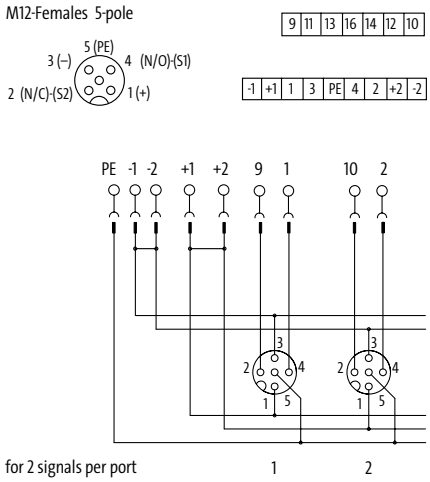
– Sets (basic module and cap)

– Field-wireable

Exact12

4-way



1 Form	84551	84552
Approvals	cULus	
Type	NPN, 5-pole Screw plug-in terminals	without LED, 5-pole Screw plug-in terminals
Contact layout		

Technical Data		
Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	–
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	0 0 0	0 0 0 0
		1 Form			

Notes

For sensors and actuators

– Sets (basic module and cap)

– Field-wireable

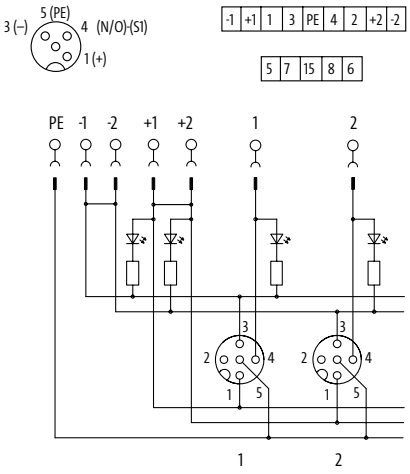
Approvals: c UL us Listed

Exact12

8-way



1 Form	88440	88450
Type	PNP, 4-pole Spring clamp plug-in terminals	PNP, 4-pole Screw plug-in terminals
Contact layout	M12-Females 4-pole	



for 1 signal per port

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

1 Form			
8000	– _____	– 000	0000

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

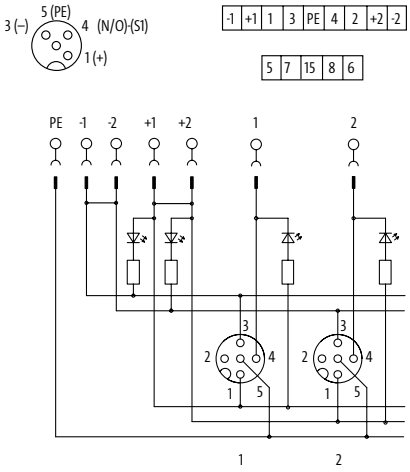
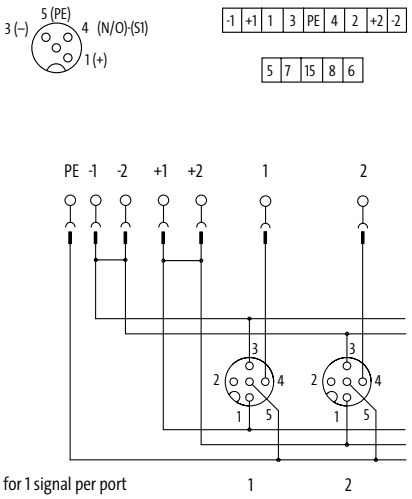
– Sets (basic module and cap)

– Field-wireable

Exact12

8-way



1 Form	**88451**	**88452**
Approvals	**cULus**	
Type	**NPN, 4-pole** **Screw plug-in terminals**	**without LED, 4-pole** **Screw plug-in terminals**
Contact layout	M12-Females 4-pole  for 1 signal per port	M12-Females 4-pole  for 1 signal per port

Technical Data		
Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1)	–
PIN 1	(+)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	

Article No.

The composition of your article number is explained on page 3.1.i

8 0 0 0	–	_ _ _ _ _	–	**0 0 0**	**0 0 0 0**
		1 Form			

Notes

For sensors and actuators

– Sets (basic module and cap)

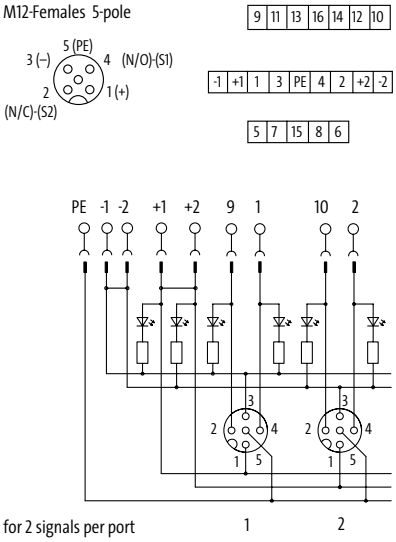
– Field-wireable

Approvals: c UL us Listed

Exact12

8-way



1 Form	88540	88550
Type	PNP, 5-pole Spring clamp plug-in terminals	PNP, 5-pole Screw plug-in terminals
Contact layout		

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Spring clamp plug-in terminals: max. 1.5 mm² (AWG 16)	Screw plug-in terminals: max. 1.5 mm² (AWG 16)
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

M12 DISTRIBUTION SYSTEMS (PLASTIC)

For sensors and actuators

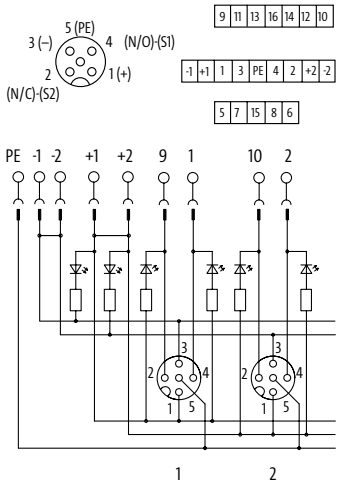
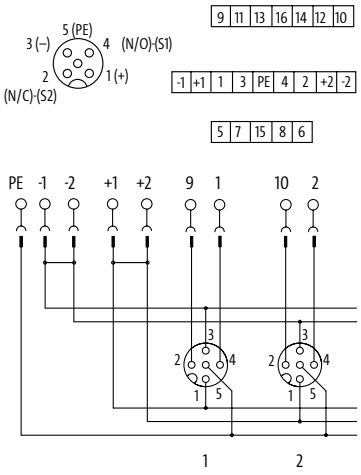
– Sets (basic module and cap)

– Field-wireable

Exact12

8-way



1 Form	88551	88552
Approvals	cULus	
Type	NPN, 5-pole Screw plug-in terminals	without LED, 5-pole Screw plug-in terminals
Contact layout	M12 Females 5-pole  for 2 signals per port	M12 Females 5-pole  for 2 signals per port

Technical Data		
Operating voltage	24 V DC	125 V AC/DC
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Connection	Screw plug-in terminals: max. 1.5 mm² (AWG 16)	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	–
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	

Article No.

The composition of your article number is explained on page 3.1.i

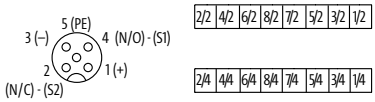
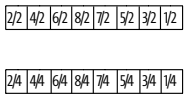
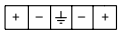
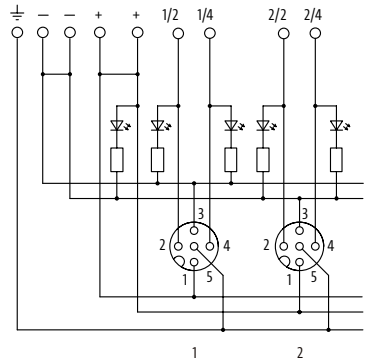
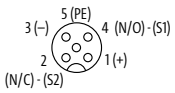
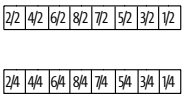
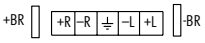
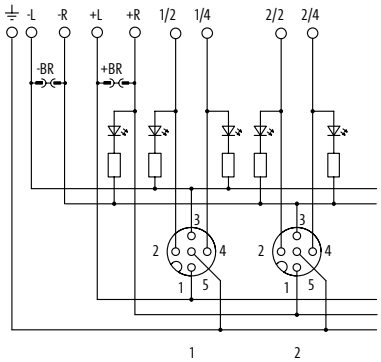
8000	– _____	– 000	0000
	1 Form		

Notes

For sensors and actuators

– Rear connection

Approvals: cULus Listed

	Exact12	Exact12 with potential separation
		
1 Form	**88580**	**88680**
Type	**PNP, 5-pole** **Spring clamp terminals**	**PNP, 5-pole** **Spring clamp terminals**
Contact layout	M12-Females 5-pole  Bottom view    for 2 signals per port	M12-Females 5-pole  Bottom view    for 2 signals per port

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 2 × 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+70 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

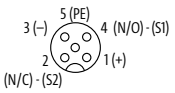
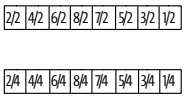
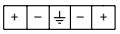
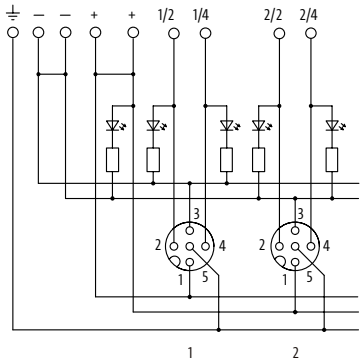
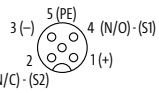
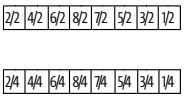
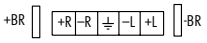
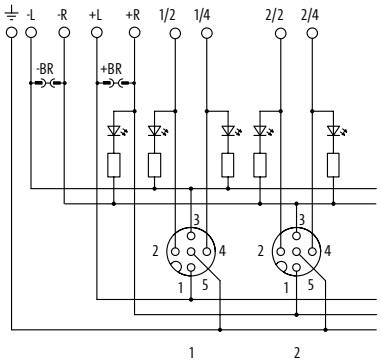
The composition of your article number is explained on page 3.1.i

1 Form			
8000	– _ _ _ _ _	– 000	0000

Notes

For sensors and actuators

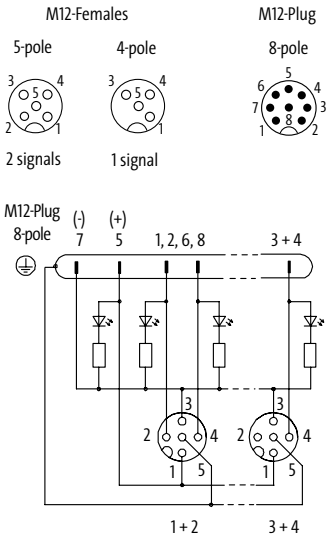
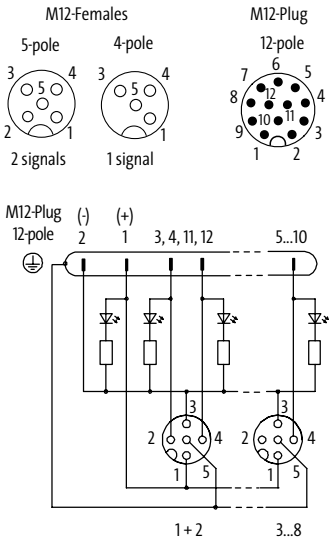
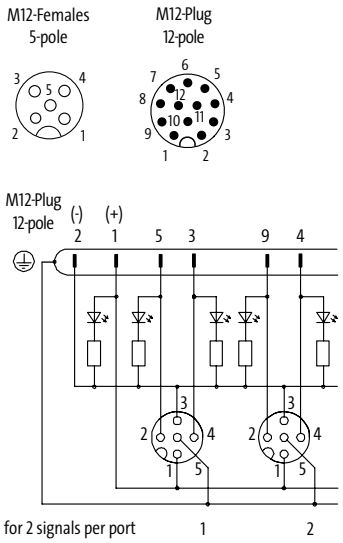
Approvals: cULus Listed

	Exact12 Pluggable rear connection	**Exact12** Pluggable rear connection with potential separation
		
1 Form	**88590**	**88690**
Type	**PNP, 5-pole** **Spring clamp plug-in terminals**	**PNP, 5-pole** **Spring clamp plug-in terminals**
Contact layout	M12-Females 5-pole  Bottom view    for 2 signals per port	M12-Females 5-pole  Bottom view    for 2 signals per port
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 2 × 8 A	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	
PIN 1	(+)	
PIN 2	(NC)/(S2)	
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – 0 0 0 0 0 0 0 0**	
	1 Form	
Notes		

For sensors and actuators

– M12 plug connection

Approvals: cULus Listed

	Exact12	Exact12	Exact12
	4-way	8-way	4-way
			
1 Form	**84470**	**88460**	**84560**
Type	**5-, 4-pole** **M12 plug connection, 8-pole**	**5-, 4-pole** **M12 plug connection, 12-pole**	**5-pole** **M12 plug connection, 12-pole**
Contact layout			

Technical Data

Operating voltage	24 V DC	
Operating current per contact	max. 2 A	max. 1.5 A
Total current	max. 2 A	max. 1.5 A
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+70 °C	

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

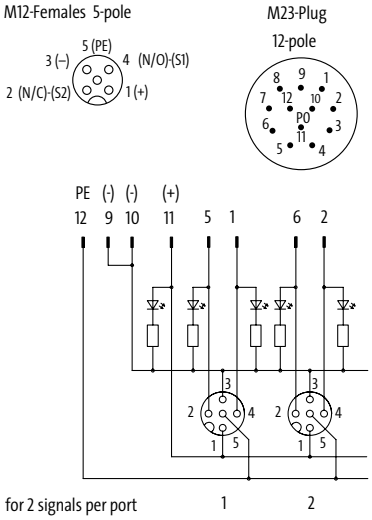
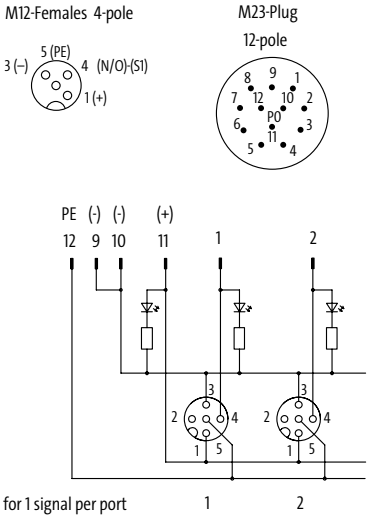
1 Form			
8 0 0 0 –	_ _ _ _ _ –	0 0 0	0 0 0 0

Notes

For sensors and actuators

– M23 plug connection

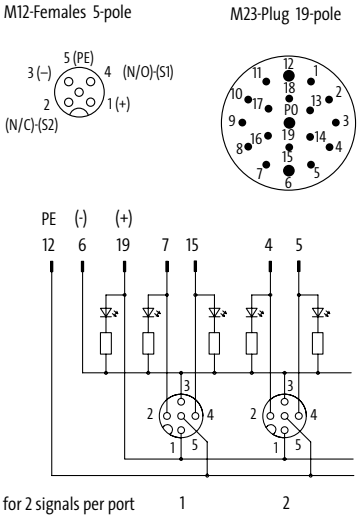
Approvals: cULus Listed

	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84530**	**88430**
Type	**5-pole** **M23 plug connection, 12-pole**	**4-pole** **M23 plug connection, 12-pole**
Contact layout		
Technical Data		
Operating voltage	24 V DC	
Operating current per contact	max. 4 A	
Total current	max. 8 A	
Protection	IP65/IP67	
Housing	Plastic, flame retardant	
Temperature range	-20...+75 °C	
Contact Layout		
LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)	LED (green): Power / LED (yellow): (S1)
PIN 1	(+)	
PIN 2	(NC)/(S2)	–
PIN 3	(-)	
PIN 4	(NO)/(S1)	
PIN 5	(Earth)	
Article No.		
The composition of your article number is explained on page 3.1.i	**8 0 0 0 – _ _ _ _ _ – 0 0 0 0 0 0 0 0**	
	1 Form	
Notes		

For sensors and actuators

– M23 plug connection

Approvals: c UL us Listed

	Exact12 4-way	**Exact12** 8-way
		
1 Form	**84520**	**88520**
Type	**5-pole** **M23 plug connection, 19-pole**	**5-pole** **M23 plug connection, 19-pole**
Contact layout	M12-Females 5-pole / M23-Plug 19-pole  	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Temperature range	-20...+80 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2)
PIN 1	(+)
PIN 2	(NC)/(S2)
PIN 3	(-)
PIN 4	(NO)/(S1)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– _____	– 000	0000
	1 Form		

Notes

For general applications

– with molded homerun cable

Approvals: c UL us Listed

Exact12 UNIVERSAL

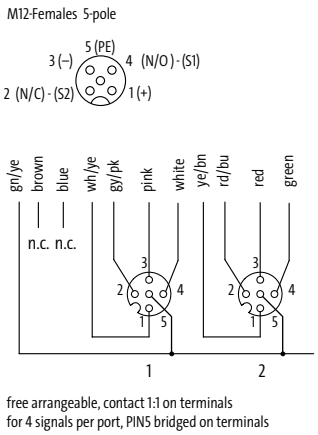
4-way



1 Form — 84712

Type — **without LED, 5-pole (for analog signals)**

Contact layout



free arrangeable, contact 1:1 on terminals
for 4 signals per port, PIN5 bridged on terminals

2 Cable Type — Jacket Color – No./diameter of wires

	gray
PUR/PVC (UL/CSA), C-tracks	**398** – 16 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	42 V AC/DC
Total current	max. 10 A
Protection	IP65/IP67
Temperature range	-20...+70 °C, depending on cable quality

Contact Layout

PIN 1	(S1)
PIN 2	(S2)
PIN 3	(S3)
PIN 4	(S4)
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– 84712 –	___	____
	1 Form	2 Cable Type	3 Cable Length

Notes

For safety wiring

– with molded homerun cable

– Homerun cable with spring clamp terminals

– EN ISO 13849-2

Approvals: c UL us Listed

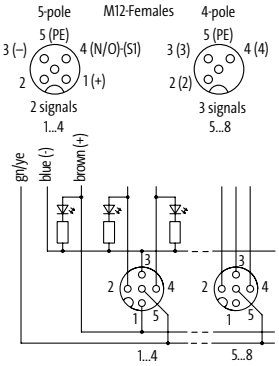
Exact12 Safety

8-way
for PNP signals 24 V DC



1 Form

98710

Type	**PNP, 5-pole, 4/3-pole**
Contact layout	

2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR/PVC (UL/CSA)	**407** – 20 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**

Technical Data

Operating voltage	24 V DC
Total current	max. 8 A
Protection	IP65/IP67
Temperature range	-20...+60 °C, depending on cable quality

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1...4
PIN 1	(+) port 1...4
PIN 2	(NC)/(S2) port 1...4; (S1) port 5...8
PIN 3	(-) port 1...4; (S2) port 5...8
PIN 4	(NO)/(S1) port 1...4; (S3) port 5...8
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98710	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For safety wiring

– Basic module

– EN ISO 13849-2

Approvals: cULus Listed

Exact12 Safety

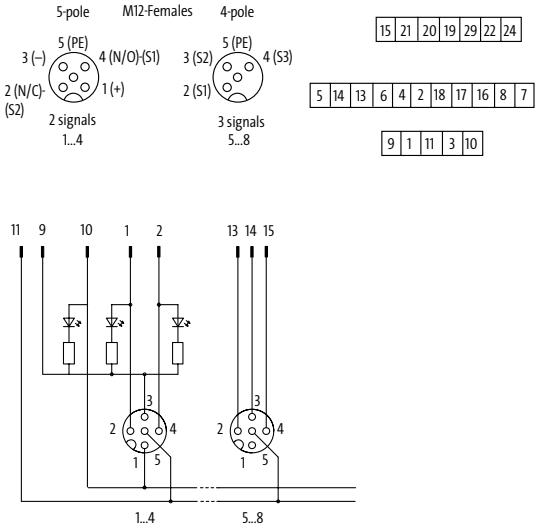
8-way

for PNP signals 24 V DC



1 Form

98700

Type	**PNP, 5-pole, 4/3-pole**
Contact layout	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Locking of ports	Screw thread M12 × 1 mm
Temperature range	-20...+60 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1...4
PIN 1	(+) port 1...4
PIN 2	(NC)/(S2) port 1...4; (S1) port 5...8
PIN 3	(-) port 1...4; (S2) port 5...8
PIN 4	(NO)/(S1) port 1...4; (S3) port 5...8
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

1	2	3	4
8000	– 98700	– 000	0000
	1 Form		

Notes

For safety wiring

– Connection cap

– Homerun cable with spring clamp terminals

– EN ISO 13849-2

Approvals: c UL us Listed

Exact12 Safety

for 8-way distribution boxes



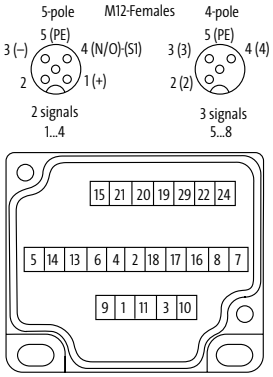
1 Form

98749

Type

5-, 4-pole

Contact layout



2 Cable Type

Jacket Color – No./diameter of wires

	gray
PUR (UL/CSA), robots/C-tracks	**408** – 20 × 0.34 + 3 × 0.75 mm²

3 Cable Length

3.0 m	**0300**
5.0 m	**0500**
10.0 m	**1000**
15.0 m	**1500**
20.0 m	**2000**

Technical Data

Total current	max. 8 A
Temperature range	-20...+80 °C, depending on cable quality

Article No.

The composition of your article number is explained on page 3.1.i

8000	–	98749	–	___	____
		1 Form		2 Cable Type	3 Cable Length

Notes

For sensors and actuators

– Rear connection

– EN ISO 13849-2

Approvals: cULus Listed

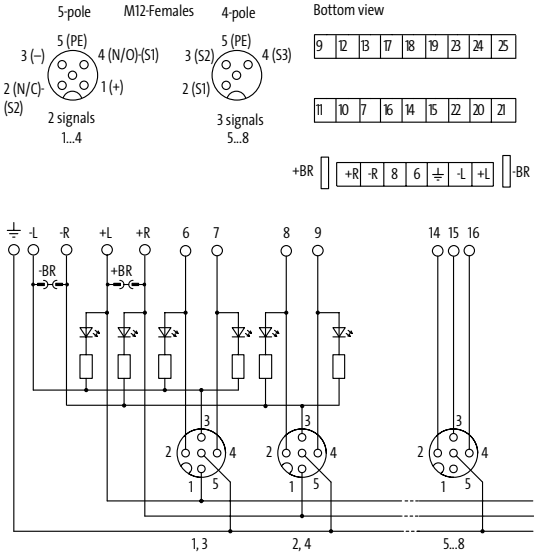
Exact12 Safety

Rear connection
with potential separation



1 Form

98790

Type	**PNP, 5-pole, 4/3-pole** **Spring clamp terminals**
Contact layout	

Technical Data

Operating voltage	24 V DC
Operating current per contact	max. 4 A
Total current	max. 8 A
Protection	IP65/IP67
Housing	Plastic, flame retardant
Locking of ports	Screw thread M12 × 1 mm
Temperature range	-20...+60 °C

Contact Layout

LED display	LED (green): Power / LED (yellow): (S1) / LED (white): Signal (S2) port 1...4
PIN 1	(+) port 1...4
PIN 2	(NC)/(S2) port 1...4; (S1) port 5...8
PIN 3	(-) port 1...4; (S2) port 5...8
PIN 4	(NO)/(S1) port 1...4; (S3) port 5...8
PIN 5	(Earth)

Article No.

The composition of your article number is explained on page 3.1.i

8000	– 98790 –	000	0000
	1 Form		

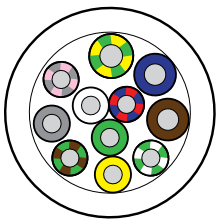
Notes

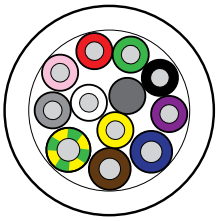
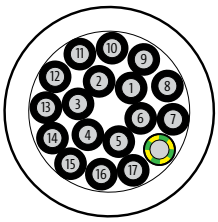
Mounting accessories			Art-No.
	**Torque wrench set**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99102-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW13)	M12 data connenctor molded (standard)	**7000-99109-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW14)	M12 data connenctor moulded (Xtreme)	**7000-99108-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW17)	M12 field-wireable (IDC terminal)	**7000-99094-0000000**
	**Torque wrench**		
	M12 (0.6 Nm, SW18)	M12 field-wireable via (screw terminals)	**7000-99103-0000000**
	**DIN-rail adapter**		
	with fixing screws, plastic		**27905**
	**V2A guard**		
	Exact12 ATEX, 4-way	for 8099-84510-448xxxx	**996082**
	**V2A guard**		
	Exact12 ATEX, 8-way	for 8099-88510-452xxxx	**996083**

Plug accessories			Art-No.
	**Transfer module**		
	for 1 × 11- and 1 × 12-pole spring clamp terminals		**596154**
	**Service adapter**		
	with LED and SUB-D25	for transfer module Art-No. 596154	**596153**

M12 DISTRIBUTION SYSTEMS (PLASTIC)

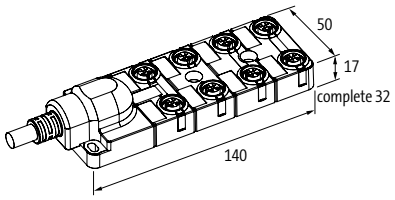
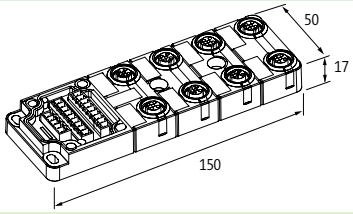
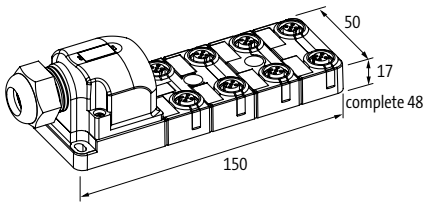
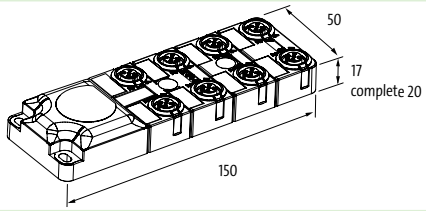
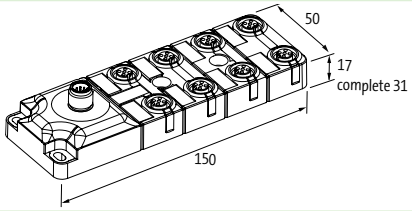
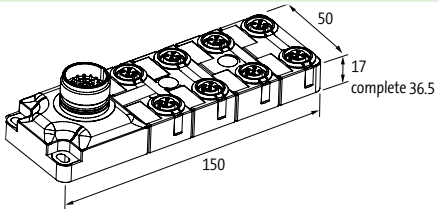
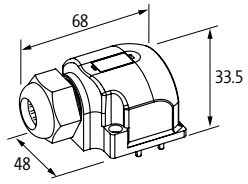
Plug accessories			Art-No.
	**Screw plug M12 × 1 mm**		
	Metal, hex, 1 piece		**996049**
	**Screw plug M12 × 1 mm (for female)**		
	Plastic, hex without gasket	Quantity: 10 pcs.	**58627**
	**Label plates**		
	KES 20 × 8 (white)	(10 pieces/2 plates)	**996067**
	**Label plates**		
	KES 17 × 9 (Type M) (12 pieces/2 plates)		**996050**
	**Adapter M8/M12**		
	3-pole	M12 Distribution Systems	**7000-42201-0000000**
	**Adapter M8/M12**		
	4-pole	M12 Distribution Systems	**7000-42211-0000000**

Homerun cable accessories			Art-No.
	Coding element		
	for 6 codings		**996054**
	**Screw plug M23**		
	Metal		**55352**
	**Screw plug M12 × 1 mm (for male)**		
	Plastic	Quantity: 4 pcs.	**56951**
	**Cable rings (50 m), 5-pole, PUR/PVC**		
	8×0.34 + 3×0.75 mm²	4-way distribution boxes M12	**8000-00000-3635000**
	12×0.34 + 3×0.75 mm²	6-way distribution boxes M12	**8000-00000-3885000**
	16×0.34 + 3×0.75 mm²	8-way distribution boxes M12	**8000-00000-3985000**

Homerun cable accessories			Art-No.
	**Cable rings (50 m), 4-pole, PUR (UL/CSA), halogen free**		
	8×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4475000**
	8×0.5 + 3×1.0 mm²	4-way distribution boxes M12	**8000-00000-4485000**
	16×0.5 + 3×1.0 mm²	8-way distribution boxes M12	**8000-00000-4525000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4035000**
	**Cable rings (50 m), PUR/PVC**		
	18 × 0.75 mm²	4-way distribution box M12, UNIVERSAL	**8000-00000-5335000**
	4×0.34 + 3×0.75 mm²	4-way distribution boxes M12	**8000-00000-3335000**
	8×0.34 + 3×0.75 mm²	8-way distribution boxes M12	**8000-00000-3625000**
	8×0.34 + 5×0.75 mm²	4-way distribution boxes M12, potentially separated	**8000-00000-3745000**
	16×0.34 + 5×0.75 mm²	8-way distribution boxes M12, potentially separated	**8000-00000-4045000**

M12 DISTRIBUTION SYSTEMS (PLASTIC)

M12 Distribution Systems Technical Data

	Description	4-way	8-way
	**Exact12** Molded homerun cable	90 mm	140 mm
	Description	**4-way**	**8-way**
	**Exact12** Basic module	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12 and MSDS8** Sets: basic module and cap Field-wireable	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** Rear connection	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** M12 plug connection	100 mm	150 mm
	Description	**4-way**	**8-way**
	**Exact12** M23 plug connection	100 mm	150 mm
	Description		
	**Exact12** Caps		

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