

Switching Devices – Contactors and Contactor Assemblies – for Switching Motors



	Price groups PG 41A, 41B, 41E, 41H, 42F
3/2	Introduction
3/7	Power contactors for switching motors
3/15	General data SIRIUS 3RT contactors, 3-pole up to 250 kW NEW Accessories and spare parts for SIRIUS 3RT contactors and SIRIUS 3RH2 contactor relays - General data - Accessories NEW - Spare parts NEW
3/75	
3/77	
3/120	
3/124	SIRIUS 3RT12 and 3TF6 vacuum contactors Accessories and spare parts for SIRIUS 3RT12 and 3TF6 vacuum contactors - Accessories - Spare parts
3/137	
3/139	
3/141	3TF2 miniature contactors, 3-pole
3/149	Accessories for 3TF2 miniature contactors
3/151	3TG10 power relays/miniature contactors
	Reversing contactor assemblies
3/155	Reversing contactor assemblies SIRIUS 3RA23, up to 55 kW NEW Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW
3/166	
	Contactors assemblies for star-delta (wye-delta) starting
3/170	Contactors assemblies for star-delta (wye-delta) starting SIRIUS 3RA24, up to 90 kW NEW Contactors assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW
3/184	
	<u>Note:</u> 3RT1 contactors in sizes S00 to S12 and 3RA1 contactor assemblies in sizes S00 to S3 can be found - in the Catalog Add-On IC 10 AO · 2016 in the Information and Download Center - in the interactive Catalog CA 01 - in the Industry Mall Conversion tool e. g. from 3RT10 to 3RT20: see www.siemens.com/sirius/conversion-tool
	Siemens IC 10 · 2017

Switching Devices – Contactors and Contactor Assemblies

Power Contactors for Switching Motors

Introduction

Overview

More information

Home page, see www.siemens.com/siriusIndustry Mall, see www.siemens.com/product?3RT_3TK_3TCConversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-toolOnline configurator for 3RT2 contactors, see www.siemens.com/sirius/configuratorsSize
TypeS00
3RT201S0
3RT202

3RT20 contactors

Type	3RT2015	3RT2016	3RT2017	3RT2018	3RT2023	3RT2024	3RT2025	3RT2026	3RT2027	3RT2028
AC, DC operation	(p. 3/51, 3/52, 3/57 ... 3/60)				(p. 3/53, 3/54, 3/61 ... 3/63, 3/65)					

AC-3

I_e /AC-3/400 V	A	7	9	12	16	9	12	17	25	32	38
400 V	kW	3	4	5.5	7.5	4	5.5	7.5	11	15	18.5
230 V	kW	1.5	2.2	3	4	2.2	3	4	5.5	7.5	11
690 V	kW	4	5.5	5.5	7.5	7.5	7.5	11	11	18.5	18.5
1 000 V	kW	--	--	--	--	--	--	--	--	--	--

AC-4 (at $I_a = 6 \times I_e$)

400 V	kW	3	4	4	5.5	4	5.5	7.5	7.5	11	11
400 V (200 000 operating cycles)	kW	1.15	2	2	2.5	2	2.6	3.5	4.4	6	6

AC-1 (40 °C, ≤ 690 V)

I_e 3RT20	A	18	22	22	22	40	40	40	40	50	50
-------------	---	----	----	----	----	----	----	----	----	----	----

Accessories for contactors

Auxiliary switch blocks	- On front - Lateral	3RH29, 3RA28	(p. 3/93 ... 3/100)	3RH29, 3RA28	(p. 3/93 ... 3/100)
Function modules	- Direct-on-line starting, wye-delta starting - IO-Link, AS-Interface	3RA281.	(p. 3/97)	3RA281.	(p. 3/97)
Surge suppressors		3RA271.-.AA00	(p. 3/106, 3/107)	3RA271.-.AA00	(p. 3/106, 3/107)
		3RT2916	(p. 3/102, 3/103)	3RT2926	(p. 3/102, 3/103)

3RU2 and 3RB3 overload relays

3RU thermal overload relays	3RU2116	0.11 ... 16 A	(p. 7/84)	3RU2126	1.8 ... 40 A	(p. 7/84)
3RB electronic overload relays						
• for standard applications	3RB3016	0.1 ... 16 A	(p. 7/97 ... 7/99)	3RB3026	0.1 ... 40 A	(p. 7/97 ... 7/99)
	3RB3113			3RB3123		
• for High-Feature applications	3RB22, 3RB23 and 3RB24	(p. 7/120, 7/128)		3RB22, 3RB23 and 3RB24	(p. 7/120, 7/128)	
	with current measuring module	(p. 7/132)		with current measuring module	(p. 7/132)	
	3RB2906-2.G1	0.3 ... 25 A		3RB2906-2.G1	0.3 ... 25 A	

3RV20 motor starter protectors

Motor starter protectors	3RV2011	0.11 ... 16 A	(p. 7/26)	3RV2021	0.45 ... 40 A	(p. 7/26)
Link modules	3RA1921, 3RA2911	(p. 7/49)		3RA2921	(p. 7/49)	

3RA23 reversing contactor assemblies

Complete units	Type	3RA2315	3RA2316	3RA2317	3RA2318	--	3RA2324	3RA2325	3RA2326	3RA2327	3RA2328
		(p. 3/162)					(p. 3/163)				
400 V	kW	3	4	5.5	7.5		5.5	7.5	11	15	18.5
Assembly kits, etc.		3RA2913-2AA.				--	3RA2923-2AA.				
		(p. 3/109)					(p. 3/109)				
Function modules		3RA271.-.BA00				--	3RA271.-.BA00				
		(p. 3/106)					(p. 3/106)				

3RA24 contactor assemblies for star-delta (wye-delta) starting

Complete units	Type	3RA2415	3RA2416	3RA2417	3RA2423	3RA2425	3RA2426
		(p. 3/179)			(p. 3/180)		
400 V	kW	5.5	7.5	11	11	15/18.5	22
Assembly kits/wiring modules		3RA2913-2BB.			3RA2923-2BB.		
		(p. 3/110)			(p. 3/110)		
Function modules		3RA271.-.CA00			3RA271.-.CA00		
		(p. 3/106)			(p. 3/106)		

Note:

For safety characteristics for contactors, see "Standards and Approvals", from page 16/10 onwards.

Switching Devices – Contactors and Contactor Assemblies

Power Contactors for Switching Motors

Introduction



Size
Type

S2
3RT203

S3
3RT204

3RT20 contactors								
Type AC, DC operation		3RT2035 (p. 3/55, 3/64, 3/66, 3/67)	3RT2036	3RT2037	3RT2038	3RT2045 (p. 3/56, 3/64, 3/68, 3/69)	3RT2046	3RT2047
AC-3								
I_e /AC-3/400 V	A	40	50	65	80	80	95	110
400 V	kW	18.5	22	30	37	37	45	55
230 V	kW	11	15	18.5	22	22	22	30
690 V	kW	22	22	37	45	55	75	90
1 000 V	kW	--	--	--	--	37	37	37
AC-4 (at $I_a = 6 \times I_e$)								
400 V	kW	18.5	22	30	37	37	45	55
400 V (200 000 operating cycles)	kW	11.6	12.6	14.7	15.8	17.9	22	24.3
AC-1 (40 °C, ≤ 690 V)								
I_e	A	60	70	80	90	125	130	130
Accessories for contactors								
Auxiliary switch blocks	• On front • Lateral	3RH29, 3RA28 3RH29				3RH29, 3RA28 3RH29		
		(p. 3/93 ... 3/100) (p. 3/97)				(p. 3/93 ... 3/100) (p. 3/97)		
Function modules	• Direct-on-line starting • IO-Link, AS-Interface	3RA283. 3RA271.-.AA00				3RA283. 3RA271.-.AA00		
		(p. 3/105) (p. 3/106, 3/107)				(p. 3/105) (p. 3/106, 3/107)		
Surge suppressors		3RT2936				3RT2936¹⁾, 3RT2946		
		(p. 3/102, 3/103)				(p. 3/102, 3/103)		
Terminal covers		3RT2936-4EA2				3RT2946-4EA2		
		(p. 3/116)				(p. 3/116)		
3RU2 and 3RB overload relays								
3RU thermal overload relays		3RU2136	11 ... 80 A	(p. 7/85)		3RU2146	28 ... 100 A	(p. 7/85)
3RB electronic overload relays								
• for standard applications		3RB3036 3RB3133	12.5 ... 80 A	(p. 7/97 ... 7/99)		3RB3046 3RB3143	12.5 ... 115 A	(p. 7/97 ... 7/99)
• for High-Feature applications		3RB22, 3RB23 and 3RB24 with 3RB2906-2JG1 cur- rent measuring module 10 ... 100 A		(p. 7/120, 7/128) (p. 7/132)		3RB22, 3RB23 and 3RB24 with 3RB2906-2JG1 cur- rent measuring module 10 ... 100 A		(p. 7/120, 7/128) (p. 7/132)
3RV20 motor starter protectors								
Motor starter protectors		3RV2031, 3RV2032		9.5 ... 80 A	(p. 7/27)	3RV2041, 3RV2042		28 ... 100 A (p. 7/27)
Link modules		3RA2931		(p. 7/49)		3RA1941		(p. 7/49)
3RA23 reversing contactor assemblies								
Complete units	Type	3RA2335 (p. 3/164)	3RA2336	3RA2337	3RA2338	3RA2345 (p. 3/165)	3RA2346	3RA2347
400 V	kW	18.5	22	30	37	37	45	55
Assembly kits/wiring modules		3RA2933-2AA.				3RA2943-2AA.		
		(p. 3/109)				(p. 3/109)		
Function modules		3RA271.-.BA00				3RA271.-.BA00		
		(p. 3/106)				(p. 3/106)		
Mechanical interlocks		3RA2934-2B				3RA2934-2B		
		(p. 3/113)				(p. 3/113)		
3RA24 contactor assemblies for star-delta (wye-delta) starting								
Complete units	Type	3RA2434 (p. 3/181)	3RA2435	3RA2436	3RA2437	3RA2444 (p. 3/182)	3RA2445	3RA2446
400 V	kW	22/30	37	45	55	55	75	90
Assembly kits/wiring modules		3RA2933-2BB.-/2C				3RA2943-2BB.-/2C		
		(p. 3/110)				(p. 3/110)		
Function modules		3RA271.-.CA00				3RA271.-.CA00		
		(p. 3/106)				(p. 3/106)		

¹⁾ From product version E03 onwards, 3RT2936-1B/-1E surge suppressors can be used for 3RT2.4 contactors.

Note:

For safety characteristics for contactors, see "Standards and Approvals", from page 16/10 onwards.

Switching Devices – Contactors and Contactor Assemblies

Power Contactors for Switching Motors

Introduction



Size	S6				S10			S12	
Type	3RT105				3RT1.6			3RT1.7	
3RT10 contactors · 3RT12 vacuum contactors									
Type	3RT1054	3RT1055	3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076	
AC, DC operation	(p. 3/70, 3/71)			(p. 3/70, 3/71)			(p. 3/70, 3/71)		
Type	--	--	--	3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	
				(p. 3/134)			(p. 3/134)		
AC-3									
I _e /AC-3/400 V	A	115	150	185	225	265	300	400	500
400 V	kW	55	75	90	110	132	160	200	250
230 V	3RT10/3RT12 kW	37	45	55	55	75	90	132	160
690 V	3RT10/3RT12 kW	110	132	160	200	250	250	400	400/500
1 000 V	kW	75	90	90	90/315	132/355	132/400	250/560	250/710
AC-4 (at I _a = 6 × I _e)									
400 V	3RT10/3RT12 kW	55	75	90	110	132	160	200	250
400 V	kW	29	38	45	54/78	66/93	71/112	84/140	98/161
(200 000 operating cycles)									
AC-1 (40 °C, ≤ 690 V)									
I _e	3RT10/3RT12 A	160	185	215	275/330	330	330	430/610	610
3RT14 AC-1 contactors									
Type	3RT1456	(p. 4/12)			3RT1466	(p. 4/12)		3RT1476	(p. 4/12)
I _e /AC-1/40 °C/≤ 690 V	A	275				400			690
Accessories for contactors									
Auxiliary switch blocks	• On front • Lateral	3RH19, 3RT1926 3RH19			(p. 3/96, 3/101) (p. 3/98, 3/99)				
Surge suppressors		3RT1956-1C (RC element)			(p. 3/103)				
Terminal covers		3RT1956-4EA. (p. 3/116)			3RT1966-4EA. (p. 3/116)				
Box terminal blocks		3RT1955-4G, 3RT1956-4G (p. 3/114)			3RT1966-4G (p. 3/114)				
3RB2 overload relays									
3RB electronic overload relays									
• for standard applications		3RB2056	50 ... 200 A	(p. 7/109)	3RB2066	55 ... 250 A or 160 ... 630 A	(p. 7/109)		
		3RB2153		(p. 7/111)	3RB2163		(p. 7/111)		
• for High-Feature applications		3RB22, 3RB23 and 3RB24		(p. 7/120) (p. 7/128)	3RB22, 3RB23 and 3RB24		(p. 7/120) (p. 7/128)		
		with 3RB2956-2TH2 current measuring module		(p. 7/132)	with current measuring module 3RB2966-2WH2		(p. 7/132)		
		20 ... 200 A			63 ... 630 A				
3RV10 molded case motor starter protectors									
Molded case motor starter protectors		3RV1063	40 ... 200 A	(p. 7/67)	3RV1073	160 ... 400 A	(p. 7/67)	3RV1083	252 ... 630 A (p. 7/67)
Reversing contactor assemblies ¹⁾									
Complete units	Type	--							
400 V	kW	55	75	90	110	132	160	200	250
Assembly kits/wiring modules		3RA1953-2A (p. 3/109)			3RA1963-2A (p. 3/109)		3RA1973-2A (p. 3/109)		
Mechanical interlocks		3RA1954-2A (p. 3/113)							
Contactor assemblies for star-delta (wye-delta) starting ¹⁾									
Complete units	Type	--							
400 V	kW	--							
Assembly kits/wiring modules		3RA1953-2B (p. 3/111)			3RA1963-2B (p. 3/111)		3RA1973-2B (p. 3/111)		

¹⁾ Contactor assemblies for customer assembly:
 - For reversing contactor assemblies, see pages 3/167 to 3/169
 - For star-delta (wye-delta) assemblies, see pages 3/184 to 3/189.

Note:

For safety characteristics for contactors, see "Standards and Approvals", from page 16/10 onwards.

Switching Devices – Contactors and Contactor Assemblies

Power Contactors for Switching Motors

Introduction



Size **14**
Type **3TF6**

3TF68/3TF69 vacuum contactors			
Type	3TF68 (p. 3/135, 3/136)		3TF69 (p. 3/135, 3/136)
AC-3			
I _e /AC-3/400 V	A	630	820
400 V		kW	335
230 V	3RT10/3RT12	kW	200
690 V	3RT10/3RT12	kW	600
1 000 V		kW	600
AC-4 (at I _a = 6 × I _e)			
400 V	3RT10/3RT12	kW	355
400 V		kW	168
(200 000 operating cycles)			
AC-1 (40 °C, ≤ 690 V)			
I _e	3RT10/3RT12 A	700	910
Accessories for contactors			
Auxiliary switch blocks			
• Lateral	3TY7561		(p. 3/137)
Surge suppressors			
		3TX7572	(p. 3/138)
Terminal covers			
		3TX7686, 3TX7696	(p. 3/138)
3RB2 overload relays			
3RB electronic overload relays			
• for standard applications	3RB2066, 3RB2163	55 ... 250 A or 160 ... 630 A	(p. 7/109, 7/110) (p. 7/111)
• for High-Feature applications	3RB22, 3RB23 and 3RB24 with 3RB2966-2WH2 current measuring module	63 ... 630 A	(p. 7/120, 7/128) (p. 7/132)
3RV10 molded case motor starter protectors			
Molded case motor starter protectors	3RV1083	252 ... 630 A	(p. 7/67)
Reversing contactor assemblies			
Complete units	Type	--	
400 V	kW	335	
Assembly kits/wiring modules	3TX7680-1A		(Industry Mall)
Mechanical interlocks	3TX7686-1A		(Industry Mall)
Contactor assemblies for star-delta (wye-delta) starting			
Complete units	Type	--	
400 V	kW	630	
Assembly kits/wiring modules	3TX7680-1B		(Industry Mall)

Note:

For safety characteristics for contactors, see "Standards and Approvals", from page 16/10 onwards.

Switching Devices – Contactors and Contactor Assemblies

Power Contactors for Switching Motors

Introduction



Size	--
Type	3TG10

3TG10 power relays/minature contactors

Type	3TG10
Number of main contacts	4
AC, DC operation	(p. 3/151)

AC-1 (40 °C, ≤ 690 V)

I_e	A	20
-------	---	----

P at 400 V	kW	13
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At 230 V	kW	7.5
----------	----	-----

AC-2 and AC-3

$I_e/400 V$	A	8.4
-------------	---	-----

P at 400 V	kW	4
-------------------	----	---

Connection methods

The contactors are available with screw terminals (box terminals or flat connectors) or with spring-type terminals.

Devices of the 3TF2 series are also available for connection with flat connectors and solder pin connectors.

The 3TG10 power relays/minature contactors are available with screw terminals or flat connectors.



Screw terminals



Spring-type terminals



Flat connectors



Solder pin connections

The terminals are indicated in the corresponding tables by the symbols shown on orange backgrounds.

Support function

The 3RT20 contactors up to 18.5 kW can also be ordered via an online configurator.

Use of 3RT contactors, 3RT and 3TF vacuum contactors, reversing contactor assemblies, and contactor assemblies for star-delta (wye-delta) starting with IE3/IE4 motors

Note:

For the use of 3RT contactors, 3RT and 3TF vacuum contactors, reversing contactor assemblies and contactor assemblies for star-delta (wye-delta) starting in conjunction with highly energy-efficient IE3/IE4 motors, please observe the information on dimensioning and configuring; see [Application Manual "SIRIUS Controls with IE3/IE4 Motors"](#), <https://support.industry.siemens.com/cs/ww/en/view/94770820>.

For more information see [Preface, page 7](#).

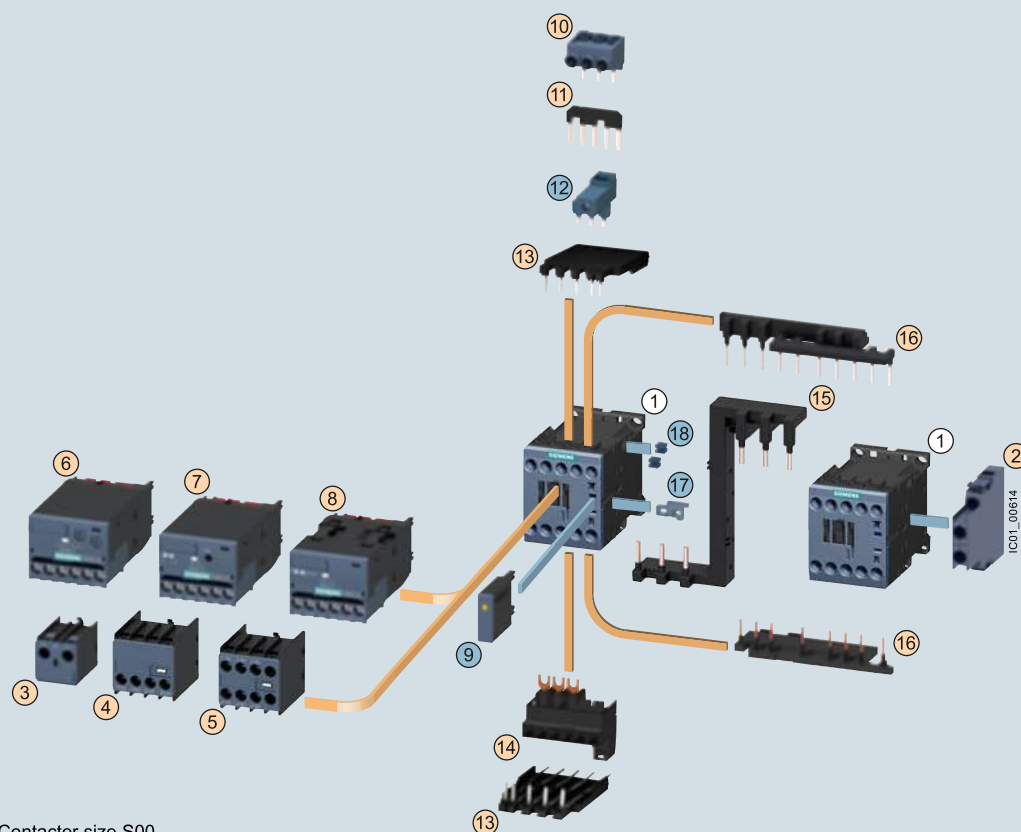
SUVA-certified safety contactors

We offer special safety contactors for use in safety-related applications. They have NC contacts with mirror contact function and they have SUVA certification. This means they have non-removable auxiliary switch blocks and cannot be operated manually. They thus comply with all requirements for use in safety applications.

Overview

The SIRIUS family of controls

The SIRIUS modular system with its components for the switching, starting, protection and monitoring of motors and industrial systems stands for the fast, flexible and space-saving construction of control cabinets.

3RT2 contactors**Size S00 with mountable accessories**

① Contactor size S00

- ② 2-pole auxiliary switch block, laterally mountable
- ③ 1-pole auxiliary switch block, for snapping onto the front cable entry from the top
- ④ 2-pole auxiliary switch block, for snapping onto the front cable entry from the bottom
- ⑤ 4-pole auxiliary switch block, for snapping onto the front
- ⑥ 3RA28 function module
- ⑦ 3RA27 function module for AS-Interface, direct starting
- ⑧ 3RA27 function module for IO-Link, direct starting
- ⑨ Surge suppressor with/without LED
- ⑩ Three-phase feeder terminal

- ⑪ Star jumper, 3-pole, without connecting terminal
- ⑫ Link for paralleling, 3-pole, with connecting terminal
- ⑬ Solder pin adapter
- ⑭ Connection module (adapter and connector) for contactors with screw-type connection
- ⑮ Safety main current connector for two contactors

Assembly kit 3RA2913-2AA1 comprising:

- ⑯ Wiring modules on the top and bottom for connecting the main, auxiliary and control current paths, electrical interlock¹⁾ included (NC contact interlock), can be broken off (NC contact interlock)
- ⑰ Mechanical interlocks²⁾
- ⑱ Two connecting clips for two contactors²⁾

- For contactors
- For contactors and coupling contactors

¹⁾ 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

²⁾ The parts ⑰ and ⑱ can only be ordered together as 3RA2912-2H mechanical connectors.

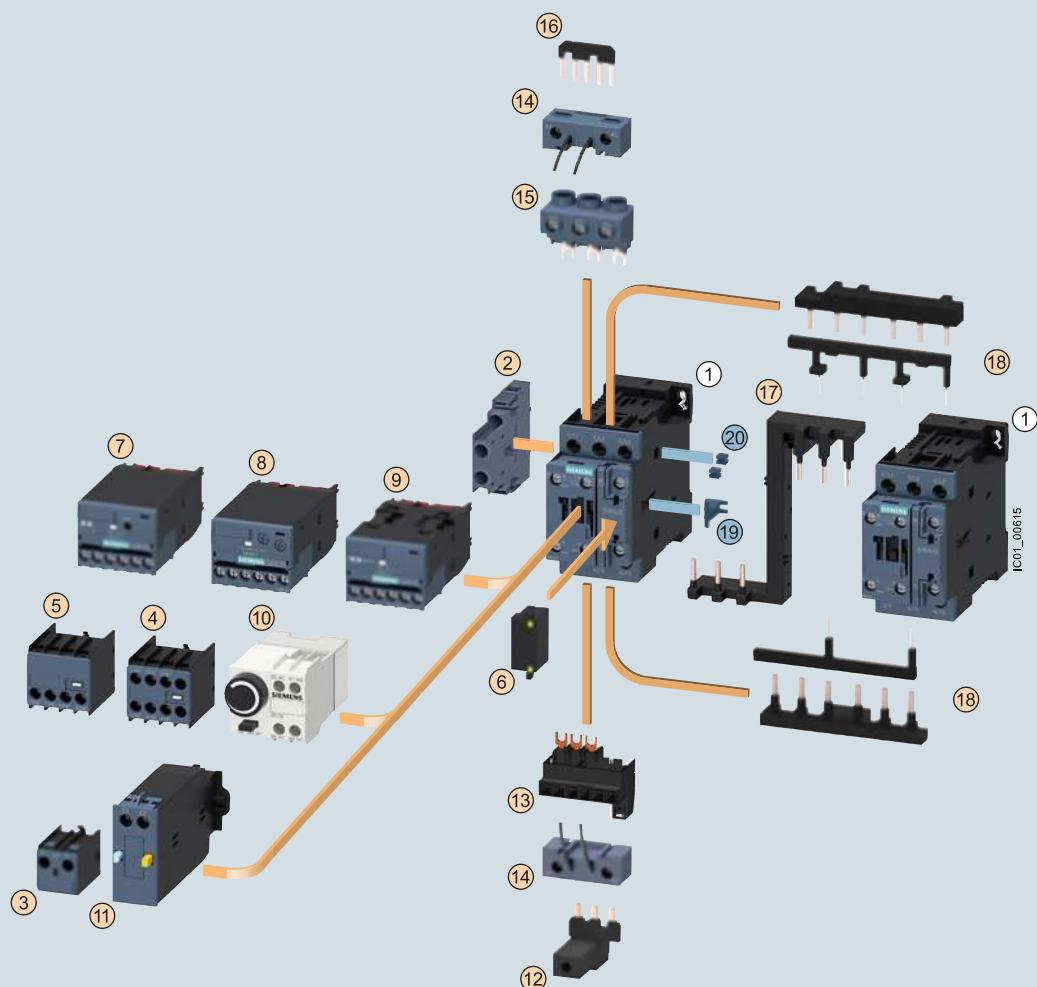
For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

General data

3RT2 contactors

Size S0 with mountable accessories



① Contactor size S0

- ② 2-pole auxiliary switch block, laterally mountable
- ③ 1-pole auxiliary switch block, for snapping onto the front cable entry from the top
- ④ 4-pole auxiliary switch block, for snapping onto the front cable entry from the bottom
- ⑤ 2-pole auxiliary switch block, for snapping onto the front cable entry from the bottom
- ⑥ Surge suppressor with/without LED
- ⑦ 3RA27 function module for AS-Interface, direct starting
- ⑧ 3RA28 function module
- ⑨ 3RA27 function module for IO-Link, direct starting
- ⑩ Pneumatically delayed auxiliary switch block
- ⑪ Mechanical latching block

- ⑫ Link for paralleling, 3-pole, with connecting terminal
- ⑬ Connection module (adapter and plug) for contactors with screw-type connection
- ⑭ Coil terminal module, on the top and bottom
- ⑮ Three-phase feeder terminal
- ⑯ Link for paralleling (star jumper), 3-pole, without connecting terminal
- ⑰ Safety main current connector for two contactors

Assembly kit 3RA2923-2AA1 comprising:

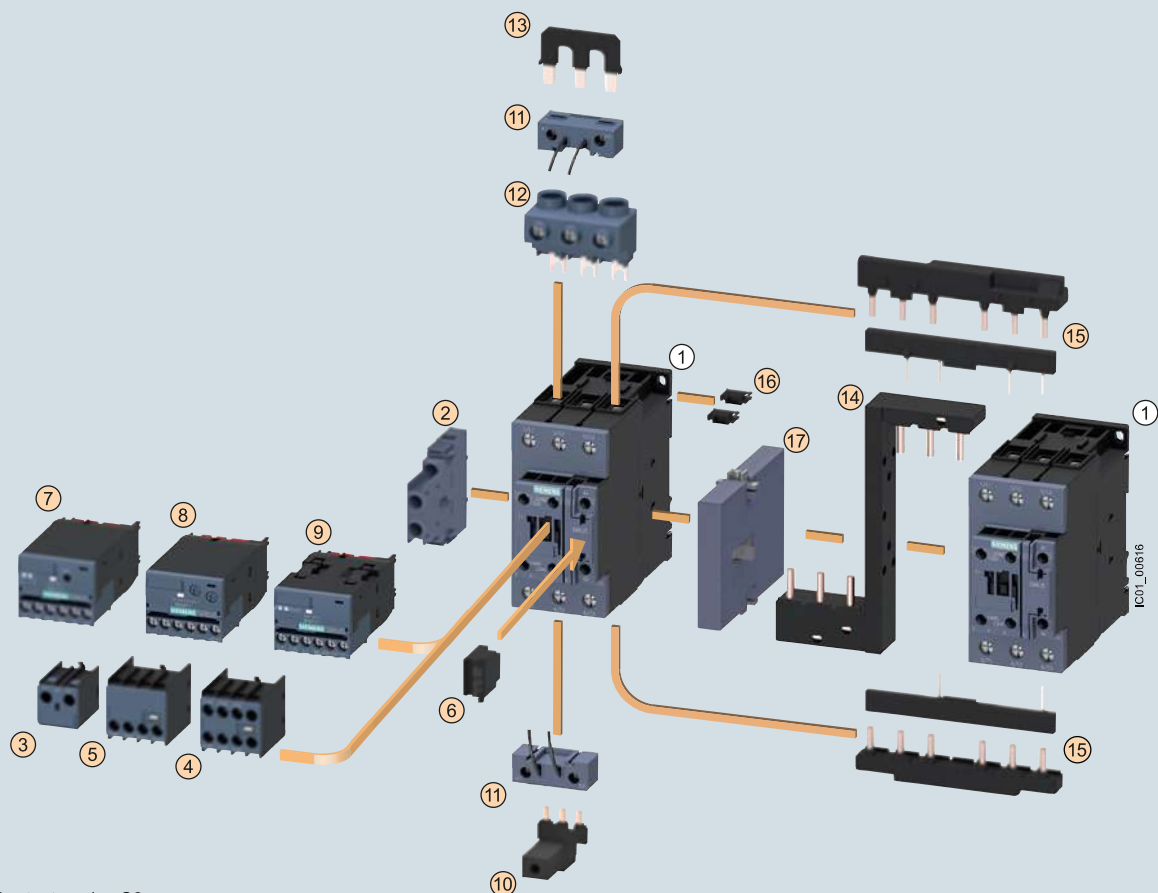
- ⑱ Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)
- ⑲ Mechanical interlocks¹⁾
- ⑳ Two connecting clips for two contactors¹⁾

○ For contactors

● For contactors and coupling contactors

¹⁾ The parts ⑲ and ⑳ can only be ordered together as 3RA2912-2H mechanical connectors.

For accessories and spare parts, see pages 3/75 to 3/123.

3RT2 contactors**Size S2 with mountable accessories**

① Contactor, size S2

- ② 2-pole auxiliary switch block, laterally mountable
- ③ 1-pole auxiliary switch block, for snapping onto the front, cable entry from above
- ④ 4-pole auxiliary switch block, for snapping onto the front
- ⑤ 2-pole auxiliary switch block, for snapping onto the front, cable entry from below
- ⑥ Surge suppressor with/without LED
- ⑦ 3RA27 function modules for AS-Interface, direct start
- ⑧ 3RA28 function modules
- ⑨ 3RA27 function modules for IO-Link, direct start
- ⑩ Link for paralleling, 3-pole, with connection terminal
- ⑪ Coil terminal module, top and bottom
- ⑫ Three-phase feeder terminal

- ⑬ Link for paralleling (star jumper), 3-pole, without connection terminal
- ⑭ Safety main current connector for two contactors

Assembly kit 3RA2933-2AA1 comprising:

- ⑮ Wiring modules on the top and bottom for connecting the main current paths, electrical interlock included (NC contact interlock)
- ⑯ Two connecting clips for two contactors

To be ordered separately:

- ⑰ Mechanical interlocks

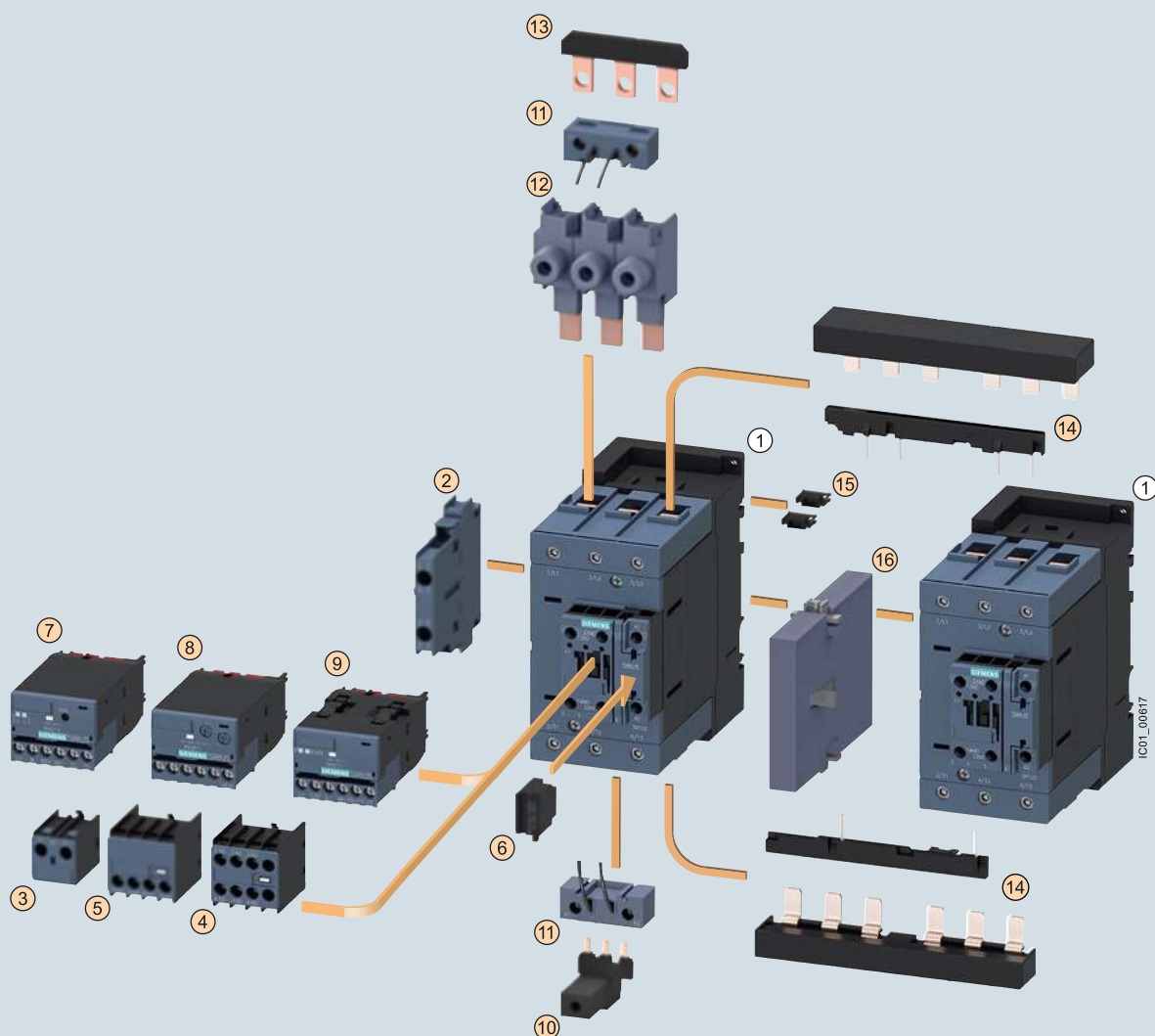
For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

General data

3RT2 contactors

Size S3 with mountable accessories



① Contactor, size S3

- ② 2-pole auxiliary switch block, laterally mountable
- ③ 1-pole auxiliary switch block, for snapping onto the front, cable entry from above
- ④ 4-pole auxiliary switch block, for snapping onto the front
- ⑤ 2-pole auxiliary switch block, for snapping onto the front, cable entry from below
- ⑥ Surge suppressor with/without LED
- ⑦ 3RA27 function modules for AS-Interface, direct-on-line starting
- ⑧ 3RA28 function modules
- ⑨ 3RA27 function modules for IO-Link, direct-on-line starting

- ⑩ Links for paralleling, 3-pole, with connection terminal
- ⑪ Coil terminal module, top and bottom
- ⑫ Single-phase infeed terminals (3 units)
- ⑬ Links for paralleling (star jumper), 3-pole without connecting terminal

Assembly kit 3RA2943-2AA1 comprising:

- ⑭ Wiring modules on the top and bottom for connecting the main, auxiliary and control current paths, electrical interlock¹⁾ included (NC contact interlock), can be broken off (NC contact interlock)
- ⑮ Two connectors for two contactors

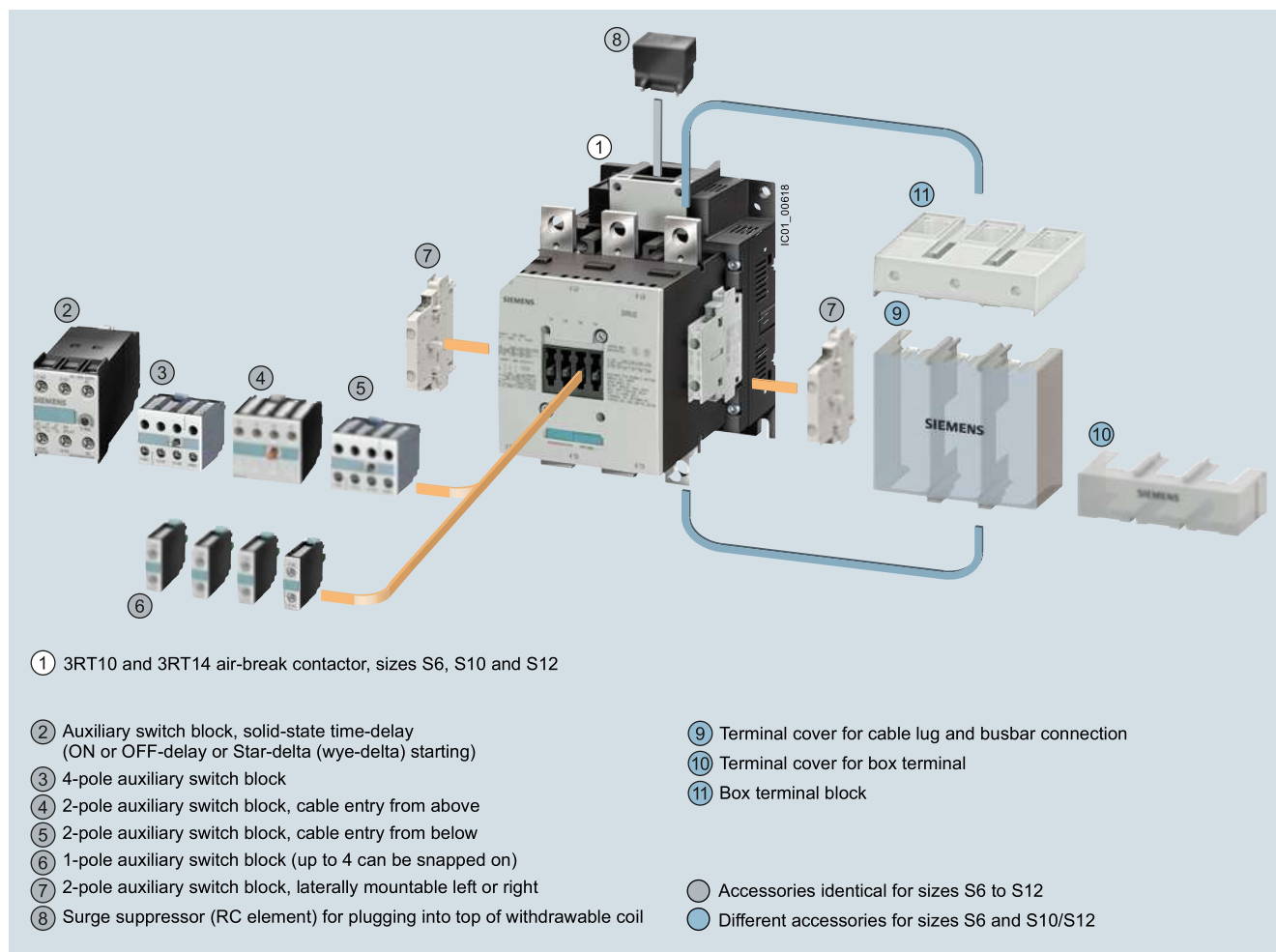
To be ordered separately:

- ⑯ Mechanical interlock

¹⁾ 3RT201. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

For accessories and spare parts, see pages 3/75 to 3/123.

3RT1 contactors
Sizes S6 to S12 with mountable accessories
(illustration for basic unit)

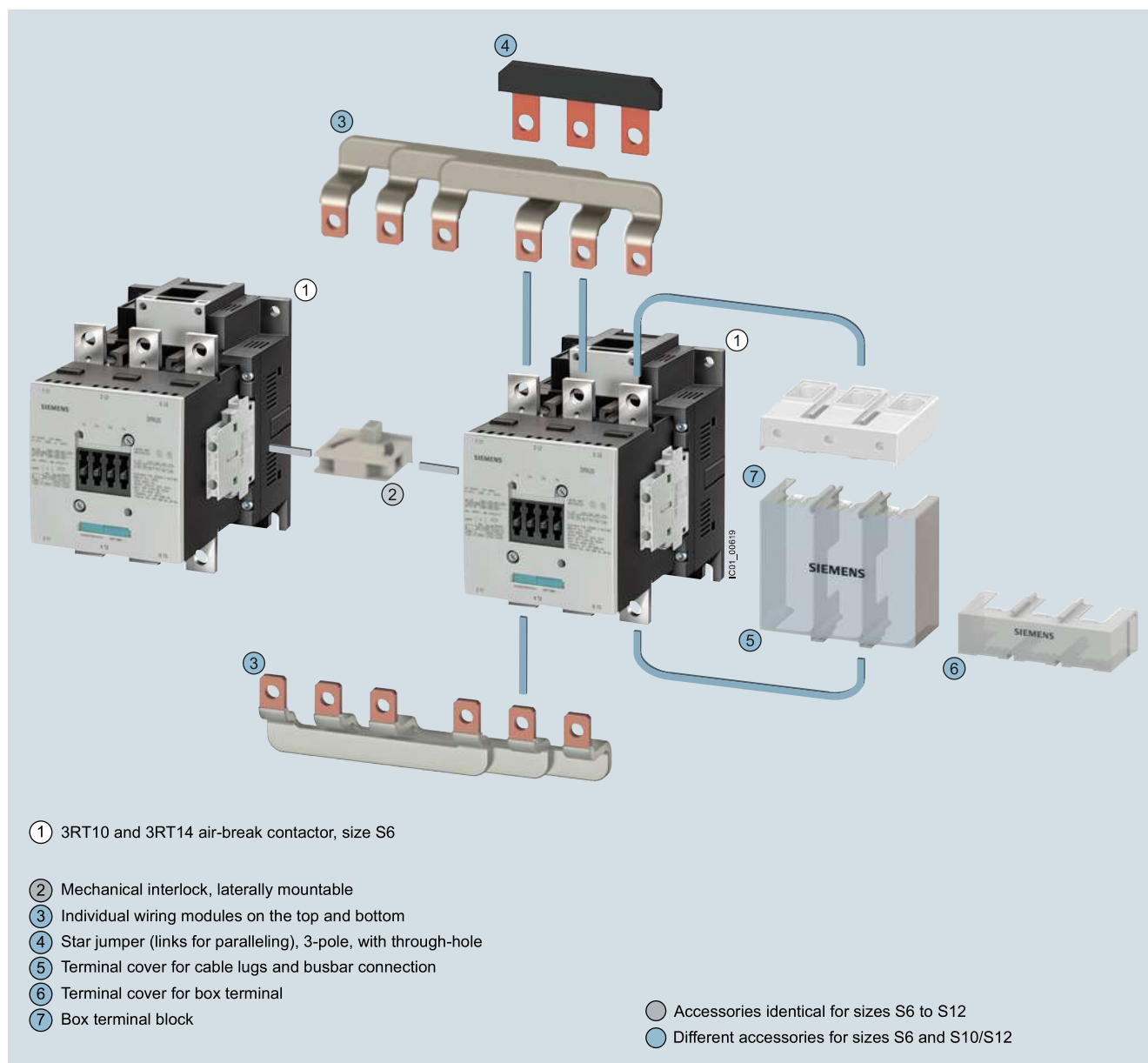


For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

General data

Contactor assemblies, 3RT1 contactors Size S6 with mountable accessories

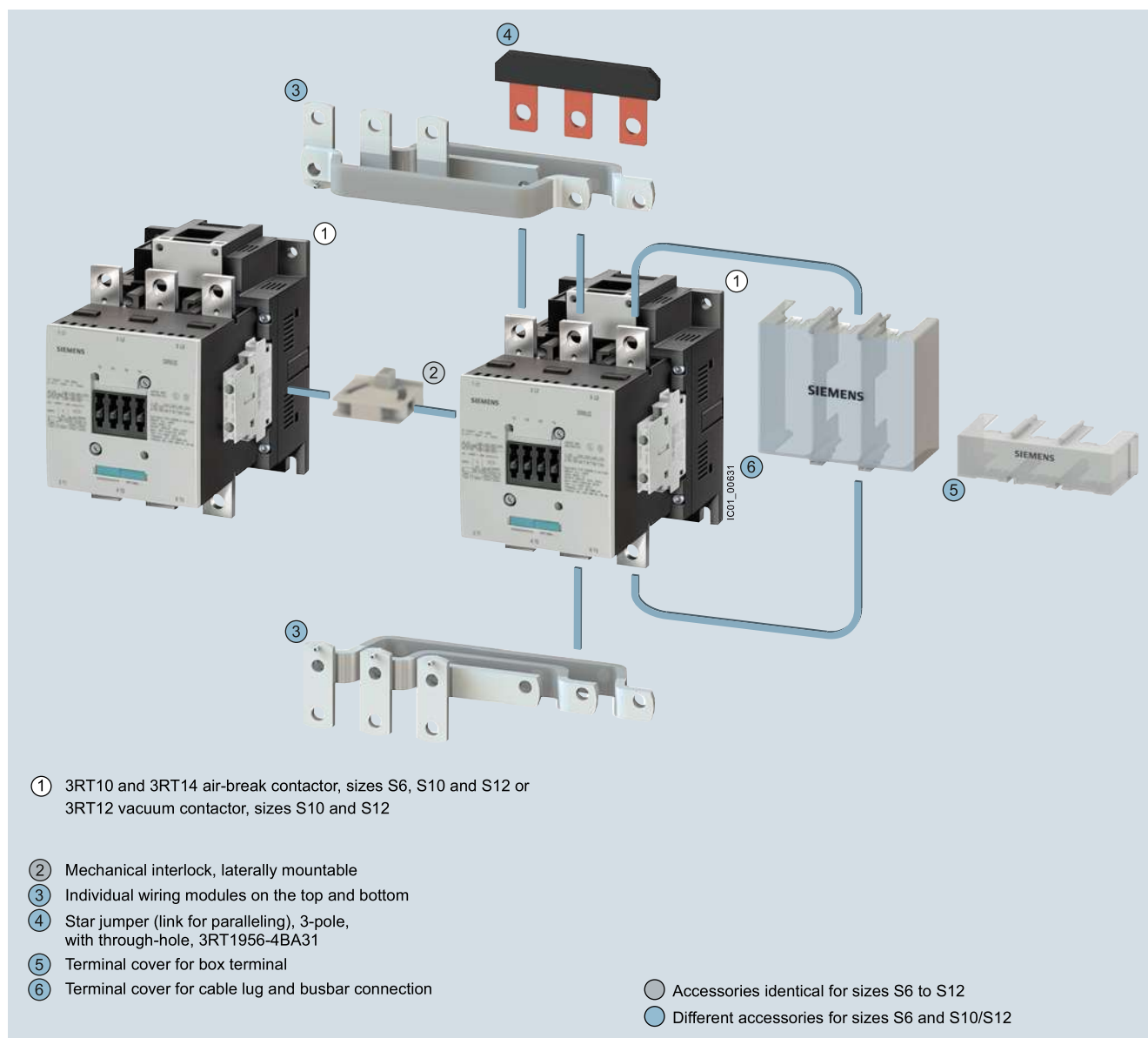


For accessories and spare parts, [see pages 3/75 to 3/123](#).

For contactor assemblies for customer assembly from 3RT1 contactors, [see](#)

- [For reversing contactor assemblies, pages 3/167 to 3/169](#)
- [For star-delta \(wye-delta\) assemblies, pages 3/184 to 3/189](#)

Contactor assemblies, 3RT1 contactors
Sizes S6 to S12 with mountable accessories



For accessories and spare parts for

- 3RT10 and 3RT14 contactors, [see pages 3/75 to 3/123](#)
- 3RT12 vacuum contactors, [see pages 3/137 to 3/140](#)

For contactor assemblies for customer assembly from 3RT1 contactors, [see](#)

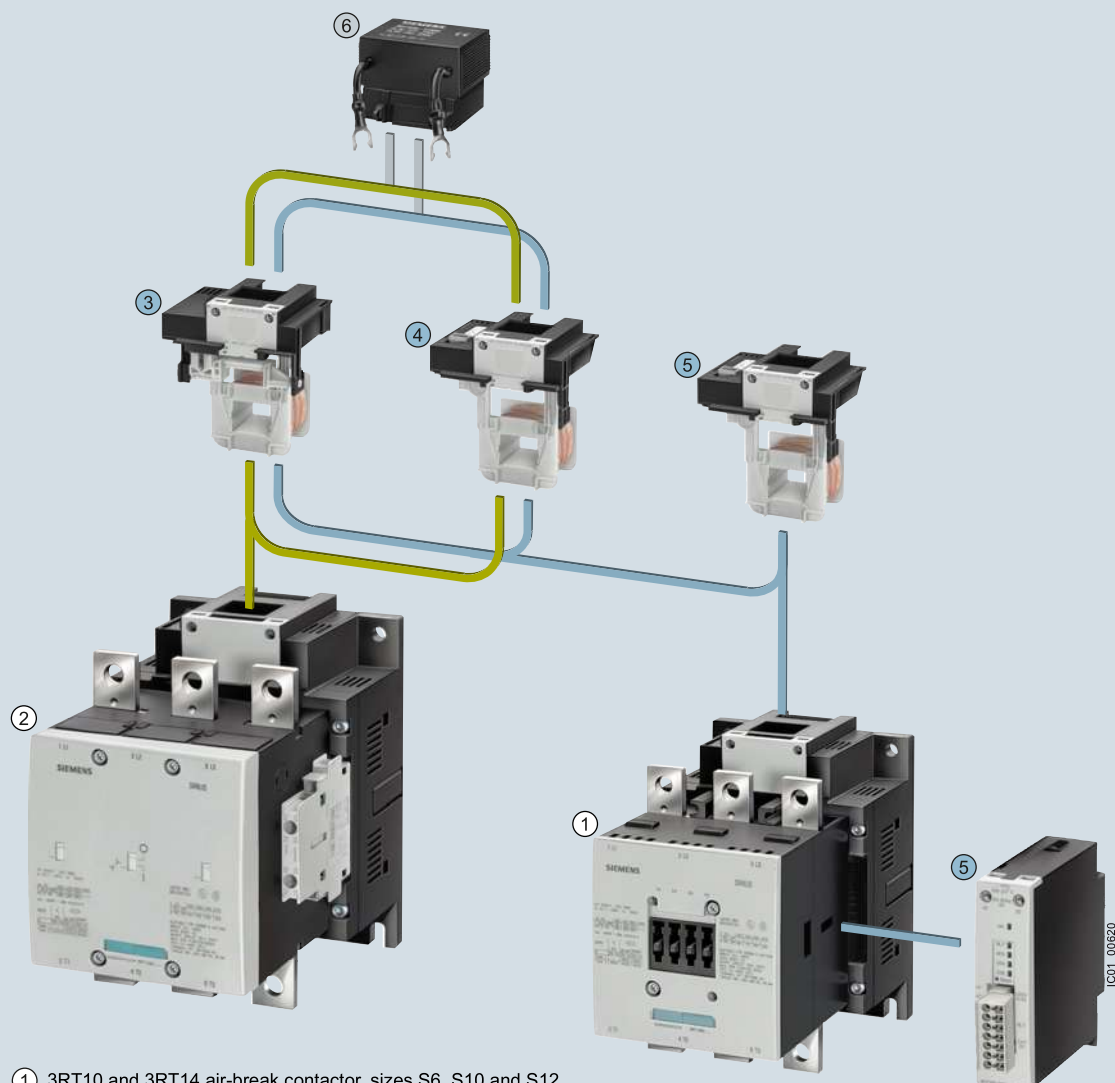
- [For reversing contactor assemblies, pages 3/167 to 3/169](#)
- [For star-delta \(wye-delta\) assemblies, pages 3/184 to 3/189.](#)

Power Contactors for Switching Motors

General data

3RT1 contactors

Sizes S6 to S12 with mountable accessories



- ① 3RT10 and 3RT14 air-break contactor, sizes S6, S10 and S12 (3RT1054, size S6 shown here)
- ② 3RT12 vacuum contactor, sizes S10 and S12 (3RT1266, size S10 shown here)
- ③ Withdrawable coils for 3RT1...-A... contactors with conventional operating mechanism (size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors) (size S12: the same for air-break and vacuum contactors)
- ④ Withdrawable coils for 3RT1...-N... contactors with solid-state operating mechanism. (size S10: differentiation between 3RT10/3RT14 air-break contactors and 3RT12 vacuum contactors) (size S12: the same for air-break and vacuum contactors)
- ⑤ Withdrawable coils and laterally mountable module (plug-on) for 3RT1...-P... air-break contactors with solid-state operating mechanism and remaining lifetime indicator
- ⑥ Surge suppressor (RC element), plug-mountable on withdrawable coils
 - 3RT1...-A... with conventional operating mechanism
 - 3RT1...-N... with solid-state operating mechanism
- Same accessories for sizes S6 to S12
- Different accessories depending on size

For accessories and spare parts for

- 3RT10 and 3RT14 contactors, [see pages 3/75 to 3/123](#)
- 3RT12 vacuum contactors, [see pages 3/137 to 3/140](#)

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Overview

Version	Size	Ratings of three-phase motors at 50 Hz and 400 V	Connection methods		Type	Page
		kW	Screw terminals	Spring-type terminals		
Power contactors for switching motors						
AC operation						
Basic unit	S00	3 ... 7.5	✓	✓	3RT201...A.0.	3/51
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT201...P04-3MA0	3/52
Basic unit	S0	4 ... 18.5	✓	✓	3RT202...A.00	3/53
• With removable mounted auxiliary switch block			✓	✓	3RT202...A.04	3/54
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT202...CL24-3MA0	3/54
Basic unit	S2	18.5 ... 37	✓	✓	3RT203...A.00	3/55
• With removable mounted auxiliary switch block			✓	--	3RT203...1A.04	3/55
• With permanently mounted auxiliary switch block			✓	✓	3RT203...CL24-3MA0	3/55
Basic unit	S3	37 ... 55	✓	✓	3RT204...A.00	3/56
• With removable mounted auxiliary switch block			✓	--	3RT204...1A.04	3/56
• With permanently mounted auxiliary switch block			✓	--	3RT204...1CL24-3MA0	3/56
DC operation						
Basic unit	S00	3 ... 7.5	✓	✓	3RT201...B.4.	3/57
• With integrated coil circuit (diode)			✓	✓	3RT201...FB4.	3/57
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and integrated coil circuit (diode)			✓	✓	3RT201...B44-3MA0	3/58
• With voltage tap-off			✓	✓	3RT201...BB4.-0CC0	3/58
Basic unit	S0	4 ... 18.5	✓	✓	3RT202...B.40	3/61
• With coil circuit plugged into front (diode assembly)			✓	✓	3RT202...FB40	3/61
• With removable mounted auxiliary switch block			✓	✓	3RT202...BB44	3/61
• With permanently mounted auxiliary switch block (SUVA-certified safety contactor)			✓	✓	3RT202...B44-3MA0	3/62
• With voltage tap-off			✓	✓	3RT202...BB40-0CC0	3/62
DC operation for direct control from the PLC (coupling relays)						
Basic unit with and without integrated coil circuit	S00	3 ... 5.5	✓	✓	3RT201...B4.	3/59, 3/60
Basic unit with integrated coil circuit	S0	4 ... 15	✓	✓	3RT202...KB40	3/63
Basic unit with integrated coil circuit	S2	18.5 ... 37	✓	✓	3RT203...KB40	3/64
Basic unit with integrated coil circuit	S3	37 and 45	✓	✓	3RT204...KB40	3/64
AC/DC operation (50/60 Hz AC and DC)						
Basic unit with integrated coil circuit	S0	5.5 ... 18.5	✓	✓	3RT202...N.30	3/65
Basic unit with integrated coil circuit	S2	18.5 ... 37	✓	✓	3RT203...N.30	3/66
• With removable mounted auxiliary switch block			✓	--	3RT203...1N.34	3/66
• With permanently mounted auxiliary switch block			✓	✓	3RT203...NB34-3MA0	3/67
• With voltage tap-off			✓	✓	3RT203...NB30-0CC0	3/67
Basic unit with integrated coil circuit	S3	37 ... 55	✓	✓	3RT204...N.30	3/68
• With removable mounted auxiliary switch block			✓	--	3RT204...1N.34	3/68
• With permanently mounted auxiliary switch block			✓	✓	3RT204...NB34-3MA0	3/69
• With voltage tap-off			✓	✓	3RT204...NB30-0CC0	3/69
Basic unit	S6 ... S12	55 ... 250	✓ ¹⁾	✓	3RT10...A.36	3/70
• Conventional operating mechanism						
• Solid-state operating mechanism						
- With 24 V DC control signal input, e.g. for control by PLC			✓ ¹⁾	✓	3RT10...N.36	3/71
- With 24 V DC control signal input · with indication of remaining lifetime (RLT), e.g. for control by PLC			✓ ¹⁾	--	3RT10...P.35	3/72

-- Version not possible

✓ Version possible

¹⁾ Screw terminal optionally with box terminals or with busbar connections.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW



Contactors with screw terminals: 3RT2 (sizes S00 to S3) and 3RT1 (sizes S6 to S12)

3RT contactors, sizes S00 to S12

Our power range:

- Contactors for switching motors:
 - Size S00: 3RT201 up to 7.5 kW
 - Size S0: 3RT202 up to 18.5 kW
 - Size S2: 3RT203 up to 37 kW
 - Size S3: 3RT204 up to 55 kW
 - Sizes S6 to S12: 3RT10 up to 250 kW
- For vacuum contactors for switching motors, see page 3/124 onwards:
 - Sizes S10 and S12: 3RT12 up to 250 kW
 - Size 14: 3TF6 up to 450 kW

Standards

IEC 60947-1, EN 60947-1,
IEC 60947-4-1, EN 60947-4-1,
IEC 60947-5-1, EN 60947-5-1 (auxiliary switches)

3RT contactors

The 3RT contactors are climate-proof and are suitable and tested for use worldwide.

If the devices are used in ambient conditions which deviate from common industrial conditions (IEC 60721-3-3 "Stationary Use, Weather-Protected"), information must be obtained about possible restrictions with regard to the reliability and endurance of the device and possible protective measures. In this case contact our Technical Assistance,
Tel.: +49 (911) 895-5900
E-mail: technical-assistance@siemens.com

Auxiliary contact complement

- Size S00: an auxiliary contact is integrated in the basic device.

- Sizes S0 to S3: the basic units contain two integrated auxiliary contacts (1 NO + 1 NC). All basic units, with the exception of coupling relays, can be expanded using auxiliary switch blocks; see page 3/87 for the permitted selection of auxiliary switches.
- Sizes S6 to S12: These contactors are supplied with two laterally mounted auxiliary switch blocks. The fitting of auxiliary switches is possible on the front and on the side (the 3RT12 vacuum contactor is an exception: only lateral fitting of auxiliary switches is possible here).

For detailed information about fitting of auxiliary switches, see pages 3/87 to 3/92.

Contact reliability

If voltages ≤ 110 V and currents ≤ 100 mA are to be switched, the auxiliary contacts of the 3RT contactors or 3RH contactor relays should be used as they guarantee a high level of contact reliability.

These auxiliary contacts are particularly suitable for solid-state circuits with currents ≥ 1 mA at a voltage ≥ 17 V.

Connection methods

Main circuit

- Sizes S00 and S0: screw or spring-type terminals, spring-type terminals with convenient plug-in design for device connectors
- Size S2: Screw terminals
- Sizes S3 to S12: screw terminals with or without box terminal; with the box terminal removed: connection with busbar or cable lugs on the device connecting bar possible

Auxiliary circuit

- Sizes S00 to S12: Screw or spring-type terminals

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Electromagnetic compatibility (EMC)

The 3RT contactors fulfill the requirements for environment category A.

Note:

When the contactors are used in an environment with frequency converters, the information in the manuals must be observed. See "More information" on page 3/19.

Short-circuit protection

For short-circuit protection of contactors without overload relays, see "Technical specifications":

- For 3RT2 contactors, see pages 3/24, 3/30, 3/34 and 3/39
- For 3RT1 contactors, see page 3/44

Refer to the manuals for details of short-circuit protection of the contactors with overload relays; see "More information" on page 3/19.

For fuseless assembly of motor feeders consisting of 3RV2 motor starter protector and 3RT2 contactor, selection guides are available; see "SIRIUS 3RA2 load feeders" from page 8/4 onwards.

Motor protection

3RT2 contactors

For protection against overload, 3RU2 thermal overload relays (see page 7/84 onwards) or 3RB3 electronic overload relays (see page 7/97 onwards) can be mounted on the 3RT2 contactors.

3RT1 contactors

For protection against overload, 3RB2 electronic overload relays (see page 7/109 onwards) can be mounted on the 3RT1 contactors.

Plant and application monitoring

For monitoring and measuring in the application, 3RR2 monitoring relays can be mounted on the 3RT2 contactors (see page 10/62).

Ratings of three-phase motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

The power rating specifications of the contactors in kW (in accordance with IEC 60947-4-1, Table G) are guide values for 4-pole standard motors at 50 Hz AC and specified voltage (e. g. 400 V). The actual starting and rated data of the motor to be switched must be considered when selecting the units.

Surge suppression

3RT contactors supplied without a coil circuit can be retrofitted with RC elements, varistors, diodes or diode assemblies (assembly of diode and Zener diode for short break times) for damping opening surges in the coil. See page 3/103.

- Size S00: the surge suppressors are plugged onto the front of the contactors here. Space is provided for them next to a snap-on auxiliary switch block.
- Sizes S0 and S3: the surge suppressors can be plugged onto the front of the devices. In the case of size S3 contactors, surge suppressors can only be used as from product version E03.
- Sizes S6 to S12: Withdrawable coils with integrated coil switch (varistor)

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (for details, see the relevant manual → "More information" on page 3/19).

Contactors with voltage tap-off

Sizes S00 to S3

The S00 to S3 contactors with voltage tap-off are special versions for mounting the SIRIUS function modules for connection to the control system through IO-Link or AS-Interface (see page 3/79 onwards).

Without a function module, these contactors can be used like the standard versions.

For more information on IO-Link and AS-Interface see "Industrial Communication" from page 2/1 onwards.

Control supply voltage

Different versions of operating mechanisms are available depending on the contactor size:

- AC or DC operation for sizes S00 to S3
- AC/DC operating mechanism for sizes S0 to S12 that can operate on AC (50 to 60 Hz) or DC.

Operating mechanism types

Sizes S6 to S12

Two types of solenoid operation are available:

- Conventional operating mechanisms
- Solid-state operating mechanisms
 - The operating mechanism for the contactors features solid-state control of the contactor coil. Overvoltage damping of the operating mechanism coil is already integrated in the electronics. The operating mechanisms are powered via a supply voltage with an operating range from 0.7 to $1.25 \times U_s$, optionally also controlled depending on the chosen mode of operation. Alternatively, control is via the separate 24 V DC control signal input. Various rated voltage ranges for AC/DC control are available.
 - This version is additionally available with a 24 V DC PLC relay output and a remaining lifetime indicator (RLT).

Solenoid coils

- Sizes S0 to S3: coil replacement is possible.
- As from size S6: For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Article No. scheme

Product versions		Article number											
SIRIUS power contactors		3RT2 □ □ □ - □ □ □ □ □ - □ □ □ □											
Device type	e. g. 0 = 3-pole motor contactor	□	□	□	□	□	□	□	□	□	□	□	□
Size of the contactor	e. g. 4 = S3	□	□	□	□	□	□	□	□	□	□	□	□
Power dependent on size	e. g. 5 = 37 kW in the case of S3	□	□	□	□	□	□	□	□	□	□	□	□
Type of electrical connection	e. g. 1 = screw terminals (main and auxiliary circuits)	□	□	□	□	□	□	□	□	□	□	□	□
Operating range / solenoid coil circuit	e.g. A = AC standard / without coil circuit	□	□	□	□	□	□	□	□	□	□	□	□
Rated control supply voltage	e.g. P0 = 230 V AC, 50 Hz	□	□	□	□	□	□	□	□	□	□	□	□
Auxiliary switches	e. g. 0 = in the case of S3: 1 NO + 1 NC integrated	□	□	□	□	□	□	□	□	□	□	□	□
Special version		□	□	□	□	□	□	□	□	□	□	□	□
Example		3RT2 0 4 5 - 1 A P 0 0											

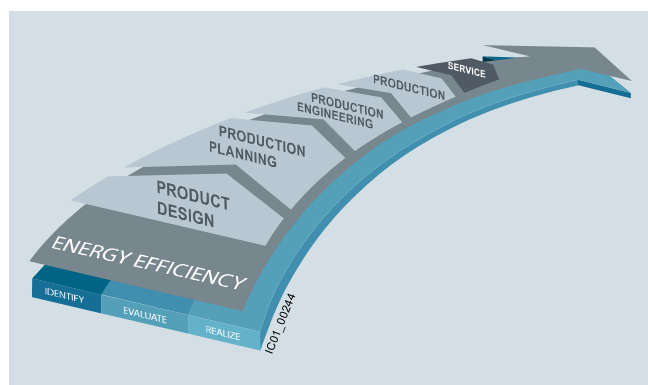
Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

For your orders, please use the article numbers quoted in the selection and ordering data.

Benefits

Advantages through energy efficiency



Overview of the energy management process

We offer you a unique portfolio for industrial energy management, using an energy management system that helps to optimally define your energy needs. We split up our industrial energy management into three phases – identify, evaluate, and realize – and we support you with the appropriate hardware and software solutions in every process phase.

The innovative products of the SIRIUS industrial controls portfolio can also make a substantial contribution to a plant's energy efficiency (see www.siemens.com/sirius/energysaving).

3RT2 contactors contribute to energy efficiency throughout the plant as follows:

- AC/DC coils with electrical control for reduced power consumption when closing and in the closed state
- Smaller power supply units in the control circuit due to low holding power at 24 V DC
- Reduced heating of control cabinet:
Technology-reduced inherent power loss of the contactors, resulting in lower cooling costs and a more compact design

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Technical specifications

More information				
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16134/td FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16134/faq		Manuals, see • System Manual "SIRIUS – System Overview", https://support.industry.siemens.com/cs/WW/en/view/60311318 • Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WW/en/view/60306557 • Application Manual "SIRIUS Controls with IE3/IE4 motors", https://support.industry.siemens.com/cs/ww/en/view/94770820		
Type	3RT20 contactors		3RT10	
Size	S00 to S2		S3	S6 to S12
Rated data of the auxiliary contacts				
acc. to IEC 60947-5-1/EN 60947-5-1 Data applies to integrated auxiliary contacts and conventional contacts in the auxiliary switch blocks				
Rated insulation voltage U_i (pollution degree 3)	V	690	1 000 (3RT20...-0CC0: 690)	--
• For laterally mountable auxiliary switch blocks	V	690	690	500
• For front mountable auxiliary switch blocks	V	690	690	690
Conventional thermal current I_{th} = Rated operational current I_e /AC-12	A	10		
AC load				
Rated operational current I_e /AC-15/AC-14				
• For rated operational voltage U_e	Up to 230 V A	10 ¹⁾	6	6
	400 V A	3		3
	500 V A	2		2
	690 V A	1		1 ²⁾
DC load				
Rated operational current I_e /DC-12				
• For rated operational voltage U_e	24 V A	10		10
	60 V A	6		6
	110 V A	3		3
	125 V A	2		2
	220 V A	1		1
	440 V A	0.3		0.3
	600 V A	0.15		0.15 ²⁾
Rated operational current I_e /DC-13				
• For rated operational voltage U_e	24 V A	10 ¹⁾		10 ³⁾
	60 V A	2		2
	110 V A	1		1
	125 V A	0.9		0.9
	220 V A	0.3		0.3
	440 V A	0.14		0.14
	600 V A	0.1		0.15 ²⁾
Contact reliability at 17 V, 1 mA according to IEC 60947-5-4/EN 60947-5-4		Frequency of contact faults < 10 ⁻⁸ i. e. < 1 fault per 100 million operating cycles		

¹⁾ 3RH22, 3RH29, 3RT2...-...4, 3RT2...-...6: I_e = 6 A at AC-15/AC-14 and DC-13.

²⁾ For laterally mountable auxiliary switch blocks, only the rated operational voltages up to 500 V apply.

³⁾ For laterally mountable auxiliary switch blocks, DC-13/at 24 V: Max. 6 A.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type

Size

3RT contactors

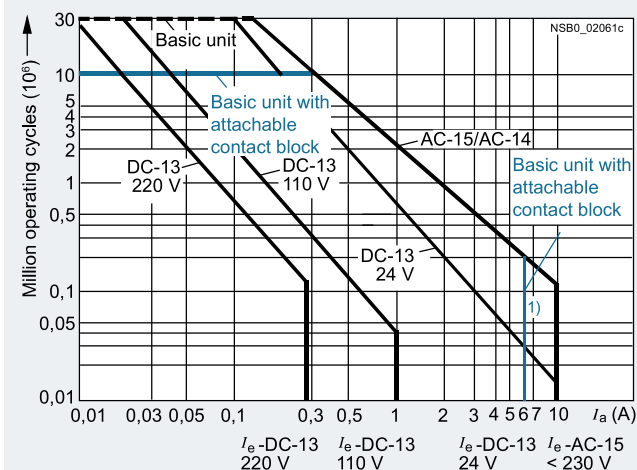
S00 to S12

Contact endurance of the auxiliary contacts

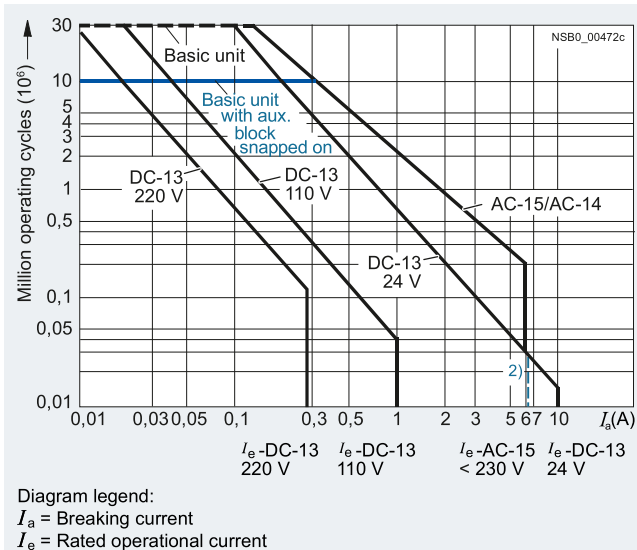
It is assumed that the operating mechanisms are switched randomly, i. e. not synchronized with the phase angle of the supply system.

The contact endurance is mainly dependent on the breaking current.

Sizes S00 to S3



Sizes S6 to S12



¹⁾ 3RH22, 3RH29, 3RT2...-...4, 3RT2...-...6: $I_e = 6$ A at AC-15/AC-14 and DC-13, 3RT2.4: $I_e = 6$ A at AC-15/AC-14.

²⁾ For laterally mountable auxiliary switch blocks, DC-13/at 24 V: Max. 6 A.

³⁾ For laterally mountable auxiliary switch blocks, only the rated operational voltages up to 500 V apply.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type
Size

3RT2 contactors
S00 and S0

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i. e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

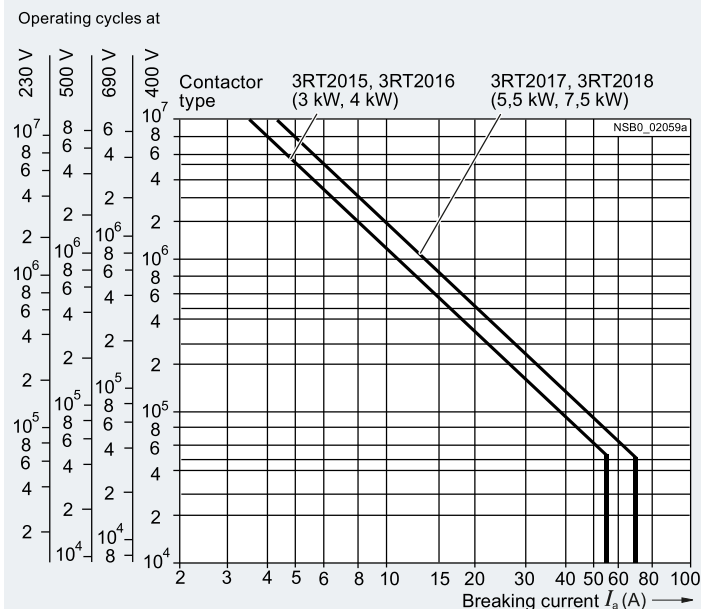
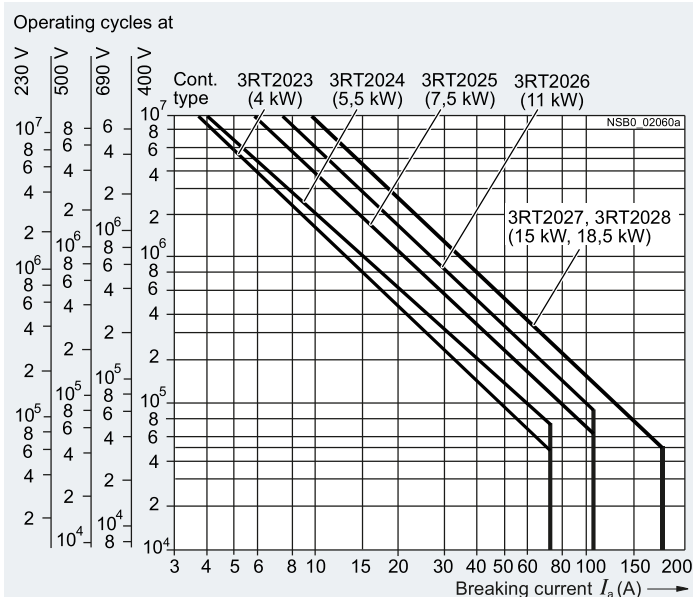
If a shorter contact endurance is sufficient, the rated operational current I_e /AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100} \left(\frac{A}{B} - 1 \right)}$$

Characters in the equation:

- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
- B Contact endurance for inching ($I_a = \text{multiple of } I_e$) in operating cycles
- C Inching operations as a percentage of total switching operations

Size S00**Size S0**

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type

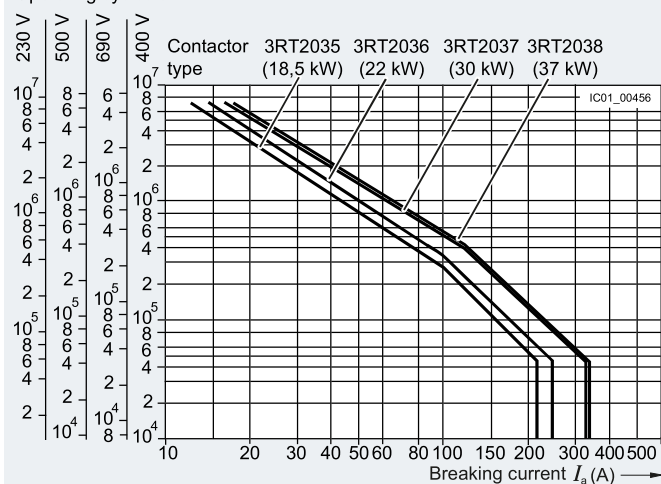
3RT2 contactors

Size

S2 to S12**Contact endurance of the main contacts**

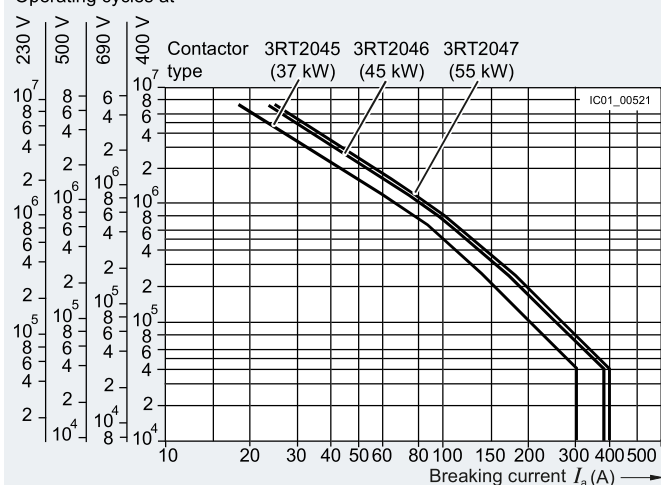
Size S2

Operating cycles at



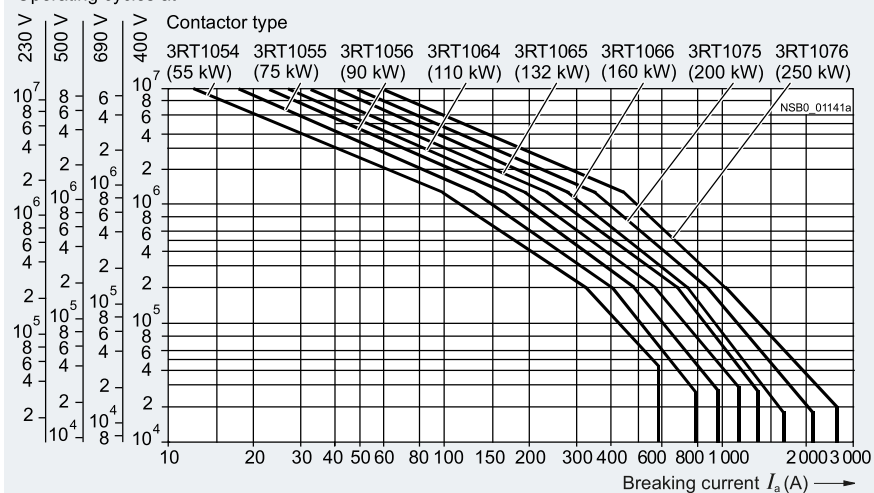
Size S3

Operating cycles at



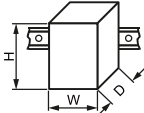
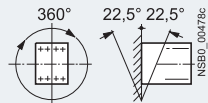
Sizes S6 to S12

Operating cycles at



Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors													
Type		3RT2015, 3RT2016	3RT2017, 3RT2018												
Size		S00													
General data															
Dimensions (W x H x D)															
- Basic unit - Screw terminals - Spring-type terminals - Basic unit with mounted auxiliary switch block - Screw terminals - Spring-type terminals - Basic unit with mounted function module or solid-state time-delayed auxiliary switch block - Screw terminals - Spring-type terminals		<table><tr><td>mm</td><td>45 x 58 x 73</td></tr><tr><td>mm</td><td>45 x 70 x 73</td></tr><tr><td>mm</td><td>45 x 58 x 117</td></tr><tr><td>mm</td><td>45 x 70 x 121</td></tr><tr><td>mm</td><td>45 x 58 x 147</td></tr><tr><td>mm</td><td>45 x 70 x 147</td></tr></table>	mm	45 x 58 x 73	mm	45 x 70 x 73	mm	45 x 58 x 117	mm	45 x 70 x 121	mm	45 x 58 x 147	mm	45 x 70 x 147	
mm	45 x 58 x 73														
mm	45 x 70 x 73														
mm	45 x 58 x 117														
mm	45 x 70 x 121														
mm	45 x 58 x 147														
mm	45 x 70 x 147														
Permissible mounting position															
The contactors are designed for operation on a vertical mounting surface.															
Upright mounting position		 Special version required													
Mechanical endurance															
- Basic unit - Basic unit with mounted auxiliary switch block - Basic unit with solid-state compatible auxiliary switch block	<table><tr><td>Operating cycles</td><td>30 million</td></tr><tr><td>Operating cycles</td><td>10 million</td></tr><tr><td>Operating cycles</td><td>5 million</td></tr></table>	Operating cycles	30 million	Operating cycles	10 million	Operating cycles	5 million								
Operating cycles	30 million														
Operating cycles	10 million														
Operating cycles	5 million														
Electrical endurance		For contact endurance of the main contacts, see page 3/21 .													
Rated insulation voltage U_i (pollution degree 3)	V	690													
Rated impulse withstand voltage U_{imp}	kV	6													
Protective separation between the coil and the main contacts according to IEC 60947-1, Appendix N	V	400													
Mirror contacts															
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.															
3RT2.1. (removable auxiliary switch block) 3RH2919-.NF.. solid-state compatible auxiliary switch blocksNF..		Yes, this applies to both the basic unit as well as to between the basic unit and the mounted auxiliary switch block acc. to IEC 60947-4-1, Appendix F Have no mirror contact for size S00													
Ambient temperature															
- During operation - During storage	<table><tr><td>°C</td><td>-25 ... +60</td></tr><tr><td>°C</td><td>-55 ... +80</td></tr></table>	°C	-25 ... +60	°C	-55 ... +80										
°C	-25 ... +60														
°C	-55 ... +80														
Degree of protection acc. to IEC 60529															
- On front - Connecting terminal		IP20 (screw terminals and spring-type terminals) IP20 (screw terminals and spring-type terminals)													
Touch protection acc. to IEC 60529		Finger-safe (screw terminals and spring-type terminals)													
Shock resistance															
- Rectangular pulse - AC operation - DC operation - Sine pulse - AC operation - DC operation	<table><tr><td>g/ms</td><td>6.7/5 and 4.2/10</td></tr><tr><td>g/ms</td><td>6.7/5 and 4.2/10</td></tr><tr><td>g/ms</td><td>10.5/5 and 6.6/10</td></tr><tr><td>g/ms</td><td>10.5/5 and 6.6/10</td></tr></table>	g/ms	6.7/5 and 4.2/10	g/ms	6.7/5 and 4.2/10	g/ms	10.5/5 and 6.6/10	g/ms	10.5/5 and 6.6/10	<table><tr><td>7.3/5 and 4.7/10</td></tr><tr><td>7.3/5 and 4.7/10</td></tr><tr><td>11.4/5 and 7.3/10</td></tr><tr><td>11.4/5 and 7.3/10</td></tr></table>		7.3/5 and 4.7/10	7.3/5 and 4.7/10	11.4/5 and 7.3/10	11.4/5 and 7.3/10
g/ms	6.7/5 and 4.2/10														
g/ms	6.7/5 and 4.2/10														
g/ms	10.5/5 and 6.6/10														
g/ms	10.5/5 and 6.6/10														
7.3/5 and 4.7/10															
7.3/5 and 4.7/10															
11.4/5 and 7.3/10															
11.4/5 and 7.3/10															

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors	
		3RT2015, 3RT2016	3RT2017, 3RT2018
Size		S00	
Short-circuit protection			
Main circuit			
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC 60947-4-1/EN 60947-4-1			
- Type of coordination "1"	A	35	50
- Type of coordination "2"	A	20	25
- Weld-free (test conditions according to IEC 60947-4-1)	A	10	
• Miniature circuit breaker (up to 230 V) with C characteristic Short-circuit current 1 kA, type of coordination "1"	A	10	
Auxiliary circuit			
Short-circuit test acc. to IEC 60947-5-1/EN 60947-5-1			
• With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current $I_k = 1$ kA	A	10	
• With 230 V miniature circuit breakers, C characteristic with short-circuit current $I_k = 400$ A	A	6	
Short-circuit protection for contactors with overload relays		See "Configuring SIRIUS Innovations – Selection Data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188	
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders on page 8/4 onwards	
Control			
Solenoid coil operating range			
• AC operation	50 Hz 60 Hz	0.8 ... 1.1 x U_s 0.85 ... 1.1 x U_s	
• DC operation	Up to 50 °C Up to 60 °C	0.8 ... 1.1 x U_s 0.85 ... 1.1 x U_s	
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)			
• AC operation, 50/60 Hz, standard version			
- Closing	VA	27/24.3	37/33
- P.f.		0.8/0.75	
- Closed	VA	4.2/3.3	5.7/4.4
- P.f.		0.25/0.25	
• AC operation, 50 Hz, for USA/Canada			
- Closing	VA	26.4	36
- P.f. for closing		0.81	0.8
- Closed	VA	4.4	5.9
- P.f. for closed		0.24	
• AC operation, 60 Hz, for USA/Canada			
- Closing	VA	31.7	43
- P.f. for closing		0.81	0.8
- Closed	VA	4.8	6.5
- P.f. for closed		0.25	
• DC operation (closing = closed)	W	4	
Permissible residual current of the electronics (with 0 signal)			
• AC operation		< 3 mA x (230 V/ U_s) ¹⁾	< 4 mA x (230 V/ U_s) ¹⁾
• DC operation		< 10 mA x (24 V/ U_s) ¹⁾	
Operating times at 1.0 x U_s ²⁾			
Total break time = Opening delay + Arcing time			
• AC operation			
- Closing delay	ms	9.5 ... 24	9 ... 22
- Opening delay	ms	4 ... 14	4.5 ... 15
• DC operation			
- Closing delay	ms	35 ... 50	
- Opening delay	ms	7 ... 12	
• Arcing time	ms	10 ... 15	

¹⁾ The 3RT2916-1GA00 additional load module is recommended for higher residual currents, see page 3/118.

²⁾ The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (noise suppression diode 6 to 10 times; diode assembly 2 to 6 times, suppressor diode +1 ms to 5 ms; varistor +2 ms to 5 ms).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Coupling contactors			
Size	3RT201.-.HB4.		3RT201.-.JB4.	
	S00		3RT201.-.KB4.	
Control				
Solenoid coil operating range		0.7 ... 1.25 x U _s		
Power consumption of the solenoid coils (for cold coil) Closing = Closed		At U _s 24 V DC W 2.8		
Permissible residual current of the electronics (with 0 signal)		< 6 mA x (24 V/U _s)		
Upright mounting position		On request		
Overvoltage configuration of the solenoid coil		No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times				
• Closing delay				
- ON-delay NO		ms	35 ... 60	
- OFF-delay NC		ms	25 ... 40	
• Opening delay				
- ON-delay NO		ms	7 ... 20	38 ... 65
- OFF-delay NC		ms	20 ... 30	55 ... 75
				7 ... 20
				20 ... 30

Type	Coupling contactors			
Size	3RT201.-1MB4.-0KT0		3RT201.-1VB4.	
	S00		3RT201.-1SB4.	
Control				
Solenoid coil operating range		0.85 ... 1.85 x U _s		
Power consumption of the solenoid coils (for cold coil) Closing = Closed		At U _s 24 V DC W 1.6		
Permissible residual current, upright mounting position		On request		
Overvoltage configuration of the solenoid coil		No overvoltage damping 	Built-in diode 	Built-in suppressor diode 
Operating times				
• Closing delay				
- ON-delay NO		ms	25 ... 90	
- OFF-delay NC		ms	15 ... 80	
• Opening delay				
- ON-delay NO		ms	5 ... 20	20 ... 80
- OFF-delay NC		ms	10 ... 30	30 ... 90
				5 ... 20
				10 ... 30

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors			
Type		3RT2015	3RT2016	3RT2017	3RT2018
Size		S00			
Rated data of the main contacts					
Load rating with AC					
Utilization category AC-1, switching resistive loads					
• Rated operational currents I_e	At 40 °C up to 690 V	A	18	22	
	At 60 °C up to 690 V	A	16	20	
• Rated power for AC loads ¹⁾ P.f = 0.95 (at 60 °C)	230 V	kW	6	7.5	
	400 V	kW	10.5	13	
	690 V	kW	18	22	
• Minimum conductor cross-section for loads with I_e	At 40 °C	mm ²	2.5	4	
	At 60 °C	mm ²	2.5		
Utilization categories AC-2 and AC-3					
• Rated operational currents I_e	Up to 400 V	A	7	9	12
	440 V	A	7	9	11
	500 V	A	6	7.7	9.2
	690 V	A	4.9	6.7	8.9
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V	kW	1.5	2.2	3
	400 V	kW	3	4	5.5
	690 V	kW	4	5.5	7.5
Thermal load capacity	10 s current	A	56	72	96
Power loss per conducting path	At I_e /AC-3	W	0.42	0.7	1.24
Utilization category AC-4 (at $I_a = 6 \times I_e$)²⁾					
• Maximum values					
- Rated operational current I_e	Up to 400 V	A	6.5	8.5	11.5
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	Up to 400 V	kW	3	4	5.5
• The following applies to a contact endurance of about 200 000 operating cycles:					
- Rated operational currents I_e	Up to 400 V	A	2.6	4.1	5.5
	690 V	A	1.8	3.3	4.4
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 230 V	kW	0.67	1.1	1.5
	400 V	kW	1.15	2	2.5
	690 V	kW	1.15	2.5	3.5

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc.
(increased power consumption on heating up has been taken into account).

²⁾ The data applies to 3RT2516 and 3RT2517 contactors (2 NO + 2 NC)
up to a rated operational voltage of 400 V only.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

				Contactors	
Type				3RT2015	3RT2016 to 3RT2018
Size				S00	
Rated data of main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A	15	20	
	60 V	A	15	20	
	110 V	A	1.5	2.1	
	220 V	A	0.6	0.8	
	440 V	A	0.42	0.6	
	600 V	A	0.42	0.6	
- 2 conducting paths in series	Up to 24 V	A	15	20	
	60 V	A	15	20	
	110 V	A	8.4	12	
	220 V	A	1.2	1.6	
	440 V	A	0.6	0.8	
	600 V	A	0.5	0.7	
- 3 conducting paths in series	Up to 24 V	A	15	20	
	60 V	A	15	20	
	110 V	A	15	20	
	220 V	A	15	20	
	440 V	A	0.9	1.3	
	600 V	A	0.7	1	
Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V	A	15	20	
	60 V	A	0.35	0.5	
	110 V	A	0.1	0.15	
	220 V	A	--		
	440 V	A	--		
	600 V	A	--		
- 2 conducting paths in series	Up to 24 V	A	15	20	
	60 V	A	3.5	5	
	110 V	A	0.25	0.35	
	220 V	A	--		
	440 V	A	--		
	600 V	A	--		
- 3 conducting paths in series	Up to 24 V	A	15	20	
	60 V	A	15	20	
	110 V	A	15	20	
	220 V	A	1.2	1.5	
	440 V	A	0.14	0.2	
	600 V	A	0.14	0.2	
Switching frequency					
Switching frequency z in operating cycles/hour					
Contactors without overload relays					
• No-load switching frequency	AC/DC	h ⁻¹	10 000		
• Switching frequency z during rated operation ¹⁾					
- $I_e/AC-1$	At 400 V	h ⁻¹	1 000		
- $I_e/AC-2$	At 400 V	h ⁻¹	750		
- $I_e/AC-3$	At 400 V	h ⁻¹	750		
- $I_e/AC-4$	At 400 V	h ⁻¹	250		
Contactors with overload relays					
• Mean value		h ⁻¹	15		

¹⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Contactors	
Size	3RT2015 to 3RT2018	
Conductor cross-sections		S00
Main conductors, auxiliary conductors and coil terminals (1 or 2 conductors can be connected)		 Screw terminals
• Solid or stranded	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾ ; max. 2 x 4
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾
• AWG cables, solid or stranded	AWG	2 x (20 ... 16) ¹⁾ ; 2 x (18 ... 14) ¹⁾ ; 2 x 12
• Terminal screw		M3 (for Pozidriv size 2; Ø 5 ... 6)
• Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)
Main conductors, auxiliary conductors and coil terminals²⁾ (1 or 2 conductors can be connected)		 Spring-type terminals
• Operating devices ³⁾	mm	3.0 x 0.5
• Solid or stranded	mm ²	2 x (0.5 ... 4)
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 2.5)
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 12)
Auxiliary conductors for front and laterally mounted auxiliary switches²⁾ (1 or 2 conductors can be connected)		
• Operating devices ³⁾	mm	3.0 x 0.5
• Solid or stranded	mm ²	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

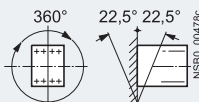
¹⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

²⁾ Max. external diameter of the cable insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm², an insulation stop must be used, [see page 3/119](#).

³⁾ Tool for opening the spring-type terminals, [see page 3/119](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		Contactors	
Size		3RT2023 to 3RT2025	3RT2026 to 3RT2028
General data		S0	
Dimensions (W x H x D)			
<u>AC operation</u>			
• Basic unit			
- Screw terminals		mm	45 x 85 x 97
- Spring-type terminals		mm	45 x 102 x 97
• Basic unit with mounted auxiliary switch block			
- Screw terminals		mm	45 x 85 x 141
- Spring-type terminals		mm	45 x 102 x 145
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block			
- Screw terminals		mm	45 x 85 x 171
- Spring-type terminals		mm	45 x 102 x 171
<u>DC operation</u>			
• Basic unit			
- Screw terminals		mm	45 x 85 x 107
- Spring-type terminals		mm	45 x 102 x 107
• Basic unit with mounted auxiliary switch block			
- Screw terminals		mm	45 x 85 x 151
- Spring-type terminals		mm	45 x 102 x 155
• Basic unit with mounted function module or solid-state time-delayed auxiliary switch block			
- Screw terminals		mm	45 x 85 x 181
- Spring-type terminals		mm	45 x 102 x 181
Permissible mounting position			
The contactors are designed for operation on a vertical mounting surface.			
Upright mounting position		 Special version required, also applies to 3RT202... coupling contactors K.40	
Mechanical endurance			
• Basic unit and basic unit with mounted auxiliary switch block	Operating cycles	10 million	
• Basic unit with solid-state compatible auxiliary switch block	Operating cycles	5 million	
Electrical endurance		For contact endurance of the main contacts, see page 3/21 .	
Rated insulation voltage U_i (pollution degree 3)	V	690	
Rated impulse withstand voltage U_{imp}	kV	6	
Protective separation between the coil and the main contacts (according to IEC 60947-1, Appendix N)	V	400	
Mirror contacts			
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.			
• Integrated auxiliary switches		Yes, acc. to IEC 60947-4-1, Appendix F	
• 3RT2.2. (removable auxiliary switch block)		Yes, acc. to IEC 60947-4-1, Appendix F	
Permissible ambient temperature			
• During operation	°C	-25 ... +60	
• During storage	°C	-55 ... +80	
Degree of protection acc. to IEC 60529			
• On front		IP20 (screw terminals and spring-type terminals)	
• Connecting terminal		IP20 (screw terminals and spring-type terminals)	
Touch protection acc. to IEC 60529		Finger-safe (screw terminals and spring-type terminals)	
Shock resistance			
• Rectangular pulse			
- AC operation	g/ms	7.5/5 and 4.7/10	8.3/5 and 5.310
- DC operation	g/ms	10/5 and 7.5/10	
• Sine pulse			
- AC operation	g/ms	11.8/5 and 7.4/10	13.5/5 and 8.3/10
- DC operation	g/ms	15/5 and 10/10	

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Contactors			
Size	3RT2023 to 3RT2025		3RT2026	3RT2027, 3RT2028
S0				
Short-circuit protection				
Main circuit				
- Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC 60947-4-1/EN 60947-4-1 - Type of coordination "1" A 63 100 125 - Type of coordination "2" A 25 35 50 - Weld-free (test conditions according to IEC 60947-4-1) A 10 16 - Miniature circuit breaker with C characteristic (short-circuit current 3 kA, type of coordination "1") A 25 32 40				
Auxiliary circuit				
Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10		
230 V miniature circuit breakers, C characteristic (short-circuit current $I_k < 400$ A)	A	10		
Short-circuit protection for contactors with overload relays		See Configuration Manual "Configuring SIRIUS Innovations – Selection Data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188		
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders on page 8/4 onwards		

		Contactors				
Type		3RT2023 to 3RT2025	3RT2026 to 3RT2028	3RT202.-.NB3	3RT202.-.NF3..	3RT202.-.NP3
Size		S0				
Control						
Type of operating mechanism		AC or DC		AC/DC		
Solenoid coil operating range		AC/DC	0.8 ... 1.1 x $U_s^{1)}$		0.7 ... 1.3 x $U_s^{2)}$	
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)						
• AC operation, 50 Hz, standard version						
- Closing	VA	65	77	6.6	11.9	12.7
- P.f.		0.82		0.98		
- Closed	VA	7.6	9.8	1.9	1.6	3.9
- P.f.		0.25		0.86	0.79	0.51
• AC operation, 50/60 Hz, standard version						
- Closing	VA	68/67	81/79	6.6/6.7	11.9/12.0	12.7/14.7
- P.f.		0.72/0.74		0.98/0.98		
- Closed	VA	7.9/6.5	10.5/8.5	1.9/2.0	1.6/1.8	3.9/4.3
- P.f.		0.25/0.28		0.86/0.82	0.79/0.74	0.51/0.56
• AC operation, 50 Hz, for USA/Canada						
- Closing	VA	65	77	--		
- P.f.		0.82	0.82	--		
- Closed	VA	7.6	9.8	--		
- P.f.		0.25	0.28	--		
• AC operation, 60 Hz, for USA/Canada						
- Closing	VA	73	87	--		
- P.f.		0.76		--		
- Closed	VA	7.2	9.4	--		
- P.f.		0.28		--		
• DC operation (closing = closed)	W	5.9/5.9		5.9/1.4	10.2/1.3	14.3/1.9
Permissible residual current of the electronics (with 0 signal)						
• AC operation	mA	< 6 mA x (230 V/ U_s)		< 7 mA x (230 V/ U_s)		
• DC operation	mA	< 16 mA x (24 V/ U_s)				
Operating times at 1.0 x $U_s^{3)}$						
• AC operation						
- Closing delay	ms	10 ... 18	10 ... 17	65 ... 80	50 ... 70	60 ... 80
- Opening delay	ms	4 ... 16		30 ... 45	35 ... 45	30 ... 50
• DC operation						
- Closing delay	ms	55 ... 80		60 ... 80	56 ... 70	60 ... 80
- Opening delay	ms	16 ... 17		30 ... 45	35 ... 45	30 ... 50
• Arcing time	ms	10				

¹⁾ Coil operating range
- at 50 Hz: 0.8 to $1.1 \times U_s$
- at 60 Hz: 0.85 to $1.1 \times U_s$

²⁾ The following applies to $U_{s \max} = 280$ V: Upper limit = $1.1 \times U_{s \max}$.

³⁾ The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 ms to 5 ms, diode assembly: 2 to 6 times).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Coupling contactors	
Size	3RT202...KB4.	
Control	S0	
Solenoid coil operating range	0.7 ... 1.25 x U_s	
Power consumption of the solenoid coils (for cold coil) Closing = Closed	At U_s 24 V DC W	4.5
Permissible residual current of the electronics (with 0 signal)	< 10 mA x (24 V/ U_s)	
Overvoltage configuration of the solenoid coil	Built-in varistor  U	
Operating times		
• Closing delay		
- ON-delay NO	ms	65 ... 90
- OFF-delay NC	ms	55 ... 80
• Opening delay		
- ON-delay NO	ms	19 ... 21
- OFF-delay NC	ms	25 ... 31

Type	Contactors						
Size	3RT2023 3RT2024 3RT2025 3RT2026 3RT2027 3RT2028						
Rated data of the main contacts	S0						
Load rating with AC							
Utilization category AC-1, switching resistive loads							
• Rated operational current I_e	At 40 °C up to 690 V A	40					50
	At 60 °C up to 690 V A	35					42
• Rated power for AC loads ¹⁾	230 V kW	13.3					15.5
P.f = 0.95 (at 60 °C)	400 V kW	23					27.5
	690 V kW	40					47.5
• Minimum conductor cross-section for loads with I_e	At 40 °C mm ²	10					
	At 60 °C mm ²	10					
Utilization categories AC-2 and AC-3							
• Rated operational currents I_e	Up to 400 V A	9	12	17	25	32	38
	440 V A	9	12	17	22	32	35
	500 V A	9	12	17	18	32	
	690 V A	9		13		21	
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V kW	2.2	3	4	5.5	7.5	11
	400 V kW	4	5.5	7.5	11	15	18.5
	690 V kW	7.5		11		18.5	
Thermal load capacity	10 s current A	80	110	150	200	260	300
Power loss per conducting path	At I_e /AC-3 W	0.4	0.5	0.9	1.6	2.7	3.8
Utilization category AC-4 (for $I_a = 6 \times I_e$)							
• Maximum values:							
- Rated operational current I_e	Up to 400 V A	8.5	12.5	15.5		22	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 400 V kW	4	5.5	7.5		11	
• The following applies to a contact endurance of about 200 000 operating cycles:							
- Rated operational currents I_e	Up to 400 V A	4.1	5.5	7.7	9	12	
	690 V A	3.3	5.5	7.7	9	12	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 110 V kW	0.5	0.73	1	1.2	1.6	
	230 V kW	1.1	1.5	2	2.5	3.4	
	400 V kW	2	2.6	3.5	4.4	6	
	690 V kW	2.5	4.6	6	7.7	10.3	

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		Contactors	
Size		3RT2023 to 3RT2025	3RT2026 to 3RT2028
Rated data of main contacts (continued)		S0	
Load rating with DC			
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)			
• Rated operational currents I_e (at 60 °C)			
- 1 conducting path	Up to 24 V	A	35
	60 V	A	20
	110 V	A	4.5
	220 V	A	1
	440 V	A	0.4
	600 V	A	0.25
- 2 conducting paths in series	Up to 24 V	A	35
	60 V	A	35
	110 V	A	35
	220 V	A	5
	440 V	A	1
	600 V	A	0.8
- 3 conducting paths in series	Up to 24 V	A	35
	60 V	A	35
	110 V	A	35
	220 V	A	35
	440 V	A	2.9
	600 V	A	1.4
Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)			
• Rated operational currents I_e (at 60 °C)			
- 1 conducting path	Up to 24 V	A	20
	60 V	A	5
	110 V	A	2.5
	220 V	A	1
	440 V	A	0.09
	600 V	A	0.06
- 2 conducting paths in series	Up to 24 V	A	35
	60 V	A	35
	110 V	A	15
	220 V	A	3
	440 V	A	0.27
	600 V	A	0.16
- 3 conducting paths in series	Up to 24 V	A	35
	60 V	A	35
	110 V	A	35
	220 V	A	10
	440 V	A	0.6
	600 V	A	0.6
Switching frequency			
Switching frequency z in operating cycles/hour			
Contactors without overload relays			
• No-load switching frequency	AC	h ⁻¹	5 000
	DC	h ⁻¹	1 500
• Switching frequency z during rated operation ¹⁾			
- $I_e/AC-1$	At 400 V	h ⁻¹	1 000
- $I_e/AC-2$	At 400 V	h ⁻¹	1 000
- $I_e/AC-3$	At 400 V	h ⁻¹	1 000
- $I_e/AC-4$	At 400 V	h ⁻¹	300
Contactors with overload relays			
• Mean value		h ⁻¹	15

¹⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Contactors	
Size	3RT2023 to 3RT2028	
Conductor cross-sections		S0
Main conductors (1 or 2 conductors can be connected)		 Screw terminals
• Solid or stranded	mm ²	2 x (1 ... 2.5) ¹⁾ ; 2 x (2.5 ... 10) ¹⁾
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (1 ... 2.5) ¹⁾ ; 2 x (2.5 ... 6) ¹⁾ ; 1 x 10
• AWG cables, solid or stranded	AWG	2 x (16 ... 12) ¹⁾ ; 2 x (14 ... 8) ¹⁾
• Terminal screws - Tightening torque	Nm	M4 (for Pozidriv size 2; Ø 5 ... 6) 2 ... 2.5 (18 ... 22 lb.in)
Auxiliary conductors (1 or 2 conductors can be connected)		
• Solid or stranded	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾
• AWG cables, solid or stranded	AWG	2 x (20 ... 16) ¹⁾ ; 2 x (18 ... 14) ¹⁾
• Terminal screws - Tightening torque	Nm	M3 (for Pozidriv size 2; Ø 5 ... 6) 0.8 ... 1.2 (7 ... 10.3 lb.in)
Main conductors²⁾ (1 or 2 conductors can be connected)		 Spring-type terminals
• Operating devices ³⁾	mm	3.0 x 0.5
• Solid or stranded	mm ²	2 x (1 ... 10)
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (1 ... 6)
• Finely stranded without end sleeve	mm ²	2 x (1 ... 6)
• AWG cables, solid or stranded	AWG	2 x (18 ... 8)
Auxiliary conductors²⁾ (1 or 2 conductors can be connected)		
• Operating devices ³⁾		3.0 x 0.5
• Solid or stranded	mm ²	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

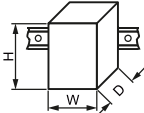
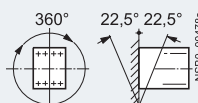
¹⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

²⁾ Max. external diameter of the cable insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm², an insulation stop must be used, [see page 3/119](#).

³⁾ Tool for opening the spring-type terminals, [see page 3/119](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors			
		3RT2035	3RT2036	3RT2037	3RT2038
Size		S2			
General data					
Dimensions (W x H x D)					
- Basic units - Screw/spring-type terminals - Basic unit with mounted auxiliary switch block - Screw terminals - Spring-type terminals - Basic unit with mounted function module or solid-state time-delayed auxiliary switch block - Screw/spring-type terminals		mm	55 x 114 x 130		
		mm	55 x 114 x 174		
		mm	55 x 114 x 178		
		mm	55 x 114 x 204		
Permissible mounting position					
The contactors are designed for operation on a vertical mounting surface.					
Upright mounting position		 NSB0_00477a Special version required			
Mechanical endurance					
Basic units and basic units with mounted auxiliary switch block	Operating cycles	10 million			
Basic units with solid-state compatible auxiliary switch block	Operating cycles	5 million			
Electrical endurance		For contact endurance of the main contacts, see page 3/22 onwards .			
Rated insulation voltage U_i (pollution degree 3)	V	690			
Rated impulse withstand voltage U_{imp}	kV	6			
Protective separation between the coil and the main contacts (according to IEC 60947-1, Appendix N)	V	400			
Mirror contacts					
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.					
- Integrated auxiliary switches 3RT2.3. (removable auxiliary switch block)		Yes, acc. to IEC 60947-4-1, Appendix F Yes, acc. to IEC 60947-4-1, Appendix F			
Permissible ambient temperature					
- During operation - During storage	°C	-25 ... +60			
	°C	-55 ... +80			
Degree of protection acc. to IEC 60529					
- On front - Connecting terminal		IP20 IP00 (for higher degree of protection, use additional terminal covers)			
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front			
Shock resistance					
- Rectangular pulse - AC operation - DC operation - Sine pulse - AC operation - DC operation	g/ms	11.8/5 and 7.4/10			
	g/ms	7.7/5 and 4.5/10			
	g/ms	18.5/5 and 11.6/10			
	g/ms	12/5 and 7/10			
Short-circuit protection					
Main circuit					
- Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC 60947-4-1/EN 60947-4-1 - Type of coordination "1" - Type of coordination "2" - Weld-free (test conditions according to IEC 60947-4-1)	A	160	250	160	
	A	80		125	
	A	16	25	50	
Auxiliary circuit					
Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA)	A	10			
230 V miniature circuit breakers, C characteristic (short-circuit current $I_k < 400$ A)	A	10			
Short-circuit protection for contactors with overload relays		See Configuration Manual "Configuring SIRIUS Innovations – Selection Data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188			
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders on page 8/4 onwards			

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		3RT203.-.A...	3RT203.-.N.3.	Coupling contactors 3RT203.-.KB4.
Size		S2		
Control				
Type of operating mechanism		AC	AC/DC	DC
Solenoid coil operating range				
• AC operation ¹⁾		0.8 ... 1.1 x U_s	--	--
• AC/DC operation ¹⁾		--	0.8 ... 1.1 x U_s	--
• DC operation		--	--	0.8 ... 1.2 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)				
• AC operation, 50 Hz, standard version				
- Closing	VA	190	--	
- P.f.		0.72	--	
- Closed	VA	16	--	
- P.f.		0.37	--	
• AC operation, 50/60 Hz, standard version				
- Closing	VA	210/188	--	
- P.f.		0.69/0.65	--	
- Closed	VA	17.2/16.5	--	
- P.f.		0.36/0.39	--	
• AC operation, 50/60 Hz, for USA/Canada				
- Closing	VA	212/188	--	
- P.f.		0.67/0.65	--	
- Closed	VA	18.5/16.5	--	
- P.f.		0.37/0.39	--	
• AC/DC operation				
- Closing for AC operation	VA	--	40	--
- P.f.		--	0.64/0.5	--
- Closed for AC operation	VA	--	2	--
- P.f.		--	0.36/0.39	--
• DC operation				
- Closing for DC operation	W	--	23 ²⁾	
- Closed for DC operation	W	--	1	1
Permissible residual current of the electronics (with 0 signal)				
• AC/DC operation	mA	--	< 20	--
• DC operation	mA	--	--	< 20
Overvoltage configuration of the solenoid coil		--	Built-in varistor 	Built-in varistor 
Operating times at 0.7 ... 1.25 x U_s³⁾ Total break time = Opening delay + Arcing time				
• DC operation				
- Closing delay	ms	--		45 ... 60
- Opening delay	ms	--		35 ... 55
Operating times at 1.0 x U_s³⁾				
• AC operation				
- Closing delay	ms	12 ... 22	50 ... 60	--
- Opening delay	ms	10 ... 18	40 ... 50	--
• DC operation				
- Closing delay	ms	--	45 ... 55	
- Opening delay	ms	--	40 ... 50	
• Arcing time	ms	10 ... 20		

¹⁾ Coil operating range
- at 50 Hz: 0.8 to 1.1 x U_s
- at 60 Hz: 0.85 to 1.1 x U_s .

²⁾ In the case of DC coils, increased starting currents (2.6 A on average) occur during the first 200 ms. For direct control from a PLC, we recommend special 3RT203.-.KB4. coupling contactors with adapted power consumption, suitable for a PLC output current of 2 A (see page 3/64).

³⁾ The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 ms to 5 ms, diode assembly: 2 to 6 times).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors			
Type		3RT2035	3RT2036	3RT2037	3RT2038
Size		S2			
Rated data of the main contacts					
Load rating with AC					
Utilization category AC-1, switching resistive load					
• Rated operational current I_e	At 40 °C up to 690 V	A 60	70	80	90
	At 60 °C up to 690 V	A 55	60	70	80
• Rated power for AC loads ¹⁾ P.f. = 0.95 (at 60 °C)	230 V	kW 23	26	30	34
	400 V	kW 39	46	53	59
	690 V	kW 68	79	91	102
• Minimum conductor cross-section for loads with I_e	At 40 °C	mm ² 16	25		35
	At 60 °C	mm ² 16		25	
Utilization categories AC-2 and AC-3					
• Rated operational currents I_e	Up to 400 V	A 40	50	65	80
	440 V	A 40	50	65	80
	500 V	A 40	50	65	80
	690 V	A 24		47	58
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V	kW 11	15	18.5	22
	400 V	kW 18.5	22	30	37
	690 V	kW 22		37	45
Thermal load capacity	10 s current	A 400	420	520	640
Power loss per conducting path	At I_e /AC-3	W 2.2	4	3.8	5.7
Utilization category AC-4 (for $I_a = 6 \times I_e$)					
• Maximum values					
- Rated operational current I_e	Up to 400 V	A 35	41	55	
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 400 V	kW 18.5	22	30	
• The following applies to a contact endurance of about 200 000 operating cycles:					
- Rated operational currents I_e	Up to 400 V	A 22	24	28	30
	690 V	A 18.5	20	22	24
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 110 V	kW 3.2	3.5	4.1	4.3
	230 V	kW 6.7	7.3	8.5	9.1
	400 V	kW 11.6	12.6	14.7	15.8
	690 V	kW 16.8	18.2	20	21.8

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc.
(increased power consumption on heating up has been taken into account).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors			
Type		3RT2035	3RT2036	3RT2037	3RT2038
Size		S2			
Rated data of main contacts (continued)					
Load rating with DC					
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V A	55			
	60 V A	23			
	110 V A	4.5			
	220 V A	1			
	440 V A	0.4			
	600 V A	0.25			
- 2 conducting paths in series	Up to 24 V A	55			
	60 V A	45			
	110 V A	45			
	220 V A	5			
	440 V A	1			
	600 V A	0.8			
- 3 conducting paths in series	Up to 24 V A	55			
	60 V A	55			
	110 V A	55			
	220 V A	45			
	440 V A	2.9			
	600 V A	1.4			
Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)					
• Rated operational currents I_e (at 60 °C)					
- 1 conducting path	Up to 24 V A	35			
	60 V A	6			
	110 V A	2.5			
	220 V A	1			
	440 V A	0.1			
	600 V A	0.06			
- 2 conducting paths in series	Up to 24 V A	55			
	60 V A	45			
	110 V A	25			
	220 V A	5			
	440 V A	0.27			
	600 V A	0.16			
- 3 conducting paths in series	Up to 24 V A	55			
	60 V A	55			
	110 V A	55			
	220 V A	25			
	440 V A	0.6			
	600 V A	0.35			
Switching frequency					
Switching frequency z in operating cycles/hour					
Contactors without overload relays					
• No-load switching frequency					
	AC h ⁻¹	5 000			
	AC/DC h ⁻¹	1 500			
• Switching frequency z during rated operation ¹⁾					
- $I_e/AC-1$	At 400 V h ⁻¹	1 200	1 000	800	700
- $I_e/AC-2$	At 400 V h ⁻¹	750	600	400	350
- $I_e/AC-3$	At 400 V h ⁻¹	1 000	800	700	500
- $I_e/AC-4$	At 400 V h ⁻¹	300	250	200	150
Contactors with overload relays					
• Mean value					
	h ⁻¹	15			

¹⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Contactors	
Size	3RT2035 to 3RT2038	
		S2
Conductor cross-sections		
Main conductors (1 or 2 conductors can be connected)		 Screw terminals
• Solid or stranded	mm ²	2 x (1 ... 35) ¹⁾ ; 1 x (1 ... 50) ¹⁾
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (1 ... 25) ¹⁾ ; 1 x (1 ... 35) ¹⁾
• AWG cables, solid or stranded	AWG	2 x (18 ... 2) ¹⁾ ; 1 x (18 ... 1) ¹⁾
• Terminal screws - Tightening torque	Nm	Pozidriv size 2; Ø 5 ... 6 3 ... 4.5 (27 ... 40 lb.in)
Auxiliary and control conductors (1 or 2 conductors can be connected)		
• Solid or stranded	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾
• AWG cables, solid or stranded	AWG	2 x (20 ... 16) ¹⁾ ; 2 x (18 ... 14) ¹⁾
• Terminal screws - Tightening torque	Nm	M3 (for Pozidriv size 2; Ø 5 ... 6) 0.8 ... 1.2 (7 ... 10.3 lb.in)
Auxiliary and control conductors ²⁾ (1 or 2 conductors can be connected)		 Spring-type terminals
• Operating devices ³⁾	mm	3.0 x 0.5
• Solid or stranded	mm ²	2 x (0.5 ... 2.5)
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5)
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)

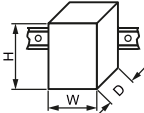
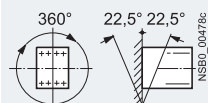
¹⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

²⁾ Max. external diameter of the cable insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm², an insulation stop must be used, [see page 3/119](#).

³⁾ Tool for opening the spring-type terminals, [see page 3/119](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	Contactors		
Size	3RT2045	3RT2046	3RT2047
S3			
General data			
Dimensions (W x H x D)			
- Basic unit - Screw/spring-type terminals		mm	70 x 140 x 152
- Basic unit with mounted auxiliary switch block - Screw terminals - Spring-type terminals		mm mm	70 x 140 x 196 70 x 140 x 200
- Basic unit with mounted function module or solid-state time-delayed auxiliary switch block - Screw/spring-type terminals		mm	70 x 140 x 226
Permissible mounting position			
The contactors are designed for operation on a vertical mounting surface.			
Upright mounting position		 NSB0_00477a Special version required	
Mechanical endurance			
Basic units and basic units with mounted auxiliary switch block	Operating cycles	10 million	
Basic units with solid-state compatible auxiliary switch block	Operating cycles	5 million	
Electrical endurance		For contact endurance of the main contacts, see page 3/22 .	
Rated insulation voltage U_i (pollution degree 3)	V	1 000 (3RT20...-...-OCC0: 690)	
Rated impulse withstand voltage U_{imp}	kV	6	
Protective separation between the coil and the main contacts (according to IEC 60947-1, Appendix N)	V	400	
Mirror contacts			
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.			
- Integrated auxiliary switches 3RT2.4. (removable auxiliary switch block)	Yes, acc. to IEC 60947-4-1, Appendix F Yes, acc. to IEC 60947-4-1, Appendix F		
Permissible ambient temperature			
During operation	°C	-25 ... +60	
During storage	°C	-55 ... +80	
Degree of protection acc. to IEC 60529			
On the front	IP20		
Connecting terminal	IP00 (for higher degree of protection, use additional terminal covers)		
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front	
Shock resistance			
- Rectangular pulse - AC operation - DC operation	g/ms g/ms	10.3/5 and 6.7/10 6.7/5 and 4.0/10 (3RT204...-KB40: 6.3/5 and 3.6/10)	
- Sine pulse - AC operation - DC operation	g/ms g/ms	16.3/5 and 10.5/10 10.6/5 and 6.3/10 (3RT204...-KB40: 9.8/5 and 5.6/10)	
Short-circuit protection			
Main circuit			
- Fuse links, operational class gG: - LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC 60947-4-1/EN 60947-4-1 - Type of coordination "1" - Type of coordination "2" - Weld-free (test conditions according to IEC 60947-4-1)	A A A	250 160 On request	160 200
Auxiliary circuit			
- Fuse links, operational class gG: - DIAZED, type 5SB; NEOZED, type 5SE (weld-free protection at $I_k \leq 1$ kA) 230 V miniature circuit breakers, C characteristic (short-circuit current $I_k < 400$ A)	A A	10 10	
Short-circuit protection for contactors with overload relays		On request	
Short-circuit protection for fuseless load feeders		See 3RA2 load feeders on page 8/4 onwards	

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type Size		Contactors 3RT204.-.A... S3	3RT204.-.N.3.	Coupling contactors 3RT204.-.KB4.
Control				
Type of operating mechanism		AC	AC/DC	DC
Solenoid coil operating range				
• AC operation ¹⁾		0.8 ... 1.1 x U_s	--	--
• AC/DC operation ¹⁾		--	0.8 ... 1.1 x U_s	--
• DC operation		--	--	0.8 ... 1.2 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)				
• AC operation, 50 Hz, standard version				
- Closing	VA	296	--	--
- P.f.		0.61	--	--
- Closed	VA	19	--	--
- P.f.		0.38	--	--
• AC operation, 50/60 Hz, standard version				
- Closing	VA	348/296	--	--
- P.f.		0.62/0.55	--	--
- Closed	VA	25/18	--	--
- P.f.		0.35/0.41	--	--
• AC operation, 50/60 Hz, for USA/Canada				
- Closing	VA	326/326	--	--
- P.f.		0.62/0.55	--	--
- Closed	VA	22/22	--	--
- P.f.		0.38/0.4	--	--
• AC/DC operation				
- Closing for AC operation	VA	--	163	--
- P.f.		--	--	--
- Closed for AC operation	VA	--	3.1	--
- P.f.		--	--	--
• DC operation				
- Closing for DC operation	W	--	76 ²⁾	25
- Closed for DC operation	W	--	1.8	0.9
Permissible residual current of the electronics (with 0 signal)				
• AC/DC operation	mA	--	< 20	--
• DC operation	mA	--	--	< 20
Overvoltage configuration of the solenoid coil				
		--	Built-in varistor 	Built-in varistor 
Operating times at 0.8 ... 1.2 x U_s³⁾				
Total break time = Opening delay + Arcing time				
• DC operation				
- Closing delay	ms	--		50 ... 70
- Opening delay	ms	--		38 ... 57
Operating times at 1.0 x U_s³⁾				
• AC operation				
- Closing delay	ms	15 ... 25	50 ... 70	--
- Opening delay	ms	11 ... 20	38 ... 57	--
• DC operation				
- Closing delay	ms	--	50 ... 70	--
- Opening delay	ms	--	38 ... 57	--
• Arcing time	ms	10 ... 20		

¹⁾ Coil operating range
- at 50 Hz: 0.8 to 1.1 x U_s
- at 60 Hz: 0.85 to 1.1 x U_s .

²⁾ In the case of DC coils, increased starting currents (2.6 A on average) occur during the first 200 ms. For direct control from a PLC, we recommend special 3RT204.-.KB4, coupling contactors with adapted power consumption, suitable for a PLC output current of 2 A (see page 3/64).

³⁾ The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 ms to 5 ms, diode assembly: 2 to 6 times).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors		
Type		3RT2045	3RT2046	3RT2047
Size		S3		
Rated data of the main contacts				
Load rating with AC				
Utilization category AC-1, switching resistive loads				
• Rated operational current I_e	At 40 °C up to 690 V A	125	130	
	At 60 °C up to 690 V A	105	110	
• Rated power for AC loads ¹⁾ P.f. = 0.95 (at 60 °C)	230 V kW	40	42	
	400 V kW	69	72	
	690 V kW	119	125	
• Minimum conductor cross-section for loads with I_e	At 40 °C mm ²	50		
	At 60 °C mm ²	35		
Utilization categories AC-2 and AC-3				
• Rated operational currents I_e	Up to 400 V A	80	95	110
	500 V A	80	95	110
	690 V A	58	78	98
	1 000 V A	30		
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	At 230 V kW	22	22	30
	400 V kW	37	45	55
	690 V kW	55	75	90
	1 000 V A	37		
Thermal load capacity	10 s current A	760		880
Power loss per conducting path	At I_e /AC-3 W	5.3	6.6	7.9
Utilization category AC-4 (for $I_a = 6 \times I_e$)				
• Maximum values				
- Rated operational current I_e	Up to 400 V A	66	80	97
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 400 V kW	37	45	55
• The following applies to a contact endurance of about 200 000 operating cycles:				
- Rated operational currents I_e	Up to 400 V A	34	42	46
	690 V A	24	30	36
- Rated power for squirrel-cage motors with 50 Hz and 60 Hz	At 110 V kW	4.9	6.1	6.7
	230 V kW	10.4	12	14
	400 V kW	17.9	22	24.3
	690 V kW	21.8	27.4	32.9

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors		
Type		3RT2045	3RT2046	3RT2047
Size		S3		
Rated data of main contacts (continued)				
Load rating with DC				
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)				
• Rated operational currents I_e (at 60 °C)				
- 1 conducting path	Up to 24 V A	100		
	60 V A	60		
	110 V A	9		
	220 V A	2		
	440 V A	0.6		
	600 V A	0.4		
- 2 conducting paths in series	Up to 24 V A	100		
	60 V A	100		
	110 V A	100		
	220 V A	10		
	440 V A	1.8		
	600 V A	1.0		
- 3 conducting paths in series	Up to 24 V A	100		
	60 V A	100		
	110 V A	100		
	220 V A	80		
	440 V A	4.5		
	600 V A	2.6		
Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)				
• Rated operational currents I_e (at 60 °C)				
- 1 conducting path	Up to 24 V A	40		
	60 V A	6		
	110 V A	2.5		
	220 V A	1		
	440 V A	0.15		
	600 V A	0.06		
- 2 conducting paths in series	Up to 24 V A	100		
	60 V A	100		
	110 V A	100		
	220 V A	7		
	440 V A	0.42		
	600 V A	0.16		
- 3 conducting paths in series	Up to 24 V A	100		
	60 V A	100		
	110 V A	100		
	220 V A	35		
	440 V A	0.8		
	600 V A	0.35		
Switching frequency				
Switching frequency z in operating cycles/hour				
Contactors without overload relays				
• No-load switching frequency	AC	h ⁻¹	5 000	
	AC/DC	h ⁻¹	1 000	
• Switching frequency z during rated operation ¹⁾				
- $I_e/AC-1$	At 400 V	h ⁻¹	900	
- $I_e/AC-2$	At 400 V	h ⁻¹	400	350
- $I_e/AC-3$	At 400 V	h ⁻¹	1 000	850
- $I_e/AC-4$	At 400 V	h ⁻¹	300	250
Contactors with overload relays				
• Mean value		h ⁻¹	15	200

¹⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors	
Type		3RT2045	3RT2046
Size		S3	3RT2047
Conductor cross-sections			
Main conductors (1 or 2 conductors can be connected)		 Screw terminals	
• Solid	mm ²	2 x (2.5 ... 16) ¹⁾	
• Stranded	mm ²	2 x (6 ... 16) ¹⁾ ; 2 x (10 ... 50) ¹⁾ ; 1 x (10 ... 70) ¹⁾	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (2.5 ... 35) ¹⁾ ; 1 x (2.5 ... 50) ¹⁾	
• AWG cables, solid or stranded	AWG	2 x (10 ... 1/0) ¹⁾ ; 1 x (10 ... 2/0) ¹⁾	
• Terminal screws		Hexagon socket, size 4	
- Tightening torque	Nm	4.5 ... 6 (40 ... 53 lb.in)	
Auxiliary and control conductors (1 or 2 conductors can be connected)			
• Solid or stranded	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5) ¹⁾ ; 2 x (0.75 ... 2.5) ¹⁾	
• AWG cables, solid or stranded	AWG	2 x (20 ... 16) ¹⁾ ; 2 x (18 ... 14) ¹⁾	
• Terminal screws		M3 (for Pozidriv size 2; Ø 5 ... 6)	
- Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)	
Auxiliary and control conductors²⁾ (1 or 2 conductors can be connected)		 Spring-type terminals	
• Operating devices ³⁾	mm	3.0 x 0.5	
• Solid or stranded	mm ²	2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.5 ... 2.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 16)	

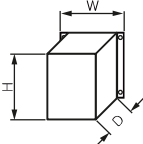
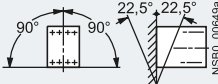
¹⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

²⁾ Max. external diameter of the conductor insulation: 3.6 mm.
On spring-type terminals with conductor cross-sections ≤ 1 mm², an insulation stop must be used, [see page 3/119](#).

³⁾ Tool for opening the spring-type terminals, [see page 3/119](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type	3RT1054		3RT1055, 3RT1056		3RT1064, 3RT1065, 3RT1066		3RT1075		3RT1076			
Size	S6				S10		S12					
General data												
Dimensions (W x H x D)												
- Basic unit - Basic unit with mounted auxiliary switch block					mm		120 x 172 x 170		145 x 210 x 202		160 x 214 x 225	
					mm		120 x 172 x 217		145 x 210 x 251		160 x 214 x 271	
Permissible mounting position												
Mechanical endurance			Operating cycles		10 million							
Electrical endurance			For contact endurance of the main contacts, see page 3/22 .									
Rated insulation voltage U_i (pollution degree 3)			V		1 000							
Rated impulse withstand voltage U_{imp}			kV		8							
Protective separation between the coil and the main contacts according to IEC 60947-1, Appendix N			V		690							
Mirror contacts			Yes, acc. to IEC 60947-4-1, Appendix F									
A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.												
Permissible ambient temperature												
During operation			°C		-25 ... +60							
During storage			°C		-55 ... +80							
Degree of protection acc. to IEC 60529												
On the front			IP00 (IP20 with box terminal/cover)									
Connecting terminal			IP00 (for higher degree of protection, use additional terminal covers)									
Touch protection acc. to IEC 60529			Finger-safe for vertical touching from the front with cover									
Shock resistance												
Rectangular pulse			g/ms		8.5/5 and 4.2/10							
Sine pulse			g/ms		13.4/5 and 6.5/10							
Electromagnetic compatibility (EMC)			See page 3/17									
Short-circuit protection												
Main circuit												
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE acc. to IEC 60947-4-1/EN 60947-4-1												
Type of coordination "1"			A		355		500		630			
Type of coordination "2"			A		315		400		500			
Weld-free			A		80		160		250		315	
Auxiliary circuit												
Short-circuit test												
With fuse links of operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current I_k = 1 kA acc. to IEC 60947-5-1			A		10							
with miniature circuit breaker with C characteristic with short-circuit current I_k = 400 A			A		10							
Short-circuit protection for contactors with overload relays			See Configuration Manual "Configuring SIRIUS – Selection Data for Fuseless Load Feeders" , https://support.industry.siemens.com/cs/ww/en/view/40625241									

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		3RT105.	3RT106.	3RT107.
Size		S6	S10	S12
Control				
Operating range of the solenoid operating mechanism	AC/DC	$0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$		
Power consumption of the solenoid operating mechanism (with cold coil and rated range $U_{s \min} \dots U_{s \max}$)				
<u>Conventional operating mechanisms</u>				
• AC operation				
- Closing at $U_{s \min}$	VA/p.f.	250/0.9	490/0.9	700/0.9
- Closing at $U_{s \max}$	VA/p.f.	300/0.9	590/0.9	830/0.9
- Closed at $U_{s \min}$	VA/p.f.	4.8/0.8	5.6/0.9	7.6/0.9
- Closed at $U_{s \max}$	VA/p.f.	5.8/0.8	6.7/0.9	9.2/0.9
• DC operation				
- Closing at $U_{s \min}$	W	300	540	770
- Closing at $U_{s \max}$	W	360	650	920
- Closed at $U_{s \min}$	W	4.3	6.1	8.5
- Closed at $U_{s \max}$	W	5.2	7.4	10
<u>Solid-state operating mechanisms</u>				
• AC operation				
- Closing at $U_{s \min}$	VA/p.f.	190/0.8	400/0.8	560/0.8
- Closing at $U_{s \max}$	VA/p.f.	280/0.8	530/0.8	750/0.8
- Closed at $U_{s \min}$	VA/p.f.	3.5/0.6	5.5/0.5	5.6/0.5
- Closed at $U_{s \max}$	VA/p.f.	4.8/0.6	8.5/0.4	9/0.4
• DC operation				
- Closing at $U_{s \min}$	W	250	440	600
- Closing at $U_{s \max}$	W	320	580	800
- Closed at $U_{s \min}$	W	2.1	2.8	3
- Closed at $U_{s \max}$	W	2.8	3.4	3.6
PLC control input acc. to IEC 61131-2				
• Version		Type 2 – suitable for signals from semiconductor switches		
• Rated voltage		24		
• Operating range		17 ... 30		
• Power consumption		≤ 30		
Operating times (Total break time = Opening delay + Arcing time)				
<u>Conventional operating mechanisms</u>				
• For $U_{s \min} \dots U_{s \max}$				
- Closing delay	ms	25 ... 50	35 ... 50	50 ... 70
- Opening delay	ms	40 ... 60	50 ... 80	70 ... 100
<u>Solid-state operating mechanism, actuated via A1/A2</u>				
• For $U_{s \min} \dots U_{s \max}$				
- Closing delay	ms	100 ... 120	110 ... 130	125 ... 150
- Opening delay	ms	80 ... 100		
<u>Solid-state operating mechanism, actuated via PLC input</u>				
• For $U_{s \min} \dots U_{s \max}$				
- Closing delay	ms	40 ... 60	50 ... 65	65 ... 80
- Opening delay	ms	80 ... 100		
• Arcing time		ms	10 ... 15	

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		3RT1054	3RT1055	3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076
Size		S6			S10			S12	
Rated data of the main contacts									
Load rating with AC									
Utilization category AC-1									
Switching resistive load									
• Rated operational currents I_e									
- At 40 °C up to 690 V	A	160	185	215	275	330		430	610
- At 60 °C up to 690 V	A	140	160	185	250	300		400	550
- At 60 °C up to 1 000 V	A	80	90	100		150		200	
• Rated power for AC loads ¹⁾ with p.f. = 0.95 (at 60 °C)									
- At 230 V	kW	53	60	70	94	113		151	208
- At 400 V	kW	92	105	121	164	197		263	362
- At 500 V	kW	115	131	152	205	246		329	452
- At 690 V	kW	159	181	210	283	340		454	624
- At 1 000 V	kW	131	148	165	164	246		329	
• Minimum conductor cross-section for loads with I_e									
- At 40 °C	mm ²	70	95		150	185		2 x 150	2 x 185
- At 60 °C	mm ²	50	70	95	120	185		240	2 x 185
Utilization categories AC-2 and AC-3									
• Rated operational currents I_e									
- Up to 500 V	A	115	150	185	225	265	300	400	500
- At 690 V	A	115	150	170	225	265	280	400	450
- At 1 000 V	A	53	65		68	95		180	
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz									
- At 230 V	kW	37	50	61	73	85	97	132	164
- At 400 V	kW	64	84	104	128	151	171	231	291
- At 500 V	kW	81	105	132	160	189	215	291	363
- At 690 V	kW	113	146	167	223	265	280	400	453
- At 1 000 V	kW	75	90			132		250	
Thermal load capacity, 10 s current	A	1 100	1 300	1 480	1 800	2 400		3 200	4 000
Power loss per main conducting path at $I_e/AC-3/500 V$	W	7	9	13	17	18	22	35	55
Utilization category AC-4 (for $I_a = 6 \times I_e$)									
Maximum values:									
• Rated operational current I_e									
- Up to 400 V	A	97	132	160	195	230	280	350	430
• Rated power of squirrel-cage motors with 50 and 60 Hz									
- At 400 V	kW	55	75	90	110	132	160	200	250
The following applies to a contact endurance of about 200 000 operating cycles:									
• Rated operational currents I_e									
- Up to 500 V	A	54	68	81	96	117	125	150	175
- Up to 690 V	A	48	57	65	85	105	115	135	150
• Rated power of squirrel-cage motors with 50 and 60 Hz									
- At 230 V	kW	16	20	25	30	37	40	48	56
- At 400 V	kW	29	38	45	54	66	71	85	98
- At 500 V	kW	37	47	57	67	82	87	105	123
- At 690 V	kW	48	55	65	82	102	112	133	148

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc.
(increased power consumption on heating up has been taken into account).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		3RT1054	3RT1055	3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076				
Size		S6			S10			S12					
Rated data of main contacts (continued)													
Load rating with DC													
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)													
• Rated operational currents I_e (at 60 °C)													
- 1 conducting path	Up to 24 V A	160			200	300		400					
	60 V A	160			200	300		330					
	110 V A	18				33							
	220 V A	3.4				3.8							
	440 V A	0.8				0.9							
	600 V A	0.5				0.6							
	Up to 24 V A	160			200	300		400					
	60 V A	160			200	300		400					
	110 V A	160			200	300		400					
	220 V A	20				300		400					
- 2 conducting paths in series	440 V A	3.2				4							
	600 V A	1.6				2							
	Up to 24 V A	160			200	300		400					
	60 V A	160			200	300		400					
	110 V A	160			200	300		400					
	220 V A	160			200	300		400					
- 3 conducting paths in series	440 V A	11.5				11							
	600 V A	4				5.2							
	Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)												
	• Rated operational currents I_e (at 60 °C)												
	- 1 conducting path	Up to 24 V A	160			200	300		400				
		60 V A	7.5				11						
110 V A		2.5				3							
220 V A		0.6											
440 V A		0.17				0.18							
600 V A		0.12				0.125							
Up to 24 V A		160			200	300		400					
60 V A		160			200	300		400					
110 V A		160			200	300		400					
220 V A		2.5											
- 2 conducting paths in series	440 V A	0.65											
	600 V A	0.37											
	Up to 24 V A	160			200	300		400					
	60 V A	160			200	300		400					
	110 V A	160			200	300		400					
	220 V A	160			200	300		400					
- 3 conducting paths in series	440 V A	1.4											
	600 V A	0.75											
	Switching frequency												
	Switching frequency z in operating cycles/hour												
	Contactors without overload relays												
	• No-load switching frequency	h ⁻¹	2 000			AC-1 values							
h ⁻¹		1 000											
- Reduced in the case of contactors with solid-state operating mechanism at $U_s = 21 \dots 27.3$ V AC/DC													
• Switching frequency z during rated operation ¹⁾													
- $I_e/AC-1$	At 400 V	h ⁻¹	800		750	800	750	700	500				
- $I_e/AC-2$	At 400 V	h ⁻¹	400	300	250	300	250	200	170				
- $I_e/AC-3$	At 400 V	h ⁻¹	1 000	750	500	700	500		420				
- $I_e/AC-4$	At 400 V	h ⁻¹	130										
Contactors with mounted overload relay													
• Mean value	h ⁻¹	60											

¹⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Type		3RT105.	3RT106.	3RT107.
Size		S6	S10	S12
Conductor cross-sections				
Main conductors (1 or 2 conductors connectable)		 Screw terminals		
<u>With mounted box terminals</u>		Type	3RT1955-4G (55 kW)	3RT1956-4G
• Terminal screws			M10 (hexagon socket, A/F 4)	3RT1966-4G M12 (hexagon socket, A/F 5)
- Tightening torque		Nm	10 ... 12	20 ... 22
		lb.in	90 ... 110	180 ... 195
<u>Front clamping point connected</u>				
	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	16 ... 70	16 ... 120
	• Finely stranded without end sleeve	mm ²	16 ... 70	16 ... 120
	• Stranded	mm ²	16 ... 70	16 ... 120
	• AWG cables, solid or stranded	AWG	6 ... 2/0	6 ... 250 kcmil
	• Ribbon cable conductors (number x width x thickness)	mm	Min. 3 x 9 x 0.8 Max. 6 x 15.5 x 0.8	Min. 3 x 9 x 0.8 Max. 10 x 15.5 x 0.8
<u>Rear clamping point connected</u>				
	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	16 ... 70	16 ... 120
	• Finely stranded without end sleeve	mm ²	16 ... 70	16 ... 120
	• Stranded	mm ²	16 ... 70	16 ... 120
	• AWG cables, solid or stranded	AWG	6 ... 2/0	6 ... 250 kcmil
	• Ribbon cable conductors (number x width x thickness)	mm	Min. 3 x 9 x 0.8 Max. 6 x 15.5 x 0.8	Min. 3 x 9 x 0.8 Max. 10 x 15.5 x 0.8
<u>Both clamping points connected (minimum cross-section 16 mm²)</u>				
	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120
	• Finely stranded without end sleeve	mm ²	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120
	• Stranded	mm ²	Max. 1 x 50, 1 x 70	Max. 1 x 95, 1 x 120
	• AWG cables, solid or stranded	AWG	Max. 2 x 1/0	Max. 2 x 3/0
	• Ribbon cable conductors (number x width x thickness)	mm	Max. 2 x (6 x 15.5 x 0.8)	Max. 2 x (10 x 15.5 x 0.8)
<u>Busbar connections</u>				
Connecting bar (max. width)		mm	17	25
<u>Cable lug connection</u>				
• Finely stranded with cable lug ¹⁾²⁾		mm ²	16 ... 95	50 ... 240
• Stranded with cable lug ¹⁾²⁾		mm ²	25 ... 120	70 ... 240
• AWG cables, solid or stranded		AWG	4 ... 250 kcmil	2/0 ... 500 kcmil
• Terminal screws			M8 x 25 (A/F 13)	M10 x 30 (A/F 17)
- Tightening torque		Nm	10 ... 14	14 ... 24
		lb.in	90 ... 124	124 ... 210
Auxiliary conductors (1 or 2 conductors connectable)				
• Solid		mm ²	2 x (0.5 ... 1.5) ³⁾ ; 2 x (0.75 ... 2.5) ³⁾ ; max. 2 x (0.75 ... 4) ³⁾	
• Finely stranded with end sleeve (DIN 46228-1)		mm ²	2 x (0.5 ... 1.5) ³⁾ ; 2 x (0.75 ... 2.5) ³⁾	
• AWG cables, solid or stranded		AWG	2 x (18 ... 14)	
• Terminal screws			M3 (Pozidriv size 2)	
- Tightening torque		Nm	0.8 ... 1.2	
		lb.in	7 ... 10.3	
Auxiliary conductors⁴⁾ (1 or 2 conductors connectable)			 Spring-type terminals	
• Operating devices ⁵⁾			3.0 x 0.5; 3.5 x 0.5	
• Solid		mm ²	2 x (0.25 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)		mm ²	2 x (0.25 ... 1.5)	
• Finely stranded without end sleeve		mm ²	2 x (0.25 ... 2.5)	
• AWG cables, solid or stranded		AWG	2 x (24 ... 14)	

¹⁾ 3RT105.: When using cable lugs according to EN 46235, use the 3RT1956-4EA1 terminal cover for conductor cross-sections from 95 mm² to keep to the phase clearance, [see page 3/116](#).

²⁾ 3RT106. and 3RT107.: When using cable lugs according to DIN 46234, the 3RT1966-4EA1 terminal cover must be used for conductor cross-sections of 240 mm² and more and when using cable lugs in accordance with DIN 46235 for conductor cross-sections of 185 mm² and more to keep to the phase clearance, [see page 3/116](#).

³⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

⁴⁾ Max. external diameter of the conductor insulation: 3.6 mm. An "insulation stop" must be used for conductor cross-sections ≤ 1 mm²; [see page 3/119](#).

⁵⁾ Tool for opening the spring-type terminals, [see page 3/119](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Data for North America

Type Size	Contactors			
	3RT2015 S00	3RT2016	3RT2017	3RT2018
Ⓢ and Ⓤ rated data				
Rated insulation voltage	V AC	600		
Uninterrupted current , at 40 °C, open and enclosed	A	20		
Maximum horsepower ratings (from Ⓢ and Ⓤ approved values)				
• Rated power for three-phase motors at 60 Hz	At 200 V hp	1.5	2	3
	230 V hp	2	3	5
	460 V hp	3	5	10
	575 V hp	5	7.5	10
Short-circuit protection¹⁾ (Contactor)	At 600 V kA	5		
• CLASS J fuse ²⁾	A	60		
• Circuit breakers in accordance with UL 489 ("Inverse Time Breakers")	A	50		
• Combination motor controllers, Type E according to UL 508 and UL 60947-4-1		3RV2.1 ¹⁾ or 3RV2.2 ¹⁾		

¹⁾ For more information about short-circuit values, e.g. for protection against short-circuit currents, see [Certificate of Compliance for the individual devices](https://support.industry.siemens.com/cs/ww/en/ps/16134/cert), <https://support.industry.siemens.com/cs/ww/en/ps/16134/cert>.
For the dimensioning of load feeders, see the Configuration Manual "Configuring SIRIUS Innovations for UL", <https://support.industry.siemens.com/cs/ww/en/view/53433538>.

²⁾ Values for RK5 fuses on request.

Type Size	Contactors					
	3RT2023 S0	3RT2024	3RT2025	3RT2026	3RT2326-4AA0	3RT2027 3RT2028
Ⓢ and Ⓤ rated data						
Rated insulation voltage	V AC	600				
Uninterrupted current , at 40 °C, open and enclosed	A	30				42
Maximum horsepower ratings (from Ⓢ and Ⓤ approved values)						
• Rated power for three-phase motors at 60 Hz	At 200 V hp	2	3	5	3	10
	230 V hp	3		7.5	5	10
	460 V hp	5	7.5	10	10	20
	575 V hp	7.5	10	15	15	25
Short-circuit protection¹⁾ (contactor)	At 600 V kA	5				
• CLASS J fuse ²⁾	A	125				150
• Circuit breakers in accordance with UL 489 ("Inverse Time Breakers")	A	70				100
• Combination motor controllers, Type E according to UL 508 and UL 60947-4-1	At 480 V Type	3RV202 ¹⁾				
	At 600 V Type	3RV202 ¹⁾				

¹⁾ For more information about short-circuit values, e.g. for protection against short-circuit currents, see [Certificate of Compliance for the individual devices](https://support.industry.siemens.com/cs/ww/en/ps/16134/cert), <https://support.industry.siemens.com/cs/ww/en/ps/16134/cert>.
For the selection and dimensioning of load feeders, see the UL guide "Industrial Control Panels for North America", <https://support.industry.siemens.com/cs/ww/en/view/53433538>.

²⁾ Values for RK5 fuses on request.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

		Contactors						
Type		3RT2035	3RT2036, 3RT2336-.....4AA0	3RT2037	3RT2038	3RT2045	3RT2046	3RT2047
Size		S2				S3		
☞ and ☞ rated data								
Rated operational voltage	V AC	600						
Uninterrupted current, at 40 °C, open and enclosed	A	55	60	80	90	62	77	99
Maximum horsepower ratings (from ☞ and ☞ approved values)								
• Rated power for three-phase motors at 60 Hz	At 200/208 V hp	10	15	20		25	30	
	230/240 V hp	15		20	25	30		40
	460/480 V hp	30	40	50		60	75	
	575/600 V hp	40	50		60	60	75	100
Short-circuit protection ¹⁾ (contactor)	At 600 V kA	5	10			10		
• RK5 fuse	A	150	200	250	250	300	350	350
• Combination motor controllers, Type E according to UL 508 and UL 60947-4-1	Type	3RV203 ¹⁾			--			
¹⁾ For more information about short-circuit values, e.g. for protection against short-circuit currents, see Certificate of Compliance for the individual devices , https://support.industry.siemens.com/cs/ww/en/ps/16134/cert . For the selection and dimensioning of load feeders, see the UL guide "Industrial Control Panels for North America", https://support.industry.siemens.com/cs/ww/en/view/53433538 .								

		3RT1054	3RT1055	3RT1056	3RT1064	3RT1065	3RT1066	3RT1075	3RT1076
Size		S6			S10			S12	
☞ and ☞ rated data									
Rated operational voltage	V AC	600							
Uninterrupted current, at 40 °C, open and enclosed	A	140	195		250	330		400	540
Maximum horsepower ratings (from ☞ and ☞ approved values)									
• Rated power for three-phase motors at 60 Hz	At 200 V hp	40	50	60		75	100	125	150
	230 V hp	50	60	75		100	125	150	200
	460 V hp	100	125	150		200	250	300	400
	575 V hp	125	150	200		250	300	400	500
Short-circuit protection		For more information, see Certificate of Compliance for the individual devices , https://support.industry.siemens.com/cs/ww/en/ps/16134/cert . For the dimensioning of load feeders, see Configuration Manual "Configuring SIRIUS Innovations UL" , https://support.industry.siemens.com/cs/ww/en/view/53433538 .							

		Contactors				
Type		3RT201	3RT202 ... 3RT204		3RT1054 ... 3RT1076	
Size		S00	S0 ... S3		S6 ... S12	
		Integrated or mountable auxiliary switch block	Integrated		Mountable auxiliary switch block	Mountable auxiliary switch block
☞ and ☞ rated data of the auxiliary contacts						
Rated voltage	V AC	600				
Switching capacity		A 600, Q 600		A 600, P 600		A 600, Q 600
• Uninterrupted current at 240 V AC	A	10				

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

Selection and ordering data

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT201.-1A...



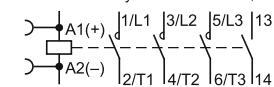
3RT201.-2A...

Rated data			Auxiliary contacts		Rated control supply voltage U_s at 50/60 Hz	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_{ij} : Up to 60 °C		AC-1, t_{ij} : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V					Article No.	Price per PU	Article No.
A	kW	A	NO	NC	V AC	d			Price per PU

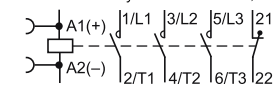
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00¹⁾

- With auxiliary contact 1 NO, Ident. No. **10**



- With auxiliary contact 1 NC, Ident. No. **01**



7	3	18	10	1	--	24 110 230	▶ 3RT2015-1AB01 ▶ 3RT2015-1AF01 ▶ 3RT2015-1AP01	▶ 3RT2015-2AB01 ▶ 3RT2015-2AF01 ▶ 3RT2015-2AP01
			01	--	1	24 110 230	▶ 3RT2015-1AB02 ▶ 3RT2015-1AF02 ▶ 3RT2015-1AP02	▶ 3RT2015-2AB02 ▶ 3RT2015-2AF02 ▶ 3RT2015-2AP02
9	4	22	10	1	--	24 110 230	▶ 3RT2016-1AB01 ▶ 3RT2016-1AF01 ▶ 3RT2016-1AP01	▶ 3RT2016-2AB01 ▶ 3RT2016-2AF01 ▶ 3RT2016-2AP01
			01	--	1	24 110 230	▶ 3RT2016-1AB02 ▶ 3RT2016-1AF02 ▶ 3RT2016-1AP02	▶ 3RT2016-2AB02 ▶ 3RT2016-2AF02 ▶ 3RT2016-2AP02
12	5.5	22	10	1	--	24 110 230	▶ 3RT2017-1AB01 ▶ 3RT2017-1AF01 ▶ 3RT2017-1AP01	▶ 3RT2017-2AB01 ▶ 3RT2017-2AF01 ▶ 3RT2017-2AP01
			01	--	1	24 110 230	▶ 3RT2017-1AB02 ▶ 3RT2017-1AF02 ▶ 3RT2017-1AP02	▶ 3RT2017-2AB02 ▶ 3RT2017-2AF02 ▶ 3RT2017-2AP02
16	7.5	22	10	1	--	24 110 230	▶ 3RT2018-1AB01 ▶ 3RT2018-1AF01 ▶ 3RT2018-1AP01	▶ 3RT2018-2AB01 ▶ 3RT2018-2AF01 ▶ 3RT2018-2AP01
			01	--	1	24 110 230	▶ 3RT2018-1AB02 ▶ 3RT2018-1AF02 ▶ 3RT2018-1AP02	▶ 3RT2018-2AB02 ▶ 3RT2018-2AF02 ▶ 3RT2018-2AP02

¹⁾ Coil operating range
 - at 50 Hz: 0.8 to 1.1 × U_s
 - at 60 Hz: 0.85 to 1.1 × U_s .

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

AC operation

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RT2015-1AP04-3MA0



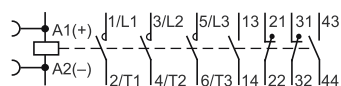
3RT2015-2AP04-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_s at 50/60 Hz	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_{ij} : Up to 60 °C	AC-1, t_{ij} : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V				Article No.	Price per PU	Article No.
A	kW	A	NO NC	V AC	d			

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

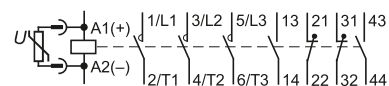
Size S00¹⁾

With permanently mounted auxiliary switch block (SUVA-certified safety contactor)



7	3	18	22	2	2	230	2	3RT2015-1AP04-3MA0	5	3RT2015-2AP04-3MA0
9	4	22	22	2	2	230	2	3RT2016-1AP04-3MA0	5	3RT2016-2AP04-3MA0
12	5.5	22	22	2	2	230	2	3RT2017-1AP04-3MA0	5	3RT2017-2AP04-3MA0
16	7.5	22	22	2	2	230	▶	3RT2018-1AP04-3MA0	5	3RT2018-2AP04-3MA0

With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and varistor plugged into the front



7	3	18	22	2	2	230	5	3RT2015-1CP04-3MA0	5	3RT2015-2CP04-3MA0
9	4	22	22	2	2	230	5	3RT2016-1CP04-3MA0	5	3RT2016-2CP04-3MA0
12	5.5	22	22	2	2	230	5	3RT2017-1CP04-3MA0	5	3RT2017-2CP04-3MA0
16	7.5	22	22	2	2	230	5	3RT2018-1CP04-3MA0	5	3RT2018-2CP04-3MA0

¹⁾ Coil operating range
- at 50 Hz: 0.8 to 1.1 × U_s
- at 60 Hz: 0.85 to 1.1 × U_s .

Other voltages [according to page 3/73](#) on request.

For accessories and spare parts, see [pages 3/75 to 3/123](#).

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT202.-1A.00

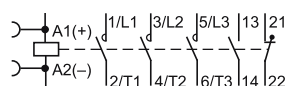


3RT202.-2A.00

Rated data		Auxiliary contacts	Rated control supply voltage U_s at 50 Hz		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C	AC-1, t_u : 40 °C		Ident. No.	Version		Article No.	Price per PU		Article No.	Price per PU
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V								
A	400 V	A	NO	NC	V AC	d		d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S0



9	4	40	11	1	1	24 110 230	▶ 3RT2023-1AB00 ▶ 3RT2023-1AF00 ▶ 3RT2023-1AP00	2 2 ▶	3RT2023-2AB00 3RT2023-2AF00 3RT2023-2AP00
12	5.5	40	11	1	1	24 110 230	▶ 3RT2024-1AB00 ▶ 3RT2024-1AF00 ▶ 3RT2024-1AP00	2 2 ▶	3RT2024-2AB00 3RT2024-2AF00 3RT2024-2AP00
17	7.5	40	11	1	1	24 110 230	▶ 3RT2025-1AB00 ▶ 3RT2025-1AF00 ▶ 3RT2025-1AP00	2 2 ▶	3RT2025-2AB00 3RT2025-2AF00 3RT2025-2AP00
25	11	40	11	1	1	24 110 230	▶ 3RT2026-1AB00 ▶ 3RT2026-1AF00 ▶ 3RT2026-1AP00	2 2 ▶	3RT2026-2AB00 3RT2026-2AF00 3RT2026-2AP00
32	15	50	11	1	1	24 110 230	▶ 3RT2027-1AB00 ▶ 3RT2027-1AF00 ▶ 3RT2027-1AP00	2 2 ▶	3RT2027-2AB00 3RT2027-2AF00 3RT2027-2AP00
38	18.5	50	11	1	1	24 110 230	▶ 3RT2028-1AB00 ▶ 3RT2028-1AF00 ▶ 3RT2028-1AP00	2 2 2	3RT2028-2AB00 3RT2028-2AF00 3RT2028-2AP00

Other voltages [according to page 3/73](#) on request.

For accessories and spare parts, [see pages 3/75 to 3/123](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

AC operation

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RT202.-1A.04



3RT202.-2A.04



3RT202.-1CL24-3MA0



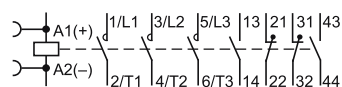
3RT202.-2CL24-3MA0

Rated data			Auxiliary contacts		Rated control supply voltage		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C		AC-1, t_u : 40 °C	Ident. No.	Version	U_s at 50 Hz							
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V						Article No.	Price per PU		Article No.	Price per PU
A	kW	A		NO	NC	V AC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

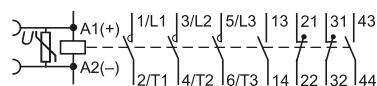
Size S0

With removable mounted auxiliary switch block



9	4	40	22	2	2	24 230	5	3RT2023-1AB04 3RT2023-1AP04	5 2	3RT2023-2AB04 3RT2023-2AP04
12	5.5	40	22	2	2	24 110 230	5 5 2	3RT2024-1AB04 3RT2024-1AF04 3RT2024-1AP04	5 5 2	3RT2024-2AB04 3RT2024-2AF04 3RT2024-2AP04
17	7.5	40	22	2	2	24 110 230	5 5 2	3RT2025-1AB04 3RT2025-1AF04 3RT2025-1AP04	5 5 2	3RT2025-2AB04 3RT2025-2AF04 3RT2025-2AP04
25	11	40	22	2	2	24 110 230	5 5 2	3RT2026-1AB04 3RT2026-1AF04 3RT2026-1AP04	5 5 2	3RT2026-2AB04 3RT2026-2AF04 3RT2026-2AP04
32	15	50	22	2	2	24 110 230	5 5 2	3RT2027-1AB04 3RT2027-1AF04 3RT2027-1AP04	5 5 2	3RT2027-2AB04 3RT2027-2AF04 3RT2027-2AP04
38	18.5	50	22	2	2	24 110 230	5 5 2	3RT2028-1AB04 3RT2028-1AF04 3RT2028-1AP04	5 5 2	3RT2028-2AB04 3RT2028-2AF04 3RT2028-2AP04

With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and varistor permanently plugged into the front



9	4	40	22	2	2	230	5	3RT2023-1CL24-3MA0	5	3RT2023-2CL24-3MA0
12	5.5	40	22	2	2	230	2	3RT2024-1CL24-3MA0	5	3RT2024-2CL24-3MA0
17	7.5	40	22	2	2	230	5	3RT2025-1CL24-3MA0	5	3RT2025-2CL24-3MA0
25	11	40	22	2	2	230	5	3RT2026-1CL24-3MA0	5	3RT2026-2CL24-3MA0
32	15	50	22	2	2	230	5	3RT2027-1CL24-3MA0	5	3RT2027-2CL24-3MA0
38	18.5	50	22	2	2	230	5	3RT2028-1CL24-3MA0	5	3RT2028-2CL24-3MA0

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT203.-1A.00



3RT203.-3A.00



3RT203.-1A.04



3RT203.-1CL24-3MA0

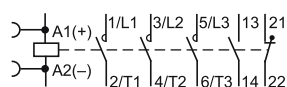


3RT203.-3CL24-3MA0

Rated data		Auxiliary contacts		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_{ij} : Up to 60 °C	AC-1, t_{ij} : 40 °C	Ident.	Version No.		Article No.	Price per PU		Article No.	Price per PU
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and up to 690 V								
A	kW	A	NO NC	V AC	d		d		

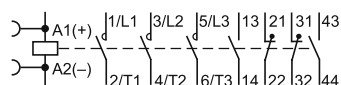
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S2



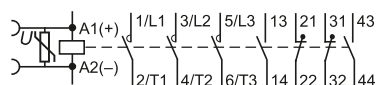
40	18.5	60	11	1	1	24 110 230	▶ 3RT2035-1AB00 ▶ 3RT2035-1AF00 ▶ 3RT2035-1AP00	2 5 5	3RT2035-3AB00 3RT2035-3AF00 3RT2035-3AP00
50	22	70	11	1	1	24 110 230	▶ 3RT2036-1AB00 ▶ 3RT2036-1AF00 ▶ 3RT2036-1AP00	5 5 5	3RT2036-3AB00 3RT2036-3AF00 3RT2036-3AP00
65	30	80	11	1	1	24 110 230	▶ 3RT2037-1AB00 ▶ 3RT2037-1AF00 ▶ 3RT2037-1AP00	5 5 5	3RT2037-3AB00 3RT2037-3AF00 3RT2037-3AP00
80	37	90	11	1	1	24 110 230	▶ 3RT2038-1AB00 ▶ 3RT2038-1AF00 ▶ 3RT2038-1AP00	5 5 5	3RT2038-3AB00 3RT2038-3AF00 3RT2038-3AP00

With removable mounted auxiliary switch block



40	18.5	60	22	2	2	24 110 230	▶ 3RT2035-1AB04 ▶ 3RT2035-1AF04 ▶ 3RT2035-1AP04	---	---
50	22	70	22	2	2	24 110 230	▶ 3RT2036-1AB04 ▶ 3RT2036-1AF04 ▶ 3RT2036-1AP04	---	---
65	30	80	22	2	2	24 110 230	▶ 3RT2037-1AB04 ▶ 3RT2037-1AF04 ▶ 3RT2037-1AP04	---	---
80	37	90	22	2	2	24 110 230	▶ 3RT2038-1AB04 ▶ 3RT2038-1AF04 ▶ 3RT2038-1AP04	---	---

With permanently mounted auxiliary switch block and varistor permanently plugged into the front



40	18.5	60	22	2	2	230	5 3RT2035-1CL24-3MA0	5	3RT2035-3CL24-3MA0
50	22	70	22	2	2	230	5 3RT2036-1CL24-3MA0	5	3RT2036-3CL24-3MA0
65	30	80	22	2	2	230	5 3RT2037-1CL24-3MA0	5	3RT2037-3CL24-3MA0
80	37	90	22	2	2	230	5 3RT2038-1CL24-3MA0	5	3RT2038-3CL24-3MA0

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

IE3/IE4 ready

NEW

AC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT204.-1A.00



3RT204.-3A.00



3RT204.-1A.04

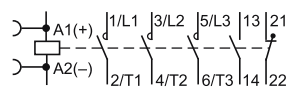


3RT204.-1CL24-3MA0

Rated data		Auxiliary contacts		Rated control supply voltage U_g at 50 Hz		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60° C	AC-1, t_u : 40 °C	Ident. No.	Version				Article No.	Price per PU		Article No.	Price per PU
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V										
A	kW	A		NO	NC	V AC	d		d		

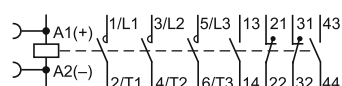
For screw fixing and snap-on mounting onto TH 35 and TH 75 standard mounting rails

Size S3



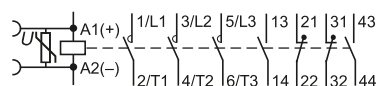
80	37	125	11	1	1	24 110 230	1 1 1	3RT2045-1AB00 3RT2045-1AF00 3RT2045-1AP00	5 5 1	3RT2045-3AB00 3RT2045-3AF00 3RT2045-3AP00
95	45	130	11	1	1	24 110 230	1 1 1	3RT2046-1AB00 3RT2046-1AF00 3RT2046-1AP00	5 5 1	3RT2046-3AB00 3RT2046-3AF00 3RT2046-3AP00
110	55	130	11	1	1	24 110 230	X X X	3RT2047-1AB00 3RT2047-1AF00 3RT2047-1AP00	X X X	3RT2047-3AB00 3RT2047-3AF00 3RT2047-3AP00

With removable mounted auxiliary switch block



80	37	125	22	2	2	24 110 230	5 1 1	3RT2045-1AB04 3RT2045-1AF04 3RT2045-1AP04	-- -- --
95	45	130	22	2	2	24 110 230	5 1 1	3RT2046-1AB04 3RT2046-1AF04 3RT2046-1AP04	-- -- --
110	55	130	22	2	2	24 110 230	X X X	3RT2047-1AB04 3RT2047-1AF04 3RT2047-1AP04	-- -- --

With permanently mounted auxiliary switch block and varistor permanently plugged into the front



80	37	125	22	2	2	230	X	3RT2045-1CL24-3MA0	--
95	45	130	22	2	2	230	X	3RT2046-1CL24-3MA0	--
110	55	130	22	2	2	230	X	3RT2047-1CL24-3MA0	--

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

DC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT201.-1B...



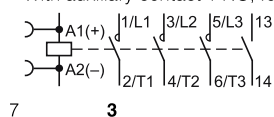
3RT201.-2B...

Rated data			Auxiliary contacts		Rated control supply voltage	SD	Screw terminals			SD	Spring-type terminals		
AC-2 and AC-3, t_u : Up to 60 °C		AC-1, t_u : 40 °C	Ident. No.	Version	U_s								
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and	Operational current I_e up to 690 V					Article No.		Price per PU		Article No.		Price per PU
A	400 V	A		NO	NC	V DC	d						

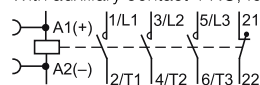
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

- With auxiliary contact 1 NO, Ident. No. **10**



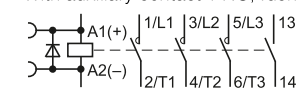
- With auxiliary contact 1 NC, Ident. No. **01**



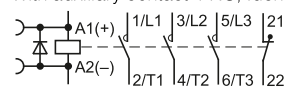
7	3	18	10	1	--	24	2	3RT2015-1BB41	5	3RT2015-2BB41
			01	--	1	24	5	3RT2015-1BB42	5	3RT2015-2BB42
9	4	22	10	1	--	24	5	3RT2016-1BB41	5	3RT2016-2BB41
			01	--	1	24	5	3RT2016-1BB42	5	3RT2016-2BB42
12	5.5	22	10	1	--	24	5	3RT2017-1BB41	5	3RT2017-2BB41
			01	--	1	24	5	3RT2017-1BB42	5	3RT2017-2BB42
16	7.5	22	10	1	--	24	5	3RT2018-1BB41	5	3RT2018-2BB41
			01	--	1	24	5	3RT2018-1BB42	5	3RT2018-2BB42

With integrated coil circuit (diode)¹⁾

- With auxiliary contact 1 NO, Ident. No. **10**



- With auxiliary contact 1 NC, Ident. No. **01**



7	3	18	10	1	--	24	▶	3RT2015-1FB41	▶	3RT2015-2FB41
			01	--	1	24	▶	3RT2015-1FB42	▶	3RT2015-2FB42
9	4	22	10	1	--	24	▶	3RT2016-1FB41	▶	3RT2016-2FB41
			01	--	1	24	▶	3RT2016-1FB42	▶	3RT2016-2FB42
12	5.5	22	10	1	--	24	▶	3RT2017-1FB41	▶	3RT2017-2FB41
			01	--	1	24	▶	3RT2017-1FB42	▶	3RT2017-2FB42
16	7.5	22	10	1	--	24	▶	3RT2018-1FB41	▶	3RT2018-2FB41
			01	--	1	24	▶	3RT2018-1FB42	▶	3RT2018-2FB42

¹⁾ When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

DC operation for direct control from the PLC

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC outputs
- Cannot be extended with auxiliary switch blocks

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT201.-1.B4.



3RT201.-2.B4.

Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_U : Up to 60 °C		AC-1, t_U : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V					Article No.	Price per PU	Article No.
A	kW	A	NO	NC	V DC	d			

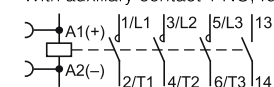
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

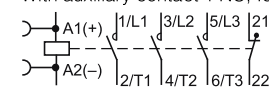
Diode, varistor or RC element, attachable

(no auxiliary switch blocks can be mounted)

- With auxiliary contact 1 NO, Ident. No. **10**



- With auxiliary contact 1 NC, Ident. No. **01**



Operating range **0.7 ... 1.25 x U_s** , power consumption of the solenoid coils **2.8 W** at 24 V

7	3	18	10	1	--	24	5	3RT2015-1HB41	5	3RT2015-2HB41
			01	--	1	24	5	3RT2015-1HB42	5	3RT2015-2HB42
9	4	22	10	1	--	24	5	3RT2016-1HB41	5	3RT2016-2HB41
			01	--	1	24	2	3RT2016-1HB42	5	3RT2016-2HB42
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1HB41	5	3RT2017-2HB41
			01	--	1	24	5	3RT2017-1HB42	5	3RT2017-2HB42

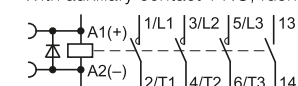
Operating range **0.85 ... 1.85 x U_s** , power consumption of the solenoid coils **1.6 W** at 24 V

7	3	18	10	1	--	24	5	3RT2015-1MB41-0KT0	5	3RT2015-2MB41-0KT0
			01	--	1	24	5	3RT2015-1MB42-0KT0	5	3RT2015-2MB42-0KT0
9	4	22	10	1	--	24	5	3RT2016-1MB41-0KT0	5	3RT2016-2MB41-0KT0
			01	--	1	24	5	3RT2016-1MB42-0KT0	5	3RT2016-2MB42-0KT0
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1MB41-0KT0	5	3RT2017-2MB41-0KT0
			01	--	1	24	5	3RT2017-1MB42-0KT0	5	3RT2017-2MB42-0KT0

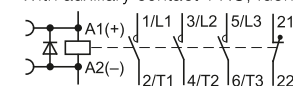
With integrated coil circuit (diode)¹⁾

(no auxiliary switch blocks can be mounted)

- With auxiliary contact 1 NO, Ident. No. **10**



- With auxiliary contact 1 NC, Ident. No. **01**



Operating range **0.7 ... 1.25 x U_s** , power consumption of the solenoid coils **2.8 W** at 24 V

7	3	18	10	1	--	24	2	3RT2015-1JB41	2	3RT2015-2JB41
			01	--	1	24	2	3RT2015-1JB42	5	3RT2015-2JB42
9	4	22	10	1	--	24	2	3RT2016-1JB41	5	3RT2016-2JB41
			01	--	1	24	2	3RT2016-1JB42	5	3RT2016-2JB42
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1JB41	5	3RT2017-2JB41
			01	--	1	24	5	3RT2017-1JB42	5	3RT2017-2JB42

Operating range **0.85 ... 1.85 x U_s** , power consumption of the solenoid coils **1.6 W** at 24 V

7	3	18	10	1	--	24	5	3RT2015-1VB41	5	3RT2015-2VB41
			01	--	1	24	5	3RT2015-1VB42	5	3RT2015-2VB42
9	4	22	10	1	--	24	5	3RT2016-1VB41	5	3RT2016-2VB41
			01	--	1	24	5	3RT2016-1VB42	5	3RT2016-2VB42
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1VB41	5	3RT2017-2VB41
			01	--	1	24	5	3RT2017-1VB42	5	3RT2017-2VB42

¹⁾ When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. In the case of 5.5 kW coupling contactors, use 5.5 kW coupling contactors of size S0; see page 3/63.
 For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

DC operation for direct control from the PLC

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC outputs
- Cannot be extended with auxiliary switch blocks

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT201.-1.B4.



3RT201.-2.B4.

Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_U : Up to 60 °C		AC-1, t_U : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V					Article No.	Price per PU	Article No.
A	400 V	A	NO	NC	V DC	d			
	kW								

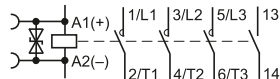
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S00

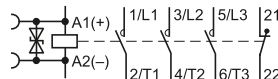
With integrated coil circuit (suppressor diode)¹⁾

(no auxiliary switch blocks can be mounted)

- With auxiliary contact 1 NO, Ident. No. **10**



- With auxiliary contact 1 NC, Ident. No. **01**



Operating range **0.7 ... 1.25 x U_s** , power consumption of the solenoid coils **2.8 W** at 24 V

7	3	18	10	1	--	24	2	3RT2015-1KB41	2	3RT2015-2KB41
			01	--	1	24	2	3RT2015-1KB42	▶	3RT2015-2KB42
9	4	22	10	1	--	24	2	3RT2016-1KB41	2	3RT2016-2KB41
			01	--	1	24	2	3RT2016-1KB42	2	3RT2016-2KB42
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1KB41	▶	3RT2017-2KB41
			01	--	1	24	5	3RT2017-1KB42	▶	3RT2017-2KB42

Operating range **0.85 ... 1.85 x U_s** , power consumption of the solenoid coils **1.6 W** at 24 V

7	3	18	10	1	--	24	5	3RT2015-1SB41	5	3RT2015-2SB41
			01	--	1	24	5	3RT2015-1SB42	5	3RT2015-2SB42
9	4	22	10	1	--	24	5	3RT2016-1SB41	5	3RT2016-2SB41
			01	--	1	24	5	3RT2016-1SB42	5	3RT2016-2SB42
12	5.5¹⁾	22	10	1	--	24	5	3RT2017-1SB41	5	3RT2017-2SB41
			01	--	1	24	5	3RT2017-1SB42	5	3RT2017-2SB42

¹⁾ When using contactors with IE3/IE4 motors, use contactors fitted with varistors instead of diodes. In the case of 5.5 kW coupling contactors, use 5.5 kW coupling contactors of size S0; see page 3/63.
 For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

DC operation

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



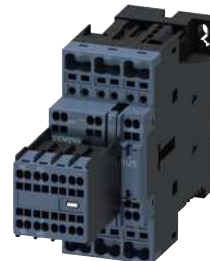
3RT202.-1B.40



3RT202.-2B.40



3RT202.-1B.44

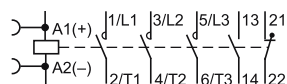


3RT202.-2B.44

Rated data		Auxiliary contacts		Rated control supply voltage U_s		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C		AC-1, t_u : 40 °C									
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V		Ident. No.	Version		Article No.	Price per PU		Article No.	Price per PU
A	400 V	A		NO	NC	V DC	d		d		

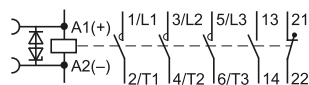
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S0



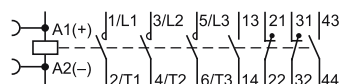
9	4	40	11	1	1	24	▶	3RT2023-1BB40	▶	3RT2023-2BB40
12	5.5	40	11	1	1	24 220	▶	3RT2024-1BB40 3RT2024-1BM40	▶	3RT2024-2BB40 3RT2024-2BM40
17	7.5	40	11	1	1	24 220	▶	3RT2025-1BB40 3RT2025-1BM40	▶	3RT2025-2BB40 3RT2025-2BM40
25	11	40	11	1	1	24 220	▶	3RT2026-1BB40 3RT2026-1BM40	▶	3RT2026-2BB40 3RT2026-2BM40
32	15	50	11	1	1	24 220	▶	3RT2027-1BB40 3RT2027-1BM40	▶	3RT2027-2BB40 3RT2027-2BM40
38	18.5	50	11	1	1	24 220	▶	3RT2028-1BB40 3RT2028-1BM40	▶	3RT2028-2BB40 3RT2028-2BM40

With coil circuit plugged into front (diode assembly)



9	4	40	11	1	1	24	2	3RT2023-1FB40	▶	3RT2023-2FB40
12	5.5	40	11	1	1	24	▶	3RT2024-1FB40	▶	3RT2024-2FB40
17	7.5	40	11	1	1	24	▶	3RT2025-1FB40	▶	3RT2025-2FB40
25	11	40	11	1	1	24	▶	3RT2026-1FB40	▶	3RT2026-2FB40
32	15	50	11	1	1	24	▶	3RT2027-1FB40	▶	3RT2027-2FB40
38	18.5	50	11	1	1	24	▶	3RT2028-1FB40	▶	3RT2028-2FB40

With removable mounted auxiliary switch block



9	4	40	22	2	2	24	▶	3RT2023-1BB44	▶	3RT2023-2BB44
12	5.5	40	22	2	2	24	▶	3RT2024-1BB44	▶	3RT2024-2BB44
17	7.5	40	22	2	2	24	▶	3RT2025-1BB44	▶	3RT2025-2BB44
25	11	40	22	2	2	24	▶	3RT2026-1BB44	▶	3RT2026-2BB44
32	15	50	22	2	2	24	▶	3RT2027-1BB44	▶	3RT2027-2BB44
38	18.5	50	22	2	2	24	▶	3RT2028-1BB44	▶	3RT2028-2BB44

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

DC operation

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RT202.-1.B44-3MA0



3RT202.-2.B44-3MA0



3RT202.-1BB40-0CC0



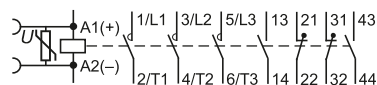
3RT202.-2BB40-0CC0

Rated data		Auxiliary contacts		Rated control supply voltage U_s		SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C	AC-1, t_u : 40 °C	Ident. No.	Version				Article No.	Price per PU		Article No.	Price per PU
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V										
A	kW	A	NO	NC	V DC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

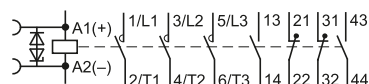
Size S0

With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and coil circuit permanently plugged into the front (varistor)



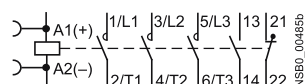
12	5.5	40	22	2	2	24	2	3RT2024-1DB44-3MA0	5	3RT2024-2DB44-3MA0
17	7.5	40	22	2	2	24	5	3RT2025-1DB44-3MA0	5	3RT2025-2DB44-3MA0
25	11	40	22	2	2	24	5	3RT2026-1DB44-3MA0	5	3RT2026-2DB44-3MA0
32	15	50	22	2	2	24	5	3RT2027-1DB44-3MA0	5	3RT2027-2DB44-3MA0

With permanently mounted auxiliary switch block (SUVA-certified safety contactor) and coil circuit permanently plugged into the front (diode assembly)



9	4	40	22	2	2	24	2	3RT2023-1FB44-3MA0	5	3RT2023-2FB44-3MA0
12	5.5	40	22	2	2	24	5	3RT2024-1FB44-3MA0	5	3RT2024-2FB44-3MA0
17	7.5	40	22	2	2	24	5	3RT2025-1FB44-3MA0	5	3RT2025-2FB44-3MA0
25	11	40	22	2	2	24	5	3RT2026-1FB44-3MA0	5	3RT2026-2FB44-3MA0
32	15	50	22	2	2	24	5	3RT2027-1FB44-3MA0	5	3RT2027-2FB44-3MA0
38	18.5	50	22	2	2	24	5	3RT2028-1FB44-3MA0	5	3RT2028-2FB44-3MA0

With voltage tap-off



9	4	40	11	1	1	24	2	3RT2023-1BB40-0CC0	2	3RT2023-2BB40-0CC0
12	5.5	40	11	1	1	24	2	3RT2024-1BB40-0CC0	2	3RT2024-2BB40-0CC0
17	7.5	40	11	1	1	24	2	3RT2025-1BB40-0CC0	2	3RT2025-2BB40-0CC0
25	11	40	11	1	1	24	2	3RT2026-1BB40-0CC0	2	3RT2026-2BB40-0CC0
32	15	50	11	1	1	24	2	3RT2027-1BB40-0CC0	2	3RT2027-2BB40-0CC0
38	18.5	50	11	1	1	24	2	3RT2028-1BB40-0CC0	2	3RT2028-2BB40-0CC0

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

DC operation for direct control from the PLC

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC outputs
- Cannot be extended with auxiliary switch blocks

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT202.-1KB40



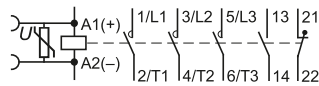
3RT202.-2KB40

Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C		AC-1, t_u : 40 °C	Ident. No.	Version			Article No.	Price per PU		Article No.	Price per PU
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V									
A	kW	A	NO	NC	V DC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S0**With integrated coil circuit (varistor)**

(no auxiliary switch blocks can be mounted)

Operating range **0.7 ... 1.25 x U_s** , power consumption of the solenoid coils **4.5 W** at 24 V

9	4	40	11	1	1	24	▶	3RT2023-1KB40	▶	3RT2023-2KB40
12	5.5	40	11	1	1	24	▶	3RT2024-1KB40	5	3RT2024-2KB40
17	7.5	40	11	1	1	24	▶	3RT2025-1KB40	2	3RT2025-2KB40
25	11	40	11	1	1	24	▶	3RT2026-1KB40	2	3RT2026-2KB40
32	15	50	11	1	1	24	▶	3RT2027-1KB40	5	3RT2027-2KB40

Other voltages [according to page 3/73](#) on request.For accessories and spare parts, [see pages 3/75 to 3/123](#).

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

DC operation for direct control from the PLC

- Coupling contactors with adapted power consumption
- Suitable for solid-state PLC outputs with 2 A
- Cannot be expanded with auxiliary switch blocks

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT203.-1KB40



3RT203.-3KB40



3RT204.-1KB40



3RT204.-3KB40

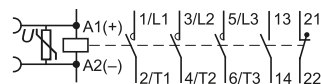
Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60 °C			Ident. No.		Version	V DC	Article No.	Price per PU	Article No.	Price per PU	
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	AC-1, t_u : 40 °C Operational current I_e up to 690 V	NO	NC							
A	kW	A				d					

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S2

With integrated coil circuit (varistor)

(no auxiliary switch blocks can be mounted)



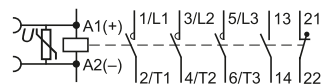
Operating range **0.8 ... 1.2 x U_s** , power consumption of the solenoid coils **23 W** at 24 V

40	18.5	60	11	1	1	24	▶	3RT2035-1KB40	X	3RT2035-3KB40
50	22	70	11	1	1	24	▶	3RT2036-1KB40	X	3RT2036-3KB40
65	30	80	11	1	1	24	▶	3RT2037-1KB40	X	3RT2037-3KB40
80	37	90	11	1	1	24	▶	3RT2038-1KB40	X	3RT2038-3KB40

Size S3 **NEW**

With integrated coil circuit (varistor)

(no auxiliary switch blocks can be mounted)



Operating range **0.8 ... 1.2 x U_s** , power consumption of the solenoid coils **25 W** at 24 V

80	37	125	11	1	1	24	X	3RT2045-1KB40	X	3RT2045-3KB40
95	45	130	11	1	1	24	X	3RT2046-1KB40	X	3RT2046-3KB40

Other voltages [according to page 3/73](#) on request.

For accessories and spare parts, [see pages 3/75 to 3/123](#).

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

AC/DC operation (50/60 Hz AC and DC)

- Extended operating range of the solenoid coil 0.7 to $1.3 \times U_s$
- Reduced power consumption when closing and in the closed state

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



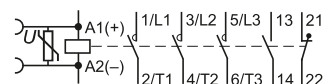
3RT202.-1N.30



3RT202.-2N.30

Rated data			Auxiliary contacts		Rated control supply voltage U_s ¹⁾	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_u : Up to 60 °C		AC-1, t_u : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V		 			Article No.	Price per PU	Article No.
A	kW	A	NO	NC	V AC/DC	d			Price per PU

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Size S0**With integrated coil circuit (varistor)**

12	5.5	40	11	1	1	21 ... 28 95 ... 130 200 ... 280 ²⁾	▶ ▶ ▶	3RT2024-1NB30 3RT2024-1NF30 3RT2024-1NP30	5 5 ▶	3RT2024-2NB30 3RT2024-2NF30 3RT2024-2NP30
17	7.5	40	11	1	1	21 ... 28 95 ... 130 200 ... 280 ²⁾	▶ ▶ ▶	3RT2025-1NB30 3RT2025-1NF30 3RT2025-1NP30	5 5 ▶	3RT2025-2NB30 3RT2025-2NF30 3RT2025-2NP30
25	11	40	11	1	1	21 ... 28 95 ... 130 200 ... 280 ²⁾	▶ ▶ ▶	3RT2026-1NB30 3RT2026-1NF30 3RT2026-1NP30	▶ ▶ ▶	3RT2026-2NB30 3RT2026-2NF30 3RT2026-2NP30
32	15	50	11	1	1	21 ... 28 95 ... 130 200 ... 280 ²⁾	▶ ▶ ▶	3RT2027-1NB30 3RT2027-1NF30 3RT2027-1NP30	▶ 5 ▶	3RT2027-2NB30 3RT2027-2NF30 3RT2027-2NP30
38	18.5	50	11	1	1	21 ... 28 95 ... 130 200 ... 280 ²⁾	5 5 ▶	3RT2028-1NB30 3RT2028-1NF30 3RT2028-1NP30	5 5 ▶	3RT2028-2NB30 3RT2028-2NF30 3RT2028-2NP30

¹⁾ Coil operating range: $0.7 \times U_{s \text{ min}}$ to $1.3 \times U_{s \text{ max}}$.

²⁾ The following applies to $U_{s \text{ max}} = 280$ V: Upper limit = $1.1 \times U_{s \text{ max}}$.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

AC/DC operation (50/60 Hz AC and DC)

- Extended operating range of the solenoid coil 0.8 to $1.1 \times U_s$
- Reduced power consumption when closing and in the closed state

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT203.-1N.30



3RT203.-3N.30



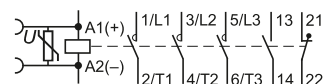
3RT203.-1N.34

Rated data			Auxiliary contacts		Rated control supply voltage U_s ¹⁾	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_{ij} : Up to 60° C	Operational current I_e up to 400 V	AC-1, t_{ij} : 40 °C Operational current I_e up to 690 V	Ident. No.	Version			Article No.	Price per PU		Article No.	Price per PU
Ratings of three-phase motors at 50 Hz and	400 V										
A	kW	A	NO	NC	V AC/DC	d			d		

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

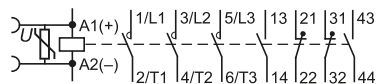
Size S2

With integrated coil circuit (varistor)



40	18.5	60	11	1	1	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2035-1NB30 3RT2035-1NF30 3RT2035-1NP30	► 5 5	3RT2035-3NB30 3RT2035-3NF30 3RT2035-3NP30
50	22	70	11	1	1	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2036-1NB30 3RT2036-1NF30 3RT2036-1NP30	► 5 5	3RT2036-3NB30 3RT2036-3NF30 3RT2036-3NP30
65	30	80	11	1	1	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2037-1NB30 3RT2037-1NF30 3RT2037-1NP30	► 5 5	3RT2037-3NB30 3RT2037-3NF30 3RT2037-3NP30
80	37	90	11	1	1	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2038-1NB30 3RT2038-1NF30 3RT2038-1NP30	► 5 2	3RT2038-3NB30 3RT2038-3NF30 3RT2038-3NP30

With removable mounted auxiliary switch block and integrated coil circuit (varistor)



40	18.5	60	22	2	2	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2035-1NB34 3RT2035-1NF34 3RT2035-1NP34	► 5 5	-- -- --
50	22	70	22	2	2	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2036-1NB34 3RT2036-1NF34 3RT2036-1NP34	► 5 5	-- -- --
65	30	80	22	2	2	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2037-1NB34 3RT2037-1NF34 3RT2037-1NP34	► 5 5	-- -- --
80	37	90	22	2	2	20 ... 33 83 ... 155 175 ... 280	► 5 5	3RT2038-1NB34 3RT2038-1NF34 3RT2038-1NP34	► 5 5	-- -- --

¹⁾ Coil operating range: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

AC/DC operation (50/60 Hz AC and DC)

- Extended operating range of the solenoid coil 0.8 to $1.1 \times U_s$
- Reduced power consumption when closing and in the closed state

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT203.-1NB34-3MA0



3RT203.-3NB34-3MA0



3RT203.-1NB30-0CC0



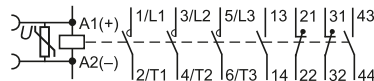
3RT203.-3NB30-0CC0

Rated data		Auxiliary contacts		Rated control supply voltage U_s ¹⁾	SD	Screw terminals	SD	Spring-type terminals
AC-2 and AC-3, t_U : Up to 60 °C	AC-1, t_U : 40 °C	Ident. No.	Version					
Operational current I_e up to 400 V	Operational current I_e up to 690 V					Article No.	Price per PU	Article No.
A	A	NO	NC	V AC/DC	d			Price per PU

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

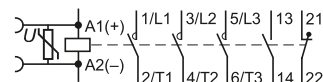
Size S2

With permanently mounted auxiliary switch block and integrated coil circuit (varistor)



40	18.5	60	22	2	2	20 ... 33	5	3RT2035-1NB34-3MA0	5	3RT2035-3NB34-3MA0
50	22	70	22	2	2	20 ... 33	2	3RT2036-1NB34-3MA0	5	3RT2036-3NB34-3MA0
65	30	80	22	2	2	20 ... 33	►	3RT2037-1NB34-3MA0	5	3RT2037-3NB34-3MA0
80	37	90	22	2	2	20 ... 33	►	3RT2038-1NB34-3MA0	2	3RT2038-3NB34-3MA0

With voltage tap-off and integrated coil circuit (varistor)



40	18.5	60	11	1	1	20 ... 33	2	3RT2035-1NB30-0CC0	2	3RT2035-3NB30-0CC0
50	22	70	11	1	1	20 ... 33	2	3RT2036-1NB30-0CC0	2	3RT2036-3NB30-0CC0
65	30	80	11	1	1	20 ... 33	2	3RT2037-1NB30-0CC0	2	3RT2037-3NB30-0CC0
80	37	90	11	1	1	20 ... 33	2	3RT2038-1NB30-0CC0	2	3RT2038-3NB30-0CC0

¹⁾ Coil operating range: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready** **NEW**

AC/DC operation (50/60 Hz AC and DC)

- Extended operating range of the solenoid coil 0.8 to $1.1 \times U_s$
- Reduced power consumption when closing and in the closed state

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RT204.-1N.30



3RT204.-3N.30



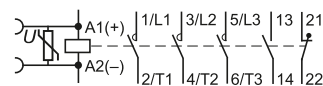
3RT204.-1N.34

Rated data			Auxiliary contacts		Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
AC-2 and AC-3, t_u : Up to 60° C		AC-1, t_u : 40 °C	Ident. No.	Version			Article No.	Price per PU	Article No.	Price per PU	
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and 400 V	Operational current I_e up to 690 V									
A	kW	A	NO	NC	V AC/DC	d					

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

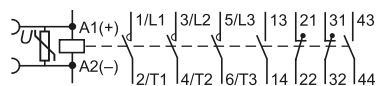
Size S3

With integrated coil circuit (varistor)



80	37	125	11	1	1	20 ... 33	X	3RT2045-1NB30	X	3RT2045-3NB30
						83 ... 155	X	3RT2045-1NF30	X	3RT2045-3NF30
						175 ... 280	X	3RT2045-1NP30	X	3RT2045-3NP30
95	45	130	11	1	1	20 ... 33	X	3RT2046-1NB30	X	3RT2046-3NB30
						83 ... 155	X	3RT2046-1NF30	X	3RT2046-3NF30
						175 ... 280	X	3RT2046-1NP30	X	3RT2046-3NP30
110	55	130	11	1	1	20 ... 33	X	3RT2047-1NB30	X	3RT2047-3NB30
						83 ... 155	X	3RT2047-1NF30	X	3RT2047-3NF30
						175 ... 280	X	3RT2047-1NP30	X	3RT2047-3NP30

With removable mounted auxiliary switch block and integrated coil circuit (varistor)



80	37	125	22	2	2	20 ... 33	X	3RT2045-1NB34	--	
						83 ... 155	X	3RT2045-1NF34	--	
						175 ... 280	X	3RT2045-1NP34	--	
95	45	130	22	2	2	20 ... 33	X	3RT2046-1NB34	--	
						83 ... 155	X	3RT2046-1NF34	--	
						175 ... 280	X	3RT2046-1NP34	--	
110	55	130	22	2	2	20 ... 33	X	3RT2047-1NB34	--	
						83 ... 155	X	3RT2047-1NF34	--	
						175 ... 280	X	3RT2047-1NP34	--	

¹⁾ Coil operating range: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

NEW**IE3/IE4 ready****SIRIUS 3RT contactors, 3-pole up to 250 kW****AC/DC operation (50/60 Hz AC and DC)**

- Extended operating range of the solenoid coil 0.8 to $1.1 \times U_s$
- Reduced power consumption when closing and in the closed state

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RT204.-1NB34-3MA0



3RT204.-3NB34-3MA0



3RT204.-1NB30-0CC0



3RT204.-3NB30-0CC0

Rated data

AC-2 and AC-3,
 t_u : Up to 60 °C

Operational
 current I_e
 up to
 400 V

Ratings of
 three-phase
 motors at
 50 Hz and
 400 V

AC-1,
 t_u : 40 °C

Operational
 current I_e
 up to
 690 V

Auxiliary contacts

Ident. No. Version

NO

NC

Rated control
 supply voltage
 U_s ¹⁾

SD

Screw terminals

Article No.

Price
per PU**Spring-type terminals**

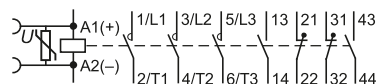
Article No.

Price
per PU

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

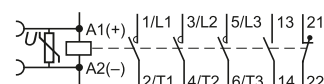
Size S3

With permanently mounted auxiliary switch block and integrated coil circuit (varistor)



80	37	125	22	2	2	20 ... 33	X	3RT2045-1NB34-3MA0	X	3RT2045-3NB34-3MA0
95	45	130	22	2	2	20 ... 33	X	3RT2046-1NB34-3MA0	X	3RT2046-3NB34-3MA0
110	55	130	22	2	2	20 ... 33	X	3RT2047-1NB34-3MA0	X	3RT2047-3NB34-3MA0

With voltage tap-off and integrated coil circuit (varistor)



80	37	125	11	1	1	20 ... 33	X	3RT2045-1NB30-0CC0	X	3RT2045-3NB30-0CC0
95	45	130	11	1	1	20 ... 33	X	3RT2046-1NB30-0CC0	X	3RT2046-3NB30-0CC0
110	55	130	11	1	1	20 ... 33	X	3RT2047-1NB30-0CC0	X	3RT2047-3NB30-0CC0

¹⁾ Coil operating range: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

Other voltages according to page 3/73 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

AC/DC operation (50/60 Hz AC and DC)

- Withdrawable coils with integrated coil switch (varistor)
- Auxiliary and control conductors: Screw or spring-type terminals
- Main conductors: Busbar connections, for 3RT1054 (55 kW) box terminals¹⁾



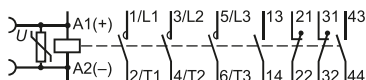
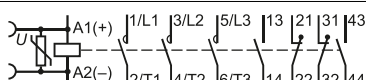
3RT105.



3RT106.



3RT107.

Size	Rated data					Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_{ij} : Up to 60° C					AC-1, t_{ij} : 40° C		Version  	V AC/DC	d				
	Operational current I_e up to 500 V	Ratings of three-phase motors at 50 Hz and				Operational current I_e up to 690 V								
	A	230 V	400 V	500 V	690 V	A								
		kW	kW	kW	kW									
Conventional operating mechanisms														
										Screw terminals 				
S6	115	37	55	75	110	160	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1054-1AF36 3RT1054-1AP36	1 1	1 unit 1 unit	41B 41B
	150	45	75	90	132	185	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1055-6AF36 3RT1055-6AP36	1 1	1 unit 1 unit	41B 41B
	185	55	90 ²⁾	110	160	215	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1056-6AF36 3RT1056-6AP36	1 1	1 unit 1 unit	41B 41B
S10	225	55	110	160	200	275	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1064-6AF36 3RT1064-6AP36	1 1	1 unit 1 unit	41B 41B
	265	75	132	160	250	330	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1065-6AF36 3RT1065-6AP36	1 1	1 unit 1 unit	41B 41B
	300	90	160 ²⁾	200	250	330	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1066-6AF36 3RT1066-6AP36	1 1	1 unit 1 unit	41B 41B
S12	400	132	200	250	400	430	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1075-6AF36 3RT1075-6AP36	1 1	1 unit 1 unit	41B 41B
	500	160	250 ²⁾	355	400	610	2	2	110 ... 127 220 ... 240	▶ ▶	3RT1076-6AF36 3RT1076-6AP36	1 1	1 unit 1 unit	41B 41B
										Spring-type terminals  for coil and auxiliary switch terminals				
S6	115	37	55	75	110	160	2	2	110 ... 127 220 ... 240	5 5	3RT1054-3AF36 3RT1054-3AP36	1 1	1 unit 1 unit	41B 41B
	150	45	75	90	132	185	2	2	110 ... 127 220 ... 240	5 5	3RT1055-2AF36 3RT1055-2AP36	1 1	1 unit 1 unit	41B 41B
	185	55	90 ²⁾	110	160	215	2	2	110 ... 127 220 ... 240	5 5	3RT1056-2AF36 3RT1056-2AP36	1 1	1 unit 1 unit	41B 41B
S10	225	55	110	160	200	275	2	2	110 ... 127 220 ... 240	5 5	3RT1064-2AF36 3RT1064-2AP36	1 1	1 unit 1 unit	41B 41B
	265	75	132	160	250	330	2	2	110 ... 127 220 ... 240	5 5	3RT1065-2AF36 3RT1065-2AP36	1 1	1 unit 1 unit	41B 41B
	300	90	160 ²⁾	200	250	330	2	2	110 ... 127 220 ... 240	5 5	3RT1066-2AF36 3RT1066-2AP36	1 1	1 unit 1 unit	41B 41B
S12	400	132	200	250	400	430	2	2	110 ... 127 220 ... 240	5 5	3RT1075-2AF36 3RT1075-2AP36	1 1	1 unit 1 unit	41B 41B
	500	160	250 ²⁾	355	400	610	2	2	110 ... 127 220 ... 240	5 5	3RT1076-2AF36 3RT1076-2AP36	1 1	1 unit 1 unit	41B 41B

¹⁾ Alternatively, the 3RT1054 contactor (55 kW) can also be supplied with busbar connections instead of box terminals.
In the 8th position of the article number, the "1" must be replaced with "6" for screw terminals, e. g. 3RT1054-6A..., for spring-type terminals, the "3" must be replaced with "2", e. g. 3RT1054-2A....

²⁾ When using 3RT10.6-.A... contactors with IE3/IE4 motors from 8.5 times the starting current, use the versions with solid-state operating mechanism 3RT10.6-.N..., see page 3/71.
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/74 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

IE3/IE4 ready

SIRIUS 3RT contactors, 3-pole up to 250 kW

AC/DC operation (50/60 Hz AC and DC)

- Withdrawable coils with integrated coil switch (varistor)
- Auxiliary and control conductors: screw or spring-type terminals
- Main conductors: Busbar connections, for 3RT1054 (55 kW) box terminals¹⁾



3RT105.

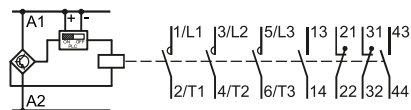


3RT106.



3RT107.

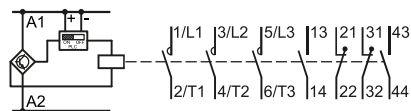
Size	Rated data				AC-1, t_{th} 40 °C		Auxiliary contacts, lateral	Rated control supply voltage U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_{th} Up to 60° C				Operational current I_e up to		Version  	V AC/DC	d					
	500 V	230 V	400 V	500 V	690 V	690 V								
	A	kW	kW	kW	kW	A	NO	NC						

Solid-state operating mechanisms · with 24 V DC control signal input
e.g. for control from the PLC

Screw terminals



S6	115	37	55	75	110	160	2	2	96 ... 127 200 ... 277	2	3RT1054-1NF36 3RT1054-1NP36	1	1 unit	41B
	150	45	75	90	132	185	2	2	96 ... 127 200 ... 277	2	3RT1055-6NF36 3RT1055-6NP36	1	1 unit	41B
	185	55	90	110	160	215	2	2	96 ... 127 200 ... 277	2	3RT1056-6NF36 3RT1056-6NP36	1	1 unit	41B
S10	225	55	110	160	200	275	2	2	96 ... 127 200 ... 277	2	3RT1064-6NF36 3RT1064-6NP36	1	1 unit	41B
	265	75	132	160	250	330	2	2	96 ... 127 200 ... 277	2	3RT1065-6NF36 3RT1065-6NP36	1	1 unit	41B
	300	90	160	200	250	330	2	2	96 ... 127 200 ... 277	2	3RT1066-6NF36 3RT1066-6NP36	1	1 unit	41B
S12	400	132	200	250	400	430	2	2	96 ... 127 200 ... 277	2	3RT1075-6NF36 3RT1075-6NP36	1	1 unit	41B
	500	160	250	355	400	610	2	2	96 ... 127 200 ... 277	2	3RT1076-6NF36 3RT1076-6NP36	1	1 unit	41B

Spring-type terminals
for coil and auxiliary switch terminals

S6	115	37	55	75	110	160	2	2	96 ... 127 200 ... 277	5	3RT1054-3NF36 3RT1054-3NP36	1	1 unit	41B
	150	45	75	90	132	185	2	2	96 ... 127 200 ... 277	5	3RT1055-2NF36 3RT1055-2NP36	1	1 unit	41B
	185	55	90	110	160	215	2	2	96 ... 127 200 ... 277	5	3RT1056-2NF36 3RT1056-2NP36	1	1 unit	41B
S10	225	55	110	160	200	275	2	2	96 ... 127 200 ... 277	5	3RT1064-2NF36 3RT1064-2NP36	1	1 unit	41B
	265	75	132	160	250	330	2	2	96 ... 127 200 ... 277	5	3RT1065-2NF36 3RT1065-2NP36	1	1 unit	41B
	300	90	160	200	250	330	2	2	96 ... 127 200 ... 277	5	3RT1066-2NF36 3RT1066-2NP36	1	1 unit	41B
S12	400	132	200	250	400	430	2	2	96 ... 127 200 ... 277	5	3RT1075-2NF36 3RT1075-2NP36	1	1 unit	41B
	500	160	250	355	400	610	2	2	96 ... 127 200 ... 277	5	3RT1076-2NF36 3RT1076-2NP36	1	1 unit	41B

¹⁾ Alternatively, the 3RT1054 contactor (55 kW) can also be supplied with busbar connections instead of box terminals.
In the 8th position of the article number, the "1" must be replaced with "6" for screw terminals, e. g. 3RT1054-6N..., for spring-type terminals, the "3" must be replaced with "2", e. g. 3RT1054-2N...

Other voltages according to page 3/74 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW **IE3/IE4 ready**

AC/DC operation (50/60 Hz AC and DC)

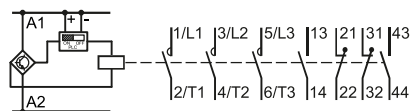
- Withdrawable coils with integrated coil switch (varistor)
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections, for 3RT1054 (55 kW) box terminals¹⁾
- Indication of remaining lifetime (RLT)



3RT1056-6P..

Size	Rated data					AC-1, t_{li} : 40 °C	Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_{li} : Up to 60° C						Version							
	Operational current I_e up to	Ratings of three-phase motors at 50 Hz and				Operational current I_e up to					Article No.	Price per PU		
	500 V	230 V	400 V	500 V	690 V	690 V								
	A	kW	kW	kW	kW	A	NO	NC	V AC/DC	d				

Solid-state operating mechanisms · with 24 V DC control signal input · with indication of remaining lifetime (RLT) e. g. for control from the PLC



S6	115	37	55	75	110	160	1	1	96 ... 127 200 ... 277	5 5	3RT1054-1PF35 3RT1054-1PP35	1 1	1 unit 1 unit	41B 41B
	150	45	75	90	132	185	1	1	96 ... 127 200 ... 277	5 5	3RT1055-6PF35 3RT1055-6PP35	1 1	1 unit 1 unit	41B 41B
	185	55	90	110	160	215	1	1	96 ... 127 200 ... 277	5 5	3RT1056-6PF35 3RT1056-6PP35	1 1	1 unit 1 unit	41B 41B
S10	225	55	110	160	200	275	1	1	96 ... 127 200 ... 277	5 5	3RT1064-6PF35 3RT1064-6PP35	1 1	1 unit 1 unit	41B 41B
	265	75	132	160	250	330	1	1	96 ... 127 200 ... 277	5 5	3RT1065-6PF35 3RT1065-6PP35	1 1	1 unit 1 unit	41B 41B
	300	90	160	200	250	330	1	1	96 ... 127 200 ... 277	5 5	3RT1066-6PF35 3RT1066-6PP35	1 1	1 unit 1 unit	41B 41B
S12	400	132	200	250	400	430	1	1	96 ... 127 200 ... 277	5 5	3RT1075-6PF35 3RT1075-6PP35	1 1	1 unit 1 unit	41B 41B
	500	160	250	355	400	610	1	1	96 ... 127 200 ... 277	5 5	3RT1076-6PF35 3RT1076-6PP35	1 1	1 unit 1 unit	41B 41B

¹⁾ Alternatively, the 3RT1054 contactor (55 kW) can also be supplied with busbar connections instead of box terminals. In the 8th position of the article number, the "1" must be replaced with "6", e.g. 3RT1054-6.....

Other voltages according to page 3/74 on request.

For accessories and spare parts, see pages 3/75 to 3/123.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Options

Rated control supply voltages for 3RT2 contactors, possible on request (change of the 10th and 11th digits of the article number)

Delivery time on request

Rated control supply voltage U_s	Contactor type	3RT201, 3RH2	3RT202	3RT203	3RT204
	Size	S00	S0	S2	S3

Sizes S00 to S3

AC operation¹⁾

Solenoid coils for 50 Hz (exception: Size S00: 50 and 60 Hz²⁾)

24 V AC	B0	B0	B0	B0
42 V AC	D0	D0	D0	D0
48 V AC	H0	H0	H0	H0
110 V AC	F0	F0	F0	F0
230 V AC	P0	P0	P0	P0
240 V AC	U0	U0	U0	U0
400 V AC	V0	V0	V0	V0

Solenoid coils for 50 and 60 Hz²⁾

24 V AC	B0	C2	C2	C2
42 V AC	D0	D2	D2	D2
48 V AC	H0	H2	H2	H2
110 V AC	F0	G2	G2	G2
220 V AC	N2	N2	N2	N2
230 V AC	P0	L2	L2	L2

Solenoid coils (for USA and Canada³⁾)

50 Hz	60 Hz				
110 V AC	120 V AC	K6	K6	K6	K6
220 V AC	240 V AC	P6	P6	P6	P6

Solenoid coils (for Japan)

50/60 Hz ⁴⁾	60 Hz ⁵⁾				
100 V AC	110 V AC	G6	G6	G6	G6
200 V AC	220 V AC	N6	N6	N6	N6
400 V AC	440 V AC	R6	R6	R6	R6

DC operation¹⁾

12 V DC	A4	A4	--	--
24 V DC	B4	B4	--	--
42 V DC	D4	D4	--	--
48 V DC	W4	W4	--	--
60 V DC	E4	E4	--	--
110 V DC	F4	F4	--	--
125 V DC	G4	G4	--	--
220 V DC	M4	M4	--	--
230 V DC	P4	P4	--	--

Examples

AC operation	3RT203-1A P00	Contactor with screw terminals; with solenoid coil for 50 Hz for rated control supply voltage 230 V AC.
	3RT203-1A G20	Contactor with screw terminals; with solenoid coil for 50/60 Hz for rated control supply voltage 110 V AC.
DC operation	3RT205-2B B40	Contactor with spring-type terminals; for rated control supply voltage 24 V DC.
	3RT205-2B G40	Contactor with spring-type terminals; for rated control supply voltage 125 V DC.

¹⁾ For deviating coil voltages and operating ranges of sizes S00 and S0, a SITOP 24 V DC power supply with wide-range input can be used for the coil control, see page 15/1 onwards.

²⁾ Coil operating range
- at 50 Hz: 0.8 to $1.1 \times U_s$
- at 60 Hz: 0.85 to $1.1 \times U_s$.

³⁾ Coil operating range
- Size S00:
at 50 Hz: 0.85 to $1.1 \times U_s$
at 60 Hz: 0.8 to $1.1 \times U_s$
- Sizes S0 to S3: at 50 Hz and 60 Hz: 0.8 to $1.1 \times U_s$.

⁴⁾ Coil operating range
- Size S00
at 50/60 Hz: 0.85 to $1.1 \times U_s$
- Size S0
at 50 Hz: 0.8 to $1.1 \times U_s$
at 60 Hz: 0.85 to $1.1 \times U_s$.

⁵⁾ Coil operating range at 60 Hz: 0.8 to $1.1 \times U_s$.

Rated control supply voltage	Contactor type	3RT2.2.-.N	Rated control supply voltage	Contactor type	3RT2.3.-.N	3RT2.4.-.N
$U_{s \min} \dots U_{s \max}^{1)}$	Size	S0	$U_{s \min} \dots U_{s \max}^{1)}$	Size	S2	S3

Sizes S00 to S3

AC/DC operation (50/60 Hz AC, DC)

21 ... 28 V AC/DC	B3	20 ... 33 V AC/DC	B3	B3
95 ... 130 V AC/DC	F3	83 ... 155 V AC/DC	F3	F3
200 ... 280 V AC/DC ²⁾	P3	175 ... 280 V AC/DC	P3	P3

¹⁾ Coil operating range
- Size S0: $0.7 \times U_{s \min}$ to $1.3 \times U_{s \max}$
- Sizes S2 and S3: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

²⁾ The following applies to S0 and $U_{s \max} = 280$ V: Upper limit = $1.1 \times U_{s \max}$.

Power Contactors for Switching Motors

SIRIUS 3RT contactors, 3-pole up to 250 kW

Rated control supply voltages for 3RT1 contactors, possible on request (change of the 10th and 11th digits of the article number)

Delivery time on request

Rated control supply voltage U_s	Contactor type	3RT1.5.-.A, 3RT1.6.-.A, 3RT1.7.-.A	Rated control supply voltage U_s	Contactor type	3RT1.5.-.N, 3RT1.6.-.N, 3RT1.7.-.N	3RT1.5.-.P, 3RT1.6.-.P, 3RT1.7.-.P
$U_{s \min} \dots U_{s \max}$	Size	S6 to S12	$U_{s \min} \dots U_{s \max}$	Size	S6 to S12	S6 to S12

Sizes S6 to S12

AC/DC operation (50/60 Hz AC, DC)

Conventional operating mechanisms¹⁾

23 ... 26 V AC/DC	B3
42 ... 48 V AC/DC	D3
110 ... 127 V AC/DC	F3
200 ... 220 V AC/DC	M3
220 ... 240 V AC/DC	P3
240 ... 277 V AC/DC	U3
380 ... 420 V AC/DC	V3
440 ... 480 V AC/DC	R3
500 ... 550 V AC/DC	S3
575 ... 600 V AC/DC	T3

Solid-state operating mechanisms²⁾

21 ... 27.3 V AC/DC	B3	--
96 ... 127 V AC/DC	F3	F3
200 ... 277 V AC/DC	P3	P3

¹⁾ Operating range: $0.8 \times U_{s \min}$ to $1.1 \times U_{s \max}$.

²⁾ Operating range: $0.7 \times U_{s \min}$ to $1.25 \times U_{s \max}$.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

General data

Overview

Extensive accessories and spare parts are available for SIRIUS 3RT power contactors and SIRIUS 3RH2 contactor relays.

These components are easily fitted to the contactors without the use of any tools according to requirements.

Overview graphics with mountable accessories

- For 3RT2 contactors, [see pages 3/7 to 3/10](#)
- For 3RT1 contactors, [see pages 3/11 to 3/14](#)
- For 3RH2 contactor relays, [see page 5/5](#)

Version	For contactors 3RT2, Sizes S00 to S3; 3RH2, Size S00	3RT1, Sizes S6 to S12	Selection and ordering data Page
Accessories for 3RT contactors and 3RH2 contactor relays			
Auxiliary switch blocks			
Instantaneous			
• Solid-state compatible auxiliary switch blocks	3RH29.1	3RH19.1	3/87 ... 3/99
Delayed			
• Pneumatic time-delay auxiliary switch blocks	3RT2926-2P..1	--	3/100
• Solid-state time-delay auxiliary switch blocks	3RA2813, 3RA2814, 3RA2815	3RT1926-2E/-2F/-2G	3/100, 3/101
Surge suppressors			
• Without LED	3RT29.6-1B/-1C/-1D/-1E	3RT19.6-1C	3/102, 3/103
• With LED	3RT29.6-1J/-1L/-1M	--	3/103
Modules for contactor control			
Coupling links for control by PLC	3RH29.4-.GP11	--	3/104
3RA28 function modules			
• For direct on-line starting: ON delay or OFF-delay	3RA2811, 3RA2812, 3RA2831, 3RA2832	--	3/105
• For star-delta (wye-delta) starting	3RA2816	--	3/105
3RA27 function modules for IO-Link or AS-Interface			
• For direct-on-line, reversing or star-delta (wye-delta) starting	3RA271.-.A/.B/.C	--	3/106
Mechanical latching blocks	3RT2926-3A..31	--	3/108
OFF-delay devices for contactors with AC/DC and DC operation	3RT2916-2B..01	--	3/108
Link modules			
Link modules from motor starter protector to contactor	3RA..9..1	--	7/49
Safety main current connectors for two contactors	3RA29.6-1A	--	3/109
Assembly kits			
• For reversing contactor assemblies	3RA29.3-2AA..	3RA19.3-2A	3/109
• For contactor assemblies for star-delta (wye-delta) starting	3RA29...-2BB.., 3RA29.3-2C	3RA1953-3G, 3RA19.3-2../-3.	3/110, 3/111
Single wiring modules	3RA..9.3-3..A.	3RA19.3-3.	3/112
Star jumpers (links for paralleling), 3-pole	3RT.9.6-4BA3.	3RT19.6-4BA31	3/112
Mechanical interlock kits for two contactors	3RA29.2-2H	--	3/113
Mechanical interlocks for contactor assemblies	3RA2934-2B	3RA1954-2.	3/113
Mechanical connectors for contactor assemblies	3RA29.2-2..	3RA1932-2D	3/113
Terminal modules/adapters			
Links for paralleling for main circuits	3RT.9.6-4BB..1	--	3/114
Single-phase infeed terminals	3RA2943-3L	--	3/114
Three-phase infeed terminals	3RA2913-3K, 3RV29.5-5A..	--	3/114
• with increased clearances and creepage distances	3RV2935-5E	--	3/114
Three-phase busbars	3RV1915-1AB	--	3/114
Auxiliary terminals	--	3TX7500-0A	3/114
Box terminal blocks	--	3RT19...-4G	3/114
Solder pin adapters for contactor assembly on printed circuit boards	3RT1916-4KA..	--	3/115
Coil connection modules for connections from top or from below	3RT2926-4R..1.	--	3/115
Motor feeder connector	3RT1900-4RE01	--	3/115
Covers			
Terminal covers	3RT29.6-4EA..	3RT19.6-4EA.., 3TX65.6-3B	3/116
Sealable covers	3RT2916-4MA10	3RT1926-4MA10	3/116

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

General data

Version	For contactors 3RT2, Sizes S00 to S3; 3RH2, Size S00	3RT1, Sizes S6 to S12	Selection and ordering data
			Page
Accessories for 3RT contactors and 3RH2 contactor relays (continued)			
Miscellaneous accessories			
Base plates			
• For reversing contactor assemblies	--	3RT19.2-2A	3/117
• For contactor assemblies for star-delta (wye-delta) starting	3RA29.2-2F	3RA19.2-2.	3/117
Adapters for screw fixing	3RT1926-4P	--	3/117
EMC suppression modules	3RT2916-1P..	--	3/117
Additional load modules	3RT2916-1GA00	--	3/118
LED modules for displaying contactor operation	3RT2926-1QT00	3RT1926-1QT00	3/118
Control kit for manual operation	3RT29.6-4MC00	--	3/118
Insulation stop for securely holding back the conductor insulation for conductors up to 1 mm ²	3RT2916-4JA02	3RT1916-4JA02	3/119
Tools for opening spring-type terminals	3RA2908-1A	3RA2908-1A	3/119
Blank labels	3RT2900-1SB.0	3RT1900-1S..0	3/119
Spare Parts for 3RT2 Contactors			
Solenoid coils	3RT29...-5...1	--	3/120 , 3/121
Withdrawable coils	--	3RT19...-5....	3/122
Contacts with fixing parts	3RT29...-6.	3RT19...-6.	3/123
Arc chambers	--	3RT19...-7.	3/123

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Overview

Auxiliary switches

The auxiliary switches can be designed as positively driven contacts in 3RH contactor relays or also as mirror contacts in the case of 3RT power contactors.

For more information on positively driven operation and mirror contacts, [see Manuals → "More information", page 3/82, and in the selection and ordering data from page 3/87 onwards.](#)

Solid-state time-delay auxiliary switch blocks for mounting on 3RT2 contactors and 3RH2 contactor relays

[See pages 3/82 and 3/100](#)

The 3RA28 solid-state time-delay auxiliary switches which can be mounted onto the contactor are designed for applications in the range from 24 to 240 V AC/DC (wide voltage range). Both the electrical and mechanical connection are made by simple snap-on and locking.

The time-delay auxiliary switch is supplied with power directly by two plug-in contacts through the coil terminals of the contactor, in parallel with A./A2.

A protection circuit (varistor) is integrated in each module.

A sealable cover is available to protect against careless adjustment of the set times.

Note:

Mounting more auxiliary switches to the contactor is not permitted.

Surge suppressors

- Without LED (also for spring-type terminals)
Sizes S00 to S3, [see page 3/102](#)
- With LED (also for spring-type terminals):
Sizes S00 to S3, [see page 3/103](#)

All 3RT2 contactors and 3RH2 contactor relays can be retrofitted with RC elements or varistors for damping opening surges in the coil. Diodes or diode assemblies (comprising noise suppression diodes and Zener diodes for short break times) can be used.

The surge suppressors are plugged onto the front of size S00 contactors. Space is provided for them next to a snap-on auxiliary switch block.

Varistors, RC elements or diode assemblies can be plugged onto the front of size S0 to S3 contactors.

Coupling contactors are supplied either without overvoltage damping or with a suppressor diode, varistor or diode connected as standard, according to the version.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (noise suppression diode 6 to 10 times; diode assembly 2 to 6 times, varistor +2 to 5 ms).

Coupling links for control by PLC

[See pages 3/84 and 3/104](#)

- Operation with 24 V DC
- Operating range 17 to 30 V
- Low power consumption of 0.5 W
- An LED indicates the switching state.

The 3RH2924-1GP11 coupling link has an integrated surge suppressor (varistor) for the contactor coil being switched and is mounted onto the size S0 contactor coil via a coil connection module.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays

See pages 3/85 and 3/105

Simply by being plugged in place, the SIRIUS function modules enable different functionalities required for the assembly of starters to be realized in the feeder. The function modules and wiring kits thus help to reduce the wiring work within the feeder practically to zero.

SIRIUS function modules for direct-on-line starting

The electronic timing relays which can be mounted onto the contactor are available in these versions:

- Sizes S00 and S0 for applications in the range from 24 to 240 V AC/DC (wide voltage range)
- Sizes S2 and S3 for applications in either the range from 24 to 90 V AC/DC or 90 to 240 V AC/DC

Both the electrical and mechanical connection are made by simple snapping on and locking.

A protection circuit (varistor) is integrated in each module.

The electronic timing relay with semiconductor output uses two contact legs to actuate the contactor underneath by means of a semiconductor after the set time t has elapsed.

The switching state feedback is performed by a mechanical switching state indicator (plunger). In addition, the auxiliary switches in the contactors are freely accessible and can be used for feedbacks to the control system or for signal lamps.

A sealable cover is available to protect against careless adjustment of the set times.

The snap-on function modules for direct-on-line starting are used above all for realizing timing functions independently of the control system.

With the OFF-delay variant of the timing relay it is possible for example for the fan motor for cooling a main drive to be switched off with a delay so that sufficient cooling after operation is guaranteed; the programmer of the control system does not need to worry about such technical details of the plant.

The ON-delay timing relays enable for example the time-delayed starting of several drives so that the summation starting current does not rise too high, which could result in voltage failure.

The use of snap-on function modules for direct-on-line starting results in the following advantages:

- Reduction of control current wiring
- Prevention of wiring errors
- Reduction of testing costs
- Implementation of timing functions independently of the control system
- Less space required in the control cabinet compared to a separate timing relay
- No additive protection circuit required (varistor integrated)

Assembly of reversing starters

We offer ready-made wiring kits for the assembly of reversing starters. Use of these wiring kits offers further advantages; see page 3/161.

SIRIUS function modules for star-delta (weye-delta) starting

Both interlocking and timing functions are required for the assembly of star-delta (weye-delta) starters. With the function modules for star-delta (weye-delta) starting and the matching link modules for the main circuit, these starters can be assembled easily and with absolutely no errors.

The entire sequence in the control circuit is integrated in the snap-on modules. This covers:

- An adjustable star time t from 0.5 to 60 s
- A non-adjustable dead interval of 50 ms
- Electrical contacting of the contactors by means of coil pick-off (contact legs)
- Feedback of the switching state at the contactor using a mechanical switch position indicator (plunger)
- Electrical interlocking between the contactors

These modules do not require their own terminals and can therefore be used for contactors with both screw and spring-type terminals in all the sizes S00 to S3. To start the star-delta (weye-delta) starter, only the first of the three contactors (line contactor) is actuated, like in the case of a direct-on-line starter. All other functions then take place inside the individual modules.

This also offers advantages if the timing function was previously implemented in a controller, as it again results in a significant reduction in the number of PLC outputs, the programming work and the wiring outlay.

The kits for the main circuit include the mechanical interlock, the star jumper, the wiring modules at the top and at the bottom, and the required connectors or connecting clips.

A protection circuit (varistor) is integrated in the basic module.

The function modules for star-delta (weye-delta) starting are mostly used where current-limiting measures for starting a drive are required and a high level of availability is essential at the same time. This technology has been used with success for several decades and has the additional advantage of requiring relatively little know-how. Through the use of function modules, the assembly work with simple standard components is even easier and absolutely error-free.

The use of function modules for star-delta (weye-delta) starting results in the following advantages:

- Operation solely through the line contactor A1/A2 – no further control current wiring needed
- Prevention of wiring errors
- Reduction of testing costs
- Integrated electrical interlocking saves costs and prevents errors
- Less space needed in the control cabinet compared to using a separate timing relay
- Adjustable starting in star mode from 0.5 to 60 s
- Independent of the contactor's control supply voltage (24 to 240 V AC/DC)
- Varistor integrated – no additive protection circuit required
- Mechanically coded assembly enables easy configuration and reliable wiring
- Fewer versions – one module kit for screw and spring-type connection and for all the contactor sizes S00 to S3
- Mechanical interlocking (with wiring kit for the main circuit)

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

SIRIUS 3RA27 function modules for IO-Link or AS-Interface for mounting on 3RT2 contactors

See pages 3/86 and 3/106

The SIRIUS 3RA27 function modules enable the assembly of starters and contactor assemblies for direct-on-line, reversing and star-delta (wye-delta) starting without any additional, complicated wiring of the individual components. They include the key control functions required for the particular feeder, e.g. timing and interlocking, and can be connected to the control system via either IO-Link or AS-Interface.

The electrical and mechanical connection to the contactor is established by snapping on and locking. An additive protection circuit for the individual contactors can be dispensed with completely because a varistor is integrated in the modules. Feedback from the contactor contacts is performed with Hall sensors which provide reliable feedback concerning the switching state even under extremely dusty conditions.

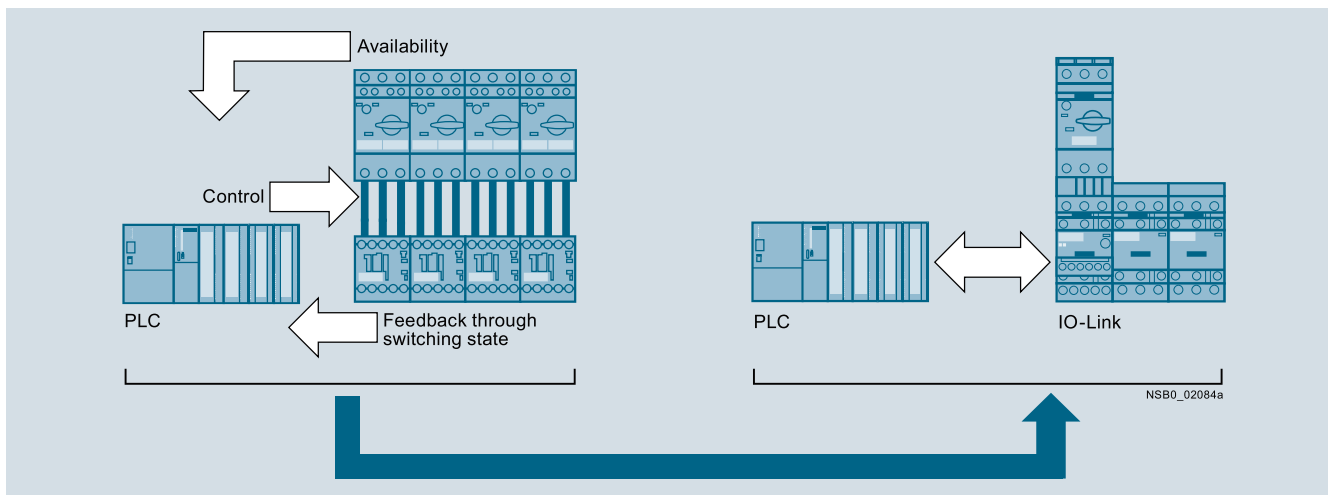
The starters are connected to the higher-level control system through IO-Link, with the possibility of connecting up to four starters as a group to one port of the IO-Link master,

or optionally via AS-Interface, Specification V2.1 or higher, in A/B technology. As a result, up to 62 starters can be connected to one master and the address is entered in the normal manner with an addressing unit.

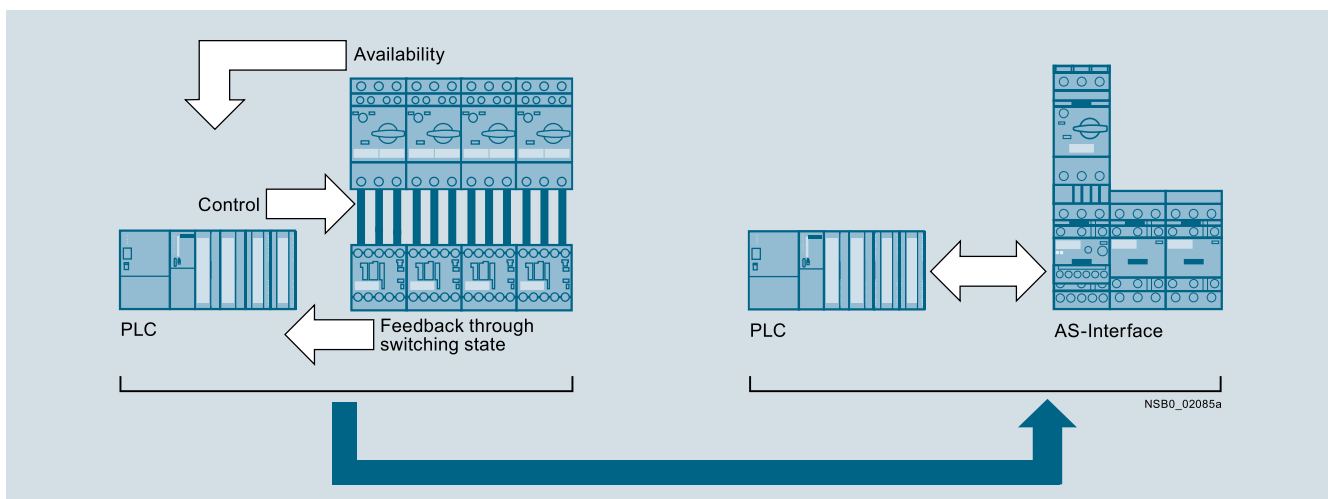
Through this type of connection to the control system, a maximum of wiring is saved. In the case of AS-Interface, the wiring amounts to the control supply voltage and the two individual wires for AS-Interface.

The following essential signals are thus transmitted:

- Availability of the feeder in response to an indirect inquiry from the motor starter protector/circuit breaker
- Starter control
- Feedback concerning the switching state of the starter



Signal transmission through IO-Link



Signal transmission through AS-Interface

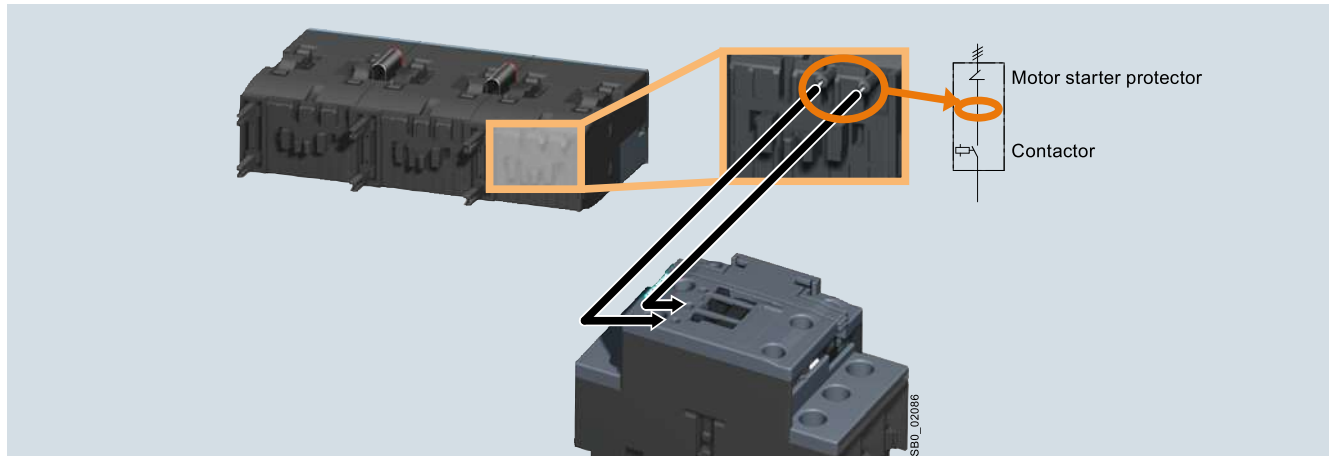
Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

The inquiry from the motor starter protector/circuit breaker does not take place through additive wiring between the auxiliary switch and the module but by means of a voltage inquiry at the contactor input.

This requires special versions of the contactors with voltage tap-off (see pages 3/58, 3/62, 3/67 and 3/69).



Availability signal through voltage tap-off

The following benefits result from the use of SIRIUS 3RA27 function modules:

- Reduction of control current wiring. In the case of IO-Link to no more than three cables for four feeders.
- Elimination of testing costs and wiring errors
- Reduction of configuration work
- Parameter server functionality
- Integration in TIA means unambiguous IO-Link diagnostics if a fault occurs

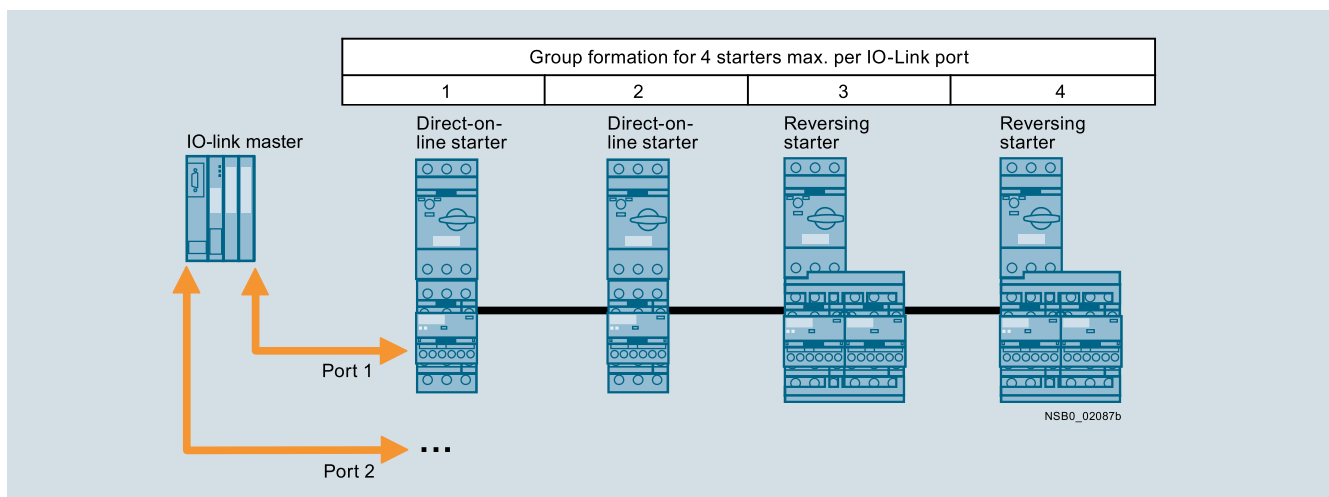
- Dispensing with IO modules saves space in the control cabinet
- All essential timing and interlocking functions for reversing duty and star-delta (wye-delta) starting are integrated
- No additive protection circuit required

For more information on IO-Link and AS-Interface, see "Industrial Communication", from page 2/1 onwards.

SIRIUS 3RA2711 function modules for IO-Link for mounting on 3RT2 contactors

By grouping up to four starters, it is possible to connect up to 16 starters to one master of the ET 200SP or S7-1200. In this case all the signals of the individual controls are made available directly in the process image of the input through only three individual wires per starter group. If the same potential is present

at the ET 200SP or S7-1200 master and at the switching devices, the wiring can be reduced further by connecting the supply voltage of the contactor coils to the communication wires via jumpers.



Group formation with IO-Link

In case of a malfunction, the corresponding error signals are also sent directly to the PLC in acyclic mode. This is in addition to transmission of the switching signals and status signals.

Possible error signals:

- Switching element defective
- No main voltage (motor starter protector tripped)
- No control supply voltage
- Limit position on the right / on the left
- Manual mode
- Process image fault

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

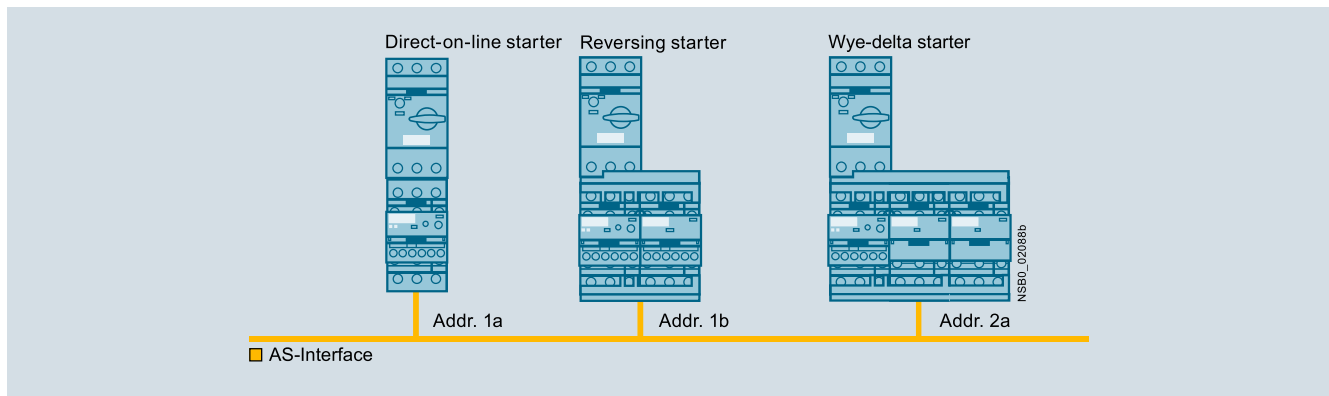
Accessories

This easy integration of the starters in the TIA world does not limit the flexibility in the field in the least. For example, all function modules have special terminals in order to enable direct local disconnection. These terminals can be connected for example to a position switch. The input interrupts the voltage supply to the contactor coil directly, i.e. without going through the PLC. These terminals are jumpered in the as-delivered state.

Local manual operation of the complete starter group is also straightforward using a hand-held device. The latter is easily connected to the last starter and can be built into the front panel of the control cabinet if required. This offers significant advantages particularly for commissioning.

SIRIUS function modules with IO-Link are used above all in machines and plants in which there are several motor feeders in one control cabinet. Using IO-Link, the connection of these feeders to the automation level is easy, quick and error-free. And with IO modules no longer needed, the width of the PLC is far smaller.

SIRIUS 3RA2712 function modules for AS-Interface for mounting on 3RT2 contactors



Topology with AS-Interface

This easy integration of the starters in the TIA world does not limit the flexibility in the field in the least. For example, all function modules have special terminals in order to enable direct local disconnection. These terminals can be connected for example to a position switch. The input interrupts the voltage supply to the contactor coil directly, i.e. without going through the PLC. These terminals are jumpered in the as-delivered state.

SIRIUS function modules with AS-Interface are recommended above all in machines and plants requiring easy connection of several different sensors and actuators both inside and outside the control cabinet to the higher-level control system. And with IO modules no longer needed, the width of the PLC is far smaller.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Technical specifications

More information

Technical specifications

- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see <https://support.industry.siemens.com/cs/ww/en/ps/16208/td>
- For SIRIUS 3RT1 contactors, see <https://support.industry.siemens.com/cs/ww/en/ps/16209/td>

FAQs

- For SIRIUS 3RT2 contactors and SIRIUS 3RH2 contactor relays, see <https://support.industry.siemens.com/cs/ww/en/ps/16208/faq>
- For SIRIUS 3RT1 contactors, see <https://support.industry.siemens.com/cs/ww/en/ps/16209/faq>

Manuals, see

- System Manual "SIRIUS – System Overview", <https://support.industry.siemens.com/cs/WW/en/view/60311318>
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", <https://support.industry.siemens.com/cs/WW/en/view/60306557>
- "SIRIUS manual - SIRIUS 3RA28 Function Modules for mounting on 3RT2 Contactors", <https://support.industry.siemens.com/cs/ww/en/view/60279150>
- Manual "SIRIUS 3RA2711 Function Modules for IO-Link", <https://support.industry.siemens.com/cs/ww/en/view/39319600>
- Manual "SIRIUS 3RA2712 Function Modules for AS-Interface", <https://support.industry.siemens.com/cs/ww/en/view/39318922>

Solid-state time-delay auxiliary switch blocks for mounting on 3RT202 to 3RT204 contactors (sizes S00 to S3) and 3RH2 contactor relays (size S00)

Type	3RA2813	3RA2814	3RA2815
Function	ON-delay	OFF-delay with control signal	OFF-delay without control signal
General data			
Dimensions (basic unit with mounted solid-state time-delay auxiliary switch block)	See 3RT2 contactors (pages 3/23, 3/29, 3/34, 3/39) and 3RH2 contactor relays (page 5/8)		
Rated insulation voltage U_i Pollution degree 3, overvoltage category III	V AC	300	
Rated impulse withstand voltage U_{imp}	kV AC	4	
Permissible ambient temperature			
• During operation	°C	-25 ... +60	
• During storage	°C	-40 ... +80	
Degree of protection acc. to IEC 60529		IP20	
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms	15/11	
Vibration resistance acc. to IEC 60068-2-6	Hz/mm	10 ... 55/0.35	
Electromagnetic compatibility (EMC)		IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1	
Overvoltage protection		Varistor integrated	
Permissible mounting position		Any (for the mounting position of 3RT2 contactors, see pages 3/23, 3/29, 3/34, 3/39; for the mounting position of 3RH2 contactor relays, see page 5/7)	
Control			
Operating range of excitation		0.85 ... 1.1 × U_s , 0.95 ... 1.05 times the rated frequency	
Rated power	W	1	
• Power consumption at 230 V AC, 50 Hz	VA	2	
Recovery time	ms	150	--
Minimum ON period	ms	--	35
Setting accuracy , typ., with reference to upper limit of scale		± 15 %	
Repeat accuracy , max.		± 1 %	
Load side			
Rated operational currents I_e			
• AC-15 at 24 ... 250 V, 50 Hz	A	3	
• DC-13	A	1	
- At 24 V	A	0.2	
- At 125 V	A	0.1	
- At 250 V	A		
Mechanical endurance	Operat- ing cycles	10 × 10 ⁶	
Electrical endurance at AC-15, 250 V, 3 A	Operat- ing cycles	100 000	
Switching frequency for load			
• With I_e at 230 V AC	h ⁻¹	2 500	
• With 3RT2 contactor at 230 V AC	h ⁻¹	2 500	
Residual current , max.	mA	--	
Voltage drop , max., with conducting output	VA	--	
Short-circuit protection			
• Fuse links, operational class gG: DIAZED, type 5SB	A	4	

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Type		3RA2813 ON-delay	3RA2814 OFF-delay with control signal	3RA2815 OFF-delay without control signal
Function				
Conductor cross-sections				
Connection type (1 or 2 conductors can be connected)		 Screw terminals		
• Solid	mm ²	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)		
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)		
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)		
• Terminal screws		M3 (for standard screwdriver size 2 or Pozidriv 2)		
• Tightening torque	Nm	0.8 ... 1.2		
Connection type (1 or 2 conductors can be connected)		 Spring-type terminals		
• Solid	mm ²	2 x (0.25 ... 1.5)		
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.25 ... 1.5)		
• Finely stranded without end sleeve	mm ²	2 x (0.25 ... 1.5)		
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)		
• Operating devices	mm	3.0 x 0.5		

Solid-state time-delay auxiliary switch blocks, for snapping onto 3RT1 contactors

Type	3RT1926-2E, 3RT1926-2F, 3RT1926-2G	Type	3RT1926-2E, 3RT1926-2F, 3RT1926-2G
Size	S6 to S12	Size	S6 to S12
General data		Load side	
Dimensions (W x H x D)	mm 45 x 26 x 50	Rated operational currents I_e	
Rated insulation voltage U_i	V AC 250	• AC-15, 230 V, 50 Hz	A 3
Pollution degree 3		• DC-13, 24 V	A 1
Overvoltage category III according to IEC 60664-1		• DC-13, 110 V	A 0.2
Permissible ambient temperature		• DC-13, 230 V	A 0.1
• During operation	°C -25 ... +60	Short-circuit protection	
• During storage	°C -40 ... +80	Fuse links, operational class gG:	A 4
Degree of protection acc. to IEC 60529		DIAZED, type 5SB	
Terminals	IP20	Mechanical endurance	Operating cycles 10 x 10 ⁶
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms 15/11	Switching frequency for load	
Vibration resistance acc. to IEC 60068-2-6	Hz/mm 10 ... 55/0.35	• with I_e at 230 V AC	h ⁻¹ 2 500
Electromagnetic compatibility (EMC)	IEC 61812-1	• With 3RT2016 contactor at 230 V AC	h ⁻¹ 5 500
Permissible mounting position	Any (see 3RT1 contactors, page 3/44)	Conductor cross-sections	
Control		Connection type (1 or 2 conductors can be connected)	 Screw terminals
Operating range of excitation	0.85 ... 1.1 x U_s , 0.95 ... 1.05 times the rated frequency	• Solid	mm ² 2 x (0.5 ... 1.5) 2 x (0.75 ... 4)
Rated power	W 2	• Finely stranded with end sleeve	mm ² 2 x (0.5 ... 2.5)
Power consumption at 230 V AC, 50 Hz	VA 4	• AWG cables, solid or stranded	AWG 2 x (18 ... 14)
Recovery time	ms 150	• Terminal screws	M3
Minimum ON period	ms 200 (OFF-delay)	• Tightening torque	Nm 0.8 ... 1.2
Setting accuracy, typ. with reference to upper limit of scale	% ± 15		
Repeat accuracy, max.	% ± 1		

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Coupling links for control by PLC

Type		3RH2924-1GP11		3RH2914-.GP11
Mounting on contactors of size		S0		S00 to S3
General data				
Standards		IEC 60947		
Rated insulation voltage U_i (pollution degree 3)	V	300		
Protective separation between coil and contacts acc. to IEC 60947-1, Appendix N	V AC	Up to 300		
Degree of protection acc. to IEC 60529				
• Connections		IP20		
Permissible ambient temperature				
• During operation	°C	-25 ... +60		
• During storage	°C	-40 ... +80		
Control side				
Rated control supply voltage U_s	V DC	24		
Operating range	V DC	17 ... 30		
Power consumption at U_s	W	0.5		
Nominal current input	mA	20		
Release voltage	V	≥ 4		
Function display		Yellow LED		
Protection circuit		Varistors		
Load side				
Mechanical endurance	Operat- ing cycles	20 million	10 million	
Electrical endurance at I_e	Operat- ing cycles	0.1 million		
Switching frequency	h ⁻¹	5 000 operating cycles/h		
Make-time	ms	Approx. 7		
Break-time	ms	Approx. 4		
Bounce time	ms	Approx. 2		
Contact material		AgSnO ₂		
Switching voltage	V AC/DC	24 ... 250		
Rated operational current I_e				
• AC-15/AC-14 at 230 V	A	3		
• DC-13 at 230 V	A	0.1		
Permissible residual current of the electronics (with 0 signal)		mA	2.5	
Conductor cross-sections				
Connection type (1 or 2 conductors can be connected)		 Screw terminals		
• Solid	mm ²	2 x (0.5 ... 2.5)		
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5)		
• Terminal screws		M3		
Connection type (1 or 2 conductors can be connected)		 Spring-type terminals		
• Solid	mm ²	--	2 x (0.25 ... 1.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	--	2 x (0.25 ... 1.5)	
• Finely stranded without end sleeve	mm ²	--	2 x (0.25 ... 1.5)	
• AWG cables, solid or stranded	AWG	--	2 x (24 ... 16)	
• Operating devices	mm	--	3.0 x 0.5	

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays

Type			3RA2811	3RA2831	3RA2812	3RA2832	3RA2816
Mounting on contactors of size			S00, S0	S2, S3	S00, S0	S2, S3	S00 to S3
Function			For direct-on-line starting				For star-delta (wye-delta) starting
			ON-delay		OFF-delay with control signal		
General data							
Dimensions (basic unit with mounted function module)			See 3RT2 contactors (pages 3/23, 3/29, 3/34, 3/39) and 3RH2 contactor relays (page 5/8)				
Rated insulation voltage U_i Pollution degree 3 Overvoltage category III	V AC		300				
Rated impulse withstand voltage U_{imp}	kV AC		4				
Overvoltage protection			Varistor integrated				
Recovery time	ms		50				
Minimum ON period	ms		--		35		150
Setting accuracy With reference to upper limit of scale	Typ.		± 15 %				
Repeat accuracy	Max.		± 1 %				
Degree of protection acc. to IEC 60529			IP20				
Permissible ambient temperature							
• During operation	°C		-25 ... +60				
• During storage	°C		-40 ... +80				
Shock resistance Half-sine acc. to IEC 60068-2-27	g/ms		15/11				
Vibration resistance acc. to IEC 60068-2-6	Hz/mm		10 ... 55/0.35				
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 61812-1, IEC 60947-4-1				
Permissible mounting position			Any (for the mounting position of 3RT2 contactors, see pages 3/23, 3/29, 3/34, 3/39; for the mounting position of 3RH2 contactor relays, see page 5/7)				
Control side							
Operating range of excitation			0.85 ... 1.1 x U_s , 0.95 ... 1.05 times the rated frequency				
Rated power	W		1				
• Power consumption at 230 V AC, 50 Hz	VA		1				2
Load side							
Mechanical endurance	Operating cycles		100 x 10 ⁶				10 x 10 ⁶
Electrical endurance							
• With 3RT2028 contactor	Operating cycles		100 000				--
• At AC-15, 250 V, 3 A	Operating cycles		--				100 000
Switching frequency for load							
• With I_g at 230 V AC	h ⁻¹		2 500				--
• With 3RT2 contactor at 230 V AC	h ⁻¹		2 500				--
Residual current	Max.	mA	5	--			
Voltage drop With conducting output	Max.	VA	3.5	--			
DIAZED fuse protection	Operational class gG	A	--				4
Conductor cross-sections							
Connection type (1 or 2 conductors can be connected)			 Screw terminals				
• Solid	mm ²		1 x (0.5 ... 4), 2 x (0.5 ... 2.5)				--
• Finely stranded with end sleeve (DIN 46228-1)	mm ²		1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)				--
• AWG cables, solid or stranded	AWG		2 x (20 ... 14)				--
• Terminal screws			M3 (for standard screwdriver size 2 or Pozidriv 2)				--
• Tightening torque	Nm		0.8 ... 1.2				--
Connection type (1 or 2 conductors can be connected)			 Spring-type terminals				
• Operating devices	mm		3.0 x 0.5				--
• Solid	mm ²		2 x (0.25 ... 1.5)				--
• Finely stranded with end sleeve (DIN 46228-1)	mm ²		2 x (0.25 ... 1.5)				--
• Finely stranded without end sleeve	mm ²		2 x (0.25 ... 1.5)				--
• AWG cables, solid or stranded	AWG		2 x (24 ... 16)				--

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

3RA27 function modules for IO-Link for mounting on 3RT2 contactors

Type	3RA2711		
General data			
Dimensions	See 3RT2 contactors on pages 3/23, 3/29, 3/34 and 3/39		
Suitable for IO-Link masters acc. to specification	1.1		
Permissible ambient temperature			
• During operation	Acc. to IEC 60947-1	°C	-25 ... +60
• During storage	Acc. to IEC 60721-3-1	°C	-40 ... +80
• During transport	Acc. to IEC 60721-3-2	°C	-40 ... +80
Degree of protection			IP20
Operating voltage U_{HI}		V DC	24 ± 20 %
Max. length of the cables for the input Y1–Y2	Acc. to EN 50295	m	30
Electromagnetic compatibility (EMC)			IEC 61000-6-2, IEC 61000-6-4, IEC 60947-4-1
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)		 Screw terminals	
• Solid	mm ²	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)	
• Terminal screws		M3 (for standard screwdriver Ø 6 mm or Pozidriv 2)	
• Tightening torque of the terminal screws	Nm	0.8 ... 1.2	
Connection type (1 or 2 conductors can be connected)		 Spring-type terminals	
• Operating devices	mm	3.0 x 0.5	
• Solid	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.25 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)	

3RA27 function modules for AS-Interface for mounting on 3RT2 contactors

Type	3RA2712		
General data			
Dimensions	See 3RT2 contactors on pages 3/23, 3/29, 3/34 and 3/39		
Slave type	A/B slave		
Suitable for AS-i masters acc. to specification	2.1 or higher		
AS-i slave profile IO.ID.ID2	7.A.E		
ID1 code (factory setting)	7		
Permissible ambient temperature			
• During operation	Acc. to IEC 60947-1	°C	-25 ... +60
• During storage	Acc. to IEC 60721-3-1	°C	-40 ... +80
• During transport	Acc. to IEC 60721-3-2	°C	-40 ... +80
Degree of protection	IP20		
Operational voltage			
• AS-Interface	V	26.5 ... 31.6	
• AUX PWR 24 V DC	V	24 ± 20 %	
Current consumption, max.			
• AS-Interface	mA	30	
• AUX PWR			
- Maximum pick-up/hold current	Size S00	mA	200/200
	Size S0	mA	300/300
	Size S2	mA	1 300/50
	Size S3	mA	4 000/70
Max. length of the cables for the input Y1–Y2	Acc. to EN 50295	m	30
Electromagnetic compatibility (EMC)	IEC 61000-6-2, IEC 61000-6-4, IEC 60947-4-1		
Conductor cross-sections			
Connection type (1 or 2 conductors can be connected)	 Screw terminals		
• Solid	mm ²	1 x (0.5 ... 4), 2 x (0.5 ... 2.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	1 x (0.5 ... 2.5), 2 x (0.5 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (20 ... 14)	
• Terminal screws		M3 (for standard screwdriver Ø 6 mm or Pozidriv 2)	
• Tightening torque of the terminal screws	Nm	0.8 ... 1.2	
Connection type (1 or 2 conductors can be connected)	 Spring-type terminals		
• Operating devices	mm	3.0 x 0.5	
• Solid	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.25 ... 1.5)	
• Finely stranded without end sleeve	mm ²	2 x (0.25 ... 1.5)	
• AWG cables, solid or stranded	AWG	2 x (24 ... 16)	

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

Selection and ordering data

Auxiliary switch: Terminal designations and identification numbers for auxiliary contacts

Terminal designations

The terminal designations are 2-digit, e.g. 13, 14, 21, 22:

- Tens digit: Sequence digit
 - Related terminals have the same sequence digit
- Units digit: Function digit
 - 1-2 for normally closed contacts (NC)
 - 3-4 for normally open contacts (NO)

Identification numbers

The identification number indicates the number and type of the auxiliary contacts, e.g. 40, 31, 22, 13:

- 1st digit: number of normally open contacts (NO)
- 2nd digit: number of normally closed contacts (NC)

Examples:

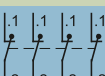
- 31 = 3 NO + 1 NC
- 40 = 4 NO

Selection aid for mountable auxiliary switch blocks for power contactors and contactor relays

The auxiliary switch blocks of the 3RH29 series for mounting on the front and side can be used for 3RT2 power contactors as well as for 3RH2 contactor relays.

The possible combinations of basic unit and mounted auxiliary switch block can be found in the tables; see pages 3/88 to 3/92.

Where the columns and lines intersect (blue and green in the example) you will find the identification number for the combination of basic unit (column) and auxiliary switch block (line).

Additional auxiliary switch blocks		3-pole contactors		
Article number	Auxiliary contacts	3RT201	3RT201	3RT202 to 3RT204
	Version	S00	S00	S0 to S3
	NO NC	10	01	11
				
		2, 3, 4, 5	5, 6, 7, 8	3, 4, 5, 6
According to EN 50012 ¹⁾				
Auxiliary switch blocks without NO contacts				
3RH2911-□HA01	-- 1 	11	02	12
3RH2911-□HA02	-- 2 	12	03	13
3RH2911-□HA03	-- 3 	13	04	14
3RH2911-□FA04	-- 4 	14	--	--
Auxiliary switch blocks with 1 NO contact				
3RH2911-□HA10	1 -- 	20	11	21

1

For screw terminals

2

For spring-type terminals

¹⁾ Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

Example 1

Basic unit: 3-pole 3RT2017 motor contactor with 1 NO

Required: 1 NO + 4 NC (Ident. No. 14)

Result: 3RH2911-FA04 auxiliary switch block

Example 2

Basic unit: 3-pole 3RT2023 motor contactor with 1 NO + 1 NC

Required: 1 NO + 4 NC (Ident. No. 14)

Result: Auxiliary switch block 3RH2911-HA03

	Example 1	Example 2
Type	3RT20 motor contactor, S00 with 1 NO	3RT20 motor contactor, S0 with 1 NO + 1 NC
Sequence digit	2. 3. 4. 5.	3. 4. 5. 6.
Type	Auxiliary switch blocks with 4 NC, 3RH2911-FA04	Auxiliary switch blocks with 3 NC, 3RH2911-HA03
Function digit	.1 .1 .1 .1 .2 .2 .2 .2	.1 .1 .1 .2 .2 .2
Combination	3RT20 motor contactor, S00 with aux. switch block	3RT20 motor contactor, S0 with aux. switch block
Terminal designation	13 21 31 41 51 14 22 32 42 52	13 21 31 41 51 14 22 32 42 52
Result	Ident. No. 14	Ident. No. 14

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks		3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts Version	S00 3RT201	S0 to S3 3RT202, 3RT203, 3RT2.4		S00 3RT231	3RT251	S0, S2 3RT232, 3RT233	3RT252, 3RT253	S00 3RH21, 3RH24		
	NO NC	10 01	11		-- --		11 11		40E 31E	22E	
		2. 3. 4. 5. 5. 6. 7. 8.	3. 4. 5. 6.		1. 2. 3. 4. 1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8.	5. 6. 7. 8.	5. 6. 7. 8.	
		According to EN 50012 ¹⁾			According to EN 50012 ¹⁾				According to EN 50011 ¹⁾		

Auxiliary switch blocks, front

Without NO contact

3RH2911-□HA01	-- 1		11	02	12	01	01	12	12	41X	32X	23X
3RH2911-□HA02	-- 2		12	03	13	02	02	13	--	42E	33X	24
3RH2911-□HA03	-- 3		13	04	14	03	--	--	--	43	34	--
3RH2911-□FA04	-- 4		14	--	--	--	--	--	--	44E	--	--

With 1 NO contact

3RH2911-□HA10	1 --		20	11	21	10	10	21	21	50E	41E	32E
3RH2911-□HA11	1 1		21	12	22	11	11	22	22	51X	42X	33X
3RH2911-□HA12	1 2		22	13	23	12	12	23	--	52	43	34
3RH2911-□HA13	1 3		23	14	24	13	--	--	--	53X	44X	--

With 2 NO contacts

3RH2911-□HA20	2 --		30	21	31	20	20	31	31	60E	51X	42X
3RH2911-□HA21	2 1		31	22	32	21	21	32	32	61	52	43
3RH2911-□HA22	2 2		32	23	33	22	22	33	--	62X	53	44X
3RH2911-□FA22	2 2		32	23	33	22	22	33	--	62X	53	44X

With 3 NO contacts

3RH2911-□HA30	3 --		40	31	41	30	30	41	41	70	61	52
3RH2911-□HA31	3 1		41	32	42	31	31	42	42	71X	62X	53X

With 4 NO contacts

3RH2911-□FA40	4 --		50	41	51	40	40	51	51	80E	71X	62X
---------------	------	--	----	----	----	----	----	----	----	-----	-----	-----

¹⁾ Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks		3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts Version	S00 3RT201	S0 to S3 3RT202, 3RT203, 3RT2.4		S00 3RT231	3RT251	S0, S2 3RT232, 3RT233	3RT252, 3RT253	S00 3RH21, 3RH24		
	NO NC	10 01	11		-- --		11 11		40E 31E 22E		
											
		2. 3. 4. 5. 5. 6. 7. 8.	3. 4. 5. 6.		1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8.	5. 6. 7. 8.	5. 6. 7. 8.
		According to EN 50005			According to EN 50005				According to EN 50005		

Auxiliary switch blocks, front

With make-before-break¹⁾

3RH2911-□FB11	1 1		21	12	22	11	11	22	22	51	42	33
3RH2911-□FB22	2 2		32	23	33	22	22	33	--	62	53	44
3RH2911-□FC22	2 2		32	23	33	22	22	33	--	62	53	44

Complete inscription with terminals from top or bottom

3RH2911-1AA10	1 --		20	11	21	10	10	21	21	50	41	32
3RH2911-1BA10	1 --		20	11	21	10	10	21	21	50	41	32
3RH2911-1AA01	-- 1		11	02	12	01	01	12	12	41	32	23
3RH2911-1BA01	-- 1		11	02	12	01	01	12	12	41	32	23
3RH2911-1LA11	1 1		21	12	22	11	11	22	22	51	42	33
3RH2911-1MA11	1 1		21	12	22	11	11	22	22	51	42	33
3RH2911-1LA20	2 --		30	21	31	20	20	31	31	60	51	42
3RH2911-1MA20	2 --		30	21	31	20	20	31	31	60	51	42

¹⁾ Contacts with make-before-break have no mirror contact function.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays
Accessories

Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks		3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts Version	S00 3RT201	S0 to S3 3RT202, 3RT203, 3RT2.4		S00 3RT231	3RT251	S0, S2 3RT232, 3RT233	3RT252, 3RT253	S00 3RH21, 3RH24		
	NO NC	10 01	11		--	--	11 11		40E 31E 22E		
		2. 3. 4. 5. 5. 6. 7. 8.	3. 4. 5. 6.		1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8.	5. 6. 7. 8.	5. 6. 7. 8.
		According to EN 50005			According to EN 50005				According to EN 50011 ¹⁾		

Auxiliary switch blocks, front

With complete inscription (for contactor relays)²⁾

3RH2911-□GA40	4	--		--	--	--	--	--	--	80E	--	--
3RH2911-□GA31	3	1		--	--	--	--	--	--	71E	--	--
3RH2911-□GA22	2	2		--	--	--	--	--	--	62E	--	--
3RH2911-□GA13	1	3		--	--	--	--	--	--	53E	--	--
3RH2911-□GA04	--	4		--	--	--	--	--	--	44E	--	--

Complete inscription

3RH2911-□XA40-0MA0	4	--		50	41	51	40	40	51	51	80E	71X	62X
3RH2911-□XA31-0MA0	3	1		41	32	42	31	31	42	42	71E	62X	53
3RH2911-□XA22-0MA0	2	2		32	23	33	22	22	33	--	62E	53	44X
3RH2911-□XA04-0MA0	--	4		14	--	--	--	--	--	--	44E	--	--

Solid-state compatible

3RH2911-□NF02	--	2		12	03	13	02	02	13	--	42	33	24
3RH2911-□NF11	1	1		21	12	22	11	11	22	22	51	42	33
3RH2911-□NF20	2	--		30	21	31	20	20	31	31	60	51	42

¹⁾ Combinations according to EN 50011 and IEC 60947-5-1 are in **bold** print.
All combinations comply with EN 50005.

²⁾ For selection and ordering data, see page 3/95.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

Additional auxiliary switch blocks		3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts Version	S00 3RT201	S0 to S3 3RT202, 3RT203, 3RT2.4		S00 3RT231	3RT251	S0, S2 3RT232, 3RT233	3RT252, 3RT253	S00 3RH21		
	NO NC	10 01	11		-- --		11 11		40E 31E	22E	
		2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8.	5. 6. 7. 8.	5. 6. 7. 8.
		According to EN 50012 ¹⁾			According to EN 50012 ¹⁾				According to EN 50011 ¹⁾		

Lateral auxiliary switch blocks

For size S00

		Left	Right										
3RH2911-□DA02	-- 2			12	--	--	02	02	--	--	--	--	--
3RH2911-□DA02	-- 4			14	--	--	--	--	--	--	--	--	--
3RH2911-□DA11	1 1			21	--	--	11	11	--	--	--	--	--
3RH2911-□DA11	2 2			32	--	--	22	22	--	--	--	--	--
3RH2911-□DA20	2 --			30	--	--	20	20	--	--	--	--	--
3RH2911-□DA20	4 --			50	--	--	40	40	--	--	--	--	--
3RH2911-□DA20 + 3RH2911-□DA11	2 -- 1 1			41	--	--	31	31	--	--	--	--	--
3RH2911-□DA20 + 3RH2911-□DA02	2 -- -- 2			32	--	--	22	22	--	--	--	--	--
3RH2911-□DA11 + 3RH2911-□DA02	1 1 -- 2			23	--	--	13	--	--	--	--	--	--

For sizes S0 to S3

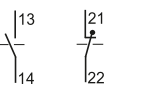
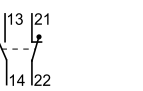
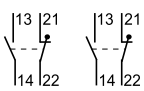
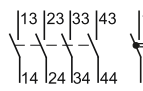
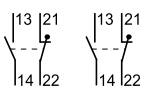
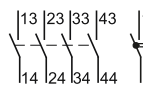
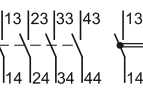
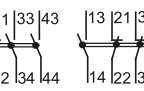
3RH2921-□DA02	-- 2			12	03	13	02	02	13	--	--	--	--
3RH2921-□DA02	-- 4			14	--	--	--	--	--	--	--	--	--
3RH2921-□DA11	1 1			21	12	22	11	11	22	22	--	--	--
3RH2921-□DA11	2 2			32	23	33	22	22	33	--	--	--	--
3RH2921-□DA20	2 --			30	21	31	20	20	31	31	--	--	--
3RH2921-□DA20	4 --			50	41	51	40	40	51	51	--	--	--

¹⁾ Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

Power Contactors for Switching Motors

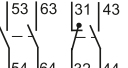
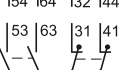
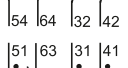
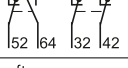
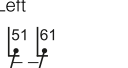
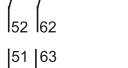
Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Auxiliary switch blocks, instantaneous

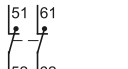
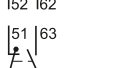
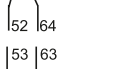
Additional auxiliary switch blocks		3-pole contactors			4-pole contactors				Contactor relays		
Article number	Auxiliary contacts Version	S00 3RT201	S0 to S3 3RT202, 3RT203, 3RT2.4		S00 3RT231	3RT251	S0, S2 3RT232, 3RT233	3RT252, 3RT253	S00 3RH21		
	NO NC	10 01	11		--	--	11 11		40E	31E	22E
											
		2. 3. 4. 5.	5. 6. 7. 8.	3. 4. 5. 6.	1. 2. 3. 4.	1. 2. 3. 4.	3. 4. 5. 6.	3. 4. 5. 6.	5. 6. 7. 8.	5. 6. 7. 8.	5. 6. 7. 8.
		According to EN 50012 ¹⁾			According to EN 50012 ¹⁾				According to EN 50011 ¹⁾		

Lateral auxiliary switch blocks

For sizes S00 to S3

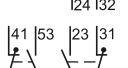
		Left	Right										
3RH2921-□DA20	2	--		41	32	42	31	31	42	42	--	--	--
3RH2921-□DA11	1	1											
3RH2921-□DA20	2	--		32	23	33	22	22	33	--	--	--	--
3RH2921-□DA02	--	2											
3RH2921-□DA11	1	1		23	14	24	13	--	--	--	--	--	--
3RH2921-□DA02	--	2											

For contactor relays²⁾

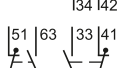
		Left											
3RH2921-□DA02	--	2		--	--	--	--	--	--	--	42Z	33X	24
3RH2921-□DA11	1	1		--	--	--	--	--	--	--	51X	42X	33X
3RH2921-□DA20	2	--		--	--	--	--	--	--	--	60Z	51X	42X

Solid-state compatible

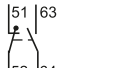
For size S00

		Left	Right										
3RH2911-2DE11	1	1		21	--	--	11	11	--	--	--	--	--
3RH2911-2DE11	2	2		32	--	--	22	22	--	--	--	--	--

For sizes S00 to S3

		Left	Right										
3RH2921-2DE11	1	1		21	12	22	11	11	22	22	--	--	--
3RH2921-2DE11	2	2		32	23	33	22	22	33	--	--	--	--

For contactor relays²⁾

		Left											
3RH2921-2DE11	1	1		--	--	--	--	--	--	--	51X	42X	33X

¹⁾ Combinations according to EN 50012, EN 50011 and IEC 60947-5-1 are in **bold** print. All combinations comply with EN 50005.

²⁾ Without positively driven operation.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RH2911-1HA22



3RH2911-2HA22

For contactors/ contactor relays ¹⁾		Auxiliary contacts Version	SD	Screw terminals		SD	Spring-type terminals	
		 		Article No.	Price per PU		Article No.	Price per PU
Type	NO	NC	d			d		

Auxiliary switch blocks for snapping onto the front

Sizes S00 to S3

3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	--	1		▶	3RH2911-1HA01	▶	3RH2911-2HA01
3RH21, 3RH24	--	2		▶	3RH2911-1HA02	▶	3RH2911-2HA02
	--	3		5	3RH2911-1HA03	5	3RH2911-2HA03
	1	--		▶	3RH2911-1HA10	▶	3RH2911-2HA10
	1	1		▶	3RH2911-1HA11	▶	3RH2911-2HA11
	1	2		▶	3RH2911-1HA12	▶	3RH2911-2HA12
	1	3		▶	3RH2911-1HA13	▶	3RH2911-2HA13
	2	--		▶	3RH2911-1HA20	▶	3RH2911-2HA20
	2	1		▶	3RH2911-1HA21	▶	3RH2911-2HA21
	2	2		▶	3RH2911-1HA22	▶	3RH2911-2HA22
	3	--		5	3RH2911-1HA30	5	3RH2911-2HA30
	3	1		▶	3RH2911-1HA31	▶	3RH2911-2HA31

¹⁾ For detailed information on use, see page 3/88.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RH2911-1FC22



3RH2911-2FC22



3RH2911-1AA01



3RH2911-1BA01



3RH2911-1LA11



3RH2911-1MA11

For contactors/ contactor relays ¹⁾	Connections Position	Auxiliary contacts Version	SD	Screw terminals	SD	Spring-type terminals
Type		NO NC NO NC	d	Article No. Price per PU	d	Article No. Price per PU

Auxiliary switch blocks for snapping onto the front

Sizes S00 to S3

3RT2. 1, 3RT2. 2, 3RT2. 3, 3RT2. 4	--	4	--	--	--		▶ 3RH2911-1FA40	▶ 3RH2911-2FA40
3RH21, 3RH24	--	2	2	--	--		▶ 3RH2911-1FA22	▶ 3RH2911-2FA22
	--	--	4	--	--		▶ 3RH2911-1FA04	▶ 3RH2911-2FA04
	--	--	--	1	1		▶ 3RH2911-1FB11	▶ 3RH2911-2FB11
	--	1	1	1	1		▶ 3RH2911-1FB22	▶ 3RH2911-2FB22
	--	--	--	2	2		▶ 3RH2911-1FC22	▶ 3RH2911-2FC22
1- and 2-pole auxiliary switch blocks, cable entry from top or bottom								
3RT2. 1, 3RT2. 2, 3RT2. 3, 3RT2. 4	Top	1	--	--	--		▶ 3RH2911-1AA10	--
	Bottom	1	--	--	--		▶ 3RH2911-1BA10	--
3RH21, 3RH24	Top	--	1	--	--		▶ 3RH2911-1AA01	--
	Bottom	--	1	--	--		▶ 3RH2911-1BA01	--
	Top	1	1	--	--		▶ 3RH2911-1LA11	--
	Bottom	1	1	--	--		▶ 3RH2911-1MA11	--
	Top	2	--	--	--		▶ 3RH2911-1LA20	--
	Bottom	2	--	--	--		▶ 3RH2911-1MA20	--

¹⁾ For detailed information on use, see pages 3/88 and 3/89.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1GA22



3RH2911-2GA22

For contactor relays ¹⁾	Contactor relay with auxiliary switch block	Auxiliary contacts	SD	Screw terminals	SD	Spring-type terminals
	Ident. No.	Version				
Type		NO NC	d	Article No. Price per PU	d	Article No. Price per PU

Auxiliary switch blocks for snapping onto the front

Size S00

Blocks for the assembly of contactor relays with 8 contacts

3RH2140, 3RH2440, Ident. No. 40E	80E	4	--		► 3RH2911-1GA40	► 3RH2911-2GA40
	71E	3	1		► 3RH2911-1GA31	► 3RH2911-2GA31
	62E	2	2		► 3RH2911-1GA22	► 3RH2911-2GA22
	53E	1	3		► 3RH2911-1GA13	► 3RH2911-2GA13
	44E	--	4		► 3RH2911-1GA04	► 3RH2911-2GA04

¹⁾ For detailed information on use, see page 3/90.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH2911-1XA22-0MA0



3RH2911-2XA22-0MA0

For contactors/ contactor relays ¹⁾	Auxiliary contacts	SD	Screw terminals	SD	Spring-type terminals
	Version				
Type	NO NC	d	Article No. Price per PU	d	Article No. Price per PU

Auxiliary switch blocks for snapping onto the front

Sizes S00 to S3

3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	4	--		► 3RH2911-1XA40-0MA0	► 3RH2911-2XA40-0MA0
3RH21, 3RH24	3	1		► 3RH2911-1XA31-0MA0	► 3RH2911-2XA31-0MA0
	2	2		► 3RH2911-1XA22-0MA0	► 3RH2911-2XA22-0MA0
	--	4		► 3RH2911-1XA04-0MA0	5 ► 3RH2911-2XA04-0MA0

¹⁾ For detailed information on use, see page 3/90.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RH1921-1C...



3RH1921-2C...

For contactors	Auxiliary contacts		SD	Screw terminals		SD	Spring-type terminals	
	Ident. No.	Version		Article No.	Price per PU		Article No.	Price per PU
Type		NO NC NO NC	d			d		

Auxiliary switch blocks for snapping onto the front

Sizes S6 to S12¹⁾

4-pole auxiliary switch blocks

• Acc. to EN 50012

3RT1.5 ... 3RT1.7	22	2	2	--	--		5	3RH1921-1XA22-0MA0	20	3RH1921-2XA22-0MA0
----------------------	----	---	---	----	----	--	---	--------------------	----	--------------------

1-pole auxiliary switch blocks

• Acc. to EN 50005 and EN 50012

3RT1.5 ... 3RT1.7	10	1	--	--	--		▶	3RH1921-1CA10	▶	3RH1921-2CA10
	01	--	1	--	--		▶	3RH1921-1CA01	▶	3RH1921-2CA01
	10	--	--	1	--		▶	3RH1921-1CD10	--	--
	01	--	--	--	1		▶	3RH1921-1CD01	--	--

¹⁾ Exception: 3RT12.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RH2911-1DA02



3RH2911-2DA02

For contactors ¹⁾	Auxiliary contacts	SD	Screw terminals	SD	Spring-type terminals
	Version		Article No.		Article No.
	 		Price per PU		Price per PU
Type	NO NC	d		d	

Laterally mountable auxiliary switch blocks, mounting on the right and/or on the left, 2-pole

Size S00

			Left	Right					
3RT2.1	--	2			2	3RH2911-1DA02	2	3RH2911-2DA02	
	1	1			2	3RH2911-1DA11	2	3RH2911-2DA11	
	2	--			2	3RH2911-1DA20	2	3RH2911-2DA20	

Sizes S0 to S3

			Left	Right					
3RT2.2 ²⁾ , 3RT2.3, 3RT2.4	--	2			2	3RH2921-1DA02	2	3RH2921-2DA02	
	1	1			2	3RH2921-1DA11	2	3RH2921-2DA11	
	2	--			2	3RH2921-1DA20	2	3RH2921-2DA20	

¹⁾ For detailed information on use, see pages 3/91 and 3/92.

²⁾ With 3RT232. and 3RT252. contactors, mountable only on the right.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RH1921-1DA11,
 3RH1921-1JA11,
 3RH1921-1EA...,
 3RH1921-1KA...



3RH1921-2DA11,
 3RH1921-2JA11,
 3RH1921-2EA...,
 3RH1921-2KA...

For contactors	Auxiliary contacts	SD	Screw terminals	SD	Spring-type terminals
	Version		Article No.		Article No.
Type	NO NC	d	Price per PU	d	Price per PU

Lateral auxiliary switch blocks, mounting on the left or right, 2-pole

Sizes S6 to S12

		Left	Right
First auxiliary switch block			
• Acc. to EN 50012			
3RT1.5 ... 3RT1.7	1 1		
• Acc. to EN 50005			
3RT1.5 ... 3RT1.7	2 --		
	1 1		
	-- 2		
Second auxiliary switch block			
• Acc. to EN 50012			
3RT1.5 ... 3RT1.7	1 1		
• Acc. to EN 50005			
3RT1.5 ... 3RT1.7	2 --		
	1 1		
	-- 2		

▶ 3RH1921-1DA11

▶ 3RH1921-1EA20

▶ 3RH1921-1EA11

▶ 3RH1921-1EA02

▶ 3RH1921-1JA11

▶ 3RH1921-1KA20

▶ 3RH1921-1KA11

▶ 3RH1921-1KA02

▶ 3RH1921-2DA11

▶ 3RH1921-2EA20

--

▶ 3RH1921-2EA02

▶ 3RH1921-2JA11

20 3RH1921-2KA20

--

20 3RH1921-2KA02

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, instantaneous

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RH2911-1NF..



3RH2911-2NF..



3RH2911-2DE11

3RH1921-2DE11,
3RH1921-2JE11

For contactors/ contactor relays ¹⁾		Contacts Version	SD	Screw terminals			SD	Spring-type terminals		
		 		Article No.	Price per PU			Article No.	Price per PU	
Type		NO NC	d				d			

Solid-state compatible auxiliary switch blocks, 2-pole

- For operation in dusty atmospheres
- For solid-state circuits with rated operational currents I_e /AC-14 and DC-13 from 1 ... 300 mA at 3 ... 60 V
- Hard gold-plated contacts
- Laterally mountable auxiliary switches and auxiliary switches for snapping onto the front for 3RT2 contactors, sizes S0 to S3, are designed as mirror contacts according to IEC 60947-4-1, Appendix F.

Auxiliary switch blocks for snapping onto the front

Sizes S00 to S3

3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4	--	2		2	3RH2911-1NF02	2	3RH2911-2NF02
3RH21, 3RH24	1	1		▶	3RH2911-1NF11	▶	3RH2911-2NF11
	2	--		▶	3RH2911-1NF20	▶	3RH2911-2NF20

Lateral auxiliary switch blocks, mounting on the right and/or on the left acc. to EN 50012

Size S00

3RT2.1	1	1	Left: Right:	--		2	3RH2911-2DE11
--------	---	---	-----------------	----	--	---	---------------

Sizes S0 to S3

3RT2.2, 3RT2.3, 3RT2.4	1	1	Left: Right:	--		2	3RH2921-2DE11
------------------------------	---	---	-----------------	----	--	---	---------------

Sizes S6 to S12

3RT1.5 ... 3RT1.7	1	1	First auxiliary switch block: Second auxiliary switch block:	--		▶	3RH1921-2DE11
3RT1.5 ... 3RT1.7	1	1		--		▶	3RH1921-2JE11

¹⁾ For detailed information on use, see pages 3/90 and 3/92.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Auxiliary switch blocks, delayed

Selection and ordering data

For contactors	Time setting range t	SD	Screw terminals	⊕	PU (UNIT, SET, M)	PS*	PG
Type	s	d	Article No.	Price per PU			
Pneumatic time-delay auxiliary switch blocks for mounting on 3RT2 contactors							
Size S0							
Auxiliary contacts 1 NO and 1 NC¹⁾							
ON-delay							
3RT202	0.1 ... 30	10	3RT2926-2PA01		1	1 unit	41B
	0.1 ... 30 ²⁾	10	3RT2926-2PA01-OMT0		1	1 unit	41B
	1 ... 60	10	3RT2926-2PA11		1	1 unit	41B
	1 ... 60 ²⁾	10	3RT2926-2PA11-OMT0		1	1 unit	41B
OFF-delay							
3RT202	0.1 ... 30	10	3RT2926-2PR01		1	1 unit	41B
	0.1 ... 30 ²⁾	10	3RT2926-2PR01-OMT0		1	1 unit	41B
	1 ... 60	10	3RT2926-2PR11		1	1 unit	41B
	1 ... 60 ²⁾	10	3RT2926-2PR11-OMT0		1	1 unit	41B

¹⁾ In addition to these, no other auxiliary contacts are permitted.

²⁾ Certificate for furnaces according to EN 50156-1 on request.

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

For technical specifications, see manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", <https://support.industry.siemens.com/cs/WW/en/view/60306557>.



3RT2926-2P...



3RA2813-1FW10



3RA2813-2AW10

For contactors	Rated control supply voltage U_s ¹⁾	Time setting range t	Output/Auxiliary contacts	SD	Screw terminals	⊕	SD	Spring-type terminals	⊕
Type	V	s		d	Article No.	Price per PU	d	Article No.	Price per PU
Solid-state time-delay auxiliary switch blocks²⁾ for mounting on 3RT2 contactors and 3RH2 contactor relays									
Sizes S00 to S3									

The electrical connection between the solid-state time-delay auxiliary switch and the contactor or contactor relay underneath is established automatically when it is snapped on and locked.

ON-delay (varistor integrated)

3RT2 ^{3/4)} , 3RH21 ³⁾ , 3RH24	24 ... 240 AC/DC	0.05 ... 100, (1, 10, 100 selectable)	1 CO 1 NO + 1 NC	2 2	3RA2813-1AW10 3RA2813-1FW10	2 2	3RA2813-2AW10 3RA2813-2FW10
OFF-delay with control signal (varistor integrated)							
3RT2 ^{3/4)} , 3RH21 ³⁾ , 3RH24	24 ... 240 AC/DC	0.05 ... 100, (1, 10, 100 selectable)	1 CO 1 NO + 1 NC	2 2	3RA2814-1AW10 3RA2814-1FW10	2 2	3RA2814-2AW10 3RA2814-2FW10
OFF-delay without control signal⁵⁾ (varistor integrated)							
3RT2 ^{3/4)} , 3RH21 ³⁾ , 3RH24	24 ... 240 AC/DC	0.05 ... 100, (1, 10, 100 selectable)	1 CO 1 NO + 1 NC	2 2	3RA2815-1AW10 3RA2815-1FW10	2 2	3RA2815-2AW10 3RA2815-2FW10

¹⁾ AC voltage values apply for 50 Hz and 60 Hz.

²⁾ The solid-state time-delay auxiliary switch blocks are also available as 3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays; see page 3/105.

³⁾ Cannot be fitted onto coupling relays and coupling contactor relays.

⁴⁾ From product version E04 onwards, 3RA281. solid-state time-delayed auxiliary switch blocks can be used for 3RT2.4 contactors.

⁵⁾ Setting of output contacts in as-supplied state not defined (bistable relay). Application of the control supply voltage once results in contact change-over to the correct setting.

For technical specifications, see page 3/82.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Auxiliary switch blocks, delayed

For contactors	Auxiliary contacts	Rated control supply voltage U_s ¹⁾	Time setting range t	SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG
Type		V	s	d	Article No.		Price per PU		
Solid-state time-delay auxiliary switch blocks For mounting on 3RT1 contactors									
Sizes S6 to S12									
 3RT1926-2....	ON-delay ²⁾								
	3RT10, 3RT14	1 NO + 1 NC	24 AC/DC	0.05 ... 1	10	3RT1926-2EJ11	1	1 unit	41H
				0.5 ... 10	▶	3RT1926-2EJ21	1	1 unit	41H
				5 ... 100	2	3RT1926-2EJ31	1	1 unit	41H
		100 ... 127 AC		0.05 ... 1	15	3RT1926-2EC11	1	1 unit	41H
				0.5 ... 10	▶	3RT1926-2EC21	1	1 unit	41H
				5 ... 100	10	3RT1926-2EC31	1	1 unit	41H
		200 ... 240 AC		0.05 ... 1	5	3RT1926-2ED11	1	1 unit	41H
				0.5 ... 10	▶	3RT1926-2ED21	1	1 unit	41H
				5 ... 100	5	3RT1926-2ED31	1	1 unit	41H
	OFF-delay without control signal ²⁾³⁾								
	3RT10, 3RT14	1 NO + 1 NC	24 AC/DC	0.05 ... 1	▶	3RT1926-2FJ11	1	1 unit	41H
0.5 ... 10				▶	3RT1926-2FJ21	1	1 unit	41H	
5 ... 100				▶	3RT1926-2FJ31	1	1 unit	41H	
		100 ... 127 AC/DC		0.05 ... 1	5	3RT1926-2FK11	1	1 unit	41H
				0.5 ... 10	▶	3RT1926-2FK21	1	1 unit	41H
				5 ... 100	5	3RT1926-2FK31	1	1 unit	41H
		200 ... 240 AC/DC		0.05 ... 1	5	3RT1926-2FL11	1	1 unit	41H
				0.5 ... 10	2	3RT1926-2FL21	1	1 unit	41H
				5 ... 100	2	3RT1926-2FL31	1	1 unit	41H
Star-delta (wye-delta) starting (varistor integrated) ²⁾									
3RT10, 3RT14		1 NO delayed + 1 NO instantaneous, dead time 50 ms	24 AC/DC	1.5 ... 30	▶	3RT1926-2GJ51	1	1 unit	41H
			100 ... 127 AC	1.5 ... 30	▶	3RT1926-2GC51	1	1 unit	41H
	200 ... 240 AC		1.5 ... 30	▶	3RT1926-2GD51	1	1 unit	41H	

¹⁾ The AC voltages are valid for 50 and 60 Hz.

²⁾ Connecting terminals A1 and A2 for the control supply voltage of the solid-state time-delay auxiliary switch must be connected to the associated contactor by means of connecting cables.

³⁾ Setting of output contacts in as-supplied state not defined (bistable relay). Application of the control supply voltage once results in contact change-over to the correct setting.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Surge suppressors

Selection and ordering data

For contactors	Version	Rated control supply voltage $U_s^{1)}$		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
		AC operation	DC operation						
Type		V AC	V DC	d					

Surge suppressors without LED (also for spring-type terminals)

Size S00



3RT2916-1B.00

For plugging onto the front side of the contactors (with and without auxiliary switch blocks)

3RT2.1, 3RH2	Varistors	24 ... 48	24 ... 70	►	3RT2916-1BB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2916-1BC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2916-1BD00	1	1 unit	41B
		240 ... 400	--	►	3RT2916-1BE00	1	1 unit	41B
		400 ... 600	--	2	3RT2916-1BF00	1	1 unit	41B
3RT2.1, 3RH2	RC element	24 ... 48	24 ... 70	►	3RT2916-1CB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2916-1CC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2916-1CD00	1	1 unit	41B
		240 ... 400	--	2	3RT2916-1CE00	1	1 unit	41B
		400 ... 600	--	2	3RT2916-1CF00	1	1 unit	41B
3RT2.1, 3RH2	Noise suppression diode	--	12 ... 250	►	3RT2916-1DG00	1	1 unit	41B
3RT2.1, 3RH2	Diode assemblies (diode and Zener diode) For DC operation	--	12 ... 250	►	3RT2916-1EH00	1	1 unit	41B

Size S0



3RT2926-1E.00

For plugging onto the front side of the contactors (before installing the auxiliary switch block)

3RT2.2	Varistors²⁾	24 ... 48	24 ... 70	►	3RT2926-1BB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2926-1BC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2926-1BD00	1	1 unit	41B
		240 ... 400	--	►	3RT2926-1BE00	1	1 unit	41B
		400 ... 600	--	2	3RT2926-1BF00	1	1 unit	41B
3RT2.2	RC elements	24 ... 48	24 ... 70	►	3RT2926-1CB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2926-1CC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2926-1CD00	1	1 unit	41B
		240 ... 400	--	2	3RT2926-1CE00	1	1 unit	41B
		400 ... 600	--	2	3RT2926-1CF00	1	1 unit	41B
3RT2.2	Diode assemblies For DC operation	--	24	►	3RT2926-1ER00	1	1 unit	41B
		--	30 ... 250	►	3RT2926-1ES00	1	1 unit	41B

Sizes S2 and S3



3RT2936-1B.00

For plugging onto the front side of the contactors (before installing the auxiliary switch block)

3RT2.3, 3RT2.4	Varistors²⁾³⁾	24 ... 48	--	►	3RT2936-1BB00	1	1 unit	41B
		48 ... 127	--	►	3RT2936-1BC00	1	1 unit	41B
		127 ... 240	--	►	3RT2936-1BD00	1	1 unit	41B
		240 ... 400	--	5	3RT2936-1BE00	1	1 unit	41B
		400 ... 600	--	5	3RT2936-1BF00	1	1 unit	41B
3RT2.3	RC elements	24 ... 48	24 ... 70	►	3RT2936-1CB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2936-1CC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2936-1CD00	1	1 unit	41B
		240 ... 400	--	5	3RT2936-1CE00	1	1 unit	41B
		400 ... 600	--	5	3RT2936-1CF00	1	1 unit	41B
3RT2.4	RC elements NEW	24 ... 48	24 ... 70	►	3RT2946-1CB00	1	1 unit	41B
		48 ... 127	70 ... 150	►	3RT2946-1CC00	1	1 unit	41B
		127 ... 240	150 ... 250	►	3RT2946-1CD00	1	1 unit	41B
		240 ... 400	--	►	3RT2946-1CE00	1	1 unit	41B
		400 ... 600	--	5	3RT2946-1CF00	1	1 unit	41B
3RT2.3, 3RT2.4	Diode assemblies³⁾ For DC operation	--	24	►	3RT2936-1ER00	1	1 unit	41B
		--	30 ... 250	►	3RT2936-1ES00	1	1 unit	41B

¹⁾ Can be used for AC operation for 50/60 Hz. Please inquire about further voltages.

²⁾ The varistor is already integrated on the AC/DC contactors.

³⁾ From product version E03 onwards, 3RT2936-1B/-1E surge suppressors can be used for 3RT2.4 contactors.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Surge suppressors

For con- tactors	Version	Rated control supply voltage $U_s^{1)}$		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type		AC operation	DC operation						
		V AC	V DC	d					

Surge suppressors without LED

Sizes S6 to S12



3RT1956-1C.00

For connecting to withdrawable coil for contactors with
• conventional operating mechanism 3RT1...-A...
• solid-state operating mechanism 3RT1...-N...

RC elements



24 ... 48	24 ... 70
48 ... 127	70 ... 150
127 ... 240	150 ... 250
240 ... 400	--
400 ... 600	--

Screw terminals



3RT1956-1CB00	1	1 unit	41B
3RT1956-1CC00	1	1 unit	41B
3RT1956-1CD00	1	1 unit	41B
3RT1956-1CE00	1	1 unit	41B
3RT1956-1CF00	1	1 unit	41B

Spring-type terminals



3RT1956-1CB02	1	1 unit	41B
3RT1956-1CC02	1	1 unit	41B
3RT1956-1CD02	1	1 unit	41B
3RT1956-1CE02	1	1 unit	41B
3RT1956-1CF02	1	1 unit	41B

¹⁾ Can be used for AC operation for 50/60 Hz. Please inquire about further voltages.

For con- tactors	Version	Rated control supply voltage $U_s^{1)}$		Power consumption P of the LED at U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type		AC operation	DC operation	mW						
		V AC	V DC		d					

Surge suppressors with LED (also for spring-type terminals)

Size S00



3RT2916-1J.00

For plugging onto the front side of the contactors
(with and without auxiliary switch blocks)

Varistors

24 ... 48	12 ... 24	10 ... 120
48 ... 127	24 ... 70	20 ... 470
127 ... 240	70 ... 150	50 ... 700
--	150 ... 250	160 ... 950

3RT2916-1JJ00	1	1 unit	41B
3RT2916-1JK00	1	1 unit	41B
3RT2916-1JL00	1	1 unit	41B
3RT2916-1JP00	1	1 unit	41B

Noise suppression diodes

--	24 ... 70	20 ... 470
--	50 ... 150	50 ... 700
--	150 ... 250	160 ... 950

3RT2916-1LM00	1	1 unit	41B
3RT2916-1LN00	1	1 unit	41B
3RT2916-1LP00	1	1 unit	41B

Size S0



3RT2926-1MR00

For plugging onto the front side of the contactors
(before installing the auxiliary switch block)

Varistors

24 ... 48	12 ... 24	10 ... 120
48 ... 127	24 ... 70	20 ... 470
127 ... 240	70 ... 150	50 ... 700

3RT2926-1JJ00	1	1 unit	41B
3RT2926-1JK00	1	1 unit	41B
3RT2926-1JL00	1	1 unit	41B

Diode assemblies

--	24	20 ... 470
----	----	------------

3RT2926-1MR00	1	1 unit	41B
---------------	---	--------	-----

Sizes S2 and S3



3RT2936-1J.00

For plugging onto the front side of the contactors
(before installing the auxiliary switch block)

Varistors²⁾

24 ... 48	12 ... 24	10 ... 120
48 ... 127	24 ... 70	20 ... 470
127 ... 240	70 ... 150	50 ... 700

3RT2936-1JJ00	1	1 unit	41B
3RT2936-1JK00	1	1 unit	41B
3RT2936-1JL00	1	1 unit	41B

¹⁾ Can be used for AC operation for 50/60 Hz. Please inquire about further voltages.

²⁾ From product version E03 onwards, 3RT2936 surge suppressors can be used for 3RT2.4 contactors.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays
Accessories

Modules for contactor control

Selection and ordering data

For contactors	Version	SD	Screw terminals 	PU (UNIT, SET, M)	PS*	PG
Type		d	Article No.	Price per PU		
Coupling links for control by PLC						
Size S0						
	3RT2.2		For mounting onto the coil terminals of the contactors (for contactors with screw terminals only) With LED for the switching state and with integrated varistor for damping opening surges • 24 V DC control, 17 ... 30 V DC operating range	▶ 3RH2924-1GP11	1	1 unit 41B
Sizes S00 to S3						
	3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4 3RH2	5	For mounting on the front side of contactors with AC, DC or AC/DC operation • 24 V DC control, 17 ... 30 V DC operating range	▶ 3RH2914-1GP11	1	1 unit 41B
	3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4 3RH2	5	Spring-type terminals  • 24 V DC control, 17 ... 30 V DC operating range	▶ 3RH2914-2GP11	1	1 unit 41B

For technical specifications, [see page 3/84](#).

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Modules for contactor control

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RA2811-1CW10



3RA2812-1DW10



3RA2816-0EW20

For contactors	Size	Version	Rated control supply voltage $U_s^{1)}$	Time setting range t	SD	Screw terminals 	SD	Spring-type terminals 	
Type			V AC/DC	s	d	Article No.	Price per PU	Article No.	Price per PU
3RA28 function modules for mounting on 3RT2 contactors and 3RH2 contactor relays									
For direct-on-line starting									
3RT2.1 ²⁾ , 3RT2.2 ²⁾ , 3RH21 ²⁾ , 3RH24	S00, S0	ON-delay Two-wire design, varistor integrated	24 ... 240	0.05 ... 100 (1, 10, 100; selectable)	2	3RA2811-1CW10	2	3RA2811-2CW10	
3RT2.3 ²⁾ , 3RT2.4 ²⁾³⁾	S2, S3	The electrical connection between the function module and the contactor underneath is established automatically when it is snapped on and locked.	24 ... 90 90 ... 240	0.05 ... 100 (1, 10, 100; selectable)	2 2	3RA2831-1DG10 3RA2831-1DH10	2 2	3RA2831-2DG10 3RA2831-2DH10	
3RT2.1 ²⁾ , 3RT2.2 ²⁾ , 3RH21 ²⁾ , 3RH24	S00, S0	OFF-delay with control signal Varistor integrated	24 ... 240	0.05 ... 100 (1, 10, 100; selectable)	2	3RA2812-1DW10	2	3RA2812-2DW10	
3RT2.3 ²⁾ , 3RT2.4 ²⁾³⁾	S2, S3	The electrical connection between the function module and the contactor underneath is established automatically when it is snapped on and locked.	24 ... 90 90 ... 240	0.05 ... 100 (1, 10, 100; selectable)	2 2	3RA2832-1DG10 3RA2832-1DH10	2 2	3RA2832-2DG10 3RA2832-2DH10	
For star-delta (wye-delta) starting									
3RT2.1, 3RT2.2, 3RT2.3 ²⁾ , 3RT2.4 ²⁾⁴⁾	S00 ... S3	Varistor integrated The electrical connection between the function module and the contactor assembly is established automatically by snapping on and plugging in the connecting cables.	24 ... 240	0.5 ... 60 (10, 30, 60; selectable)	2	3RA2816-0EW20	2	3RA2816-0EW20	
Accessories									
3RA28	S00 ... S3	Sealable covers			2	3RA2910-0	2	3RA2910-0	

¹⁾ AC voltage values apply for 50 Hz and 60 Hz.

²⁾ Cannot be fitted onto coupling relays and coupling contactor relays.

³⁾ From product version E03 onwards, 3RA283. function modules can be used for 3RT2.4 contactors.

⁴⁾ From product version E04 onwards, 3RA2816 function modules can be used for 3RT2.4 contactors.

For technical specifications, [see page 3/85](#).

Assembly of reversing starters

We offer ready-made wiring kits for the assembly of reversing starters. Use of these wiring kits offers further advantages; [see page 3/161](#).

Manual

For the manual "SIRIUS – SIRIUS 3RA28 function modules for mounting on 3RT2 contactors", [see](#) <https://support.industry.siemens.com/cs/ww/en/view/60279150>.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Modules for contactor control

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA2711-1AA00 3RA2711-2AA00 3RA2711-1BA00

3RA2711-2BA00

3RA2712-1CA00

3RA2711-2CA00

For contactors	Version	SD	Screw terminals		SD	Spring-type terminals	
Type		d	Article No.	Price per PU	d	Article No.	Price per PU
SIRIUS 3RA27 function modules for direct-on-line starting							
3RT201	IO-Link connection	2	3RA2711-1AA00	2		3RA2711-2AA00	
... 3RT204 ¹⁾	Includes one module connector for assembling an IO-Link group						
	AS-Interface connection	2	3RA2712-1AA00	2		3RA2712-2AA00	
SIRIUS 3RA27 function modules for reversing starting ²⁾							
3RT201	IO-Link connection	2	3RA2711-1BA00	2		3RA2711-2BA00	
... 3RT204 ¹⁾	comprising one basic and one coupling module and an additional module connector ³⁾ for assembling an IO-Link group						
	AS-Interface connection	2	3RA2712-1BA00	2		3RA2712-2BA00	
	comprising one basic and one coupling module						
	Assembly kits for making 3-pole contactor assemblies						
	See page 3/109						
SIRIUS 3RA27 function modules for star-delta (wye-delta) starting ⁴⁾							
3RT201	IO-Link connection	2	3RA2711-1CA00	2		3RA2711-2CA00	
... 3RT204 ¹⁾	comprising one basic and two coupling modules and an additional module connector ³⁾ for assembling an IO-Link group						
	AS-Interface connection	2	3RA2712-1CA00	2		3RA2712-2CA00	
	comprising one basic and two coupling modules						
	Assembly kits for making 3-pole contactor assemblies						
	See page 3/110						

¹⁾ From product version E06 onwards, 3RA271. function modules can be used for 3RT2.4 contactors.

²⁾ For prewired reversing contactor assemblies with voltage tap-off, [see pages 3/162 to 3/165](#). When these contactor assemblies are used, the assembly kit for the wiring is already integrated.

³⁾ 3RA2711-0EE17 module connectors for size S3 must be ordered separately; [see page 3/107](#).

⁴⁾ For complete contactor assemblies for star-delta (wye-delta) starting including function modules, [see pages 3/179 to 3/182](#).

For technical specifications for 3RA27 function modules, [see page 3/86](#).

For contactors with voltage tap-off, [see pages 3/58, 3/62, 3/67 and 3/69](#).

For IO-Link masters and AS-Interface masters, routers and power supply units [see "Industrial Communication", from page 2/1 onwards](#).

Manuals

- Manual "SIRIUS – SIRIUS 3RA2711 Function Modules for IO-Link": [see https://support.industry.siemens.com/cs/ww/en/view/39319600](https://support.industry.siemens.com/cs/ww/en/view/39319600)
- Manual "SIRIUS – SIRIUS 3RA2712 Function Modules for AS-Interface": [see https://support.industry.siemens.com/cs/ww/en/view/39318922](https://support.industry.siemens.com/cs/ww/en/view/39318922)

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Modules for contactor control



3RA2711-0EE10



3RA2711-0EE06



3RA2711-0EE15



3RA2910-0



3RA6935-0A



3RA2711-0EE11

For function modules	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type		d					
Accessories for 3RA27 function modules							
3RA271.-...A00	Module connector set Comprising: • Two module connectors, (14-pole, short) • Two interface covers	2	3RA2711-0EE10		1	1 unit	41B
3RA271.-...A00	Module connectors • 14-pole - 6 cm - 9 cm - 13 cm - 26 cm - 33.5 cm • 10-pole, 9 cm for additional auxiliary voltage infeed <u>Note:</u> For selection of module connectors, see Manual "SIRIUS – SIRIUS 3RA2711 Function Modules for IO-Link", https://support.industry.siemens.com/cs/ww/en/view/39319600	 2 2 2 2 2 2 2 2	 3RA2711-0EE17 3RA2711-0EE06 3RA2711-0EE18 3RA2711-0EE07 3RA2711-0EE08 3RA2711-0EE16		1 1 1 1 1 1	1 unit 1 unit 1 unit 1 unit 1 unit 1 unit	41B 41B 41B 41B 41B 41B
3RA271.-...A00	Interface covers (Set of 5)	2	3RA2711-0EE15		1	1 unit	41B
3RA271.-...A00	Sealable covers	2	3RA2910-0		1	5 units	41B
Operator panel for communication via IO-Link							
3RA2711-...A00	Operator panel (set) Comprising: • 1 x operator panel • 1 x enabling module • 1 x interface cover • 1 x fixing terminal	10	3RA6935-0A		1	1 unit	42F
3RA2711-...A00	Connection cables For connecting the operator panel to the coupling module Length 2 m, 10- to 14-pole	2	3RA2711-0EE11		1	1 unit	41B
3RA2711-...A00	Enabling modules (replacement)	10	3RA6936-0A		1	1 unit	42F
3RA2711-...A00	Interface covers (replacement)	10	3RA6936-0B		1	5 units	42F

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Modules for contactor control

For contactors	Rated control supply voltage U_s	Time setting range t	SD	Screw terminals 	PU (UNIT, SET, M)	PS*	PG
Type	V	s	d	Article No.	Price per PU		

Mechanical latching blocks (no switching state change in the event of voltage drop)

Size S0

For snapping onto the front of contactors

The contactor remains in the energized state after a power failure.



3RT2926-3A.31

3RT202	24 AC/DC	--	5	3RT2926-3AB31	1	1 unit	41B
	110 AC/DC	--	5	3RT2926-3AF31	1	1 unit	41B
	230 AC/DC	--	5	3RT2926-3AP31	1	1 unit	41B

OFF-delay devices for contactors with AC/DC and DC operation

Sizes S00 to S3

Non-adjustable delay time



3RT2916-2B.01

3RT201.-1BF4., 3RT202.-1BF4., 3RT203.-1NF3., 3RH2...-1BF40	110 AC/DC	S00: > 0.1 S0: > 0.08 S2: > 0.25	5	3RT2916-2BK01	1	1 unit	41B
3RT201.-1BM4./1BP4., 3RT202.-1BM4./1BP4., 3RT203.-1NP3., 3RH2...-1BM40/1BP40	220/230 AC/DC	S00: > 0.5 S0: > 0.3 S2: > 0.8	5	3RT2916-2BL01	1	1 unit	41B
3RT201.-1BB4., 3RT202.-1BB4., 3RT203.-1NB3., 3RT2.4.-1NB3., 3RH2...-1BB40	24 DC	S00: > 0.2 S0: > 0.1 S2: > 0.1 S3: > 0.05	2	3RT2916-2BE01	1	1 unit	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

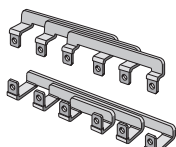
[Link modules](#)

Selection and ordering data

For contactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					
Safety main circuit connectors for two contactors								
	3RT2.1	S00	For series connection of two contactors	2	3RA2916-1A		1	1 unit 41B
	3RT2.2	S0		2	3RA2926-1A		1	1 unit 41B
	3RT2.3	S2		2	3RA2936-1A		1	1 unit 41B

3RA2926-1A

PU (UNIT, SET, M) = 1
 PS* = 1 unit (unless otherwise specified)
 PG = 41B

For contactors	Size	Version	SD	Article No.	Price per PU	SD	Article No.	Price per PU
Type			d			d		
Assembly kits for reversing contactor assemblies for making 3-pole contactor assemblies								
				Screw terminals 		Spring-type terminals 		
	3RT201	S00-S00	The assembly kit contains: mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom • For main, auxiliary and control circuits ►					
				3RA2913-2AA1			3RA2913-2AA2	
	3RT202	S0-S0	The assembly kit contains: mechanical interlock, two connecting clips for two contactors, wiring modules on the top and bottom • For main, auxiliary and control circuits ¹⁾ ► • Only for main circuit ²⁾					
				3RA2923-2AA1			--	
	3RT203	S2-S2	The assembly kit contains: two connectors for two contactors, wiring modules on the top and bottom (The 3RA2934-2B mechanical interlock must be ordered separately; see page 3/113) • For main and auxiliary circuits ► • Only for main circuit ³⁾					
				3RA2933-2AA1			--	
				--	5		3RA2933-2AA2	
	3RT2.4	S3-S3	The kit contains: two connectors for two contactors, wiring modules on the top and bottom (The 3RA2934-2B mechanical interlock must be ordered separately; see page 3/113) • For main and auxiliary circuits NEW ► • Only for main circuit ³⁾ NEW					
				3RA2943-2AA1			--	
	3RT105	S6-S6	The kit contains: wiring modules on the top and bottom	2	3RA1953-2A	2	3RA1953-2A	
	3RT1.6	S10-S10		2	3RA1963-2A	2	3RA1963-2A	
	3RT1.7	S12-S12		2	3RA1973-2A	2	3RA1973-2A	

3RA1953-2A

- ¹⁾ Use of the 3RA2923-2AA1 assembly kit in conjunction with the 3RT202-.....-3MA0 contactors is limited because the auxiliary switches in the basic unit are not allowed to be used on account of the permanently mounted auxiliary switch block.
- ²⁾ Version in size S0 with spring-type terminals:
Only the wiring modules for the main circuit are included.
No connecting clips are included for the auxiliary and control circuit.
- ³⁾ Version in sizes S2 and S3 with spring-type terminals in the auxiliary and control circuits: Only the wiring modules for the main circuit are included.
A cable set is included for the auxiliary circuit.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Link modules

PU (UNIT, SET, M) = 1
 PS* = 1 unit (unless otherwise specified)
 PG = 41B



For con- tactors	Size	Version	SD	Screw terminals		SD	Spring-type terminals	
Type			d	Article No.	Price per PU	d	Article No.	Price per PU
Assembly kits ¹⁾ for contactor assemblies for star-delta (wye-delta) starting for making 3-pole contactor assemblies								
3RT201	S00-S00-S00	The assembly kit contains: mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits	►	3RA2913-2BB1		►	3RA2913-2BB2	
3RT202	S0-S0-S0	The assembly kit contains: mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom						
		• For main, auxiliary and control circuits	►	3RA2923-2BB1			--	
		• Only for main circuit		--		►	3RA2923-2BB2	
3RT202	S0-S0-S0	The assembly kit contains: mechanical interlock, four connecting clips for three contactors, a star jumper, wiring modules on the top and bottom, three-phase infeed terminal						
		• For main, auxiliary and control circuits	5	3RA2924-2BB1			--	
3RT203	S2-S2-S0	The kit ²⁾ contains: two connectors for three contactors, an S0 star jumper, a spacer, wiring modules on the top and bottom (S2-S0) for the main circuit, a cable set for the auxiliary circuit, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor	►	3RA2933-2C		►	3RA2933-2C	
3RT203	S2-S2-S2	The kit ²⁾ contains: four connectors for three contactors, an S2 star jumper, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor and						
		• Wiring modules on the top and bottom for the main circuit and the auxiliary circuit	►	3RA2933-2BB1			--	
		• Wiring modules on the top and bottom for the main circuit, a cable set for the auxiliary circuit		--		5	3RA2933-2BB2	
3RT2.4	S3-S3-S2	The kit ²⁾ contains: two connectors for three contactors, an S2 star jumper, a spacer, wiring modules on the top and bottom (S3-S2) for the main circuit, a cable set for the auxiliary circuit, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor	NEW ►	3RA2943-2C		►	3RA2943-2C	
3RT2.4	S3-S3-S3	The kit ²⁾ contains: four connectors for three contactors, an S3 star jumper, a cable for connecting the A2 coil contact from the line contactor to the A2 coil contact of the delta contactor and						
		• Wiring modules on the top and bottom for the main circuit and the auxiliary circuit	NEW ►	3RA2943-2BB1			--	
		• Wiring modules on the top and bottom for the main circuit, a cable set for the auxiliary circuit	NEW	--		►	3RA2943-2BB2	

¹⁾ When using the function modules for contactor assemblies for star-delta (wye-delta) starting, the wiring modules for the auxiliary current are not required.

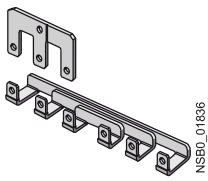
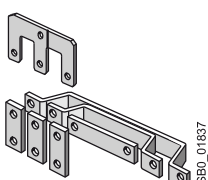
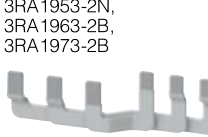
²⁾ The 3RA2934-2B mechanical interlock for sizes S2 and S3 must be ordered separately; see page 3/113.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Link modules

For contactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					
Assembly kits for contactor assemblies for star-delta (wye-delta) starting for making 3-pole contactor assemblies								
				The kit contains: link rails at bottom (a double infeed between the line contactor and the delta contactor is recommended.)				
 3RA1953-2B	3RT1.5, 3RT2.4	S6-S6-S3 for connection with box terminal	The S3 star jumper must be ordered separately; see page 3/112.	NEW X	3RA1953-3G	1	1 unit	41B
	3RT1.5	S6-S6-S6 for connection with box terminal	--	2	3RA1953-2B	1	1 unit	41B
	3RT1.5	S6-S6-S6 for connection without box terminal	--	2	3RA1953-2N	1	1 unit	41B
 3RA1963-3E	3RT1.6, 3RT1.5	S10-S10-S6 for connection with box terminal	The S6 star jumper must be ordered separately; see page 3/112.	20	3RA1963-3E	1	1 unit	41B
	3RT1.6	S10-S10-S10 for connection without box terminal	--	2	3RA1963-2B	1	1 unit	41B
 3RA1973-3E	3RT1.7, 3RT1.6	S12-S12-S10 for connection with box terminal	The S10 star jumper must be ordered separately; see page 3/112.	20	3RA1973-3E	1	1 unit	41B
	3RT1.7	S12-S12-S12 for connection without box terminal	--	5	3RA1973-2B	1	1 unit	41B

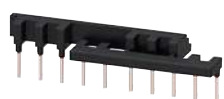
Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Link modules

PU (UNIT, SET, M) = 1
 PS* = 1 unit (unless otherwise specified)
 PG = 41B



3RA2913-3DA1



3RA2913-3DA2



3RT1933-3D



3RT1916-4BA31



3RT2916-4BA32



3RT1936-4BA31

For con- tactors	Size	Version	SD	Article No.	Price per PU	SD	Article No.	Price per PU
Type			d			d		

Single wiring modules for making 3 and 4-pole contactor assemblies

				Screw terminals 		Spring-type terminals 	
3RT201	S00-S00	- Top (in-phase) - Bottom (with phase reversal)	PS = 5 units PS = 5 units	5	3RA2913-3DA1 3RA2913-3EA1	5	3RA2913-3DA2 3RA2913-3EA2
3RT202	S0-S0	- Top (in-phase) - Bottom (with phase reversal)	PS = 5 units PS = 5 units	5	3RA2923-3DA1 3RA2923-3EA1	5	3RA2923-3DA2 3RA2923-3EA2
3RT203	S2-S2	- Top (in-phase) Contactor clearance 10 mm - Bottom (with phase reversal) Contactor clearance 10 mm	PS = 5 units PS = 5 units	▶	3RA1933-3D 3RA1933-3E	▶	3RA1933-3D 3RA1933-3E
3RT2.4	S3-S3	- Top (in-phase) Contactor clearance 10 mm - Bottom (with phase reversal) Contactor clearance 10 mm		▶	3RA1943-3D 3RA1943-3E	▶	3RA1943-3D 3RA1943-3E
3RT105	S6-S6	- Top (in-phase, for connection with box terminal) Contactor clearance 10 mm - Top (with phase reversal, for connection without box terminal) Contactor clearance 10 mm		2	3RA1953-3D	2	3RA1953-3D
				2	3RA1953-3P	2	3RA1953-3P

Star jumpers (links for paralleling), 3-pole

				Screw terminals 		Spring-type terminals 	
3RT201	S00	With through-hole		▶	3RT1916-4BA31	2	3RT2916-4BA32
3RT202	S0	The links for paralleling can be reduced by one pole.		▶	3RT1926-4BA31	2	3RT2926-4BA32
3RT203	S2	Without connecting terminal		▶	3RT1936-4BA31	▶	3RT1936-4BA31
3RT2.4	S3			▶	3RT1946-4BA31	▶	3RT1946-4BA31
3RT1.5	S6			▶	3RT1956-4BA31	▶	3RT1956-4BA31
3RT1.6, 3RT1.7	S10, S12			▶	3RT1966-4BA31	▶	3RT1956-4BA31

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

[Link modules](#)

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					

Mechanical interlock kits for two contactors for making 3 and 4-pole contactor assemblies

 3RA29.2-2H	3RT201, 3RT231	S00-S00	The interlocking assembly kits can be used without a contactor clearance.	5	3RA2912-2H	1	10 units	41B
	3RT202, 3RT232	S0-S0	One assembly kit consists of a mechanical interlock and two connecting clips.	5	3RA2922-2H	1	10 units	41B

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					

Mechanical interlocks for contactor assemblies

A contactor clearance of 10 mm must be considered when using the following mechanical interlocks.								
 3RA2934-2B	3RT203, 3RT2.4	S2-S2-S0, S2-S2-S2, S3-S3-S2, S3-S3-S3	Mechanical interlocks Note: The mechanical interlock for sizes S2 and S3 must be ordered separately.	▶	3RA2934-2B	1	1 unit	41B
	3RT105 with 3RT2.4	S6 (3RT1)- S6 (3RT1)- S3 (3RT2)	Adapter in addition to the mechanical interlock The mechanical interlock is only possible together with this 3RA1954-2G adapter and the 3RA1954-2A mechanical interlock. Two connectors are included with the adapter, the interlock must be ordered separately.	NEW X	3RA1954-2G	1	1 unit	41B
 3RA1954-2A	3RT1.5 3RT1.6 3RT1.7	S6 S10 S12	Mechanical interlocks Without auxiliary contacts; Contactor sizes S6, S10 and S12 can be interlocked with each other as required. No adaption of mounting depth is necessary.	▶	3RA1954-2A	1	1 unit	41B

Mechanical connectors for contactor assemblies

Two connectors are required for each assembly. The contactor clearance must be considered when selecting the connectors.								
 3RA1932-2D	For 3-pole contactors							
	3RT203, 3RT2.4	S2-S2, S3-S3	• Without contactor clearance	▶	3RA2932-2C	1	10 units	41B
			• With 10 mm contactor clearance	▶	3RA2932-2D	1	10 units	41B
	3RT1.5	S6-S6	• With 10 mm contactor clearance (1 unit corresponds to 2 parts for 1 assembly)	▶	3RA1932-2D	1	10 units	41B
	For 4-pole contactors							
	3RT233	S2-S2	• With 20 mm contactor clearance	2	3RA2932-2G	1	10 units	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Terminal modules/adapters

Selection and ordering data



3RT1916-4BB31



3RT2926-4BB31



3RT1936-4BB31



3RT1946-4BB31



3RT1916-4BB41

For con- tactors	Size	Version	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
Type			d	Article No.	Price per PU		

Links for paralleling for main circuits

The links for paralleling (insulated) can be reduced by one pole.
With connecting terminal

3-pole							
3RT201	S00	• Max. conductor cross-section: 25 mm ² , stranded	▶	3RT1916-4BB31	1	1 unit	41B
3RT202	S0	• Max. conductor cross-section: 50 mm ² , stranded	2	3RT2926-4BB31	1	1 unit	41B
3RT203	S2	• Max. conductor cross-section: 120 mm ² , stranded	▶	3RT1936-4BB31	1	1 unit	41B
3RT2.4	S3	• Max. conductor cross-section: 185 mm ² , stranded A cover plate is included for touch protection (can only be used when the box terminal is removed).	NEW ▶	3RT1946-4BB31	1	1 unit	41B
4-pole							
3RT231, 3RT251	S00	• Max. conductor cross-section: 25 mm ² , stranded	15	3RT1916-4BB41	1	1 unit	41B



3RA2913-3K



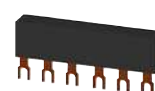
3RV2925-5AB



3RV2935-5A



3RV2935-5E



3RV1915-1AB



3RT195.-4G

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					

Single-phase infeed terminals

3RT2.4	S3	Conductor cross-section: 95 mm ²	NEW 2	3RA2943-3L	1	1 unit	41B
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Three-phase infeed terminals

Infeed terminal blocks for the line contactor for large conductor cross-sections

3RT201	S00	• Max. conductor cross-section: up to 10 mm ² , AWG 12 ... 8	2	3RA2913-3K	1	10 units	41B
3RT202	S0	• Max. conductor cross-section: up to 25 mm ² , AWG 10 ... 2/0	▶	3RV2925-5AB	1	1 unit	41E
3RT203	S2	• Max. conductor cross-section: up to 70 mm ² , AWG 10 ... 2/0	▶	3RV2935-5A	1	1 unit	41E

Three-phase infeed terminals with increased clearances and creepage distances

3RT203	S2	Max. conductor cross-section: up to 70 mm ² , AWG 10 ... 2/0	▶	3RV2935-5E	1	1 unit	41E
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Three-phase busbars

3RT202	S0	Bridging phase-by-phase of all input terminals of the line contactor (Q11) and delta contactor (Q13)	▶	3RV1915-1AB	1	1 unit	41E
--------	-----------	--	---	--------------------	---	--------	-----

Auxiliary terminals, three-pole

3RT1.5	S6	For connection of auxiliary and control cables (0.5 ... 2.5 mm ²) to the main conductor terminals	5	3TX7500-0A	1	1 unit	41B
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Box terminal blocks

For round and ribbon cables

Connectable cross-sections of the contactors:
[see Technical Specifications, page 3/48.](#)

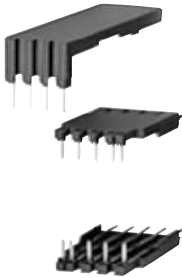
3RT1.5	S6	• Up to 70 mm ² , as standard on 3RT1054-1 contactor (55 kW)	▶	3RT1955-4G	1	1 unit	41B
		• Up to 120 mm ²	▶	3RT1956-4G	1	1 unit	41B
3RT1.6, 3RT1.7	S10, S12	• Up to 240 mm ² With auxiliary conductor connection up to 2.5 mm ²	▶	3RT1966-4G	1	1 unit	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Terminal modules/adapters

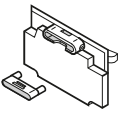
	For contactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	Type			d					
Solder pin adapters for mounting contactors on printed circuit boards up to 5.5 kW / 12 A									
 3RT1916-4KA1	3RT2. 1, 3RH2 1	S00	Assembly kit for soldering contactors with an integrated auxiliary contact onto a printed circuit board <u>Note:</u> For 1 contactor, 1 set is required.	2	Screw terminals  3RT1916-4KA1		1	4 units	41B
	3RT2. 1, 3RH2 1	S00	Assembly kit for soldering contactors with 4-pole mounted auxiliary switch block onto a printed circuit board. <u>Note:</u> For 1 contactor, 1 set is required.	5			1	4 units	41B
 3RT1916-4KA2	3RT2. 2, 3RT2. 3, 3RT2. 4	S0 to S3	• Connection from top • Connection from below • Connection diagonally	2	Spring-type terminals  3RT2926-4RA11 3RT2926-4RB11 3RT2926-4RC11		1	1 unit	41B
 3RT2926-4RA12	3RT2. 2	S0	• Connection from top • Connection from below	2			1	1 unit	41B
Coil connection modules for connections from top or from below									
 3RT1926-4RD01	3RT2. 1, 3RH2	S00	Adapters for contactors Ambient temperature $t_{u \max.} = 60^\circ\text{C}$ • Rated operational current I_e at AC-3/400 V: 20 A • Rated operational current I_e at AC-3/400 V: 25 A	5	Screw terminals  3RT1916-4RD01		1	1 unit	41B
	3RT2. 2	S0		5			1	1 unit	41B
 3RT1900-4RE01	3RT2. 1, 3RT2. 2, 3RH2	S00, S0	Motor feeder connectors for contactor	5	3RT1900-4RE01		1	1 unit	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays Accessories

Covers

Selection and ordering data

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					
Terminal covers								
Motor feeder connectors for contactors with screw terminals (box terminals) (2 units required per contactor)								
	3RT203	S2	• For 3-pole contactors	2	3RT2936-4EA2	1	1 unit	41B
	3RT2.4	S3		NEW ▶	3RT2946-4EA2	1	1 unit	41B
	3RT1.5	S6¹⁾		▶	3RT1956-4EA2	1	1 unit	41B
	3RT1.6, 3RT1.7	S10¹⁾, S12¹⁾		▶	3RT1966-4EA2	1	1 unit	41B
	3RT233, 3RT253	S2	• For 4-pole contactors (scope of supply: one 3-pole and two 1-pole terminal covers are supplied)	5	3RT2936-4EA4	1	1 unit	41B
Covers for contactors with cable lugs and busbar connections For complying with the phase clearances and as touch protection if box terminal is removed (2 units required per contactor)								
	3RT1.5	S6¹⁾	• Length: 100 mm	▶	3RT1956-4EA1	1	1 unit	41B
	3RT1.6, 3RT1.7	S10¹⁾, S12¹⁾	• Length: 120 mm	▶	3RT1966-4EA1	1	1 unit	41B
			• For the assembly kits for 3RA1953-... con- tactor assemblies for star-delta (wye-delta) starting (page 3/111) or the 3RA1953-3. single-wiring modules (page 3/112)					
	3RT1.5	S6	- Length: 38 mm	▶	3RT1956-4EA4	1	1 unit	41B
Terminal covers								
	3RT1.5	S6	• Cover the three busbar connections, between contactor and 3RB2 overload relay	▶	3RT1956-4EA3	1	1 unit	41B
	3RT1.6, 3RT1.7	S10²⁾, S12²⁾	- Length: 27 mm	▶	3RT1966-4EA3	1	1 unit	41B
			- Length: 42 mm					
			• can be screwed on free screw end; covers one busbar connection (1 set = 6 units)					
	3RT1.5	S6	- M8	5	3TX6526-3B	1	1 unit	41B
	3RT1.6, 3RT1.7	S10, S12	- M10	5	3TX6546-3B	1	1 unit	41B
Sealable covers								
	3RT2.1, 3RT2.2, 3RT2.3, 3RT2.4, 3RH2 ³⁾	S00 ... S3	for preventing manual operation (Not suitable for coupling relays)	2	3RT2916-4MA10	1	5 units	41B
	3RT1.5 ... 3RT1.7 ³⁾	S6 ... S12		15	3RT1926-4MA10	1	5 units	41B

¹⁾ Also fits on contactors of sizes S6 to S12 with box terminals.

²⁾ The 3RT1966-4EA3 cover is required in addition for use in reversing contactor assemblies and contactor assemblies for star-delta (wye-delta) starting.

³⁾ Exception: contactors and contactor relays with auxiliary switch block mounted onto the front.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Miscellaneous accessories

Selection and ordering data

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					
Base plates								
For reversing contactor assemblies								
3RT1.5	S6	For customer assembly of reversing contactor assemblies	5	3RA1952-2A		1	1 unit	41B
3RT1.6	S10		5	3RA1962-2A		1	1 unit	41B
3RT1.7	S12		5	3RA1972-2A		1	1 unit	41B
For contactor assemblies for star-delta (wye-delta) starting								
3RT2/ 3RT2/ 3RT2	S2-S2-S0, S2-S2-S2	For configuring contactor assemblies for star-delta (wye-delta) starting	2	3RA2932-2F		1	1 unit	41B
	S3-S3-S2, S3-S3-S3		NEW 3	3RA2942-2F		1	1 unit	41B
3RT1/ 3RT1/ 3RT2	S6-S6-S3	For customer assembly of contactor assemblies for star-delta (wye-delta) starting with laterally mounted timing relay	5	3RA1952-2E		1	1 unit	41B
3RT1/ 3RT1/ 3RT1	S6-S6-S6	10 mm distance between the contactors	5	3RA1952-2F		1	1 unit	41B
	S10-S10-S6		5	3RA1962-2E		1	1 unit	41B
	S10-S10-S10		5	3RA1962-2F		1	1 unit	41B
	S12-S12-S10		5	3RA1972-2E		1	1 unit	41B
	S12-S12-S12		5	3RA1972-2F		1	1 unit	41B
Adapters for screw fixing								
3RT2.2	S0	Screw adapters for securing the contactors, 2 units required per contactor (1 pack contains 10 sets for 10 contactors)	15	3RT1926-4P		1	10 units	41B
EMC suppression modules; three-phase, up to 7.5 kW								
For contactors with AC or DC operation								
	3RT201	S00	RC elements (3 x 220 Ω/0.22 μF)		Screw terminals 			
			• Up to 400 V	►	3RT2916-1PA1	1	1 unit	41B
			• Up to 575 V	2	3RT2916-1PA2	1	1 unit	41B
			• Up to 690 V	15	3RT2916-1PA3	1	1 unit	41B
	3RT201	S00	Varistors					
			• Up to 400 V	2	3RT2916-1PB1	1	1 unit	41B
			• Up to 575 V	2	3RT2916-1PB2	1	1 unit	41B
			• Up to 690 V	15	3RT2916-1PB3	1	1 unit	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Miscellaneous accessories

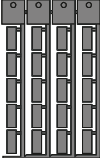
	For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type				d					
Additional load modules									
 3RT2916-1GA00	3RT2.1, 3RH2	S00	For plugging onto the front side of the contactors with or without auxiliary switch blocks For increasing the permissible residual current and for limiting the residual voltage. It ensures the safe opening of contactors with direct control via 230 V AC semiconductor outputs of SIMATIC controllers. It acts simultaneously as a surge suppressor. Rated voltage: 50/60 Hz AC, 180 ... 255 V Operating range: 0.8 ... 1.1 x U _s	▶	3RT2916-1GA00		1	1 unit	41B
LED modules for displaying contactor operation									
 3RT2926-1QT00	3RT2	S00 ... S3	For snapping into the location hole of an inscription label on the front of a contactor either directly on the contactor or on the front auxiliary switch.	5	3RT2926-1QT00		1	5 units	41B
	3RT1.5 ... 3RT1.7	S6 ... S12 The connecting leads have to be extended.	The LED module is connected to coil terminals A1 and A2 of the contactor and indicates its energized state. Yellow LED. Rated voltage: 24 ... 240 V AC/DC with reverse polarity protection.	5	3RT1926-1QT00		1	5 units	41B
Control kit									
 3RT2916-4MC00	3RT2.1, 3RH2	S00	For manual operation of contactor contacts for start up and service	2	3RT2916-4MC00		1	5 units	41B
	3RT2.2	S0		2	3RT2926-4MC00		1	5 units	41B
	3RT2.3	S2		2	3RT2936-4MC00		1	5 units	41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Accessories

Miscellaneous accessories

For con- tactors	Size	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type			d					
Insulation stop for securely holding back the conductor insulation on conductors up to 1 mm²								
 3RT2916-4JA02	3RT2.1, 3RH2	S00	5	3RT2916-4JA02		1	20 units	41B
	3RT2.2 ...	S0 ... S12	5	3RT1916-4JA02		1	20 units	41B
	3RT2.4, 3RT1, 3RH29							
Tools for opening spring-type terminals								
 3RA2908-1A	3RT	S00 ... S12	2	3RA2908-1A		1	1 unit	41B
Blank labels								
 3RT2900-1SB20	3RT2	S00 ... S3	20	3RT2900-1SB10		100	816 units	41B
			20	3RT2900-1SB20		100	340 units	41B
	3RT1	S6 ... S12	15	3RT1900-1SB10		100	816 units	41B
			20	3RT1900-1SB20		100	340 units	41B
	3RT2	S00 ... S3	5	3RT2900-1SB60		100	3 060 units	41B
	3RT1	S6 ... S12	15	3RT1900-1SB60		100	3 060 units	41B
			15	3RT1900-1SD60		100	3 060 units	41B

¹⁾ PC labeling system for individual inscription of unit labeling plates available from: murrplastik Systemtechnik GmbH (see page 16/20).

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Spare Parts

Solenoid coils

Selection and ordering data

Screw terminals and spring-type terminals



3RT2924-5A.01

For contactors	Rated control supply voltage U_s			SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
	50 Hz	50/60 Hz	60 Hz						
Type	V	V	V	d					
Solenoid coils · AC operation									
Size S0									
3RT2023-.A, 3RT2024-.A, 3RT2025-.A	24	--	--	5	3RT2924-5AB01		1	1 unit	41B
	42	--	--	5	3RT2924-5AD01		1	1 unit	41B
	48	--	--	5	3RT2924-5AH01		1	1 unit	41B
	110	--	--	5	3RT2924-5AF01		1	1 unit	41B
	230	--	--	5	3RT2924-5AP01		1	1 unit	41B
	400	--	--	5	3RT2924-5AV01		1	1 unit	41B
	--	24	--	5	3RT2924-5AC21		1	1 unit	41B
	--	42	--	5	3RT2924-5AD21		1	1 unit	41B
	--	48	--	5	3RT2924-5AH21		1	1 unit	41B
	--	110	--	5	3RT2924-5AG21		1	1 unit	41B
	--	220	--	5	3RT2924-5AN21		1	1 unit	41B
	--	230	--	5	3RT2924-5AL21		1	1 unit	41B
	--	--	24	5	3RT2924-5AC11		1	1 unit	41B
	110	--	120	5	3RT2924-5AK61		1	1 unit	41B
	220	--	240	5	3RT2924-5AP61		1	1 unit	41B
3RT2026-.A, 3RT2027-.A, 3RT2028-.A	24	--	--	5	3RT2926-5AB01		1	1 unit	41B
	42	--	--	5	3RT2926-5AD01		1	1 unit	41B
	48	--	--	5	3RT2926-5AH01		1	1 unit	41B
	110	--	--	5	3RT2926-5AF01		1	1 unit	41B
	230	--	--	5	3RT2926-5AP01		1	1 unit	41B
	400	--	--	5	3RT2926-5AV01		1	1 unit	41B
	--	24	--	5	3RT2926-5AC21		1	1 unit	41B
	--	42	--	5	3RT2926-5AD21		1	1 unit	41B
	--	48	--	5	3RT2926-5AH21		1	1 unit	41B
	--	110	--	5	3RT2926-5AG21		1	1 unit	41B
	--	220	--	5	3RT2926-5AN21		1	1 unit	41B
	--	230	--	5	3RT2926-5AL21		1	1 unit	41B
	--	--	24	5	3RT2926-5AC11		1	1 unit	41B
	110	--	120	5	3RT2926-5AK61		1	1 unit	41B
	220	--	240	5	3RT2926-5AP61		1	1 unit	41B
3RT2325-.A, 3RT2326-.A, 3RT2327-.A	--	100	110	5	3RT2926-5AG61		1	1 unit	41B
	--	200	220	5	3RT2926-5AN61		1	1 unit	41B
	--	400	440	5	3RT2926-5AR61		1	1 unit	41B
	--	--	--	5	3RT2926-5AB01		1	1 unit	41B
	--	--	--	5	3RT2926-5AD01		1	1 unit	41B
	--	--	--	5	3RT2926-5AH01		1	1 unit	41B
3RT2526-.A	--	--	--	5	3RT2926-5AF01		1	1 unit	41B
	--	--	--	5	3RT2926-5AP01		1	1 unit	41B
	--	--	--	5	3RT2926-5AV01		1	1 unit	41B
	--	--	--	5	3RT2926-5AC21		1	1 unit	41B
	--	--	--	5	3RT2926-5AD21		1	1 unit	41B
	--	--	--	5	3RT2926-5AH21		1	1 unit	41B
3RT2526-.A	--	--	--	5	3RT2926-5AG21		1	1 unit	41B
	--	--	--	5	3RT2926-5AN21		1	1 unit	41B
	--	--	--	5	3RT2926-5AL21		1	1 unit	41B
	--	--	--	5	3RT2926-5AC11		1	1 unit	41B
	--	--	--	5	3RT2926-5AK61		1	1 unit	41B
	--	--	--	5	3RT2926-5AP61		1	1 unit	41B
3RT2526-.A	--	--	--	5	3RT2926-5AG61		1	1 unit	41B
	--	--	--	5	3RT2926-5AN61		1	1 unit	41B
	--	--	--	5	3RT2926-5AR61		1	1 unit	41B
	--	--	--	5	3RT2926-5AB01		1	1 unit	41B
	--	--	--	5	3RT2926-5AD01		1	1 unit	41B
	--	--	--	5	3RT2926-5AH01		1	1 unit	41B

Note:

Contactors with AC and AC/DC coils have different depths. It is only possible to replace the coils on AC contactors with AC coils, and on AC/DC contactors with AC/DC coils. It is not possible to replace the coils on DC contactors.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays
Spare Parts

Solenoid coils

Screw terminals and spring-type terminals



3RT2934-5A.01



3RT2934-5N.31

For contactors	Rated control supply voltage U_s				SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type	50 Hz	50/60 Hz	60 Hz	DC	d					

Solenoid coils · AC operation

Size S2

3RT203.-.A,	24	--	--	--	5	3RT2934-5AB01		1	1 unit	41B
3RT233.-.A,	42	--	--	--	5	3RT2934-5AD01		1	1 unit	41B
3RT253.-.A	48	--	--	--	5	3RT2934-5AH01		1	1 unit	41B
	110	--	--	--	5	3RT2934-5AF01		1	1 unit	41B
	230	--	--	--	5	3RT2934-5AP01		1	1 unit	41B
	400	--	--	--	5	3RT2934-5AV01		1	1 unit	41B
--	24	--	--	--	5	3RT2934-5AC21		1	1 unit	41B
--	42	--	--	--	5	3RT2934-5AD21		1	1 unit	41B
--	48	--	--	--	5	3RT2934-5AH21		1	1 unit	41B
--	110	--	--	--	5	3RT2934-5AG21		1	1 unit	41B
--	220	--	--	--	5	3RT2934-5AN21		1	1 unit	41B
--	230	--	--	--	5	3RT2934-5AL21		1	1 unit	41B
110	--	120	--	--	5	3RT2934-5AK61		1	1 unit	41B
220	--	240	--	--	5	3RT2934-5AP61		1	1 unit	41B
--	--	480	--	--	5	3RT2934-5AV61		1	1 unit	41B
--	--	600	--	--	5	3RT2934-5AT61		1	1 unit	41B
--	100	110	--	--	5	3RT2934-5AG61		1	1 unit	41B
--	200	220	--	--	5	3RT2934-5AN61		1	1 unit	41B
--	400	440	--	--	5	3RT2934-5AR61		1	1 unit	41B

Size S3 **NEW**

3RT2.4.-.A	24	--	--	--	X	3RT2944-5AB01		1	1 unit	41B
	42	--	--	--	X	3RT2944-5AD01		1	1 unit	41B
	48	--	--	--	X	3RT2944-5AH01		1	1 unit	41B
	110	--	--	--	X	3RT2944-5AF01		1	1 unit	41B
	230	--	--	--	X	3RT2944-5AP01		1	1 unit	41B
	400	--	--	--	X	3RT2944-5AV01		1	1 unit	41B
--	24	--	--	--	X	3RT2944-5AC21		1	1 unit	41B
--	42	--	--	--	X	3RT2944-5AD21		1	1 unit	41B
--	48	--	--	--	X	3RT2944-5AH21		1	1 unit	41B
--	110	--	--	--	X	3RT2944-5AG21		1	1 unit	41B
--	220	--	--	--	X	3RT2944-5AN21		1	1 unit	41B
--	230	--	--	--	X	3RT2944-5AL21		1	1 unit	41B
110	--	120	--	--	X	3RT2944-5AK61		1	1 unit	41B
220	--	240	--	--	X	3RT2944-5AP61		1	1 unit	41B
--	--	480	--	--	X	3RT2944-5AV61		1	1 unit	41B
--	--	600	--	--	X	3RT2944-5AT61		1	1 unit	41B
--	100	110	--	--	X	3RT2944-5AG61		1	1 unit	41B
--	200	220	--	--	X	3RT2944-5AN61		1	1 unit	41B
--	400	440	--	--	X	3RT2944-5AR61		1	1 unit	41B

Solenoid coils · AC/DC operation, with varistor

Size S2

3RT203.-.A,	--	20 ... 33	--	20 ... 33	5	3RT2934-5NB31		1	1 unit	41B
3RT233.-.A,	--	30 ... 42	--	30 ... 42	5	3RT2934-5ND31		1	1 unit	41B
3RT253.-.A	--	48 ... 80	--	48 ... 80	5	3RT2934-5NE31		1	1 unit	41B
	--	83 ... 155	--	83 ... 155	5	3RT2934-5NF31		1	1 unit	41B
	--	175 ... 280	--	175 ... 280	5	3RT2934-5NP31		1	1 unit	41B

Size S3 **NEW**

3RT2.4.-.A	--	20 ... 33	--	20 ... 33	X	3RT2944-5NB31		1	1 unit	41B
	--	30 ... 42	--	30 ... 42	X	3RT2944-5ND31		1	1 unit	41B
	--	48 ... 80	--	48 ... 80	X	3RT2944-5NE31		1	1 unit	41B
	--	83 ... 155	--	83 ... 155	X	3RT2944-5NF31		1	1 unit	41B
	--	175 ... 280	--	175 ... 280	X	3RT2944-5NP31		1	1 unit	41B

Note:

It is only possible to replace the coils on AC contactors with AC coils, and on AC/DC contactors with AC/DC coils.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Spare Parts

Solenoid coils

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B

For contactors		Rated control supply voltage U_s	SD	Screw terminals		SD	Spring-type terminals	
Size	Type	V	d	Article No.	Price per PU	d	Article No.	Price per PU

Withdrawable coils



3RT1955-5A... 1

Conventional operating mechanisms for AC/DC

S6	3RT105, 3RT145	23 ... 26 AC/DC	5	3RT1955-5AB31	5	3RT1955-5AB32
		42 ... 48 AC/DC	5	3RT1955-5AD31	5	3RT1955-5AD32
		110 ... 127 AC/DC	5	3RT1955-5AF31	5	3RT1955-5AF32
		200 ... 220 AC/DC	5	3RT1955-5AM31	5	3RT1955-5AM32
		220 ... 240 AC/DC	5	3RT1955-5AP31	5	3RT1955-5AP32
		240 ... 277 AC/DC	5	3RT1955-5AU31	5	3RT1955-5AU32
		380 ... 420 AC/DC	5	3RT1955-5AV31	5	3RT1955-5AV32
		440 ... 480 AC/DC	5	3RT1955-5AR31	5	3RT1955-5AR32
		500 ... 550 AC/DC	5	3RT1955-5AS31	5	3RT1955-5AS32
		575 ... 600 AC/DC	5	3RT1955-5AT31	5	3RT1955-5AT32
S10	3RT106, 3RT146	23 ... 26 AC/DC	5	3RT1965-5AB31	5	3RT1965-5AB32
		42 ... 48 AC/DC	5	3RT1965-5AD31	5	3RT1965-5AD32
		110 ... 127 AC/DC	5	3RT1965-5AF31	5	3RT1965-5AF32
		200 ... 220 AC/DC	5	3RT1965-5AM31	5	3RT1965-5AM32
		220 ... 240 AC/DC	5	3RT1965-5AP31	5	3RT1965-5AP32
		240 ... 277 AC/DC	5	3RT1965-5AU31	5	3RT1965-5AU32
		380 ... 420 AC/DC	5	3RT1965-5AV31	5	3RT1965-5AV32
		440 ... 480 AC/DC	5	3RT1965-5AR31	5	3RT1965-5AR32
		500 ... 550 AC/DC	5	3RT1965-5AS31	5	3RT1965-5AS32
		575 ... 600 AC/DC	5	3RT1965-5AT31	5	3RT1965-5AT32
S12	3RT107, 3RT147	23 ... 26 AC/DC	5	3RT1975-5AB31	5	3RT1975-5AB32
		42 ... 48 AC/DC	5	3RT1975-5AD31	5	3RT1975-5AD32
		110 ... 127 AC/DC	5	3RT1975-5AF31	5	3RT1975-5AF32
		200 ... 220 AC/DC	5	3RT1975-5AM31	5	3RT1975-5AM32
		220 ... 240 AC/DC	5	3RT1975-5AP31	5	3RT1975-5AP32
		240 ... 277 AC/DC	5	3RT1975-5AU31	5	3RT1975-5AU32
		380 ... 420 AC/DC	5	3RT1975-5AV31	5	3RT1975-5AV32
		440 ... 480 AC/DC	5	3RT1975-5AR31	5	3RT1975-5AR32
		500 ... 550 AC/DC	5	3RT1975-5AS31	5	3RT1975-5AS32
		575 ... 600 AC/DC	5	3RT1975-5AT31	5	3RT1975-5AT32



3RT1955-5N... 1

Solid-state operating mechanisms for AC/DC with 24 V DC control signal input, e.g. for control by PLC

S6	3RT105, 3RT145	21 ... 27.3 AC/DC	5	3RT1955-5NB31 3RT1955-5NF31 3RT1955-5NP31	5 5 5	3RT1955-5NB32 3RT1955-5NF32 3RT1955-5NP32
		96 ... 127 AC/DC	5			
		200 ... 277 AC/DC	5			
S10	3RT106, 3RT146	21 ... 27.3 AC/DC	5	3RT1965-5NB31 3RT1965-5NF31 3RT1965-5NP31	5 5 5	3RT1965-5NB32 3RT1965-5NF32 3RT1965-5NP32
		96 ... 127 AC/DC	5			
		200 ... 277 AC/DC	5			
S12	3RT107, 3RT147	21 ... 27.3 AC/DC	5	3RT1975-5NB31 3RT1975-5NF31 3RT1975-5NP31	5 5 5	3RT1975-5NB32 3RT1975-5NF32 3RT1975-5NP32
		96 ... 127 AC/DC	5			
		200 ... 277 AC/DC	5			
• Additionally with PLC relay output and remaining lifetime indicator (RLT) (withdrawable coil with laterally mounted solid-state module)						
S6	3RT105, 3RT145	96 ... 127 AC/DC	5	3RT1955-5PF31 3RT1955-5PP31		--- ---
		200 ... 277 AC/DC	5			
S10	3RT106, 3RT146	96 ... 127 AC/DC	5	3RT1965-5PF31 3RT1965-5PP31		--- ---
		200 ... 277 AC/DC	5			
S12	3RT107, 3RT147	96 ... 127 AC/DC	5	3RT1975-5PF31 3RT1975-5PP31		--- ---
		200 ... 277 AC/DC	5			

Solid-state operating mechanisms for DC with 24 ... 110 V DC control signal input e. g. for control by PLC with extended operating range **NEW**

(see also traction contactors on page 4/67)

S6	3RT105...-X...- OLA2	24 DC	--	5	3RT1955-5XB42
		72 DC	--	5	3RT1955-5XJ42
		110 DC	--	5	3RT1955-5XF42
S10	3RT106...-X...- OLA2	24 DC	--	5	3RT1965-5XB42
		72 DC	--	5	3RT1965-5XJ42
		110 DC	--	5	3RT1965-5XF42
S12	3RT107...-X...- OLA2	24 DC	--	5	3RT1975-5XB42
		72 DC	--	5	3RT1975-5XJ42
		110 DC	--	5	3RT1975-5XF42

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT Contactors and SIRIUS 3RH2 Contactor Relays

Spare Parts

Contacts and arc chambers

Selection and ordering data

For contactors	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Size	Type	d					
Contacts with fixing parts							
For contactors with 3 main contacts							
S2	3RT2035	Main contacts (3 NO contacts) for utilization category AC-3	5	3RT2935-6A	1	1 unit	41B
	3RT2036		5	3RT2936-6A	1	1 unit	41B
	3RT2037	(1 set = 3 movable and 6 fixed switching elements with fixing parts)	5	3RT2937-6A	1	1 unit	41B
	3RT2038		5	3RT2938-6A	1	1 unit	41B
S3	3RT2.45		NEW X	3RT2945-6A	1	1 unit	41B
	3RT2.46		NEW X	3RT2946-6A	1	1 unit	41B
	3RT2.47		NEW X	3RT2947-6A	1	1 unit	41B
S6	3RT1054		►	3RT1954-6A	1	1 unit	41B
	3RT1055		►	3RT1955-6A	1	1 unit	41B
	3RT1056		►	3RT1956-6A	1	1 unit	41B
S10	3RT1064		►	3RT1964-6A	1	1 unit	41B
	3RT1065		►	3RT1965-6A	1	1 unit	41B
	3RT1066		►	3RT1966-6A	1	1 unit	41B
S12	3RT1075		►	3RT1975-6A	1	1 unit	41B
	3RT1076		2	3RT1976-6A	1	1 unit	41B
S6	3RT1456	Main contacts (3 NO contacts) for utilization category AC-1	5	3RT1956-6D	1	1 unit	41B
S10	3RT1466		5	3RT1966-6D	1	1 unit	41B
S12	3RT1476	(1 set = 3 movable and 6 fixed switching elements with fixing parts)	2	3RT1976-6D	1	1 unit	41B
For contactors with 4 main contacts							
S2	3RT2336	Main contacts (4 NO contacts) for utilization category AC-1	5	3RT2936-6E	1	1 unit	41B
	3RT2337	(1 set = 3 moving and 6 fixed switching elements and replacement pole with fixing parts)	5	3RT2937-6E	1	1 unit	41B
Arc chambers							
For contactors with 3 main contacts							
S6	3RT1054	For contactors with AC/DC coil only	5	3RT1954-7A	1	1 unit	41B
	3RT1055		5	3RT1955-7A	1	1 unit	41B
	3RT1056		5	3RT1956-7A	1	1 unit	41B
	3RT1456		5	3RT1956-7B	1	1 unit	41B
S10	3RT1064		5	3RT1964-7A	1	1 unit	41B
	3RT1065		5	3RT1965-7A	1	1 unit	41B
	3RT1066		5	3RT1966-7A	1	1 unit	41B
	3RT1466		5	3RT1966-7B	1	1 unit	41B
S12	3RT1075		5	3RT1975-7A	1	1 unit	41B
	3RT1076		5	3RT1976-7A	1	1 unit	41B
	3RT1476		5	3RT1976-7B	1	1 unit	41B

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Overview

Vacuum contactors

Standards

IEC 60947-1, EN 60947-1,
IEC 60947-4-1, EN 60947-4-1,
IEC 60947-5-1, EN 60947-5-1 (auxiliary switches)

The SIRIUS 3RT12 and 3TF68/3TF69 vacuum contactors are suitable for use in any climate. They are finger-safe according to IEC 60529. Terminal covers may have to be fitted onto the connecting bars, depending on the configuration with other devices (see pages 3/116 and 3/138).

Connection methods

The vacuum contactors are available with screw terminals (box terminals).

Contact reliability

If voltages ≤ 110 V and currents ≤ 100 mA are to be switched, the auxiliary contacts of the vacuum contactors or 3RH contactor relays should be used as they guarantee a high level of contact reliability.

These auxiliary contacts are particularly suitable for solid-state circuits with currents ≥ 1 mA at a voltage ≥ 17 V.

Short-circuit protection

For short-circuit protection of vacuum contactors without overload relays, see "Technical specifications", page 3/129.

For short-circuit protection of vacuum contactors with overload relays, see the Configuration Manual "Configuring SIRIUS – Selection Data for Fuseless Load Feeders", <https://support.industry.siemens.com/cs/ww/en/view/40625241>.

Electromagnetic compatibility (EMC)

The contactors with solid-state operating mechanism comply with the international standards IEC/EN 60947-1 and IEC/EN 60947-4-1.

These contactors have been developed for environment A.

Note:

Environment A refers to private low-voltage or industrial networks/locations/plants, including high-grade sources of interference.

Environment A corresponds to devices of Class A with CISPR 11, EN 55011.

Note:

In connection with converters, the control cables must be routed separately from the load cables to the converter.

Motor protection

For protection against overload, 3RB2 electronic overload relays (see page 7/109 onwards) can be mounted on the vacuum contactors. These must be ordered separately.

Ratings of three-phase motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

The power rating specifications of the vacuum contactors in kW are guide values for 4-pole standard motors at 50 Hz AC and specified voltage (e.g. 400 V). The actual starting and rated data of the motor to be switched must be considered when selecting the units.

Surge suppression

The vacuum contactors can be retrofitted with varistors for damping opening overvoltages in the coil.

Note:

The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (varistor +2 to 5 ms)

Vacuum contactors are basically unsuitable for switching DC voltage.

SIRIUS 3RT12 vacuum contactors, 3-pole, 110 to 250 kW

AC/DC operation

The contactors can be operated with AC (50 to 60 Hz) as well as with DC.

Two types of solenoid operation are available:

- Conventional operating mechanism, version 3RT12...A
- Solid-state operating mechanism, version 3RT12...N

Withdrawable coils

For simple coil replacement, e. g. if the application is replaced, the solenoid coil can be pulled out upwards after the release mechanism has been actuated and can be replaced by any other coil of the same size.

Vacuum interrupters

In contrast to the 3RT10 contactors – the main contacts operate in air under atmospheric conditions – the contact gaps of the 3RT12 vacuum contactors are contained in hermetically enclosed vacuum interrupters. Neither arcs nor arcing gases are produced. The particular benefit of 3RT12 vacuum contactors, however, is that their electrical endurance is at least twice as long as that of 3RT10 contactors. They are therefore particularly well suited to frequent switching in inching/mixed operation, e.g. in crane control systems.

Auxiliary contact complement

The 3RT12 vacuum contactors of sizes S10 to S12 are supplied with laterally mounted auxiliary switch blocks. These can be fitted with up to eight lateral auxiliary contacts (identical auxiliary switch blocks for S10 and S12). Of these, no more than four are permitted to be NC contacts.

3TF6 vacuum contactors, 3-pole, 335 to 450 kW

Main contacts

Contact erosion indication with 3TF68/3TF69 vacuum contactors:

The contact erosion of the vacuum interrupters can be checked during operation with the help of three white double slides on the contactor base. If the distance indicated by one of the double slides is < 0.5 mm while the contactor is in the closed position, the vacuum interrupter must be replaced. To ensure maximum reliability, it is recommended to replace all three vacuum interrupters simultaneously.

Auxiliary contacts

Contact reliability:

These auxiliary contacts are particularly suitable for solid-state circuits with currents ≥ 1 mA at a voltage ≥ 17 V.

Protection of the main current paths

An integrated RC varistor connection for the main current paths dampens the switching overvoltage rises to safe values. This prevents multiple restricting. It can therefore be assumed that the motor winding cannot be damaged by switching overvoltages with steep voltage rises.

During operation in installations in which the emitted interference limits cannot be observed, e. g. when used for output contactors in converters, 3TF68/3TF69...Q vacuum contactors – without connection of the main current path circuit – are recommended.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Technical specifications

Unless otherwise listed on subsequent pages, the technical specifications of the SIRIUS 3RT12 vacuum contactors correspond to those of the 3RT10 basic units; see pages 3/19, 3/22 and 3/44 to 3/50.

More information

Technical specifications, see
<https://support.industry.siemens.com/cs/ww/en/ps/16137/td>
 FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16137/faq>
 Manuals, see

- System Manual "SIRIUS – System Overview",
<https://support.industry.siemens.com/cs/WW/en/view/60311318>
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies",
<https://support.industry.siemens.com/cs/WW/en/view/60306557>
- Application Manual "SIRIUS Controls with IE3/IE4 motors",
<https://support.industry.siemens.com/cs/ww/en/view/94770820>

Type
 Size

SIRIUS vacuum contactors
3RT12
S10 and S12

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i. e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

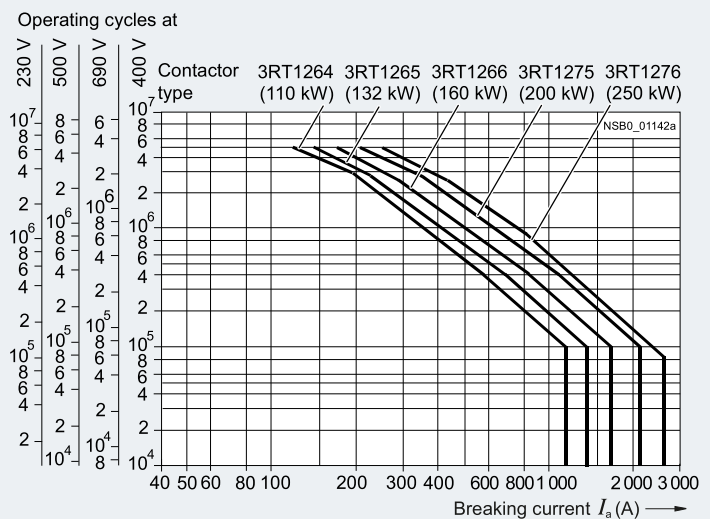
If a shorter contact endurance is sufficient, the rated operational current I_e /AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100} \left(\frac{A}{B} - 1 \right)}$$

Characters in the equation:

- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation
 $(I_a = I_e)$ in operating cycles
- B Contact endurance for inching
 $(I_a = \text{multiple of } I_e)$ in operating cycles
- C Inching operations as a percentage of total switching operations



Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Type	Vacuum contactors		
Size	3TF68 and 3TF69		
Rated data of the auxiliary contacts	According to IEC 60947-5-1		
Rated insulation voltage U_i (pollution degree 3)	V	690	
Conventional thermal current $I_{th} = \text{rated operational current } I_e/\text{AC-12}$	A	10	
AC load			
Rated operational current $I_e/\text{AC-15/AC-14}$			
• For rated operational voltage U_e			
- At 24 V	A	10	
- At 110 V	A	10	
- At 125 V	A	10	
- At 220 V	A	6	
- At 230 V	A	5.6	
- At 380 V	A	4	
- At 400 V	A	3.6	
- At 500 V	A	2.5	
- At 660 V	A	2.5	
- At 690 V	A	2.3	
DC load			
Rated operational current $I_e/\text{DC-12}$			
• For rated operational voltage U_e			
- At 24 V	A	10	
- At 60 V	A	10	
- At 110 V	A	3.2	
- At 125 V	A	2.5	
- At 220 V	A	0.9	
- At 440 V	A	0.33	
- At 600 V	A	0.22	
Rated operational current $I_e/\text{DC-13}$		Auxiliary contacts with delayed NC contact:	
• For rated operational voltage U_e		NS = No specification	
- At 24 V	A	10	6
- At 60 V	A	5	N S
- At 110 V	A	1.14	0.98
- At 125 V	A	0.98	N S
- At 220 V	A	0.48	N S
- At 440 V	A	0.13	N S
- At 600 V	A	0.07	0.07

Ⓢ and Ⓣ rated data of the auxiliary contacts

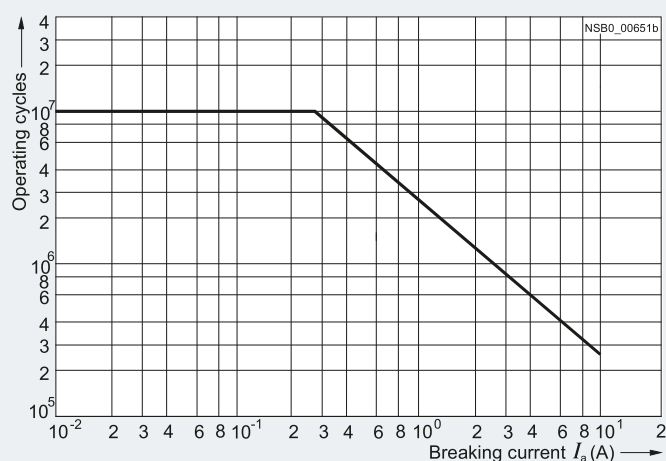
Rated voltage, max. V AC 600

Switching capacity A 600, P 600

Endurance of the auxiliary contacts

The contact endurance for utilization category AC-12 or AC-15/AC-14 depends mainly on the breaking current. It is assumed that the operating mechanisms are switched randomly, i. e. not synchronized with the phase angle of the supply system.

The characteristic curves apply to 230 V AC.



Contact erosion indication with vacuum contactors

The contact erosion of the vacuum interrupters can be checked during operation with the help of three white double slides on the contactor base.

If the distance indicated by one of the double slides is < 0.5 mm while the contactor is in the closed position, the vacuum interrupter must be replaced. To ensure maximum reliability, it is recommended to replace all three vacuum interrupters at once.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Type
Size

Vacuum contactors
3TF68 and 3TF69
14

Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching resistive and inductive AC loads (AC-1/AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i. e. not synchronized with the phase angle of the supply system.

The rated operational current I_a complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles.

If a shorter contact endurance is sufficient, the rated operational current I_e /AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

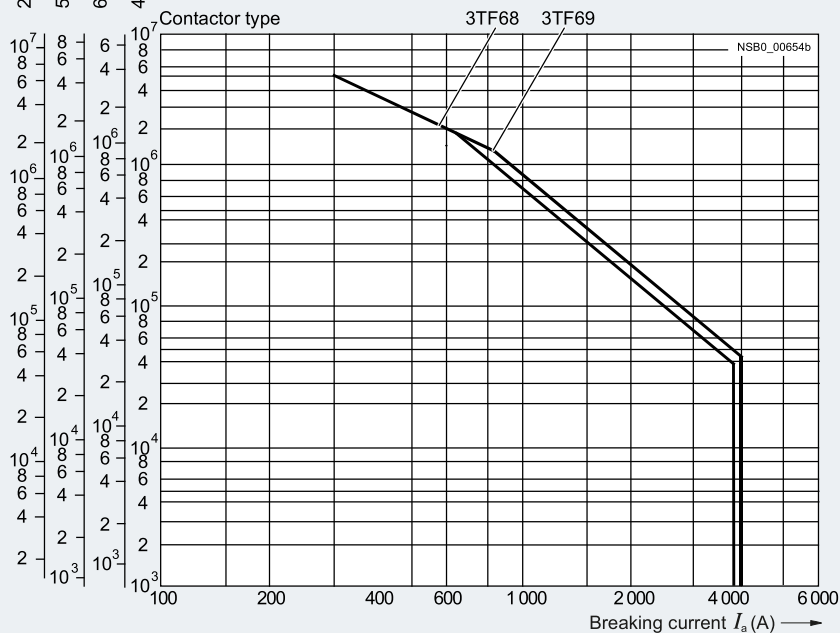
$$X = \frac{A}{1 + \frac{C}{100} \left(\frac{A}{B} - 1 \right)}$$

Characters in the equation:

- X Contact endurance for mixed operation in operating cycles
- A Contact endurance for normal operation ($I_a = I_e$) in operating cycles
- B Contact endurance for inching ($I_a = \text{multiple of } I_e$) in operating cycles
- C Inching operations as a percentage of total switching operations

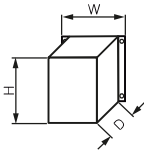
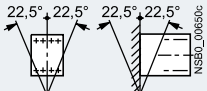
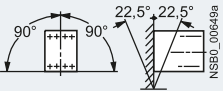
Operating cycles at

230 V
500 V
690 V
400 V



Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Type Size	SIRIUS vacuum contactors				Vacuum contactors	
	3RT1264 S10	3RT1265 S10	3RT1266 S12	3RT1275 S12	3TF68 14	3TF69
General data						
Dimensions (W x H x D)						
	mm	145 x 210 x 206	160 x 214 x 225	230 x 276 x 237	230 x 295 x 237	
Permissible mounting position						
The contactors are designed for operation on a vertical mounting surface.						
- To easily replace the laterally mounted auxiliary switches it is recommended to maintain a minimum distance of 30 mm between the contactors. - If mounted at a 90° angle (current paths are horizontally above each other), the switching frequency is reduced by 80 % compared with the normal values.	No	No	No	No	Yes	Yes
Mechanical endurance	Operating cycles	10 million			5 million	
Electrical endurance	Contact endurance of the main contacts	See page 3/125			See page 3/126	
Rated insulation voltage U_i (pollution degree 3)	kV	1				
Rated impulse withstand voltage U_{imp}	kV	8				
Protective separation between the coil and the main contacts acc. to IEC 60947-1, Appendix N	V	690			1 000	
Mirror contacts A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.		Yes, acc. to IEC 60947-4-1, Appendix F			Yes, acc. to IEC 60947-4-1, Appendix F One NC contact each must be connected in series for the left and right auxiliary switch block respectively.	
Permissible ambient temperature						
• During operation	°C	-25 ... +60			-25 ... +55 ¹⁾	
• During storage	°C	-55 ... +80			-55 ... +80	
Degree of protection acc. to IEC 60529						
• On the front		IP00 (IP20 with box terminal/cover)			2)3)	
• Connecting terminal		IP00 (for higher degree of protection, use additional terminal covers)				
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front with cover				
Shock resistance						
• Rectangular pulse						
- AC operation	g/ms	8.5/5 and 4.2/10			8.1/5 and 4.7/10	9.5/5 and 5.7/10
- DC operation	g/ms	8.5/5 and 4.2/10			9/5 and 5.7/10	8.6/5 and 5.1/10
• Sine pulse						
- AC operation	g/ms	13.4/5 and 6.5/10			12.8/5 and 7.4/10	13.5/5 and 7.8/10
- DC operation	g/ms	13.4/5 and 6.5/10			14.4/5 and 9.1/10	13.5/5 and 7.8/10
Electromagnetic compatibility (EMC)		See page 3/124				

¹⁾ For ambient temperatures > 55 °C, only 3TF6.33-.Q...-Z A02 contactors (= without connection of the main current path circuit) can be used. Then, derating is also possible with these contactors:
 - AC-1: $I_e = 782$ A, 644 operating cycles/h;
 - AC-3: Operating range 0.85 to $1.05 \times U_s$, 460 operating cycles/h, mech. endurance 5 million operating cycles, lateral clearance 10 mm.

²⁾ For 3TF6.-.C.. the following applies:
 - IP00 without cover (the connecting bar is reached directly from the front)
 - IP00 with cover for conductor entry
 - IP20 on the front plate with cover.
³⁾ For 3TF6.-.Q...-D.. the following applies:
 - IP00 without box terminal (the connecting bar, series resistor and the 3TC44 reversing contactor are reached directly from the front)
 - IP00 with box terminal (the series resistor and the 3TC44 reversing contactor are reached directly).

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Type Size	SIRIUS vacuum contactors					Vacuum contactors	
	3RT1264 S10	3RT1265	3RT1266	3RT1275 S12	3RT1276	3TF68 14	3TF69
Short-circuit protection							
Main circuit							
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE according to IEC 60947-4-1/DIN EN 60947-4-1							
• Type of coordination "1"	A	500		800		1 000	1 250
• Type of coordination "2"	A	500		800		500	630
• Weld-free (test conditions according to IEC 60947-4-1)	A	400		500		400	500
Auxiliary circuit							
Short-circuit test							
• Fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE (weld-free fuse protection at $I_k \leq 1$ kA)	A	10					
• Miniature circuit breaker with C characteristic (short-circuit current $I_k \leq 400$ A)	A	10					
Short-circuit protection for contactors with overload relays	See Configuration Manual "Configuring SIRIUS – Selection Data for Fuseless Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/40625241						

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT1264 ... 3RT1266	3RT1275, 3RT1276	3TF68	3TF69
Size		S10	S12	14	
Control					
Solenoid coil operating range	AC/DC	$0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$			
Power consumption of the solenoid coils (for cold coil and $1.0 \times U_s$)		<u>Conventional operating mechanisms</u>			
• AC operation					
- Closing at $U_{s \min}/U_{s \max}$	VA	530/630	700/830	--	
- P.f.		0.9		--	
- Closed at $U_{s \min}/U_{s \max}$	VA	6.1/7.4	7.6/9.2	--	
- P.f.		0.9		--	
• DC operation					
- Closing at $U_{s \min}/U_{s \max}$	W	580/780	770/920	--	
- Closed at $U_{s \min}/U_{s \max}$	W	6.8/8.2	8.5/10	--	
		<u>Solid-state operating mechanisms</u>			
• AC operation					
- Closing at $U_{s \min}/U_{s \max}$	VA	420/570	560/750	1 200/1 850	600/950
- P.f.		0.8		1	0.98
- Closed at $U_{s \min}/U_{s \max}$	VA	5.5/8.5	5.6/9	13.5/49	12.9/30.6
- P.f.		0.5/0.4		0.15	0.31
• AC operation for 3TF68/3TF69...-Q					
- Closing at $U_{s \min}$	VA	--		1 000	1 150
- P.f.		--		0.99	
- Closed at $U_{s \min}$	VA	--		11	
- P.f.		--		1	
• DC operation					
- Closing at $U_{s \min}/U_{s \max}$	W	460/630	600/800	--	
- Closed at $U_{s \min}/U_{s \max}$	W	2.8/3.4	3/3.6	--	
• DC economy circuit ¹⁾					
- Closing at $U_{s \min}$	W	--		1 010	960
- Closed at $U_{s \min}$	W	--		28	20.6
PLC control input acc. to IEC 61131-2		Type 2			
• Rated voltage	V DC	24			
• Operating range	V DC	17 ... 30			
• Power consumption	mA	≤ 30			
Operating times (Total break time = Opening delay + Arcing time)		(Values apply to cold and warm coil)			
		<u>Conventional operating mechanisms</u>			
• For $0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$					
- Closing delay	ms	30 ... 95	45 ... 100	--	
- Opening delay	ms	40 ... 80	60 ... 100	--	
• For $U_{s \min} \dots U_{s \max}$					
- Closing delay	ms	35 ... 50	50 ... 70	--	
- Opening delay	ms	50 ... 80	70 ... 100	--	
		<u>Solid-state operating mechanisms, actuated via A1/A2</u>			
• AC operation at $0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$					
- Closing delay	ms	105 ... 145	120 ... 150	70 ... 120 (22 ... 65)	80 ... 120
- Opening delay	ms	80 ... 100		70 ... 100	70 ... 80
• AC operation for 3TF68/3TF69...-Q at $U_{s \min}$ (including reversing contactor)					
- Closing delay	ms	--		35 ... 90	45 ... 160
- Opening delay	ms	--		65 ... 90	30 ... 80
• AC operation at $U_{s \min} \dots U_{s \max}$					
- Closing delay	ms	110 ... 130	125 ... 150	80 ... 100 (30 ... 45)	85 ... 100
- Opening delay	ms	80 ... 100		70 ... 100	70
		<u>Solid-state operating mechanisms, actuated via PLC input</u>			
• For $0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$					
- Closing delay	ms	45 ... 80	60 ... 90	--	
- Opening delay	ms	80 ... 100		--	
• DC economy circuit for $0.8 \times U_{s \min} \dots 1.1 \times U_{s \max}$					
- Closing delay	ms	--		76 ... 110	86 ... 280
- Opening delay	ms	--		50	19 ... 25
• For $U_{s \min} \dots U_{s \max}$					
- Closing delay	ms	50 ... 65	65 ... 80	--	
- Opening delay	ms	80 ... 100		--	
• DC economy circuit for $U_{s \min} \dots U_{s \max}$					
- Closing delay	ms	--		80 ... 90	90 ... 125
- Opening delay	ms	--		50	19 ... 25
Arcing time	ms	10 ... 15		10 ... 15	10
Minimum command duration					
for closing	Standard	ms	--	120	
	Reduced make-time	ms	--	90	--
Minimum interval time between two ON commands		ms	--	100	300

¹⁾ At 24 V DC; for further voltages, deviations of up to ± 10 % are possible.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

			SIRIUS vacuum contactors					Vacuum contactors		
Type			3RT1264	3RT1265	3RT1266	3RT1275	3RT1276	3TF68	3TF69	
Size			S10			S12		14		
Rated data of the main contacts										
Load rating with AC										
Utilization category AC-1										
Switching resistive loads										
• Rated operational currents I_e	- At 40 °C up to 690 V		330			610		700	910	
	- At 40 °C up to 1 000 V	A	330			610		--	--	
• Rated power for AC loads ¹⁾ with p.f. = 0.95	- At 55 °C up to 690 V	A	--			--		630	850	
	- At 55 °C up to 1 000 V	A	--			--		450	800	
	- At 60 °C up to 1 000 V	A	300			550		--	--	
	- At 230 V	kW	113			208		240	323	
	- At 400 V	kW	197			362		415	558	
• Minimum conductor cross-section for loads with I_e	- At 500 V	kW	246			452		545	735	
	- At 690 V	kW	340			624		720	970	
	- At 1 000 V	kW	492			905		780	1 385	
	- At 40 °C	mm ²	185			2 x 185		2 x 240	$I_e \geq 800$ A: 2 x 60 x 5 (copper busbars)	
	- At 55 °C	mm ²	--			--		2 x 185	$I_e < 800$ A: 2 x 240	
	- At 60 °C	mm ²	185			2 x 185		--	--	
	Utilization categories AC-2 and AC-3									
• Rated operational currents I_e	- Up to 690 V	A	--	--	--	--	--	630	820	
	- Up to 1 000 V	A	225	265	300	400	500	435	580	
• Rated power for slipring or squirrel-cage motors at 50 and 60 Hz	- At 230 V	kW	73	85	97	132	164	200	260	
	- At 400 V	kW	128	151	171	231	291	347	450	
	- At 500 V	kW	160	189	215	291	363	434	600	
	- At 690 V	kW	223	265	288	400	507	600	800	
	- At 1 000 V	kW	320	378	428	578	728	600	800	
Thermal load capacity, 10 s current			A	1 800	2 120	2 400	3 200	4 000	5 040	7 000
Power loss per conducting path at I_e /AC-3			W	9	12	14	21	32	45	70
Utilization category AC-4 (for $I_a = 6 \times I_e$)										
Maximum values:										
• Rated operational current I_e	- Up to 690 V	A	195	230	280	350	430	610	690	
• Rated power of squirrel-cage motors at 50 and 60 Hz	- At 400 V	kW	110	132	160	200	250	355	400	
The following applies to a contact endurance of about 200 000 operating cycles:										
• Rated operational currents I_e	- Up to 690 V	A	97	115	140	175	215	300	360	
	- Up to 1 000 V	A	68	81	98	123	151	210	250	
• Rated power of squirrel-cage motors at 50 and 60 Hz	- At 230 V	kW	30	37	45	56	70	97	110	
	- At 400 V	kW	55	65	79	98	122	168	191	
	- At 500 V	kW	68	81	98	124	153	210 ²⁾	250 ²⁾	
	- At 690 V	kW	94	112	138	172	212	278 ²⁾	335 ²⁾	
	- At 1 000 V	kW	95	114	140	183	217	290 ²⁾	350 ²⁾	
Switching frequency										
Switching frequency z in operating cycles/hour										
Contactors without overload relays										
• No-load switching frequency	- AC	h ⁻¹	2 000					2 000	1 000	
	- DC	h ⁻¹	--					1 000		
• Switching frequency z during rated operation ³⁾	- I_e /AC-1 at 400 V	h ⁻¹	800	750				700		
	- I_e /AC-2 at 400 V	h ⁻¹	300	250				200		
	- I_e /AC-3 at 400 V	h ⁻¹	750					500		
	- I_e /AC-4 at 400 V	h ⁻¹	250					150		
Contactors with overload relays										
• Mean value		h ⁻¹	60					15		

¹⁾ Industrial furnaces and electric heaters with resistance heating, etc. (increased power consumption on heating up has been taken into account).

²⁾ Max. permissible rated operational current I_e /AC-4 = I_e /AC-3 up to 500 V, for reduced contact endurance and reduced switching frequency.

³⁾ Dependence of the switching frequency z' on the operational current I' and operational voltage U' :
 $z' = z \cdot (I_e/I') \cdot (U_e/U')^{1.5} \cdot 1/h$.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

		SIRIUS vacuum contactors		Vacuum contactors	
Type		3RT126.	3RT127.	3TF68	3TF69
Size		S10	S12	14	
Conductor cross-sections					
Main conductors (1 or 2 conductors connectable)		⊕ Screw terminals			
With mounted box terminals	Type	3RT1966-4G	--	--	--
• Terminal screws		M12 (hexagon socket, A/F 5)	--	--	--
- Tightening torque	Nm	20 ... 22 (180 ... 195 lb.in)	--	--	--
Front clamping point connected					
 NSB0_00479	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	70 ... 240	--	--
	• Finely stranded without end sleeve	mm ²	70 ... 240	--	--
	• Stranded	mm ²	95 ... 300	--	--
	• AWG cables, solid or stranded	AWG	3/0 ... 600 kcmil	--	--
	• Ribbon cable conductors (Number x Width x Thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5	--	--
Rear clamping point connected					
 NSB0_00480	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	120 ... 185	--	--
	• Finely stranded without end sleeve	mm ²	120 ... 185	--	--
	• Stranded	mm ²	120 ... 240	--	--
	• AWG cables, solid or stranded	AWG	250 ... 500 kcmil	--	--
	• Ribbon cable conductors (Number x Width x Thickness)	mm	Min. 6 x 9 x 0.8; max. 20 x 24 x 0.5	--	--
Both clamping points connected					
 NSB0_00481	• Finely stranded with end sleeve (DIN 46228-1)	mm ²	Min. 2 x 50, max. 2 x 185	--	--
	• Finely stranded without end sleeve	mm ²	Min. 2 x 50, max. 2 x 185	--	--
	• Stranded	mm ²	Min. 2 x 70, max. 2 x 240	--	--
	• AWG cables, solid or stranded	AWG	Min. 2 x 2/0, max. 1 x 500 kcmil	--	--
	• Ribbon cable conductors (Number x Width x Thickness)	mm	Max. 2 x (20 x 24 x 0.5)	--	--
Cable lug connection					
• Finely stranded with cable lug ¹⁾	mm ²	50 ... 240	--	--	--
• Stranded with cable lug ¹⁾	mm ²	70 ... 240	--	--	--
• AWG cables, solid or stranded	AWG	2/0 ... 500 kcmil	--	--	--
• Terminal screws		M10 x 30 (A/F 17)	--	--	--
- Tightening torque	Nm	14 ... 24 (124 ... 210 lb.in)	--	--	--
Busbar connections					
• Finely stranded with cable lug	mm ²	--	50 ... 240	50 ... 240	50 ... 240
• Stranded with cable lug	mm ²	--	70 ... 240	70 ... 240	70 ... 240
• Solid or stranded	AWG	--	2/0 ... 500 MCM	2/0 ... 500 MCM	2/0 ... 500 MCM
• Connecting bar (max. width)	mm	25	50	60 ($U_g \leq 690$ V), 50 ($U_g > 690$ V)	60 ($U_g \leq 690$ V), 50 ($U_g > 690$ V)
• Terminal screws		--	M10 x 30	M12 x 40	M12 x 40
- Tightening torque	Nm	--	14 ... 24	20 ... 35	20 ... 35
	lb.in	--	124 ... 210	177 ... 310	177 ... 310
With box terminal (see page 3/138)					
• Connectable laminated copper bars		--	Yes	Yes	Yes
• Width	mm	--	15 ... 25	15 ... 25	15 ... 38
• Max. thickness	mm	--	1 x 26 or 2 x 11	1 x 26 or 2 x 11	1 x 46 or 2 x 18
• Terminal screw		--	A/F 6 (hexagon socket)	A/F 6 (hexagon socket)	A/F 8 (hexagon socket)
• Tightening torque	Nm	--	25 ... 40 (221 ... 354 lb.in)	35 ... 50 (266 ... 443 lb.in)	35 ... 50 (266 ... 443 lb.in)
Auxiliary conductors (1 or 2 conductors connectable)					
• Solid	mm ²	2 x (0.5 ... 1.5) ²⁾ ; 2 x (0.75 ... 2.5) ²⁾ according to IEC 60947; max. 2 x (0.75 ... 4)	2 x (0.5 ... 1) ²⁾ /2 x (1 ... 2.5) ²⁾	2 x (0.5 ... 1) ²⁾ /2 x (1 ... 2.5) ²⁾	2 x (0.5 ... 1) ²⁾ /2 x (1 ... 2.5) ²⁾
• Finely stranded with end sleeve (DIN 46228-1)	mm ²	2 x (0.5 ... 1.5) ²⁾ ; 2 x (0.75 ... 2.5) ²⁾	2 x (0.5 ... 1) ²⁾ ; 2 x (0.75 ... 2.5) ²⁾	2 x (0.5 ... 1) ²⁾ ; 2 x (0.75 ... 2.5) ²⁾	2 x (0.5 ... 1) ²⁾ ; 2 x (0.75 ... 2.5) ²⁾
• Pin-end connector to DIN 46231	mm ²	--	2 x (1 ... 1.5)	2 x (1 ... 1.5)	2 x (1 ... 1.5)
• AWG cables, solid or stranded	AWG	2 x (18 ... 14)	2 x (18 ... 12)	2 x (18 ... 12)	2 x (18 ... 12)
• Terminal screws		M3 (Pozidriv size 2)	--	--	--
- Tightening torque	Nm	0.8 ... 1.2 (7 ... 10.3 lb.in)	0.8 ... 1.4 (7 ... 12 lb.in)	0.8 ... 1.4 (7 ... 12 lb.in)	0.8 ... 1.4 (7 ... 12 lb.in)

¹⁾ When connecting cable lugs according to DIN 46234, the 3RT1966-4EA1 terminal cover must be used for conductor cross-sections of 240 mm² and more as well as DIN 46235 for conductor cross-sections of 185 mm² and more to keep to the phase clearance; see page 3/116.

²⁾ If two different conductor cross-sections are connected to one clamping point, both cross-sections must lie in one of the ranges specified.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors

Type Size	SIRIUS vacuum contactors						Vacuum contactors	
	3RT1264 S10	3RT1265 S12	3RT1266 S12	3RT1275 S12	3RT1276 S12		3TF68 14	3TF69
and  rated data								
Rated insulation voltage	V AC	600					600	
Uninterrupted current at 40 °C, open and enclosed	A	330			540		630	820
Maximum horsepower ratings (S and U approved values)								
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	60	75	100	125	150	231	290
- At 230 V	hp	75	100	125	150	200	266	350
- At 460 V	hp	150	200	250	300	400	530	700
- At 575 V	hp	200	250	300	400	500	664	860
NEMA/EEMAC ratings								
SIZE	hp	--					6	7
• Uninterrupted current								
- Open	A	--					600	820
- Enclosed	A	--					540	810
• Rated power for three-phase motors at 60 Hz								
- At 200 V	hp	--					150	--
- At 230 V	hp	--					200	300
- At 460 V	hp	--					400	600
- At 575 V	hp	--					400	600
Short-circuit protection¹⁾	kA	10	18			30	100	
• CLASS L fuse	A	600	700	800	1 000	1 200	1 600	
• Circuit breakers acc. to UL 489	A	500	700	800	1 000	1 200	On request ¹⁾	

¹⁾ For more information about short-circuit values, e.g. for protection against short-circuit currents, see [Certificate of Compliance for the individual devices](https://support.industry.siemens.com/cs/ww/en/ps/16134/cert), <https://support.industry.siemens.com/cs/ww/en/ps/16134/cert>.

For the selection and dimensioning of load feeders, see the UL guide "Industrial Control Panels for North America", <https://support.industry.siemens.com/cs/ww/en/view/53433538>.

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors **IE3/IE4 ready**

Selection and ordering data

SIRIUS 3RT12 vacuum contactors, 3-pole, 110 ... 250 kW

AC/DC operation (50/60 Hz AC and DC)

- Withdrawable coils with integrated coil switch (varistor)
- Auxiliary and control conductors: Screw terminals
- Main conductors: Busbar connections



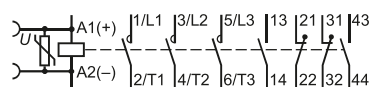
3RT126.



3RT127.

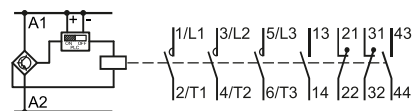
Size	Rated data					Auxiliary contacts, lateral		Rated control supply voltage U_s	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_{ij} : Up to 60 °C					AC-1, t_{ij} : 40 °C							
	Operational current I_e up to	Ratings of three-phase motors at 50 Hz and				Operational current I_e up to				Article No.	Price per PU		
	1 000 V	230 V	400 V	500 V	690 V	1 000 V							
A	kW	kW	kW	kW	A	NO	NC	V AC/DC	d				

Conventional operating mechanisms



S10	225	55	110	160	200	330	2	2	110 ... 127 220 ... 240	2	3RT1264-6AF36 3RT1264-6AP36		1	1 unit	41B
													1	1 unit	41B
S12	400	132	200	250	400	610	2	2	110 ... 127 220 ... 240	2	3RT1265-6AF36 3RT1265-6AP36		1	1 unit	41B
													1	1 unit	41B
S12	500	160	250 ¹⁾	355	500	610	2	2	110 ... 127 220 ... 240	2	3RT1266-6AF36 3RT1266-6AP36		1	1 unit	41B
													1	1 unit	41B
S12	400	132	200	250	400	610	2	2	110 ... 127 220 ... 240	2	3RT1275-6AF36 3RT1275-6AP36		1	1 unit	41B
													1	1 unit	41B
S12	500	160	250 ¹⁾	355	500	610	2	2	110 ... 127 220 ... 240	2	3RT1276-6AF36 3RT1276-6AP36		1	1 unit	41B
													1	1 unit	41B

Solid-state operating mechanisms · with 24 V DC control signal input e.g. for control by PLC



S10	225	55	110	160	200	330	2	2	96 ... 127 200 ... 277	5	3RT1264-6NF36 3RT1264-6NP36		1	1 unit	41B
													1	1 unit	41B
S12	400	132	200	250	400	610	2	2	96 ... 127 200 ... 277	5	3RT1265-6NF36 3RT1265-6NP36		1	1 unit	41B
													1	1 unit	41B
S12	500	160	250 ¹⁾	355	500	610	2	2	96 ... 127 200 ... 277	5	3RT1266-6NF36 3RT1266-6NP36		1	1 unit	41B
													1	1 unit	41B
S12	400	132	200	250	400	610	2	2	96 ... 127 200 ... 277	5	3RT1275-6NF36 3RT1275-6NP36		1	1 unit	41B
													1	1 unit	41B
S12	500	160	250 ¹⁾	355	500	610	2	2	96 ... 127 200 ... 277	5	3RT1276-6NF36 3RT1276-6NP36		1	1 unit	41B
													1	1 unit	41B

¹⁾ When using 3RT12.6-A... vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, use the versions with solid-state operating mechanism 3RT12.6-N...
For more information about dimensioning and configuring, see page 3/6.

Other voltages according to page 3/74 on request.

For an overview of the 3RT12 vacuum contactors with mountable accessories, see pages 3/13 and 3/14.

The accessories for the 3RT1 vacuum contactors correspond to those for the basic units of the 3RT1 contactors, see from page 3/75 onwards.

For spare parts, see page 3/139.

Power Contactors for Switching Motors

SIEMENS 3RT12 and 3TF6 vacuum contactors

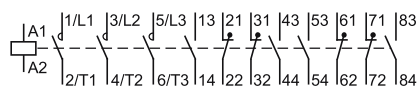
3TF6 vacuum contactors, 3-pole, 335 ... 450 kWAC operation, 50/60 Hz

- Main conductors: Busbar connections
- Auxiliary and control conductors: Screw terminals
- With overvoltage protection of the coil (varistor)



3TF68/3TF69

Size	Rated data						Auxiliary contacts	Rated control supply voltage U_s	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_u : Up to 55° C						AC-1, t_u : 40 °C						
	Operational current I_e up to						Operational current I_e up to			Article No.	Price per PU		
	690 V	230 V	400 V	500 V	690 V	1 000 V	690 V						
	A	kW	kW	kW	kW	kW	A	NO NC	V AC	d			

AC operation, 50/60 Hz¹⁾

14	630	200	335 ²⁾	434	600	--	700	4	4	110 ... 132	2	3TF6844-0CF7	1	1 unit	41B
										200 ... 240	15	3TF6844-0CM7	1	1 unit	41B
14	820	260	450 ³⁾	600	800	--	910	4	4	110 ... 132	2	3TF6944-0CF7	1	1 unit	41B
										200 ... 240	15	3TF6944-0CM7	1	1 unit	41B
14	820	260	450 ³⁾	600	800	--	910	4	4	110 ... 132	2	3TF6944-0CF7	1	1 unit	41B
										200 ... 240	15	3TF6944-0CM7	1	1 unit	41B

¹⁾ For use of 3TF6 vacuum contactors in the environment of frequency converters, we recommend ordering a special version: **3TF6...-Z A02**.

3TF68/3TF69 vacuum contactors in their basic version are supplied with integrated overvoltage damping for the main current paths. The surge suppression circuit is not required for operation in circuits with DC choppers, frequency converters or speed-variable operating mechanisms, for example.

The circuit could be damaged by the voltage peaks and harmonics and thus cause phase-to-phase short circuits. For this reason, the contactors can also be supplied without integrated overvoltage damping. Without additional price.

The article number must be supplemented by "-Z" and the order code "A02".

²⁾ When using 3TF68 vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, please use 3TF69 vacuum contactors. For more information about dimensioning and configuring, see page 3/6.

³⁾ Please inquire about use of 3TF69 vacuum contactors with IE3/IE4 motors.

For accessories and spare parts, see pages 3/137 to 3/140.

Rated control supply voltages, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

Rated control supply voltage U_s	Contactor type 3TF6844-.C., 3TF6944-.C..
	Size 14

AC operation**Solenoid coils for 50/60 Hz**

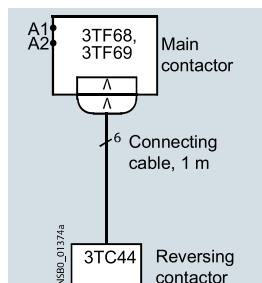
110 ... 132 V AC	F7
200 ... 240 V AC	M7
230 ... 277 V AC	P7
380 ... 460 V AC	Q7
500 ... 600 V AC	S7

Power Contactors for Switching Motors

SIRIUS 3RT12 and 3TF6 vacuum contactors **IE3/IE4 ready**

DC operation and for AC operation subject to strong interference

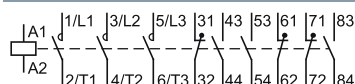
- Main conductors: Busbar connections
- Auxiliary and control conductors: Screw terminals
- DC solenoid system with 3TC44 reversing contactor for series resistor



3TF6.33-.Q.7

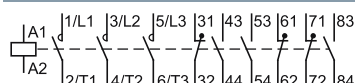
Size	Rated data						Auxiliary contacts	Rated control supply voltage U_s	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
	AC-2 and AC-3, t_u : Up to 55° C						Lateral						
	Operational current I_e up to									Article No.	Price per PU		
	690 V												
	A	kW	kW	kW	kW	kW	A	NO	NC	V AC	d		

DC operation · DC economy circuit¹⁾²⁾



14	630	200	335 ³⁾	434	600	--	700	3	3	24 DC	15	3TF6833-1DB4	1	1 unit	41B
						600	700	3	3	24 DC	15	3TF6833-8DB4	1	1 unit	41B
14	820	260	450 ⁴⁾	600	800	--	910	3	3	24 DC	15	3TF6933-1DB4	1	1 unit	41B
						800	910	3	3	24 DC	15	3TF6933-8DB4	1	1 unit	41B

AC operation 50/60 Hz with DC economy circuit²⁾⁵⁾. For AC operation subject to strong interference



14	630	200	335 ³⁾	434	600	--	700	3	3	110 ... 120 AC 15	3TF6833-1QG7	1	1 unit	41B
										220 ... 240 AC 2	3TF6833-1QL7	1	1 unit	41B
										380 ... 420 AC 15	3TF6833-1QV7	1	1 unit	41B
						600	700	3	3	220 ... 240 AC 15	3TF6833-8QL7	1	1 unit	41B
14	820	260	450 ⁴⁾	600	800	--	910	3	3	110 ... 120 AC 15	3TF6933-1QG7	1	1 unit	41B
										220 ... 240 AC 2	3TF6933-1QL7	1	1 unit	41B
										380 ... 420 AC 15	3TF6933-1QV7	1	1 unit	41B
						800	910	3	3	110 ... 120 AC 15	3TF6933-8QG7	1	1 unit	41B
										220 ... 240 AC 15	3TF6933-8QL7	1	1 unit	41B

¹⁾ On this version, a magnetic system is used in the DC economy circuit. A varistor can be retrofitted. A 3TC4417-4A... reversing contactor is included in the scope of delivery of the vacuum contactor.

²⁾ For use of 3TF6 vacuum contactors in the environment of frequency converters, we recommend ordering a special version:
3TF6...-Z A02.

3TF68/3TF69 vacuum contactors in their basic version are supplied with integrated overvoltage damping for the main current paths. The surge suppression circuit is not required for operation in circuits with DC choppers, frequency converters or speed-variable operating mechanisms, for example.

The circuit could be damaged by the voltage peaks and harmonics and thus cause phase-to-phase short circuits. For this reason, the contactors can also be supplied without integrated overvoltage damping. Without additional price. The article number must be supplemented by "-Z" and the order code "A02".

³⁾ When using 3TF68 vacuum contactors with IE3/IE4 motors from 8.5 times the starting current, please use 3TF69 vacuum contactors. For more information about dimensioning and configuring, see page 3/6.

⁴⁾ Please inquire about use of 3TF69 vacuum contactors with IE3/IE4 motors.

⁵⁾ On this version, a magnetic system with rectifier is used in the DC economy circuit. Varistor integrated. A 3TC4417-... reversing contactor with preassembled connecting cable (approx. 1 m) and plug is included in the scope of supply of the vacuum contactor.

For accessories and spare parts, see pages 3/137 to 3/140.

**Rated control supply voltages, possible on request
(change of the 10th and 11th digits of the Article No.)**

Delivery time on request

Rated control supply voltage U_s	Contactor type 3TF6833-.D., 3TF6933-.D..	Size 14
DC operation		
Solenoid coils for DC economy circuit		
24 V DC	B4	
110 V DC	F4	
125 V DC	G4	
220 V DC	M4	
230 V DC	P4	

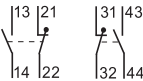
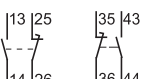
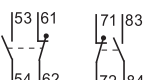
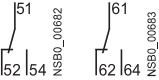
Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT12 and 3TF6 Vacuum Contactors

Accessories

Selection and ordering data

For further accessories for the SIRIUS 3RT12 vacuum contactors, see 3RT1 basic devices, from page 3/75 onwards.

For contactors	Version	Auxiliary contacts Version	Connections	SD	Screw terminals 	PU (UNIT, SET, M)	PS*	PG
Size	Type	NO	NC	NC	Left	Right	d	
Auxiliary switch blocks, instantaneous								
For lateral mounting								
 3TY7561-1.A00	14	3TF68, 3TF69	1st auxiliary switch block (replacement for 3TY7561-1A/3TY7561-1B)					
			1 1 --					
		3TF68, 3TF69	1st auxiliary switch block					
			1 -- 1					
		3TF68, 3TF69	2nd auxiliary switch block (replacement for 3TY7561-1K/3TY7561-1L)					
			1 1 --					
For reconnection of the coil with DC economy circuit								
	14	3TF68, 3TF69	-- -- 1					
Solid-state compatible auxiliary switch blocks								
For lateral mounting								
 5TY7561-1UA00	14	3TF68, 3TF69	2nd auxiliary switch block, left or right (replacement for 3TY6561-1U/3TY6561-1V)					
			1 CO contact					

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT12 and 3TF6 Vacuum Contactors

Accessories

For contactors	Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Size	Type	d					
Main current path surge suppression modules							
S10/ S12	3RT12		For damping overvoltages and protecting motor windings against multiple re-ignition when switching off three-phase motors For connection on the contactor feeder side (2-T1/4-T2/6-T3), for separate installation Rated operational voltage U_g • 690 V AC • 1 000 V AC	10 10	3RT1966-1PV3 3RT1966-1PV4	1 1	1 unit 1 unit 41B 41B
Surge suppressors							
	14	3TF68, 3TF69	Varistors <u>AC operation</u> The surge suppressor (varistor) is included in the scope of supply of the 3TF68 and 3TF69 contactors with AC operation. <u>DC operation · DC economy circuit</u> Varistor for snapping onto the side of the auxiliary switch (includes the peak value of the alternating voltage on the DC side) Rated control supply voltage U_g • 24 ... 48 V DC • 48 ... 127 V DC • 127 ... 240 V DC	15 20 15	3TX7572-3G 3TX7572-3H 3TX7572-3J	1 1 1	1 unit 1 unit 1 unit 41B 41B 41B
Terminal covers							
	14		2 units required per contactor (1 set = 2 units).				
		3TF68	For protection against inadvertent contact with exposed busbar connections	5	3TX7686-0A	1	1 unit 41B
		3TF69	Can be screwed onto free screw end on middle connecting bar	5	3TX7696-0A	1	1 unit 41B
Links for paralleling (star jumpers), 3-pole							
	14	3TF68, 3TF69	Links for paralleling Without connecting terminal (the link for paralleling can be reduced by one pole)	5	3TX7680-0D	1	1 unit 41B
	14	3TF68, 3TF69	Cover plates for links for paralleling A cover plate must be used to protect against inadvertent contact with exposed busbar connections (IEC 60529).	15	3TX7680-0E	1	1 unit 41B
Box terminals for laminated copper bars							
	14	3TF68	Without auxiliary conductor connection (1 set = 3 units) With single covers for protection against inadvertent contact (IEC 60529)	30	3TX7570-1E	1	1 unit 41B
	14	3TF69	With auxiliary conductor connection (1 set = 3 units) Conductor cross-sections for auxiliary conductors: • Solid 2 x (0.75 ... 2.5) mm ² • Finely stranded with end sleeve 2 x (0.5 ... 2.5) mm ² • AWG, solid or stranded 2 x (18 ... 12) • Tightening torque 0.8 ... 1.4 Nm (7 ... 12 lb.in)	30	3TX7690-1F	1	1 unit 41B
Locking devices for mechanical interlock							
	14	3TF68	For two contactors of the same size	15	3TX7686-1A	1	1 unit 41B

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT12 and 3TF6 Vacuum Contactors

Spare parts

Selection and ordering data

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B

For contactors			Rated control supply voltage $U_{s \text{ min}} \dots U_{s \text{ max}}$	SD	Screw terminals		SD	Spring-type terminals	
Size	Type	V AC/DC	d	Article No.	Price per PU	d	Article No.	Price per PU	
Withdrawable coils									
Conventional operating mechanisms									
	S10	3RT126	23 ... 26	5	3RT1966-5AB31		--		
			42 ... 48	5	3RT1966-5AD31		--		
			110 ... 127	2	3RT1966-5AF31		--		
			200 ... 220	5	3RT1966-5AM31		--		
			220 ... 240	2	3RT1966-5AP31		--		
			240 ... 277	5	3RT1966-5AU31		--		
			380 ... 420	5	3RT1966-5AV31		--		
			440 ... 480	5	3RT1966-5AR31		--		
			500 ... 550	5	3RT1966-5AS31		--		
			575 ... 600	5	3RT1966-5AT31		--		
	S12	3RT127	23 ... 26	5	3RT1975-5AB31	5	3RT1975-5AB32		
			42 ... 48	5	3RT1975-5AD31	5	3RT1975-5AD32		
			110 ... 127	5	3RT1975-5AF31	5	3RT1975-5AF32		
			200 ... 220	5	3RT1975-5AM31	5	3RT1975-5AM32		
			220 ... 240	5	3RT1975-5AP31	5	3RT1975-5AP32		
			240 ... 277	5	3RT1975-5AU31	5	3RT1975-5AU32		
			380 ... 420	5	3RT1975-5AV31	5	3RT1975-5AV32		
			440 ... 480	5	3RT1975-5AR31	5	3RT1975-5AR32		
			500 ... 550	5	3RT1975-5AS31	5	3RT1975-5AS32		
			575 ... 600	5	3RT1975-5AT31	5	3RT1975-5AT32		
	S10	3RT126	21 ... 27.3	5	3RT1966-5NB31		--		
			96 ... 127	5	3RT1966-5NF31		--		
			200 ... 277	5	3RT1966-5NP31		--		
	S12	3RT127	21 ... 27.3	5	3RT1975-5NB31	5	3RT1975-5NB32		
			96 ... 127	5	3RT1975-5NF31	5	3RT1975-5NF32		
			200 ... 277	5	3RT1975-5NP31	5	3RT1975-5NP32		

Solid-state operating mechanisms for AC/DC with 24 V DC control signal input, e.g. for control by PLC

	S10	3RT126	21 ... 27.3	5	3RT1966-5NB31		--		
			96 ... 127	5	3RT1966-5NF31		--		
			200 ... 277	5	3RT1966-5NP31		--		
	S12	3RT127	21 ... 27.3	5	3RT1975-5NB31	5	3RT1975-5NB32		
			96 ... 127	5	3RT1975-5NF31	5	3RT1975-5NF32		
			200 ... 277	5	3RT1975-5NP31	5	3RT1975-5NP32		

For contactors		Version	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG	
Size	Type		d						
Solenoid coils									
	14	3TF68	AC operation ¹⁾ The solenoid coils are fitted as standard with varistors against overvoltage; the coil is supplied with switch-on electronics.	3TY7683-0C.. 3TY7693-0C..					
		3TF69							
	14	3TF68	DC operation ¹⁾ · DC economy circuit The solenoid coils are supplied without reversing contactor.	3TY7683-0D.. 3TY7693-0D..					
		3TF69							
	3TY76.3-0...								
	Vacuum interrupters								
S10	3RT1264 3RT1265 3RT1266	Set with 3 vacuum interrupters with fixing parts	5	3RT1964-6V		1	1 unit	41B	
			5	3RT1965-6V					
5			3RT1966-6V						
S12	3RT1275 3RT1276		5	3RT1975-6V		1	1 unit	41B	
			5	3RT1976-6V					
14	3TF68	Set with 3 vacuum interrupters with components <u>Note:</u> In order to ensure reliable operation of the contactors, only original replacement interrupters should be used.	5	3TY7680-0B		1	1 unit	41B	
	3TF69		15	3TY7690-0B					1

Note:

In order to ensure reliable operation of the contactors, only **original replacement interrupters** should be used.

¹⁾ Rated control supply voltages for solenoid coils:
 The 10th and 11th digits of the article number must be supplemented accordingly, see the tables on pages 3/135 and 3/136.

Power Contactors for Switching Motors

Accessories and Spare Parts for SIRIUS 3RT12 and 3TF6 Vacuum Contactors

Spare parts

For contactors		Version	Rated control supply voltage U_s	SD	Screw terminals 		PU (UNIT, SET, M)	PS*	PG
Size	Type		V AC	d	Article No.	Price per PU			
Solenoid coils for main contactor									
14	3TF68...-Q	With rectifier bridge	110 ... 120	20	3TY7683-0QG7		1	1 unit	41B
			220 ... 240	20	3TY7683-0QL7		1	1 unit	41B
			380 ... 420	X	3TY7683-0QV7		1	1 unit	41B
14	3TF69...-Q	With rectifier bridge	110 ... 120	20	3TY7693-0QG7		1	1 unit	41B
			220 ... 240	20	3TY7693-0QL7		1	1 unit	41B
			380 ... 420	20	3TY7693-0QV7		1	1 unit	41B
3TC44 reversing contactors									
14	3TF68...-Q, 3TF69...-Q	Complete with series resistor, 1 m connecting cable and plug-in connector	110 ... 120	20	3TY7684-0QG7		1	1 unit	41B
			220 ... 240	20	3TY7684-0QL7		1	1 unit	41B
			380 ... 420	20	3TY7684-0QV7		1	1 unit	41B

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Overview

Standards

IEC 60947-1, EN 60947-1,
IEC 60947-4-1, EN 60947-4-1,
IEC 60947-5-1, EN 60947-5-1 (auxiliary switches)

The miniature contactors are suitable for use in any climate.

The miniature contactors with screw terminals are finger-safe according to IEC 60529.

Connection methods

The miniature contactors are available in versions with screw terminals, 6.3 mm plug-in terminals and solder pin connections for soldering in printed circuit boards.

Ratings of three-phase motors

The quoted rating (in kW) refers to the output power on the motor shaft (according to the nameplate).

The power rating specifications of the contactors in kW are guide values for 4-pole standard motors at 50 Hz and specified voltage (e.g. 400 V AC). The actual starting and rated data of the motor to be switched must be considered when selecting the units.

Technical specifications

More information

Technical specifications, see
<https://support.industry.siemens.com/cs/ww/en/ps/16142/td>

FAQs, see <https://support.industry.siemens.com/cs/de/en/ps/16142/faq>

Contactor Type **3TF2**

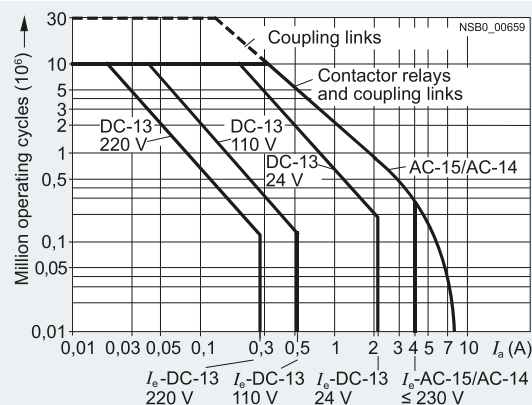
Contact endurance of the auxiliary contacts

The contact endurance for utilization category AC-12 or AC-15/AC-14 depends mainly on the breaking current. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

Diagram legend:

I_a = Breaking current

I_e = Rated operational current



Contact endurance of the main contacts

The characteristic curves show the contact endurance of the contactors when switching inductive AC loads (AC-3) depending on the breaking current and rated operational voltage. It is assumed that the operating mechanisms are switched randomly, i.e. not synchronized with the phase angle of the supply system.

The rated operational current I_e complies with utilization category AC-4 (breaking 6 times the rated operational current) and is intended for a contact endurance of approximately 200 000 operating cycles. If a shorter contact endurance is sufficient, the rated operational current I_e /AC-4 can be increased.

If the contacts are used for mixed operation, i.e. normal switching (breaking the rated operational current according to utilization category AC-3) in combination with intermittent inching (breaking several times the rated operational current according to utilization category AC-4), the contact endurance can be calculated approximately from the following equation:

$$X = \frac{A}{1 + \frac{C}{100} \left(\frac{A}{B} - 1 \right)}$$

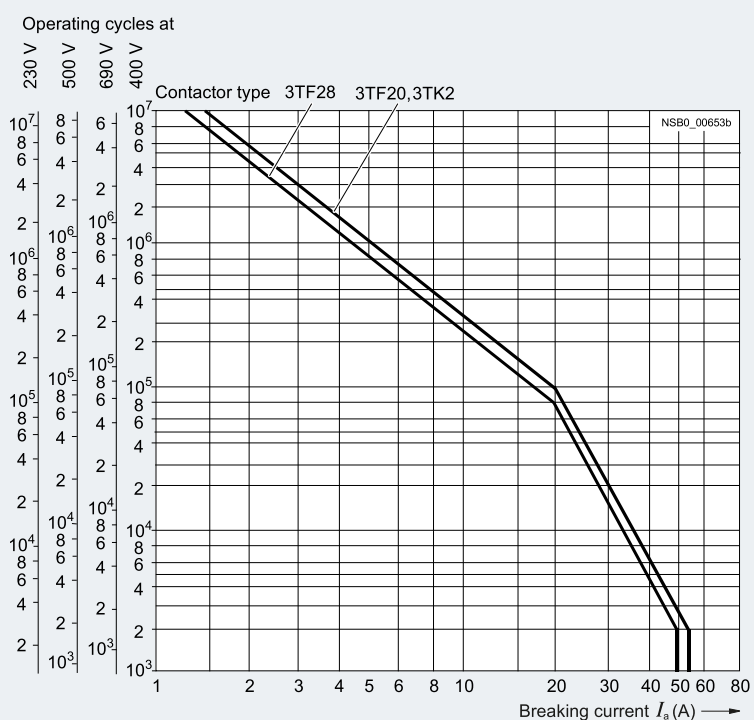
Characters in the equation:

X Contact endurance for mixed operation in operating cycles

A Contact endurance for normal operation ($I_a = I_e$) in operating cycles

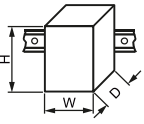
B Contact endurance for inching (I_a = multiple of I_e) in operating cycles

C Inching operations as a percentage of total switching operations



Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Type		3TF20, 3TF28	3TF22, 3TF29
Size		00	
General data			
Dimensions (W x H x D)			
• Basic unit		mm 45 x 48 x 63	--
• Basic unit with mounted auxiliary switch block		mm 45 x 48 x 91	
• Basic unit with 3TX4490 surge suppressor		mm 45 x 48 x 88	45 x 48 x 116
Permissible mounting position		Any	
Mechanical endurance			
• AC operation	Operat-	10 million	
• DC operation	ing	30 million	
• Auxiliary switch block	cycles	10 million	
Rated insulation voltage U_i (Pollution degree 3)			
• Screw terminals	V	690	690 (auxiliary contacts 500 V)
• Flat connectors 6.3 mm x 0.8 mm	V	500	--
• Solder pin connections	V	500	--
Rated impulse withstand voltage U_{imp} (Pollution degree 3)			
• Screw terminals	kV	6 (control circuit max. 4 kV)	
• Flat connectors 6.3 mm x 0.8 mm	kV	6	--
• Solder pin connections	kV	6	--
Protective separation between coil and main contacts (according to IEC 60947-1, Appendix N)		V	Up to 300
Mirror contacts A mirror contact is an auxiliary NC contact that cannot be closed simultaneously with an NO main contact.		Yes, this applies to both the basic unit as well as to between the basic unit and the mounted auxiliary switch block acc. to IEC 60947-4-1, Appendix F	Yes, acc. to IEC 60947-4-1, Appendix F and SUVA
Permissible ambient temperature¹⁾			
• During operation	°C	-25 ... +55	
• During storage	°C	-55 ... +80	
Degree of protection acc. to IEC 60529		IP20 (with screw terminals)	
• On front		IP20 (with screw terminals)	
• Connecting terminal		Finger-safe (for screw terminals)	
Touch protection acc. to IEC 60529			
Shock resistance			
• Without 3TX44 auxiliary switch block			
- Rectangular pulse	AC operation g/ms	8.3/5 and 5.2/10	--
	DC operation g/ms	11.3/5 and 9.2/10	--
- Sine pulse	AC operation g/ms	13/5 and 8/10	--
	DC operation g/ms	17.4/5 and 12.9/10	--
• With 3TX44 auxiliary switch block			
- Rectangular pulse	AC operation g/ms	5/5 and 3.6/10	9/5 and 7.3/10
	DC operation g/ms	9/5 and 6.9/10	
- Sine pulse	AC operation g/ms	7.8/5 and 5.6/10	
	DC operation g/ms	13.9/5 and 10.1/10	14/5 and 11/10
Short-circuit protection			
Main circuit²⁾			
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE according to IEC 60947-4-1			
- Type of coordination "1"	A	25	
- Type of coordination "2" ³⁾	A	10	
- Weld-free	A	10	
• Miniature circuit breaker with C characteristic	A	10	
Auxiliary circuit			
Short-circuit test			
• With fuse links of operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current $I_k = 1$ kA acc. to IEC 60947-5-1	A	6	

¹⁾ Applies to 50/60 Hz coil:
At 50 Hz, $1.1 \times U_n$, side-by-side mounting and 100 % ON period the max. ambient temperature is +40 °C.

²⁾ According to excerpt from IEC 60947-4-1
Type of coordination "1":
Destruction of the contactor and the overload relay is permissible.
The contactor and/or overload relay can be replaced if necessary.
Type of coordination "2":
The overload relay must not suffer any damage. Contact welding on the contactor is permissible, however, if the contacts can be easily separated.

³⁾ A short-circuit current of $I_q \leq 6$ kA applies to type of coordination "2".

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Contactor		Type	3TF2	
		Size	00	
Control				
Solenoid coil operating range ¹⁾			0.8 ... 1.1 x U _s	
Power consumption of the solenoid coils (for cold coil and 1.0 x U _s)				
Standard version				
• AC operation, 50 Hz	Closing	VA	15	
	P.f.		0.41	
	Closed	VA	6.8	
• AC operation, 60 Hz	P.f.		0.42	
	Closing	VA	14.4	
	P.f.		0.36	
• AC operation, 50/60 Hz ¹⁾	Closed	VA	6.1	
	P.f.		0.46	
	Closing	VA	16.5/13.2	
• AC operation, 50/60 Hz ¹⁾	P.f.		0.43/0.38	
	Closed	VA	8.0/5.4	
	P.f.		0.48/0.42	
For USA and Canada				
• AC operation, 50 Hz	Closing	VA	14.6	
	P.f.		0.38	
	Closed	VA	6.5	
• AC operation, 60 Hz	P.f.		0.40	
	Closing	VA	14.4	
	P.f.		0.30	
• AC operation, 60 Hz	Closed	VA	6.0	
	P.f.		0.44	
	• DC operation	Closing = Closed	W	3
Permissible residual current of the electronic circuit ²⁾ (with 0 signal)				
• AC operation		mA	≤ 3 x (230 V/U _s)	
• DC operation		mA	≤ 1 x (230 V/U _s)	
Operating times for 0.8 ... 1.1 x U _s ³⁾ Total break time = Opening delay + Arcing time Values apply with coil in cold state and at operating temperature for operating range				
• AC operation	Closing delay	ms	5 ... 19	
	Opening delay	ms	2 ... 22	
- Dead interval			To use the 3TF2 AC-operated contactor in reversing an additional dead interval of 50 ms is required along with an NC contact interlock.	
• DC operation	Closing delay	ms	16 ... 65	
	Opening delay	ms	2 ... 5	
• Arcing time		ms	10 ... 15	
Operating times for 1.0 x U _s ³⁾				
• AC operation	Closing delay	ms	5 ... 18	
	Opening delay	ms	3 ... 21	
- Dead interval			To use the 3TF2 AC-operated contactor in reversing an additional dead interval of 50 ms is required along with an NC contact interlock.	
• DC operation	Closing delay	ms	19 ... 31	
	Opening delay	ms	3 ... 4	
• Arcing time		ms	10 ... 15	

¹⁾ Applies to 50/60 Hz coil:
At 50 Hz, 1.1 x U_s , side-by-side mounting and 100 % ON period the max. ambient temperature is +40 °C.

²⁾ The 3TX4490-1J additional load module is recommended for higher residual currents; see page 3/150.

³⁾ The OFF-delay of the NO contact and the ON-delay of the NC contact are increased if the contactor coils are attenuated against voltage peaks (noise suppression diode 6 to 10 times; diode assembly 2 to 6 times, varistor +2 to 5 ms).

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Contactor	Type	3TF28, 3TF29	3TF20...-0..., 3TF22...-0...	3TF20...-3..., 3TF20...-6..., 3TF20...-7...
	Size	00		
Rated data of the main contacts				
Load rating with AC				
Utilization category AC-1				
Switching resistive load				
• Rated operational current I_e (at 40 °C)	Up to 400/380 V A	18		
	690/660 V A	18		--
• Rated operational current I_e (at 55 °C)	400/380 V A	16		
	690/660 V A	16		--
• Rated power of AC loads P.f. = 1	At 230/220 V kW	6.0		
	400/380 V kW	10		
	500 V kW	13		
	690/660 V kW	17		--
• Minimum conductor cross-section for loads with I_e	mm ²	2.5		
Utilization categories AC-2 and AC-3				
• Rated operational current I_e	Up to 220 V A	5.1	9.0	
	230 V A	5.1	9.0	
	380 V A	5.1	9.0	
	400 V A	5.1	8.4	
	500 V A	4.8	6.5	
	660 V A	4.8	5.2	--
	690 V A	4.8	5.2	--
• Rated power for motors with slipring or squirrel cage at 50 and 60 Hz and	At 110 V kW	0.7	1.2	
	115 V kW	0.7	1.2	
	120 V kW	0.7	1.3	
	127 V kW	0.8	1.4	
	200 V kW	1.2	2.2	
	220 V kW	1.3	2.4	
	230 V kW	1.4	2.5	
	240 V kW	1.5	2.6	
	380 V kW	2.2	4.0	
	400 V kW	2.2	4.0	
	415 V kW	2.5	4.0	
	440 V kW	2.5	4.0	
	460 V kW	2.7	4.0	
	500 V kW	2.9	4.0	
	575 V kW	3.2	4.0	--
	660 V kW	3.8	4.0	--
	690 V kW	4.0		
Utilization category AC-4				
(Contact endurance approx. 200 000 operating cycles at $I_a = 6 \times I_e$)				
• Rated operational current $I_e^{1)}$	Up to 400 V A	1.9	2.6	
	690 V A	1.4	1.8	--
• Rated power for motors with squirrel cage at 50 and 60 Hz and	At 110 V kW	0.23	0.32	
	115 V kW	0.24	0.33	
	120 V kW	0.26	0.35	
	127 V kW	0.27	0.37	
	200 V kW	0.42	0.58	
	220 V kW	0.47	0.64	
	230 V kW	0.49	0.67	
	240 V kW	0.51	0.70	
	380 V kW	0.81	1.10	
	400 V kW	0.85	1.15	
	415 V kW	0.93	1.20	
	440 V kW	1.0	1.27	
	460 V kW	1.0	1.33	
	500 V kW	1.1	1.45	
	575 V kW	1.0	1.30	--
	660 V kW	0.86	1.10	--
	690 V kW	0.89	1.15	--
Thermal load capacity	10 s current A	70		
Power loss per conducting path	At I_e /AC-3 W	0.3		

¹⁾ The following applies: Max. permissible rated operational current I_e /AC-4 $\cong I_e$ /AC-3 up to 500 V for reduced contact endurance and reduced switching frequency.

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Contactor	Type	3TF28, 3TF29	3TF20...-0..., 3TF22...-0...	3TF20...-3..., 3TF20...-6..., 3TF20...-7...
	Size	00		
Rated data of main contacts (continued)				
Load rating with DC				
Utilization category DC-1, switching resistive loads ($L/R \leq 1$ ms)				
• Rated operational currents I_e (at 55 °C)				
- 1 conducting path	Up to 24 V A	10	16	
	60 V A	4	6	
	110 V A	1.5	2	
	220/240 V A	0.6	1	
- 2 conducting paths in series	Up to 24 V A	10	16	
	60 V A	10	16	
	110 V A	4	6	
	220/240 V A	1.5	2	
- 3 conducting paths in series	Up to 24 V A	10	16	
	60 V A	10	16	
	110 V A	10	16	
	220/240 V A	4	6	
Utilization category DC-3/DC-5, shunt-wound and series-wound motors ($L/R \leq 15$ ms)				
• Rated operational currents I_e (at 55 °C)				
- 1 conducting path	Up to 24 V A	4	6	
	60 V A	1.8	3	
	110 V A	0.3	0.5	
	220/240 V A	--	0.1	
- 2 conducting paths in series	Up to 24 V A	6	10	
	60 V A	3	5	
	110 V A	1.5	2	
	220/240 V A	0.3	0.5	
- 3 conducting paths in series	Up to 24 V A	10	16	
	60 V A	10	16	
	110 V A	10	16	
	220/240 V A	1.5	2	
Switching frequency				
Switching frequency z in operating cycles/hour				
• Contactors without overload relays for rated operation	No-load switching frequency	h ⁻¹	10 000	
Dependence of the switching frequency z' on the operational current I' and operational voltage U':	AC-1	h ⁻¹	1 000	
z' = z · (I _e /I') · (U _e /U') ^{1.5} · 1/h	AC-2	h ⁻¹	500	
	AC-3	h ⁻¹	1 000	
• Contactors with overload relays (mean value)		h ⁻¹	15	
Conductor cross-sections				
Main and auxiliary conductors				
(1 or 2 conductors can be connected)				
• Solid	mm ²	2 x (0.5 ... 2.5), 1 x 4		
• AWG cables, solid	AWG	2 x (20 ... 14), 1 x 12		
• Finely stranded with end sleeve	mm ²	2 x (0.5 ... 1.5), 1 x 2.5		
• Pin-end connector (DIN 46231)	mm ²	1 x 1 ... 2.5		
• Terminal screw		M3		
• Prescribed tightening torque for terminal screws	Nm	0.8 ... 1.3		
	lb.in	7 ... 11		
Main and auxiliary conductors				
(1 or 2 conductors can be connected)				
• When using a plug-in sleeve 6.3 – 1	mm ²	0.5 ... 1		
• Solid with 6.3–2.5	mm ²	1 ... 2.5		
Screw terminals				
Flat connectors				
Solder pin connection (only for printed circuit boards)				
• Solder pin cross-section	mm ²	0.8 x 1.2		
• Solder pin cross-section, plug-in base	mm ²	0.32 x 1.0		

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Contactor	Type	3TF20...-0...	3TF20...-3..., 3TF20...-6..., 3TF20...-7...
	Size	00	
Ⓢ and Ⓚ rated data of the 3TF20 contactors			
Rated insulation voltage U_i	V AC	600	300
Uninterrupted current	Open and enclosed A	16	16 (10 for solder pin connection)
Maximum horsepower ratings (Ⓢ and Ⓚ approved values)			
• Rated power for three-phase motors at 60 Hz			
- Single-phase	At 115 V hp	0.5	--
	200 V hp	1	
	230 V hp	1.5	1
	460/575 V hp	--	
- Three-phase	At 115 V hp	--	--
	200 V hp	3	3 (1 for 3TF20...-6)
	230 V hp	3	3 (1 for 3TF20...-6)
	460/575 V hp	5	--
Contactor	Type	3TF2	
	Size	00	
Rated data of the auxiliary contacts according to IEC 60947-1			
Rated insulation voltage U_i (Pollution degree 3)	V	690	
Conventional thermal current I_{th} = Rated operational current I_e/AC-12	A	10	
AC load Rated operational current I_e/AC-15/AC-14			
• For rated operational voltage U_e			
	24 V A	4	
	110 V A	4	
	125 V A	4	
	220 V A	4	
	230 V A	4	
	380 V A	3	
	400 V A	3	
	500 V A	2	
	660 V A	1	
	690 V A	1	
DC load Rated operational current I_e/DC-12			
• For rated operational voltage U_e			
	24 V A	4	
	48 V A	2.2	
	110 V A	1.1	
	125 V A	1.1	
	220 V A	0.5	
	440 V A	--	
	600 V A	--	
Rated operational current I_e/DC-13			
• For rated operational voltage U_e			
	24 V A	2.1	
	48 V A	1.1	
	110 V A	0.52	
	125 V A	0.52	
	220 V A	0.27	
	440 V A	--	
	600 V A	--	
Ⓢ, Ⓚ and Ⓜ rated data of the auxiliary contacts			
Rated voltage, max.	V AC	600	
Auxiliary switch blocks, max.	V AC	300	
Switching capacity		A 600, Q 300	
Uninterrupted current at 240 V AC	A	10	

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Selection and ordering data

Size 00

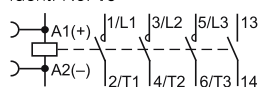
AC-1: Operational current $I_e = 16\text{ A}$ (at 55 °C)

Screw terminals

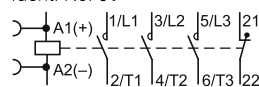
Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts		SD	Screw terminals	⊕	PU (UNIT, SET, M)	PS*	PG
Operational current I_e At 400/ 380 V	Ratings of three-phase motors at 50 Hz and				Ident. No.	Version	Article No.	Price per PU				
	230/ 220 V	400/ 380 V	500 V	690/ 660 V								
A	kW	kW	kW	kW								
					NO	NC	d					

Miniature contactors with screw terminals ·
For screw fixing and snap-on mounting onto TH 35 standard mounting rail

Ident. No. 10



Ident. No. 01

3TF20...-0...,
3TF28...-0...**AC operation, rated control supply voltage $U_s = 50\text{ Hz } 230/220\text{ V AC}^{1)}$**

5	1.3	2.2	2.9	3.8	10	1	--	5	3TF2810-0AP0	1	1 unit	41B
					01	--	1	5	3TF2801-0AP0	1	1 unit	41B
9	2.4	4	4	4	10	1	--	2	3TF2010-0AP0	1	1 unit	41B
					01	--	1	2	3TF2001-0AP0	1	1 unit	41B

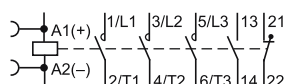
DC operation, rated control supply voltage $U_s = 24\text{ V DC}$

5	1.3	2.2	2.9	3.8	10	1	--	2	3TF2810-0BB4	1	1 unit	41B
					01	--	1	5	3TF2801-0BB4	1	1 unit	41B
9	2.4	4	4	4	10	1	--	2	3TF2010-0BB4	1	1 unit	41B
					01	--	1	2	3TF2001-0BB4	1	1 unit	41B

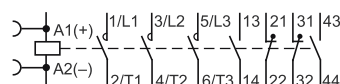
With permanently mounted auxiliary switch blocks

Terminal designations of the auxiliary contacts according to EN 50012

Ident. No. 11



Ident. No. 22

3TF22...-0...,
3TF29...-0...**AC operation, rated control supply voltage $U_s = 50\text{ Hz } 230/220\text{ V AC}^{1)}$**

5	1.3	2.2	2.9	3.8	11	1	1	20	3TF2911-0AP0	1	1 unit	41B
					22	2	2	15	3TF2922-0AP0	1	1 unit	41B
9	2.4	4	4	4	11	1	1	15	3TF2211-0AP0	1	1 unit	41B
					22	2	2	15	3TF2222-0AP0	1	1 unit	41B

DC operation, rated control supply voltage $U_s = 24\text{ V DC}$

5	1.3	2.2	2.9	3.8	11	1	1	15	3TF2911-0BB4	1	1 unit	41B
					22	2	2	20	3TF2922-0BB4	1	1 unit	41B
9	2.4	4	4	4	11	1	1	20	3TF2211-0BB4	1	1 unit	41B
					22	2	2	2	3TF2222-0BB4	1	1 unit	41B

¹⁾ Operating range at AC-1 and 220 V:
0.85 to $1.15 \times U_s$; lower operating range limit according to IEC 60947.

For further rated control supply voltages, see page 3/148.

For accessories, see pages 3/149 and 3/150.

Power Contactors for Switching Motors

3TF2 miniature contactors, 3-pole

Size 00

AC-1: Operational current $I_e = 16\text{ A}$ (at 55 °C)

Flat connectors or solder pin connection

Rated data Utilization categories AC-2 and AC-3					Auxiliary contacts		SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Operational current I_e At 400/ 380 V	Ratings of three-phase motors at 50 Hz and				Ident No.	Version						
	230/ 220 V	400/ 380 V	500 V	690/ 660 V								
A	kW	kW	kW	kW		NO	NC	d				
Ident. No. 10									Ident. No. 01			

Miniature contactors with flat connectors, 6.3 mm x 0.8 mm ·
For screw fixing and snap-on mounting onto TH 35 standard mounting rail



3TF20...-3...

AC operation, rated control supply voltage $U_s = 50\text{ Hz } 230/220\text{ V AC}^{1)}$

9	2.4	4	4	--	10	1	--	15	3TF2010-3AP0	1	1 unit	41B
					01	--	1	15	3TF2001-3AP0	1	1 unit	41B

DC operation, rated control supply voltage $U_s = 24\text{ V DC}$

9	2.4	4	4	--	10	1	--	20	3TF2010-3BB4	1	1 unit	41B
					01	--	1	20	3TF2001-3BB4	1	1 unit	41B

Flat connectors



Miniature contactors with flat connectors, 6.3 mm x 0.8 mm ·
For screw fixing (diagonal)



3TF20...-7...

AC operation, rated control supply voltage $U_s = 50\text{ Hz } 230/220\text{ V AC}^{1)}$

9	2.4	4	4	--	10	1	--	20	3TF2010-7AP0	1	1 unit	41B
					01	--	1	20	3TF2001-7AP0	1	1 unit	41B

DC operation, rated control supply voltage $U_s = 24\text{ V DC}$

9	2.4	4	4	--	10	1	--	20	3TF2010-7BB4	1	1 unit	41B
					01	--	1	20	3TF2001-7BB4	1	1 unit	41B

Miniature contactors with solder pin connections for printed circuit boards ·
For screw fixing (diagonal)



3TF20...-6...

AC operation, rated control supply voltage $U_s = 50\text{ Hz } 230/220\text{ V AC}^{1)}$

9	2.4	4	4	--	10	1	--	15	3TF2010-6AP0	1	1 unit	41B
					01	--	1	20	3TF2001-6AP0	1	1 unit	41B

DC operation, rated control supply voltage $U_s = 24\text{ V DC}$

9	2.4	4	4	--	10	1	--	2	3TF2010-6BB4	1	1 unit	41B
					01	--	1	2	3TF2001-6BB4	1	1 unit	41B

Solder pin
connection



¹⁾ Operating range at AC-1 and 220 V:
0.85 to 1.15 × U_s ; lower operating range limit according to IEC 60947.

For accessories, see pages 3/149 and 3/150.

Rated control supply voltages, possible on request (change of the 10th and 11th digits of the Article No.)

Delivery time on request

Rated control supply voltage U_s	Contactor type	3TF20, 3TF28
	Size	00
AC operation		
Solenoid coils for AC 50 and 60 Hz		
50 Hz	60 Hz	
24 V AC	29 V AC	B0
110 V AC	132 V AC	F0
230/220 V AC	276 V AC	P0 ¹⁾
AC operation		
Solenoid coils for AC 50/60 Hz		
230 V AC		L2
DC operation		
24 V DC		B4

¹⁾ Operating range at AC-1 and 220 V:
0.85 to 1.15 × U_s ; lower operating range limit according to IEC 60947.

Please inquire about further voltages.

Rated control supply voltage U_s	Contactor type	3TF22, 3TF29
	Size	00
AC operation		
Solenoid coils for AC 50 and 60 Hz		
50 Hz	60 Hz	
230/220 V AC	276 V AC	P0 ¹⁾
DC operation		
24 V DC		B4

¹⁾ Operating range at AC-1 and 220 V:
0.85 to 1.15 × U_s ; lower operating range limit according to IEC 60947.

Please inquire about further voltages.

Power Contactors for Switching Motors

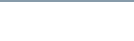
Accessories for 3TF2 miniature contactors

Selection and ordering data

Rated operational current I_e /AC-15/AC-14 at			Auxiliary contacts				SD	Screw terminals		PU (UNIT, SET, M)	PS*	PG				
230/ 220 V	400/ 380 V	500 V	Ident No.	Version	Connections											
A	A	A							Article No.	Price per PU						
					NO	NC	NO	NC	d							
Snap-on auxiliary switch blocks																
For expansion to 2, 4 or 5 auxiliary contacts according to EN 50012 Only for 3TF2.10, Ident. No. 10 (with auxiliary contact 1 NO)																
	4	3	2	11	--	1	--	--	20	3TX4401-1A	1	1 unit	41A			
				22	1	2	--	--	►	3TX4412-1A	1	1 unit	41A			
				23	1	3	--	--	5	3TX4413-1A	1	1 unit	41A			
				32	2	2	--	--	►	3TX4422-1A	1	1 unit	41A			
For expansion to 3 or 5 auxiliary contacts according to EN 50005																
	4	3	2	20	2	--	--	--	►	3TX4420-2A	1	1 unit	41A			
				11	1	1	--	--	►	3TX4411-2A	1	1 unit	41A			
									►	3TX4402-2A	1	1 unit	41A			
				02	--	2	--	--	20	3TX4402-2A	1	1 unit	41A			
	4	3	2	11; U	--	--	1	1	20	3TX4411-2G	1	1 unit	41A			
									►	3TX4440-2A	1	1 unit	41A			
				31	3	1	--	--	►	3TX4431-2A	1	1 unit	41A			
				22	2	2	--	--	►	3TX4422-2A	1	1 unit	41A			
	4	3	2	22; 2 U	--	--	2	2	5	3TX4422-2G	1	1 unit	41A			
									►	3TX4422-2G	1	1 unit	41A			
				OFF-delay devices												
				For DC-operated contactors for bridging short-time power failures up to 0.8 s												
	3TF2...-0BB4	24														

Power Contactors for Switching Motors

Accessories for 3TF2 miniature contactors

For contactors		Rated control supply voltage U_s		Power consumption of LED at U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
Type	V AC	V DC	mW	d						
Surge suppressors For plugging onto miniature contactors with and without auxiliary switch blocks										
Version without LED										
RC elements										
 3TX4490-3A	3TF2...-0...	24 ... 48	24 ... 70	--	5	3TX4490-3R		1	1 unit	41B
	3TF2...-1...	48 ... 127	70 ... 150	--	5	3TX4490-3S		1	1 unit	41B
		127 ... 240	150 ... 250	--	5	3TX4490-3T		1	1 unit	41B
	240 ... 400	--	--	--	5	3TX4490-3U		1	1 unit	41B
	400 ... 600	--	--	--	5	3TX4490-3V		1	1 unit	41B
Varistors										
 3TX4490-4G	3TF2...-0...	≤ 48	24 ... 70	--	▶ 5	3TX4490-3G		1	1 unit	41B
	3TF2...-1...	48 ... 127	70 ... 150	--	5	3TX4490-3H		1	1 unit	41B
		127 ... 240	150 ... 250	--	5	3TX4490-3J		1	1 unit	41B
	240 ... 400	--	--	--	5	3TX4490-3K		1	10 units	41B
	400 ... 600	--	--	--	5	3TX4490-3L		1	10 units	41B
Noise suppression diodes										
 3TX4490-3B	3TF2...-0...	--	12 ... 250	--	▶ 5	3TX4490-3A		1	1 unit	41B
	3TF2...-1...									
Diode assemblies (diode and Zener diode) For DC operation and short break times										
 3TX4490-3B	3TF2...-0...	--	24 ... 250	--	5	3TX4490-3B		1	1 unit	41B
	3TF2...-1...									
Version with LED										
Varistors										
 3TX4490-4G	3TF2...-0...	24 ... 48	12 ... 24	10 ... 120	5	3TX4490-4G		1	1 unit	41B
	3TF2...-1...	48 ... 127	24 ... 70	20 ... 470	5	3TX4490-4H		1	1 unit	41B
		127 ... 240	70 ... 150	50 ... 700	5	3TX4490-4J		1	1 unit	41B
	--	150 ... 250	160 ... 950	20	3TX4490-4K		1	1 unit	41B	
Noise suppression diodes										
 3TX4490-4C	3TF2...-0...	--	24 ... 70	20 ... 470	5	3TX4490-4A		1	1 unit	41B
	3TF2...-1...	--	70 ... 150	50 ... 700	5	3TX4490-4B		1	1 unit	41B
	--	--	150 ... 250	160 ... 950	5	3TX4490-4C		1	1 unit	41B
Additional load modules For plugging onto miniature contactors with and without auxiliary switch blocks										
For increasing the permissible residual current and for limiting the residual voltage. Same dimensions as for 3TX4490-3 surge suppressor.										
 3TX4491-2A	3TF2...-0A...	230/220, 50 Hz	--		20	3TX4490-1J		1	1 unit	41B
	3TF2...-1A...	230, 60 Hz								
		230, 50/60 Hz								
Operating range 0.8 ... 1.1 x U_s ,										
Plug-in bases with solder pin connections for printed circuit boards, 45 mm										
Rated insulation voltage U_i : 400 V (with pollution degree 3); rated impulse withstand voltage U_{imp} : 6 kV; rated operational current I_e : 6 A; Ⓢ and Ⓡ rated data: max. 300 V, 6 A										
 3TX4491-2A	3TF20...-3...	For contactors with flat connectors, 6.3 mm x 0.8 mm			20	3TX4491-2A		1	5 units	41A
	3TF20...-7...									
	3TK20...-3...									
	3TK20...-7...									
Release tools										
 3TX4491-2K	3TF2...-7...	For releasing miniature contactors			20	3TX4491-2K		1	1 unit	41A
	3TK2...-7...	from 3TX4491-2A plug-in bases								

Power Contactors for Switching Motors

3TG10 power relays/miniature contactors

Overview

Standards

IEC 60947-1, IEC 60947-4-1, IEC 60947-5-1

Version

The 3TG10 power relays/miniature contactors are available with screw terminals or 6.3 mm × 0.8 mm flat connectors. The versions with screw terminals are suitable for use in any climate and finger-safe according to IEC 60529.

The 3TG10 miniature contactors are characterized by their width of just 36 mm.

Surge suppression

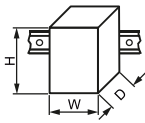
The 3TG10 power relays/miniature contactors have an integrated protective circuit against opening surges.

Application

Because they are hum-free they are suitable for use in household appliances and distribution boards in office and residential areas.

They can also be used for applications where there is little space such as air conditioners, heating systems, pumps and fans, i.e. for simple electrical controls.

Technical specifications

More information		
Technical specifications, see https://support.industry.siemens.com/cs/ww/en/ps/16186/td		Reference Manual "Switching Devices - Contactors and Contactor Assemblies", see https://support.industry.siemens.com/cs/ww/en/view/35554359 FAQs, see https://support.industry.siemens.com/cs/ww/en/ps/16186/faq
Type	3TG10	
General data		
Dimensions (W x H x D)	 mm	36 x 56 x 56
Endurance		
• Mechanical	Operating cycles	3 million
• Electrical		
- AC-1 at I_e	Operating cycles	0.1 million
- AC-3 at I_e	Operating cycles	0.4 million
Rated insulation voltage U_i (pollution degree 3)	V	400
Rated impulse withstand voltage U_{imp}	kV	4
Protective separation between coil and contacts acc. to IEC 60947-1, Appendix N	V	Up to 300
Permissible ambient temperature		
• During operation ¹⁾	°C	-25 ... + 55
• During storage	°C	-50 ... + 80
Degree of protection acc. to IEC 60529		IP00
Touch protection acc. to IEC 60529		Finger-safe for vertical touching from the front (with screw terminals)
Short-circuit protection		
Fuse links , operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE according to IEC 60947-4-1		
• Type of coordination "1"	A	25
• Type of coordination "2"	A	10
Miniature circuit breakers , C characteristic	A	10
Control		
Solenoid coil operating range		0.85 ... 1.1 x U_s
Power consumption of the solenoid coils (for cold coil and 1.0 x U_s)		
• AC operation, 45 ... 450 Hz	VA	4.4
- P.f.		0.9 (hum-free)
• DC operation	W	4
Rated data of the main contacts		
Load rating with AC		
Utilization category AC-1, switching resistive loads		
• Rated operational current I_e up to 400 V at 55 °C ¹⁾	A	20 for screw terminals, 16 for flat connectors
• Rated power U_e for AC loads with p.f. = 1, 230/220 V		
- For screw terminals	kW	7.5 (13 at 400 V)
- For flat connectors	kW	6 (10 at 400 V)
• Minimum conductor cross-section for loads with I_e	mm ²	2.5

¹⁾ If the three main current paths carry a load of 20 A, the following applies if $I > 10$ A in the fourth conducting path: Permissible ambient temperature 40 °C.

Power Contactors for Switching Motors

3TG10 power relays/miniature contactors

Type	3TG10			
Rated data of main contacts (continued)				
Load rating with AC				
Utilization categories AC-2 and AC-3				
• Operational current for AC-3 at $U_e \leq 400$ V rated value	A	8.4		
• Rated power for slipping or squirrel-cage motors with 50 and 60 Hz and at $U_e \leq 400$ V	kW	4		
Utilization category AC-5a (permissible nominal impedance: $\geq 0.5 \Omega$)				
Switching of gas discharge lamps				
Per main current path at 230 V, 50 Hz				
Rated power/rated operational current per lamp				
• Uncompensated	18 W	0.37 A	Unit(s)	43
	36 W	0.43 A	Unit(s)	37
	58 W	0.67 A	Unit(s)	24
• DUO switching	18 W	2 x 0.11 A	Unit(s)	2 x 81
	36 W	2 x 0.21 A	Unit(s)	2 x 42
	58 W	2 x 0.32 A	Unit(s)	2 x 28
Switching gas discharge lamps with compensation or ECG				
Per main current path 230 V, 50 Hz				
Connection	Rated power per lamp	Capacitor capacitance	Rated operational current per lamp	
• Shunt compensation	L18 W	4.5 μ F	0.11 A	Unit(s) 15
	L36 W	4.5 μ F	0.21 A	Unit(s) 15
	L58 W	7 μ F	0.32 A	Unit(s) 10
• With ECG (single lamp)	L18 W	6.8 μ F	0.10 A	Unit(s) 39
	L36 W	6.8 μ F	0.18 A	Unit(s) 39
	L58 W	10 μ F	0.27 A	Unit(s) 26
• With ECG (two lamps)	L18 W	10 μ F	0.18 A	Unit(s) 2 x 26
	L36 W	10 μ F	0.35 A	Unit(s) 2 x 26
	L58 W	22 μ F	0.52 A	Unit(s) 2 x 12
Utilization category AC-5b, switching incandescent lamps				kW 1.6
Per main current path at 230 V, 50 Hz				
Load rating with DC				
Utilization category DC-1, switching resistive loads ($L/R \leq 15$ ms)				
• Rated operational currents I_e				
- 1 conducting path	Up to 24 V	A	16	
	60 V	A	6	
	110 V	A	2	
	220 V/240 V	A	0.8	
- 2 conducting paths in series	Up to 24 V	A	16	
	60 V	A	16	
	110 V	A	6	
	220 V/240 V	A	1.6	
- 3 conducting paths in series	Up to 24 V	A	18	
	60 V	A	18	
	110 V	A	16	
	220 V/240 V	A	6	
- 4 conducting paths in series	Up to 24 V	A	20	
	60 V	A	20	
	110 V	A	20	
	220 V/240 V	A	20	
Utilization categories DC-3 and DC-5				
Shunt-wound and series-wound motors ($L/R \leq 15$ ms)				
• Rated operational currents I_e				
- 1 conducting path	Up to 24 V	A	10	
	60 V	A	0.5	
	110 V	A	0.15	
	220 V/240 V	A	0	
- 2 conducting paths in series	Up to 24 V	A	16	
	60 V	A	5	
	110 V	A	0.35	
	220 V/240 V	A	0	
- 3 conducting paths in series	Up to 24 V	A	16	
	60 V	A	16	
	110 V	A	10	
	220 V/240 V	A	1.75	
- 4 conducting paths in series	Up to 24 V	A	18	
	60 V	A	16	
	110 V	A	10	
	220 V/240 V	A	2	

Power Contactors for Switching Motors

3TG10 power relays/miniature contactors

Type			3TG10
Conductor cross-sections			
			Screw terminals
- Terminal screws - Finely stranded with end sleeve (DIN 46228 Form A/D/C) - Solid - Permissible opening tool (screwdriver)			M3
	mm ²		2 x (0.75 ... 2.5)
	mm ²		2 x (1 ... 2.5), 1 x 4
			3.0 mm x 0.5 mm (3RA2908-1A) or Pozidriv 2
			Flat connectors
- Finely stranded 6.3 mm plug-in sleeve acc. to DIN 46245/DIN 46247 - 6.3 ... 1 - 6.3 ... 2.5			0.5 ... 1
	mm ²		1 ... 2.5
	mm ²		
Ⓢ and Ⓟ rating (screw terminals)			
Rated insulation voltage		V AC	600
Uninterrupted current		Open and enclosed	A
			20
Maximum horsepower ratings			Single-phase/three-phase
(from Ⓢ and Ⓟ approved values)			
Rated power of three-phase motors at 60 Hz	At 115 V	hp	0.5/ --
	200 V	hp	1/ 3
	230 V	hp	1.5/ 3
	460 ... 600 V	hp	0/ 5

Power Contactors for Switching Motors

3TG10 power relays/miniature contactors

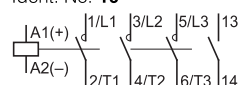
Selection and ordering data

For screw fixing and snap-on mounting onto TH 35 standard mounting rail

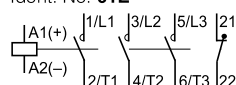
Rated data Utilization category				Main contacts		Rated control supply voltage U_s	SD	Article No.	Price per PU	PU (UNIT, SET, M)	PS*	PG
AC-1 Switching of resistive loads at 55 °C		AC-2 and AC-3		Version								
Operational current I_e up to 400 V	Power of AC loads at 50 Hz and 400 V	Operational current I_e up to 400 V ¹⁾	Power of AC loads at 50 Hz and 400 V	NO	NC	V	d					
A	kW	A	kW									

Hum-free · with screw terminals

Auxiliary contacts 1 NO, Ident. No. **10**



Auxiliary contacts 1 NC, Ident. No. **01E**



AC operation, 45 ... 450 Hz

20	13	8.4	4	4	--	24 AC	5
						110 AC	5
						230 AC	5
				3	1	24 AC	▶
						110 AC	▶
						230 AC	▶

Screw terminals

3TG1010-0AC2	1	1 unit	41H
3TG1010-0AG2	1	1 unit	41H
3TG1010-0AL2	1	1 unit	41H
3TG1001-0AC2	1	1 unit	41H
3TG1001-0AG2	1	1 unit	41H
3TG1001-0AL2	1	1 unit	41H

DC operation

20	13	8.4	4	4	--	24 DC	5
				3	1	24 DC	▶

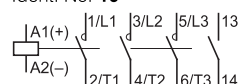
3TG1010-0BB4	1	1 unit	41H
3TG1001-0BB4	1	1 unit	41H

3TG10...-0...

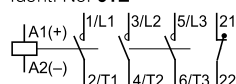


Hum-free · with 6.3 mm x 0.8 mm flat connectors

Auxiliary contacts 1 NO, Ident. No. **10**



Auxiliary contacts 1 NC, Ident. No. **01E**



AC operation, 45 ... 450 Hz

16	10	8.4	4	4	--	24 AC	5
						110 AC	30
						230 AC	5
				3	1	24 AC	30
						110 AC	30
						230 AC	5

Flat connectors

3TG1010-1AC2	1	1 unit	41H
3TG1010-1AG2	1	1 unit	41H
3TG1010-1AL2	1	1 unit	41H
3TG1001-1AC2	1	1 unit	41H
3TG1001-1AG2	1	1 unit	41H
3TG1001-1AL2	1	1 unit	41H

DC operation

16	10	8.4	4	4	--	24 DC	5
		8.4	4	3	1	24 DC	5

3TG1010-1BB4	1	1 unit	41H
3TG1001-1BB4	1	1 unit	41H

3TG10...-1...



¹⁾ The rated operational currents apply to each pole.

Accessories

Version	Max. rate operational currents I_e /AC-1 (at 55 °C) of the contactors	Max. conductor cross-sections	SD	Screw terminals	PU (UNIT, SET, M)	PS*	PG
	A	mm ²	d	Article No.	Price per PU		

Links for paralleling (insulated star jumpers)¹⁾

3-pole

- Without connecting terminal (replacement for 3TX4490-2C)
- With connecting terminal (replacement for 3TX4490-2A)

16	--	▶
40	25	▶

3RT1916-4BA31	1	1 unit	41B
3RT1916-4BB31	1	1 unit	41B

4-pole

- With connecting terminal (replacement for 3TX4490-2B)

40	25	15
----	----	----

3RT1916-4BB41	1	1 unit	41B
---------------	---	--------	-----

3RT1916-4BB31



¹⁾ The links for paralleling can be reduced by one pole. The rated operational currents apply to each pole.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Overview

More information

Home page, see www.siemens.com/sirius

Industry Mall, see www.siemens.com/product?3RA23_3RT1

Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool

Online configurator for 3RT2 contactors, see www.siemens.com/sirius/configurators

The 3RA23 reversing contactor assemblies in sizes S00 to S3 can be ordered as follows:

- Fully wired and tested, with mechanical and electrical interlock; see from page 3/162 onwards
- For all individual parts for customer assembly, see from page 3/75 onwards.

The 3RA23 reversing contactor assemblies have screw or spring-type terminals (main and control circuits) and are suitable for screw fixing and snap-on mounting onto TH 35 standard mounting rails.

Complete 3RA23 reversing contactor assemblies

The fully wired reversing contactor assemblies are suitable for use in any climate.

They are finger-safe according to IEC 60529.

The 3RA23 reversing contactor assemblies of size S00 to S3 each consist of two contactors with the same power, with one NC contact (S00) or one NO contact and one NC contact (S0 to S3) in the basic unit. The contactors are mechanically and electrically interlocked (NC contact interlock).

3RU2 overload relays (see from page 7/84 onwards) or 3RB3 overload relays (see from page 7/97 onwards) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (from page 10/14 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for motor protection.

Reversing contactor assemblies with voltage tap-off

The 3RA23 reversing contactor assemblies with voltage tap-off (see pages 3/162 to 3/165) are required for mounting the function modules for connection to the controller via the IO-Link or AS-Interface communication systems. The 3RA27 function modules must be ordered separately; see page 3/106.

For more information on IO-Link and AS-Interface see "Industrial Communication", from page 2/1 onwards.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Sizes S00 to S3

Rated data AC-2 and AC-3 for 50 Hz 400 V AC		Size	Type		
Rating kW	Operational current I_e A		Contactor (See from page 3/51 onwards)	Assembly kit (See from page 3/109 onwards)	Fully-wired and tested reversing contactor assemblies
			⊕ Screw terminals		
3	7	S00	3RT2015-1...2	3RA2913-2AA1	3RA2315-8XB30-1...
4	9		3RT2016-1...2	3RA2913-2AA1	3RA2316-8XB30-1...
5.5	12		3RT2017-1...2	3RA2913-2AA1	3RA2317-8XB30-1...
7.5	16		3RT2018-1...2	3RA2913-2AA1	3RA2318-8XB30-1...
5.5	12	S0	3RT2024-1...0	3RA2923-2AA1	3RA2324-8XB30-1...
7.5	16		3RT2025-1...0	3RA2923-2AA1	3RA2325-8XB30-1...
11	25		3RT2026-1...0	3RA2923-2AA1	3RA2326-8XB30-1...
15	32		3RT2027-1...0	3RA2923-2AA1	3RA2327-8XB30-1...
18.5	38		3RT2028-1...0	3RA2923-2AA1	3RA2328-8XB30-1...
18.5	40	S2	3RT2035-1...0	3RA2933-2AA1	3RA2335-8XB30-1...
22	55		3RT2036-1...0	3RA2933-2AA1	3RA2336-8XB30-1...
30	65		3RT2037-1...0	3RA2933-2AA1	3RA2337-8XB30-1...
37	80		3RT2038-1...0	3RA2933-2AA1	3RA2338-8XB30-1...
37	80	S3	3RT2045-1...0	3RA2943-2AA1	3RA2345-8XB30-1...
45	90		3RT2046-1...0	3RA2943-2AA1	3RA2346-8XB30-1...
55	110		3RT2047-1...0	3RA2943-2AA1	3RA2347-8XB30-1...
			∞ Spring-type terminals		
3	7	S00	3RT2015-2...2	3RA2913-2AA2	3RA2315-8XB30-2...
4	9		3RT2016-2...2	3RA2913-2AA2	3RA2316-8XB30-2...
5.5	12		3RT2017-2...2	3RA2913-2AA2	3RA2317-8XB30-2...
7.5	16		3RT2018-2...2	3RA2913-2AA2	3RA2318-8XB30-2...
5.5	12	S0	3RT2024-2...0	3RA2923-2AA2	3RA2324-8XB30-2...
7.5	16		3RT2025-2...0	3RA2923-2AA2	3RA2325-8XB30-2...
11	25		3RT2026-2...0	3RA2923-2AA2	3RA2326-8XB30-2...
15	32		3RT2027-2...0	3RA2923-2AA2	3RA2327-8XB30-2...
18.5	38		3RT2028-2...0	3RA2923-2AA2	3RA2328-8XB30-2...

Note:

The 3RA2934-2B mechanical interlock for sizes S2 and S3 must be ordered separately; see page 3/113.

Article No. scheme

Product versions		Article number									
SIRIUS reversing contactor assembly		3RA23 □ □ - □ □ □ □ □ - □ □ □ □									
Size of the contactor	e. g. 4 = S3	□	□	□	□	□	□	□	□	□	□
Power dependent on size	e. g. 5 = 37 kW for size S3	□	□	□	□	□	□	□	□	□	□
Type of overload relay	e. g. 8X = without			□	□	□	□	□	□	□	□
Assembly	e. g. E = communication-capable installation					□	□	□	□	□	□
Interlocking	e. g. 3 = mechanical and electrical						□	□	□	□	□
Free auxiliary switches	e. g. 0 = S3: 2 NO total							□	□	□	□
Type of electrical connection	e. g. 1 = screw terminals (main and auxiliary circuits)								□	□	□
Operating range / solenoid coil circuit	e. g. A = AC standard / without coil circuit									□	□
Rated control supply voltage	e. g. L2 = 230 V AC, 50/60 Hz										□ □
Example		3RA23 4 5 - 8 X E 3 0 - 1 A L 2									

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

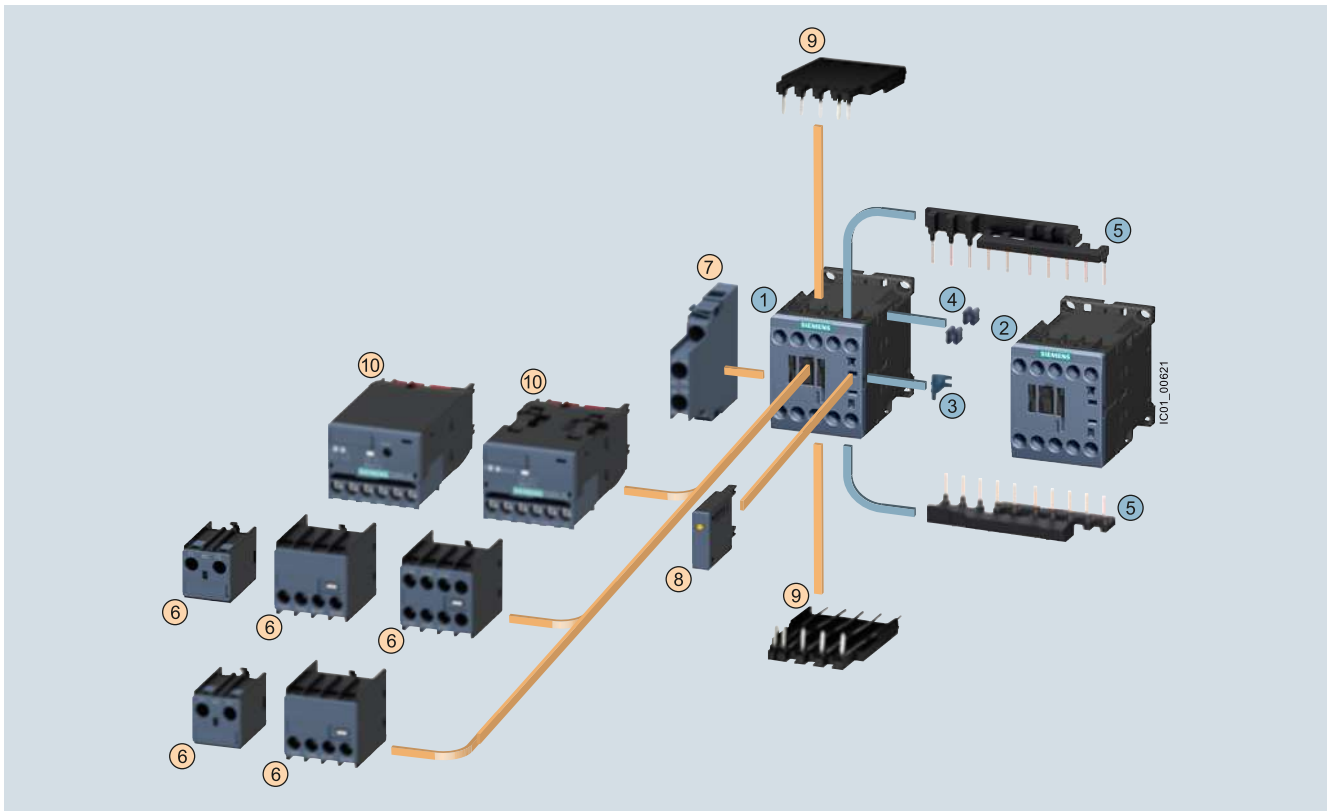
For your orders, please use the article numbers quoted in the selection and ordering data.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S00 · Up to 7.5 kW

The figure shows the version with screw terminals

**Mountable accessories (optional)**

To be ordered separately	Type	Page
⑥ Auxiliary switch block, front ¹⁾	3RH2911	3/93 ... 3/95
⑦ Auxiliary switch block, lateral	3RH2921	3/97
⑧ Surge suppressors	3RT2916	3/102, 3/103
⑨ Solder pin adapters	3RT1916-4KA1	3/115
⑩ Function module for connection to the control system	3RA271..-1BA00	3/106

Complete reversing contactor assembly

Individual parts		Type		Page
		Q11	Q12	
① ②	Contactors, 3 kW	3RT2015	3RT2015	3/51, 3/59
① ②	Contactors, 4 kW	3RT2016	3RT2016	3/51, 3/59
① ②	Contactors, 5.5 kW	3RT2017	3RT2017	3/51, 3/59
① ②	Contactors, 7.5 kW	3RT2018	3RT2018	3/51, 3/59
③ ... ⑤	Assembly kit comprising:	3RA2913-2AA1		3/109
③	Mechanical interlock ²⁾			
④	Two connecting clips for two contactors ²⁾			
⑤	Wiring modules on the top and bottom for connecting the main current circuits, electrical interlock included ³⁾ , interruptible (NC contact interlock)			

¹⁾ Auxiliary switch block according to EN 50005 must be used.

²⁾ The parts ③ and ④ can only be ordered together as 3RA2912-2H mechanical connectors.

³⁾ 3RT201.. contactors with one NC contact in the basic unit are required for the electrical interlock. An additional NO contact is required for momentary-contact operation.

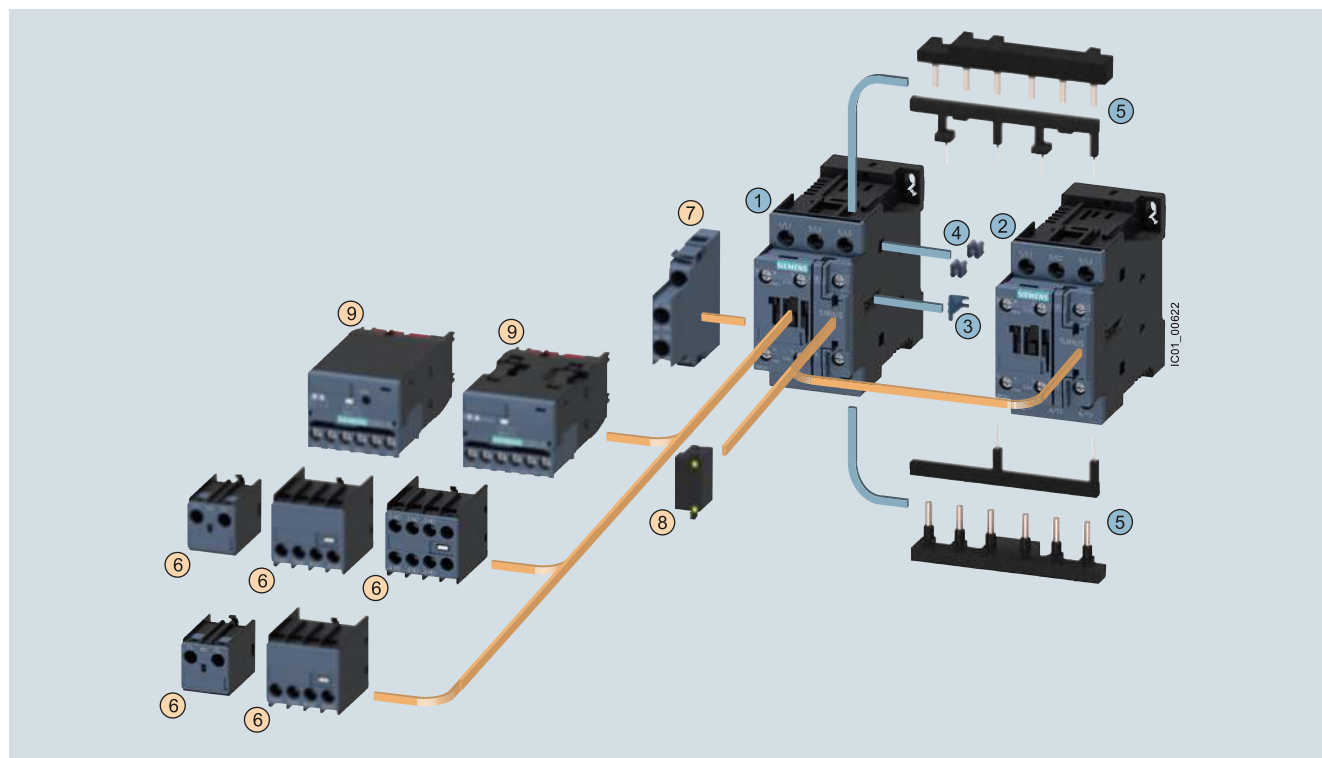
For complete reversing contactor assemblies, see page 3/162.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S0 · Up to 18.5 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately	Type	Page
⑥ Auxiliary switch block, front	3RH2911	3/93 ... 3/95
⑦ Auxiliary switch block, lateral	3RH2921	3/97
⑧ Surge suppressors	3RT2926	3/102, 3/103
⑨ Function module for connection to the control system	3RA271.-1BA00	3/106

¹⁾ The parts ③ and ④ can only be ordered together as 3RA2922-2H mechanical connectors.

Complete reversing contactor assembly

Individual parts	Type	Q11	Q12	Page
① ② Contactors, 5.5 kW	3RT2024	3RT2024		3/53, 3/63
① ② Contactors, 7.5 kW	3RT2025	3RT2025		3/53, 3/63
① ② Contactors, 11 kW	3RT2026	3RT2026		3/53, 3/63
① ② Contactors, 15 kW	3RT2027	3RT2027		3/53, 3/63
① ② Contactors, 18.5 kW	3RT2028	3RT2028		3/53, 3/63
③ ... ⑤ Assembly kit comprising:	3RA2923-2AA1			3/109
③ Mechanical interlock ¹⁾				
④ Two connecting clips for two contactors ¹⁾				
⑤ Wiring modules on the top and bottom for connecting the main current circuits, electrical interlock included (NC contact interlock)				

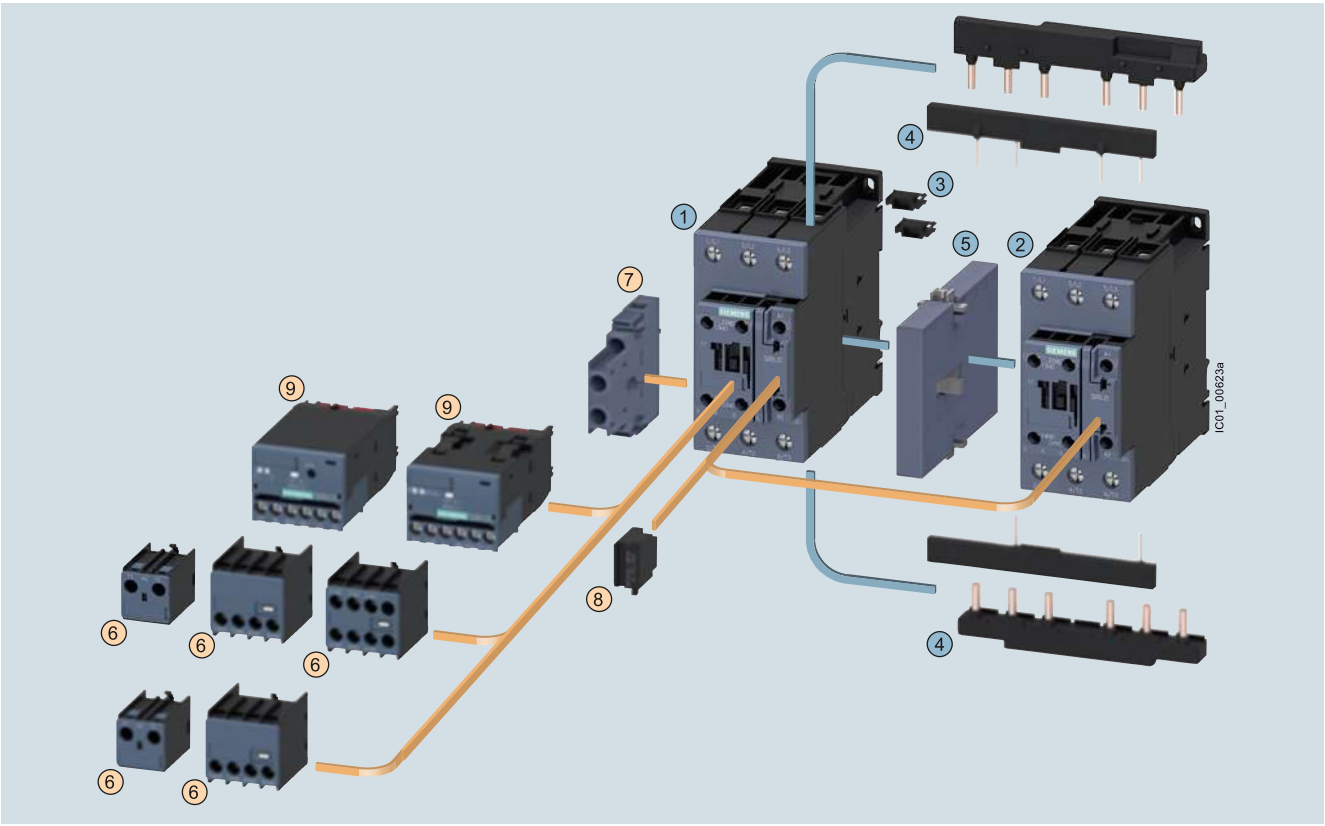
For complete reversing contactor assemblies, see page 3/163.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S2 · Up to 37 kW

The figure shows the version with screw terminals



Mountable accessories (optional)			Complete reversing contactor assembly			
To be ordered separately	Type	Page	Individual parts	Type	Page	
				Q11	Q12	
⑥ Auxiliary switch block, front	3RH2911	3/93 ... 3/95	① ② Contactors, 18.5 kW	3RT2035	3RT2035	3/55, 3/64
⑦ Auxiliary switch block, lateral	3RH2921	3/97	① ② Contactors, 22 kW	3RT2036	3RT2036	3/55, 3/64
⑧ Surge suppressors	3RT2936	3/102, 3/103	① ② Contactors, 30 kW	3RT2037	3RT2037	3/55, 3/64
⑨ Function module for connection to the control system	3RA271...1BA00	3/106	① ② Contactors, 37 kW	3RT2038	3RT2038	3/55, 3/64
			③ ④ Assembly kit comprising:	3RA2933-2AA1		3/109
			③ Two connectors for two contactors			
			④ Wiring modules on the top and bottom for connecting the main and auxiliary current circuits, electrical interlock included (NC contact interlock)			
			⑤ Mechanical interlock (must be ordered separately)	3RA2934-2B		3/113

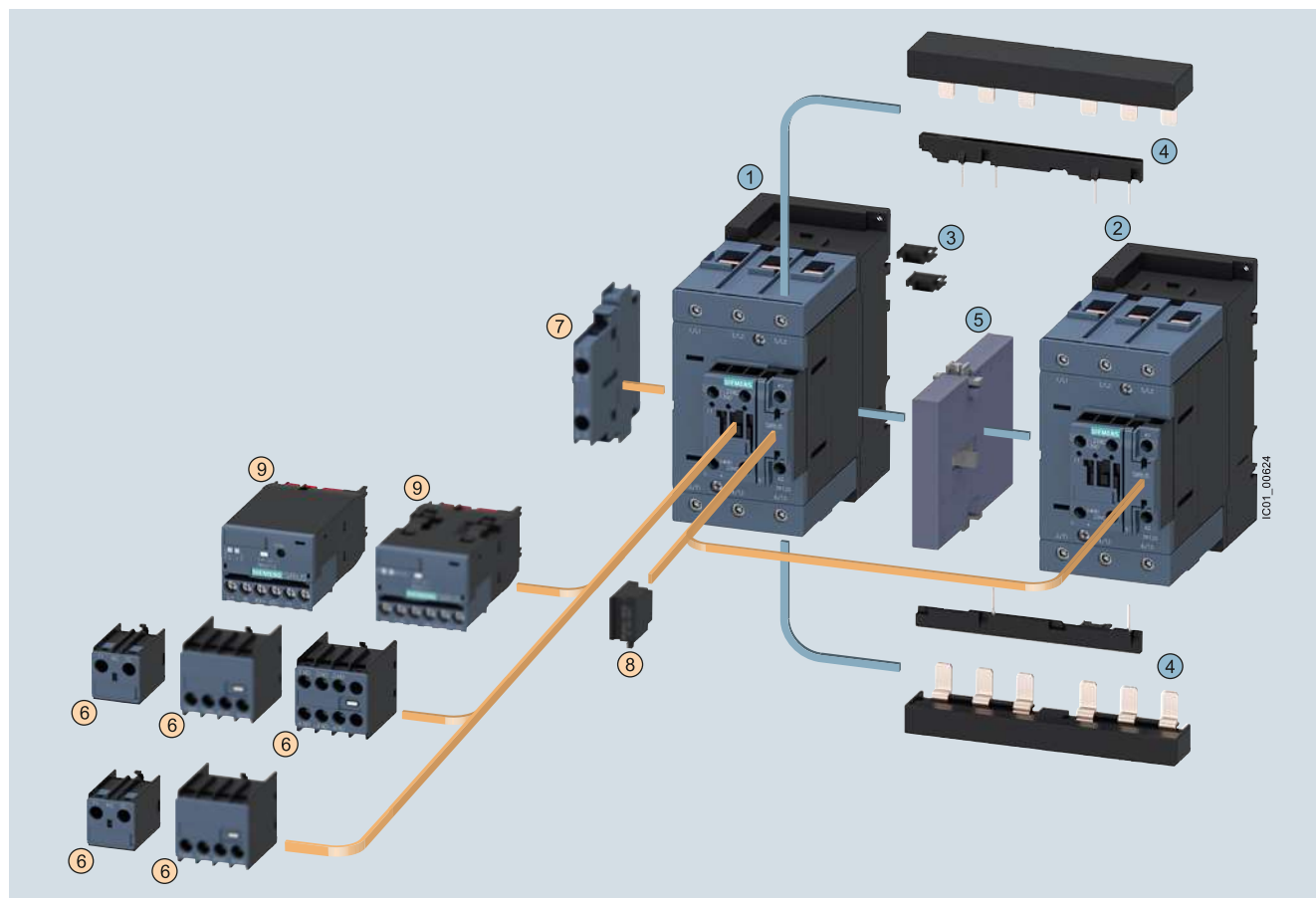
For complete reversing contactor assemblies, see page 3/164.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Fully wired and tested reversing contactor assemblies · Size S3 · Up to 55 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately	Type	Page
① Auxiliary switch block, front	3RH2911	3/93 ... 3/95
② Auxiliary switch block, lateral	3RH2921	3/97
③ Surge suppressors	3RT2936	3/102, 3/103
④ Function module for connection to the control system (the associated module connectors 3RA2711-0EE17 must be ordered separately; see page 3/107)	3RA271..-1BA00	3/106

Complete reversing contactor assembly

Individual parts	Type	Page
① ② Contactors, 37 kW	3RT2045 3RT2045	3/56, 3/64
① ② Contactors, 45 kW	3RT2046 3RT2046	3/56, 3/64
① ② Contactors, 55 kW	3RT2047 3RT2047	3/56, 3/64
③ ④ Assembly kit comprising:	3RA2943-2AA1	3/109
③ Two connectors for two contactors		
④ Wiring modules on the top and bottom for connecting the main and auxiliary current circuits, electrical interlock included (NC contact interlock)		
⑤ Mechanical interlock (must be ordered separately)	3RA2934-2B	3/113

For complete reversing contactor assemblies, see page 3/165.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW

Benefits

Using wiring kits for reversing contactor assemblies has the following advantages:

- Notable reduction of wiring in the control circuit
- Integrated mechanical interlock for sizes S00 and S0
- Prevention of wiring errors in the main circuit

Connecting combs for screw terminals also result in:

- Prevention of wiring errors in the control circuit
- Reduction of testing costs
- Ready-jumpered actuation of the auxiliary switches and the frame (A2)
- Integrated electrical interlocking

Accessories

Selecting the auxiliary switches

The following points should be noted:

Size S00

- For maintained-contact operation:
Use contactors with an NC contact in the basic unit for the electrical interlock.
- For momentary-contact operation:
Use contactors with an NC contact in the basic unit for the electrical interlock; in addition, an auxiliary switch block with at least one NO contact for latching is required per contactor.

Sizes S0 to S3

- For maintained-contact operation:
The contactors have two integrated auxiliary contacts (1 NO + 1 NC); the NC contact can be used for electrical interlocking.
- For momentary-contact operation:
Electrical interlock as for maintained-contact operation; the NO contact in the basic unit can be used for the latching.

Surge suppression

Sizes S00 to S3

All reversing contactor assemblies can be fitted with RC elements or varistors for damping opening surges in the coil.

As with the individual contactors, the surge suppressors can either be plugged onto the top of the contactors (S00) or be plugged into the front of the contactors (S0 to S3).

Technical specifications

More information

Technical specifications, see
<https://support.industry.siemens.com/cs/ww/en/ps/16146/td>
 FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16146/faq>

Manuals, see

- System Manual "SIRIUS – System Overview",
<https://support.industry.siemens.com/cs/WW/en/view/60311318>
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies",
<https://support.industry.siemens.com/cs/WW/en/view/60306557>
- Application Manual "SIRIUS Controls with IE3/IE4 motors",
<https://support.industry.siemens.com/cs/ww/en/view/94770820>

The technical specifications are the same as for the individual contactors (see page 3/19 onwards).

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW **IE3/IE4 ready**

Selection and ordering data

Fully wired and tested reversing contactor assemblies¹⁾ · Size S00 · Up to 7.5 kW

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA231.-8XB30-1A.0



3RA231.-8XB30-2A.0



3RA231.-8XE30-1BB4

Rated data AC-2 and AC-3				Rated control supply voltage $U_s^{2)}$	SD	Screw terminals 		SD	Spring-type terminals 	
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
A	kW	400 V kW	690 V kW	V	d			d		
AC operation, 50/60 Hz										
7	2.2	3	4	24 AC	5	3RA2315-8XB30-1AB0	5	3RA2315-8XB30-2AB0		
				110 AC	5	3RA2315-8XB30-1AF0	5	3RA2315-8XB30-2AF0		
				230 AC	2	3RA2315-8XB30-1AP0	2	3RA2315-8XB30-2AP0		
9	3	4	5.5	24 AC	5	3RA2316-8XB30-1AB0	5	3RA2316-8XB30-2AB0		
				110 AC	5	3RA2316-8XB30-1AF0	5	3RA2316-8XB30-2AF0		
				230 AC	2	3RA2316-8XB30-1AP0	2	3RA2316-8XB30-2AP0		
12	3	5.5	5.5	24 AC	5	3RA2317-8XB30-1AB0	5	3RA2317-8XB30-2AB0		
				110 AC	5	3RA2317-8XB30-1AF0	5	3RA2317-8XB30-2AF0		
				230 AC	2	3RA2317-8XB30-1AP0	2	3RA2317-8XB30-2AP0		
16	4	7.5	7.5	24 AC	5	3RA2318-8XB30-1AB0	5	3RA2318-8XB30-2AB0		
				110 AC	5	3RA2318-8XB30-1AF0	5	3RA2318-8XB30-2AF0		
				230 AC	2	3RA2318-8XB30-1AP0	2	3RA2318-8XB30-2AP0		
DC operation										
7	2.2	3	4	24 DC	2	3RA2315-8XB30-1BB4	2	3RA2315-8XB30-2BB4		
9	3	4	5.5	24 DC	2	3RA2316-8XB30-1BB4	2	3RA2316-8XB30-2BB4		
12	3	5.5	5.5	24 DC	2	3RA2317-8XB30-1BB4	2	3RA2317-8XB30-2BB4		
16	4	7.5	7.5	24 DC	2	3RA2318-8XB30-1BB4	2	3RA2318-8XB30-2BB4		
With voltage tap-off										
7	2.2	3	4	24 DC	2	3RA2315-8XE30-1BB4	5	3RA2315-8XE30-2BB4		
9	3	4	5.5	24 DC	2	3RA2316-8XE30-1BB4	5	3RA2316-8XE30-2BB4		
12	3	5.5	5.5	24 DC	2	3RA2317-8XE30-1BB4	2	3RA2317-8XE30-2BB4		
16	4	7.5	7.5	24 DC	2	3RA2318-8XE30-1BB4	2	3RA2318-8XE30-2BB4		

¹⁾ The contactors integrated in the reversing contactor assemblies have no unassigned auxiliary contacts. When used with a voltage tap-off and function module, the auxiliary contacts are unassigned.

²⁾ Coil operating range
- at 50 Hz: 0.8 to $1.1 \times U_s$
- at 60 Hz: 0.85 to $1.1 \times U_s$.

Representation of the complete reversing contactor assemblies with optionally mountable accessories, [see page 3/157](#).

Reversing Contactor Assemblies

IE3/IE4 ready**SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW****Fully wired and tested reversing contactor assemblies · Size S0 · Up to 18.5 kW**

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RA232.-8XB30-1A.2



3RA232.-8XB30-2A.2



3RA2324-8XE30-1BB4

Rated data AC-2 and AC-3				Rated control supply voltage U_s ¹⁾	SD	Screw terminals			SD	Spring-type terminals		
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU			Article No.	Price per PU	
	230 V	400 V	690 V									
A	kW	kW	kW	V	d			d				
AC operation, 50/60 Hz												
12	3	5.5	7.5	24 AC	5	3RA2324-8XB30-1AC2	5	3RA2324-8XB30-2AC2				
				110 AC	5	3RA2324-8XB30-1AG2	5	3RA2324-8XB30-2AG2				
				230 AC	5	3RA2324-8XB30-1AL2	5	3RA2324-8XB30-2AL2				
17	4	7.5	11	24 AC	5	3RA2325-8XB30-1AC2	5	3RA2325-8XB30-2AC2				
				110 AC	5	3RA2325-8XB30-1AG2	5	3RA2325-8XB30-2AG2				
				230 AC	5	3RA2325-8XB30-1AL2	5	3RA2325-8XB30-2AL2				
25	5.5	11	11	24 AC	5	3RA2326-8XB30-1AC2	5	3RA2326-8XB30-2AC2				
				110 AC	5	3RA2326-8XB30-1AG2	5	3RA2326-8XB30-2AG2				
				230 AC	5	3RA2326-8XB30-1AL2	5	3RA2326-8XB30-2AL2				
32	7.5	15	18.5	24 AC	5	3RA2327-8XB30-1AC2	5	3RA2327-8XB30-2AC2				
				110 AC	5	3RA2327-8XB30-1AG2	5	3RA2327-8XB30-2AG2				
				230 AC	5	3RA2327-8XB30-1AL2	5	3RA2327-8XB30-2AL2				
38	11	18.5	18.5	24 AC	5	3RA2328-8XB30-1AC2	5	3RA2328-8XB30-2AC2				
				110 AC	5	3RA2328-8XB30-1AG2	5	3RA2328-8XB30-2AG2				
				230 AC	5	3RA2328-8XB30-1AL2	5	3RA2328-8XB30-2AL2				
DC operation												
12	3	5.5	7.5	24 DC	2	3RA2324-8XB30-1BB4	2	3RA2324-8XB30-2BB4				
17	4	7.5	11	24 DC	2	3RA2325-8XB30-1BB4	2	3RA2325-8XB30-2BB4				
25	5.5	11	11	24 DC	2	3RA2326-8XB30-1BB4	2	3RA2326-8XB30-2BB4				
32	7.5	15	18.5	24 DC	2	3RA2327-8XB30-1BB4	2	3RA2327-8XB30-2BB4				
38	11	18.5	18.5	24 DC	2	3RA2328-8XB30-1BB4	2	3RA2328-8XB30-2BB4				
With voltage tap-off												
12	3	5.5	7.5	24 DC	2	3RA2324-8XE30-1BB4	2	3RA2324-8XE30-2BB4				
17	4	7.5	11	24 DC	2	3RA2325-8XE30-1BB4	5	3RA2325-8XE30-2BB4				
25	5.5	11	11	24 DC	2	3RA2326-8XE30-1BB4	2	3RA2326-8XE30-2BB4				
32	7.5	15	18.5	24 DC	5	3RA2327-8XE30-1BB4	2	3RA2327-8XE30-2BB4				
38	11	18.5	18.5	24 DC	2	3RA2328-8XE30-1BB4	2	3RA2328-8XE30-2BB4				

¹⁾ Coil operating range
 - at 50 Hz: 0.8 to $1.1 \times U_s$
 - at 60 Hz: 0.85 to $1.1 \times U_s$.

Representation of the complete reversing contactor assemblies with optionally mountable accessories, see page 3/158.

Reversing Contactor Assemblies

SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW **IE3/IE4 ready**

Fully wired and tested reversing contactor assemblies · Size S2 · Up to 37 kW

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA233.-8XB30-1A.2



3RA233.-8XE30-1NB3

Rated data AC-2 and AC-3				Rated control supply voltage $U_s^{1)}$	SD	Screw terminals 		SD	Spring-type terminals 	
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU		Article No.	Price per PU
A	kW	kW	kW	V	d			d		
AC operation, 50/60 Hz										
40	11	18.5	22	110 AC	2	3RA2335-8XB30-1AG2			--	
				230 AC	2	3RA2335-8XB30-1AL2			--	
50	15	22	22	110 AC	5	3RA2336-8XB30-1AG2			--	
				230 AC	2	3RA2336-8XB30-1AL2			--	
65	18.5	30	45	110 AC	5	3RA2337-8XB30-1AG2			--	
				230 AC	2	3RA2337-8XB30-1AL2			--	
80	22	37	55	110 AC	5	3RA2338-8XB30-1AG2			--	
				230 AC	2	3RA2338-8XB30-1AL2			--	
AC/DC operation ²⁾										
40	11	18.5	22	20 ... 33 AC/DC	2	3RA2335-8XB30-1NB3			--	
50	15	22	22	20 ... 33 AC/DC	2	3RA2336-8XB30-1NB3			--	
65	18.5	30	45	20 ... 33 AC/DC	2	3RA2337-8XB30-1NB3			--	
80	22	37	55	20 ... 33 AC/DC	2	3RA2338-8XB30-1NB3			--	
With voltage tap-off										
40	11	18.5	22	20 ... 33 AC/DC	5	3RA2335-8XE30-1NB3			--	
50	15	22	22	20 ... 33 AC/DC	5	3RA2336-8XE30-1NB3			--	
65	18.5	30	45	20 ... 33 AC/DC	5	3RA2337-8XE30-1NB3			--	
80	22	37	55	20 ... 33 AC/DC	5	3RA2338-8XE30-1NB3			--	

¹⁾ Operating range

- AC coil
at 50 Hz: 0.8 to $1.1 \times U_s$;
at 60 Hz: 0.85 to $1.1 \times U_s$;
- AC/DC coil 0.8 to $1.1 \times U_s$.

²⁾ With integrated coil circuit (varistor).

Representation of the complete reversing contactor assemblies with optionally mountable accessories, [see page 3/159](#).

Reversing Contactor Assemblies

NEW**IE3/IE4 ready****SIRIUS 3RA23 reversing contactor assemblies, up to 55 kW****Fully wired and tested reversing contactor assemblies · Size S3 · Up to 55 kW**

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RA234.-8XB30-1A.2



3RA234.-8XE30-1NB3

Rated data AC-2 and AC-3				Rated control supply voltage U_s ¹⁾	SD	Screw terminals			SD	Spring-type terminals		
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price pro PE			Article No.	Price per PU	
230 V	400 V	690 V										
A	kW	kW	kW	V	d			d				
AC operation, 50/60 Hz												
80	22	37	55	110 AC	3	3RA2345-8XB30-1AG2		--				
				230 AC	3	3RA2345-8XB30-1AL2		--				
95	22	45	75	110 AC	3	3RA2346-8XB30-1AG2		--				
				230 AC	5	3RA2346-8XB30-1AL2		--				
110	30	55	75	110 AC	X	3RA2347-8XB30-1AG2		--				
				230 AC	X	3RA2347-8XB30-1AL2		--				
AC/DC operation ²⁾												
80	22	37	55	20 ... 33 AC/DC	X	3RA2345-8XB30-1NB3		--				
95	22	45	75	20 ... 33 AC/DC	X	3RA2346-8XB30-1NB3		--				
110	30	55	75	20 ... 33 AC/DC	X	3RA2347-8XB30-1NB3		--				
With voltage tap-off ³⁾												
80	22	37	55	20 ... 33 AC/DC	X	3RA2345-8XE30-1NB3		--				
95	22	45	75	20 ... 33 AC/DC	X	3RA2346-8XE30-1NB3		--				
110	30	55	75	20 ... 33 AC/DC	X	3RA2347-8XE30-1NB3		--				

- 1) Operating range
 - AC coil
 at 50 Hz: 0.8 to $1.1 \times U_s$;
 at 60 Hz: 0.85 to $1.1 \times U_s$;
 - AC/DC coil 0.8 to $1.1 \times U_s$.

2) With integrated coil circuit (varistor).

3) The associated module connectors 3RA2711-0EE17 for the 3RA271. function modules must be ordered separately, [see page 3/107](#).

Representation of the complete reversing contactor assemblies with optionally mountable accessories, [see page 3/160](#).

Reversing Contactor Assemblies

Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Overview

The individual parts for the reversing contactor assemblies for customer assembly must be ordered separately.

- 3RT contactors: The operating times of the individual 3RT10 contactors are rated in such a way that no overlapping of the contact making and the arcing time between two contactors can occur on reversing, providing they are interlocked by way of their auxiliary switches (NC contact interlock) and the mechanical interlock.

For assemblies with AC operation and 50/60 Hz, a dead interval of 50 ms must be provided when used with voltages over 500 V; a dead interval of 30 ms is recommended for use with voltages up to and including 400 V. These dead times do not apply to assemblies with DC operation.

The operating times of the individual contactors are not affected by the mechanical interlock.

- Mechanical interlock
- Wiring kits consisting of link rails
- Base plate

Additional components

- for momentary-contact operation: auxiliary switch (NO contact) for self-locking
- 3RB2 overload relays ([see from page 7/109 onwards](#)), SIMOCODE pro 3UF7 motor management and control devices ([from page 10/14 onwards](#)) or 3RN thermistor motor protection evaluation units ([page 10/164](#)) can be used as overload protection.

More information

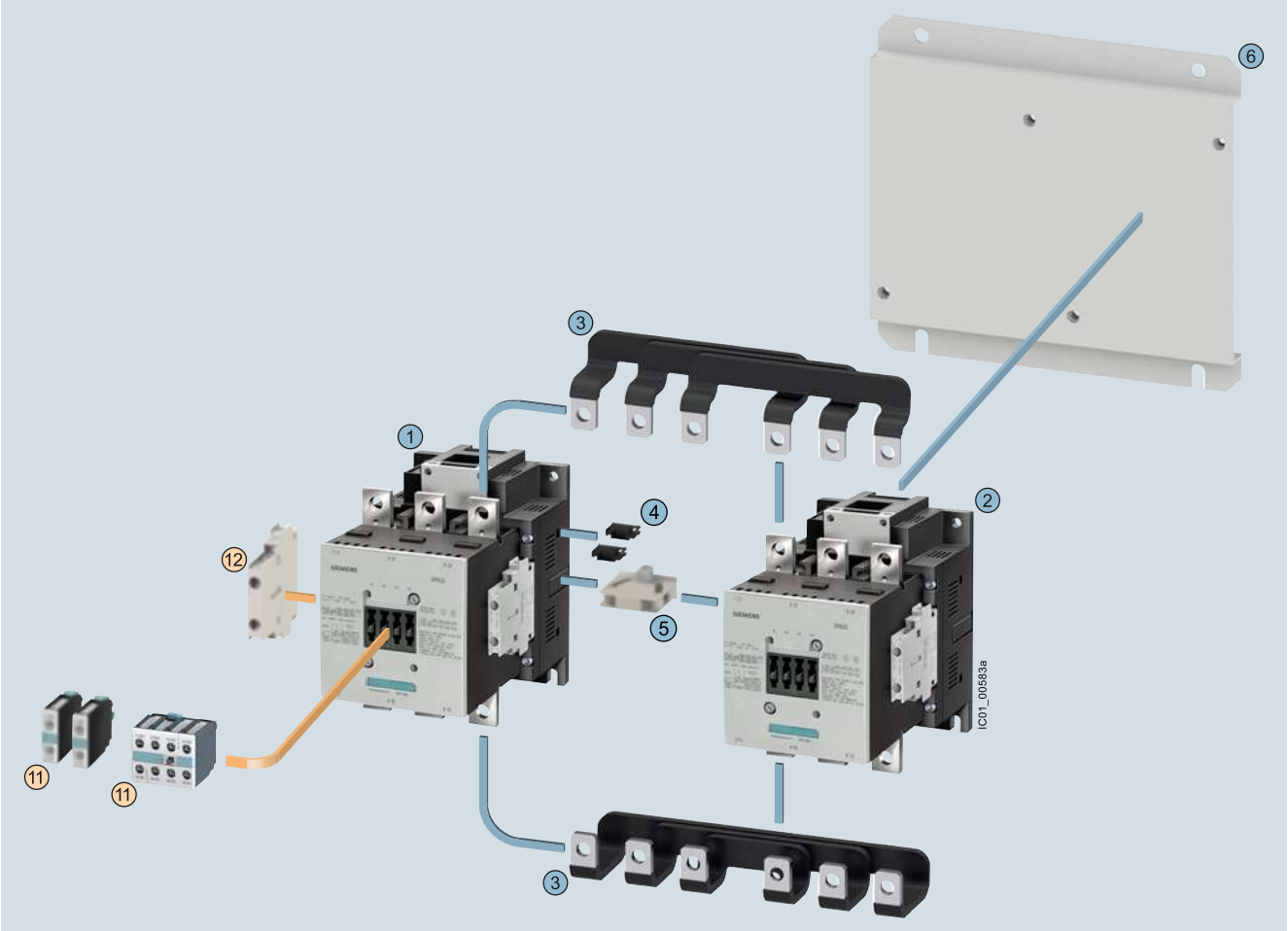
Home page, [see www.siemens.com/sirius](http://www.siemens.com/sirius)

Industry Mall, [see www.siemens.com/product?3RA23_3RT1](http://www.siemens.com/product?3RA23_3RT1)

Reversing Contactor Assemblies

Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S6 · Up to 90 kW

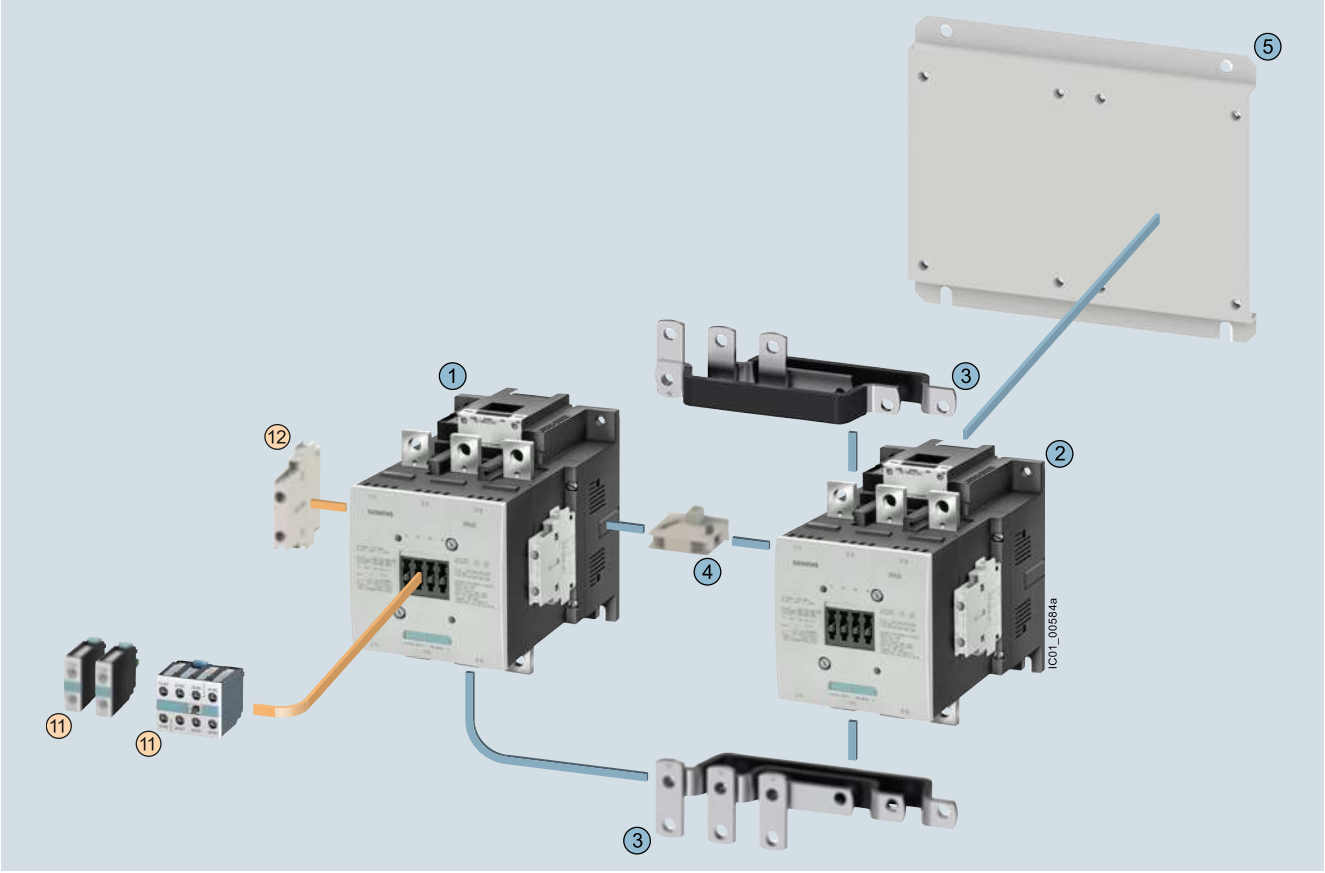


Mountable accessories (optional)			Reversing contactor assembly for customer assembly			
To be ordered separately	Type	Page	Individual parts		Type	Page
					Q11	Q12
⑪ Auxiliary switch block, front	3RH1921	3/96	① ② Contactors, 55 kW		3RT1054	3RT1054 3/70 ... 3/72
⑫ Auxiliary switch block, lateral	3RH1921	3/98	① ② Contactors, 75 kW		3RT1055	3RT1055 3/70 ... 3/72
			① ② Contactors, 90 kW		3RT1056	3RT1056 3/70 ... 3/72
			③ Assembly kit comprising: Wiring rails top and bottom for contactors without box terminals for connecting the main and auxiliary current circuits, electrical interlock included (NC contact interlock)		3RA1953-2A	3/109
			④ Two connectors for two contactors		3RA1932-2D	3/113
			⑤ Mechanical interlock (must be ordered separately)		3RA1954-2A	3/113
			⑥ Base plate for reversing contactor assemblies		3RA1952-2A	3/117

Reversing Contactor Assemblies

Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S10 · Up to 160 kW

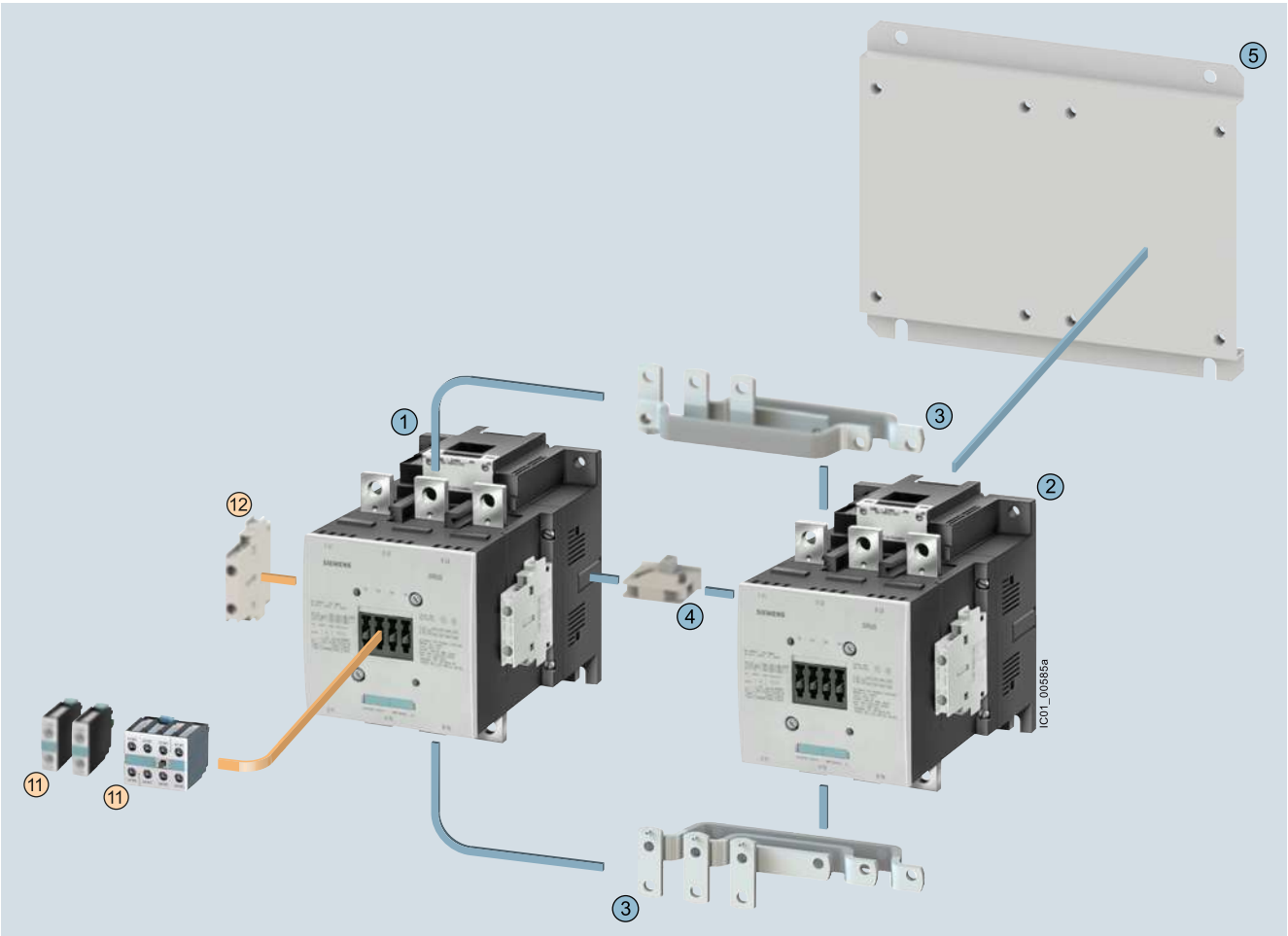


Mountable accessories (optional)			Reversing contactor assembly for customer assembly			
To be ordered separately	Type	Page	Individual parts	Type		Page
				Q11	Q12	
⑪ Auxiliary switch block, front	3RH1921	3/96	① ② Contactors, 110 kW	3RT1.64	3RT1.64	3/70 ... 3/72
⑫ Auxiliary switch block, lateral	3RH1921	3/98	① ② Contactors, 132 kW	3RT1.65	3RT1.65	3/70 ... 3/72
			① ② Contactors, 160 kW	3RT1.66	3RT1.66	3/70 ... 3/72
			③ Assembly kit comprising: Wiring rails top and bottom for contactors without box terminals for connecting the main and auxiliary current circuits, electrical interlock included (NC contact interlock)	3RA1963-2A		3/109
			④ Mechanical interlock (must be ordered separately)	3RA1954-2A		3/113
			⑤ Base plate for reversing contactor assemblies	3RA1962-2A		3/117

Reversing Contactor Assemblies

Reversing contactor assemblies consisting of SIRIUS 3RT1 contactors, up to 250 kW

Reversing contactor assemblies for customer assembly · Size S12 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
⑪ Auxiliary switch block, front	3RH1921	3/96
⑫ Auxiliary switch block, lateral	3RH1921	3/98

Reversing contactor assembly for customer assembly

Individual parts	Type		Page
	Q11	Q12	
① ② Contactors, 200 kW	3RT1.74	3RT1.74	3/70 ... 3/72
① ② Contactors, 250 kW	3RT1.75	3RT1.75	3/70 ... 3/72
③ Assembly kit comprising: Wiring rails top and bottom for contactors without box terminals for connecting the main and auxiliary current circuits, electrical interlock included (NC contact interlock)	3RA1973-2A		3/109
④ Mechanical interlock (must be ordered separately)	3RA1954-2A		3/113
⑤ Base plate for reversing contactor assemblies	3RA1972-2A		3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Overview

More information

Home page, see www.siemens.com/sirius
 Industry Mall, see www.siemens.com/product?3RA24_3RT

Conversion tool, e.g. from 3RT10 to 3RT20, see www.siemens.com/sirius/conversion-tool
 Online configurator for 3RT2 contactors, see www.siemens.com/sirius/configurators

The 3RA24 contactor assemblies for star-delta (wye-delta) starting in sizes S00 to S3 can be ordered as follows:

- Fully wired and tested, with electrical and mechanical interlock; see [page 3/179 onwards](#)
- For all individual parts for customer assembly, see [from page 3/75 onwards](#).

The 3RA24 contactor assemblies for star-delta (wye-delta) starting have screw or spring-type terminals and are suitable for screwing and snapping onto TH 35 standard mounting rails.

A base plate is also available for the size S2 and S3 assemblies.

A dead interval of 50 ms on reversing is already integrated in the 3RA28 function module for star-delta (wye-delta) starting.

With the fully wired and tested 3RA24 contactor assemblies for star-delta (wye-delta) starting, the auxiliary contacts included in the basic units are unassigned.

The 3RA24 contactor assemblies for star-delta (wye-delta) starting are designed for standard applications.

Note:

Contactor assemblies for star-delta (wye-delta) starting in special applications such as very heavy starting¹⁾ or star-delta (wye-delta) starting of special motors must be customized. Help with designing such special applications is available from our Technical Assistance,
 Tel.: +49 (911) 895-5900
 E-mail: technical-assistance@siemens.com

¹⁾ For effective support from Technical Assistance you must provide the following details:

- Rated motor voltage
- Rated motor current
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature.

Surge suppression

Surge suppression (varistor) is included in the 3RA28 function modules for star-delta (wye-delta) starting.

Motor protection

3RU2 overload relays (see [from page 7/84 onwards](#)) or 3RB3 overload relays (see [from page 7/97 onwards](#)) for contactor mounting or stand-alone installation, SIMOCODE pro 3UF7 motor management and control devices (from [page 10/14 onwards](#)) or 3RN thermistor motor protection evaluation units (from [page 10/164 onwards](#)) can be used for motor protection.

The overload relay can be either mounted onto the line contactor or separately fitted. It must be set to 0.58 times the rated motor current.

SIRIUS 3RA28 function module for star-delta (wye-delta) starting

The 3RA2816-0EW20 star-delta (wye-delta) function module (see [page 3/105](#)) replaces the complete wiring in the control circuit and can be used in the voltage range from 24 to 240 V AC/DC. It is snapped onto the front of the contactor assembly for star-delta (wye-delta) starting size S00, S0, S2 or S3.

One function module comprises a complete module kit:

- Basic module with integrated control logic and time setting
- Two coupling modules with corresponding connecting cables

The scope of supply thus comprises a complete module kit for one contactor assembly for star-delta (wye-delta) starting in size S00, S0, S2 or S3, regardless of the connection method.

Data of the control circuit:

- Wide voltage range 24 to 240 V AC/DC
- Time setting range 0.5 to 60 s (3 selectable settings)
- Dead interval of 50 ms, non-adjustable

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Complete units

Note:

The selection of contactor types refers to fused designs.

Rated data at 50 Hz 400 V AC			Size	Type	Star contactor	Fully-wired and tested contactor assemblies for star-delta (wye-delta) starting
Rating <i>P</i>	Operational current <i>I_e</i>	Motor current				
kW	A	A		Line/delta contactor		
 Screw terminals						
5.5	12	9.5 ... 13.8	S00-S00-S00	3RT2015-1...	3RT2015-1...	3RA2415-8XF31-1...
7.5	16	12.1 ... 17		3RT2017-1...	3RT2015-1...	3RA2416-8XF31-1...
11	25	19 ... 25		3RT2018-1...	3RT2016-1...	3RA2417-8XF31-1...
11	25	19 ... 25	S0-S0-S0	3RT2024-1...0	3RT2024-1...0	3RA2423-8XF32-1...
15	32	24.1 ... 34		3RT2026-1...0	3RT2024-1...0	3RA2425-8XF32-1...
18.5	40	34.5 ... 40		3RT2026-1...0	3RT2024-1...0	3RA2425-8XF32-1...
22	50	31 ... 43		3RT2027-1...0	3RT2026-1...0	3RA2426-8XF32-1...
22/30	50	31 ... 43	S2-S2-S0	3RT2035-1...0	3RT2026-1...0	3RA2434-8XF32-1...
37	80	62.1 ... 77.8		3RT2035-1...0	3RT2027-1...0	3RA2435-8XF32-1...
45	86	69 ... 86		3RT2036-1...0	3RT2028-1...0	3RA2436-8XF32-1...
55	115	77.6 ... 108.6	S2-S2-S2	3RT2037-1...0	3RT2035-1...0	3RA2437-8XF32-1...
55	115	77.6 ... 108.6	S3-S3-S2	3RT2045-1...0	3RT2035-1...0	3RA2444-8XF32-1...
75	150	120.7 ... 150		3RT2045-1...0	3RT2036-1...0	3RA2445-8XF32-1...
90	160	86 ... 160		3RT2046-1...0	3RT2037-1...0	3RA2446-8XF32-1...
 Spring-type terminals						
5.5	12	9.5 ... 13.8	S00-S00-S00	3RT2015-2...	3RT2015-2...	3RA2415-8XF31-2...
7.5	16	12.1 ... 17		3RT2017-2...	3RT2015-2...	3RA2416-8XF31-2...
11	25	19 ... 25		3RT2018-2...	3RT2016-2...	3RA2417-8XF31-2...
11	25	19 ... 25	S0-S0-S0	3RT2024-2...0	3RT2024-2...0	3RA2423-8XF32-2...
15	32	24.1 ... 34		3RT2026-2...0	3RT2024-2...0	3RA2425-8XF32-2...
18.5	40	34.5 ... 40		3RT2026-2...0	3RT2024-2...0	3RA2425-8XF32-2...
22	50	31 ... 43		3RT2027-2...0	3RT2026-2...0	3RA2426-8XF32-2...

Article No. scheme

Product versions		Article number											
SIRIUS contactor assembly for star-delta (wye-delta) starting		3RA24	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
Contactor size	e. g. 4 = S3		☐										
Power dependent on size	e. g. 5 = 75 kW for size S3		☐										
Type of overload relay	e. g. 8X = without					☐	☐						
Assembly	e. g. F = ready-assembled with function modules						☐						
Interlock	e. g. 3 = mechanical and electrical							☐					
Free auxiliary switches	e. g. 2 = S3: 3 NO + 3 NC total								☐				
Type of electrical connection	e. g. 1 = screw terminals (main and auxiliary circuits)									☐			
Operating range / solenoid coil circuit	e. g. A = AC standard / without coil circuit										☐		
Rated control supply voltage	e. g. L2 = 230 V AC, 50/60 Hz											☐	☐
Example		3RA24	4	5	-	8	X	F	3	2	-	1	A L 2

Note:

The Article No. scheme shows an overview of product versions for better understanding of the logic behind the article numbers.

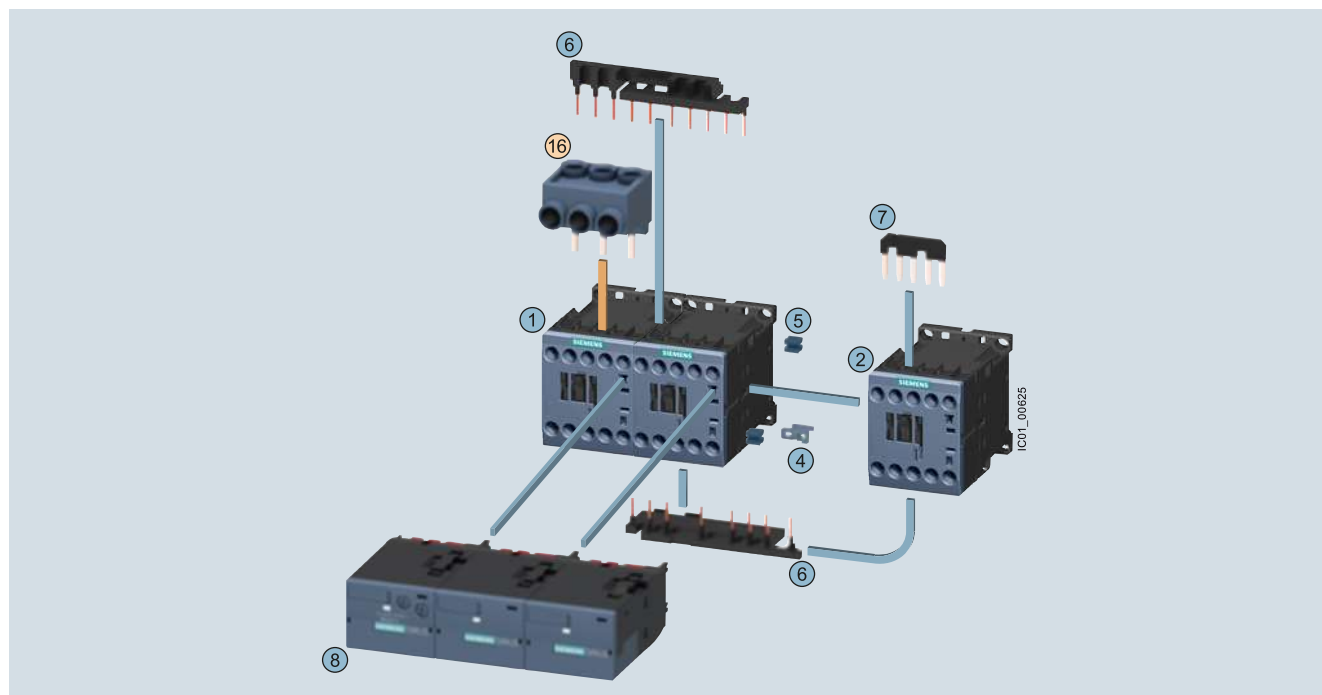
For your orders please use the article numbers quoted in the selection and ordering data.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S00-S00-S00 · Up to 11 kW

The figure shows the version with screw terminals



Mountable accessories (optional)

To be ordered separately	Type	Page
16 Three-phase infeed terminal ¹⁾	3RA2913-3K	3/114

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts		Type			Page
		Q11 ²⁾	Q13	Q12	
①②③	Contactors, 5.5 kW	3RT2015	3RT2015	3RT2015	3/51, 3/59
①②③	Contactors, 7.5 kW	3RT2017	3RT2017	3RT2015	3/51, 3/59
①②③	Contactors, 11 kW	3RT2018	3RT2018	3RT2016	3/51, 3/59
④ ... ⑦	Assembly kit S00-S00-S00 comprising:	3RA2913-2BB1			3/110
④	Mechanical interlock				
⑤	Four connecting clips for three contactors				
⑥	Wiring modules on the top and bottom for connecting the main and auxiliary circuits				
⑦	Star jumper				
⑧	Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/105

¹⁾ Part 16 can only be mounted in the case of contactors with screw terminal.

²⁾ The version with 1 NO is required for momentary-contact operation.

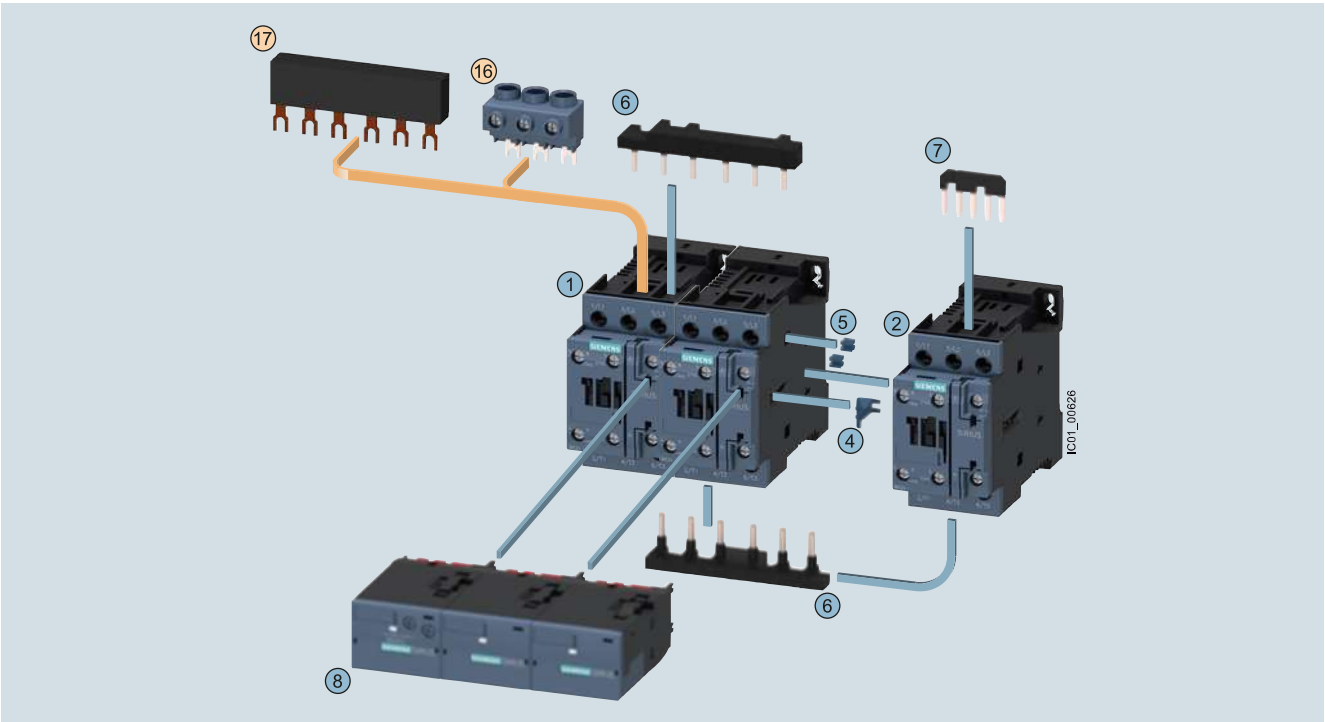
Complete contactor assemblies for star-delta (wye-delta) starting [see page 3/179](#).

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S0-S0-S0 · Up to 22 kW

The figure shows the version with screw terminals



Mountable accessories (optional)			Complete contactor assembly for star-delta (wye-delta) starting					
To be ordered separately	Type	Page	Individual parts		Type			Page
					Q11	Q13	Q12	
16 Three-phase infeed terminal ¹⁾	3RV2925-5AB	3/114	1 2 3	Contactors, 11 kW	3RT2024	3RT2024	3RT2024	3/53, 3/63
17 Three-phase busbar ¹⁾	3RV1915-1AB	3/114	1 2 3	Contactors, 15/18.5 kW	3RT2026	3RT2026	3RT2024	3/53, 3/63
			1 2 3	Contactors, 22 kW	3RT2027	3RT2027	3RT2026	3/53, 3/63
			4 ... 7	Assembly kit S0-S0-S0 comprising:	3RA2923-2BB1			3/110
			4	Mechanical interlock				
			5	Four connecting clips for three contactors				
			6	Wiring modules on the top and bottom for connecting the main and auxiliary circuits				
			7	Star jumper				
			8	Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/105
			Complete contactor assemblies for star-delta (wye-delta) starting see page 3/180.					

¹⁾ The parts 16 and 17 can only be mounted with contactors with screw terminal.

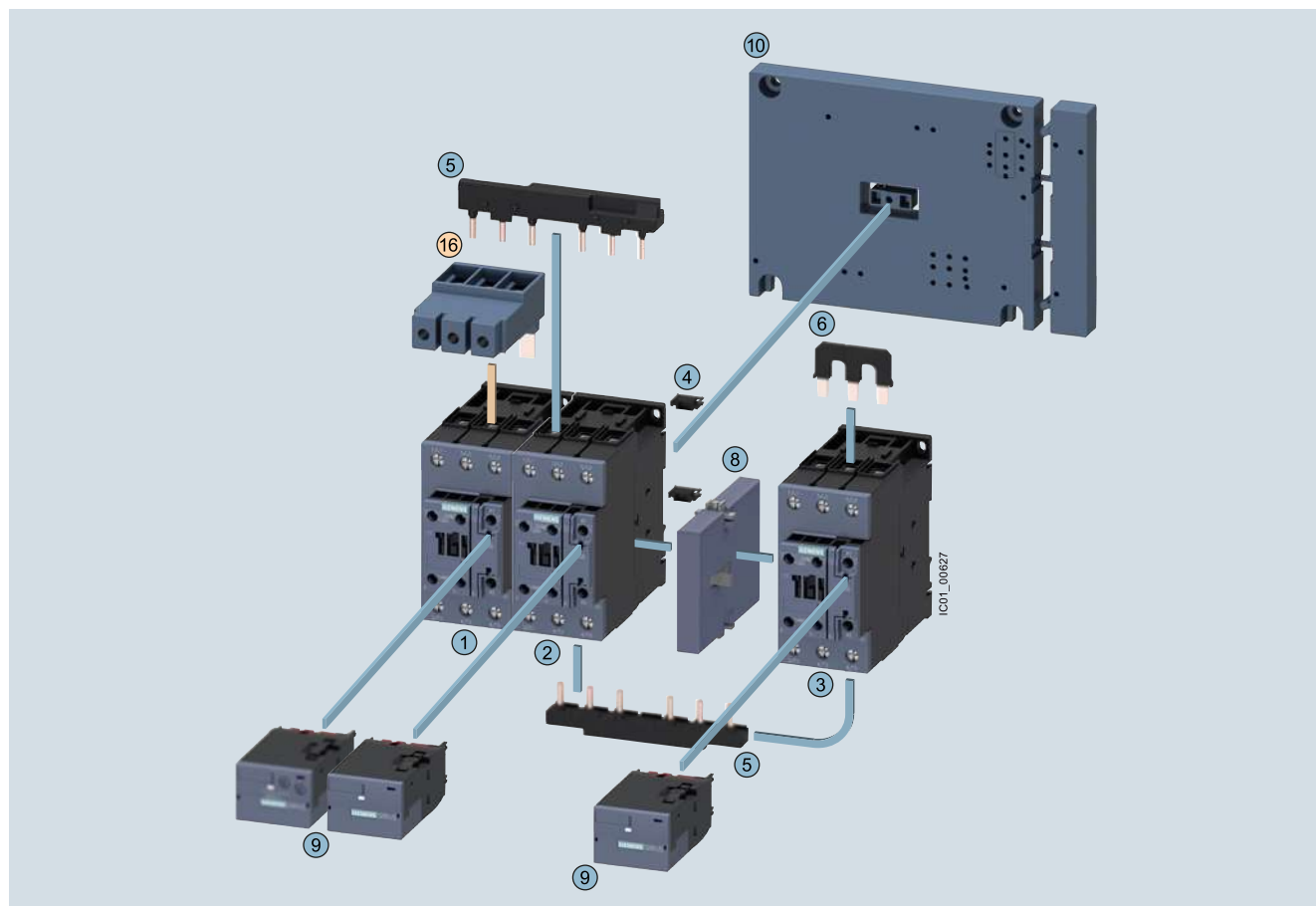
¹⁾ The parts 16 and 17 can only be mounted with contactors with screw terminal.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S2-S2-S0¹⁾ ·
Up to 45 kW and S2-S2-S2 · 55 kW

The figure shows the version with screw terminals in S2-S2-S2



Mountable accessories (optional)

To be ordered separately	Type	Page
16 Three-phase infeed terminal	3RV2935-5A	3/114

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts		Type			Page
		Q11	Q13	Q12	
①②③	Contactors, 22/30 kW	3RT2035	3RT2035	3RT2026	3/55, 3/64
①②③	Contactors, 37 kW	3RT2035	3RT2035	3RT2027	3/55, 3/64
①②③	Contactors, 45 kW	3RT2036	3RT2036	3RT2028	3/55, 3/64
①②③	Contactors, 55 kW	3RT2037	3RT2037	3RT2035	3/55, 3/64
④ ... ⑦	Assembly kit S2-S2-S2 comprising:	3RA2933-2BB1			3/110
④	Four connectors for three contactors (not required for fully pre-wired contactor assemblies for star-delta (wye-delta) starting)				
⑤	Wiring modules on the top and bottom for connecting the main and auxiliary circuits				
⑥	Star jumper S2				
⑦	Cable for connecting the A2 coil contact from the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing)				
⑧	Mechanical interlock	3RA2934-2B			3/113
⑨	Function modules for star-delta (wye-delta) starting	3RA2816-0EW20			3/105
⑩	Base plate star-delta (wye-delta)	3RA2932-2F			3/117

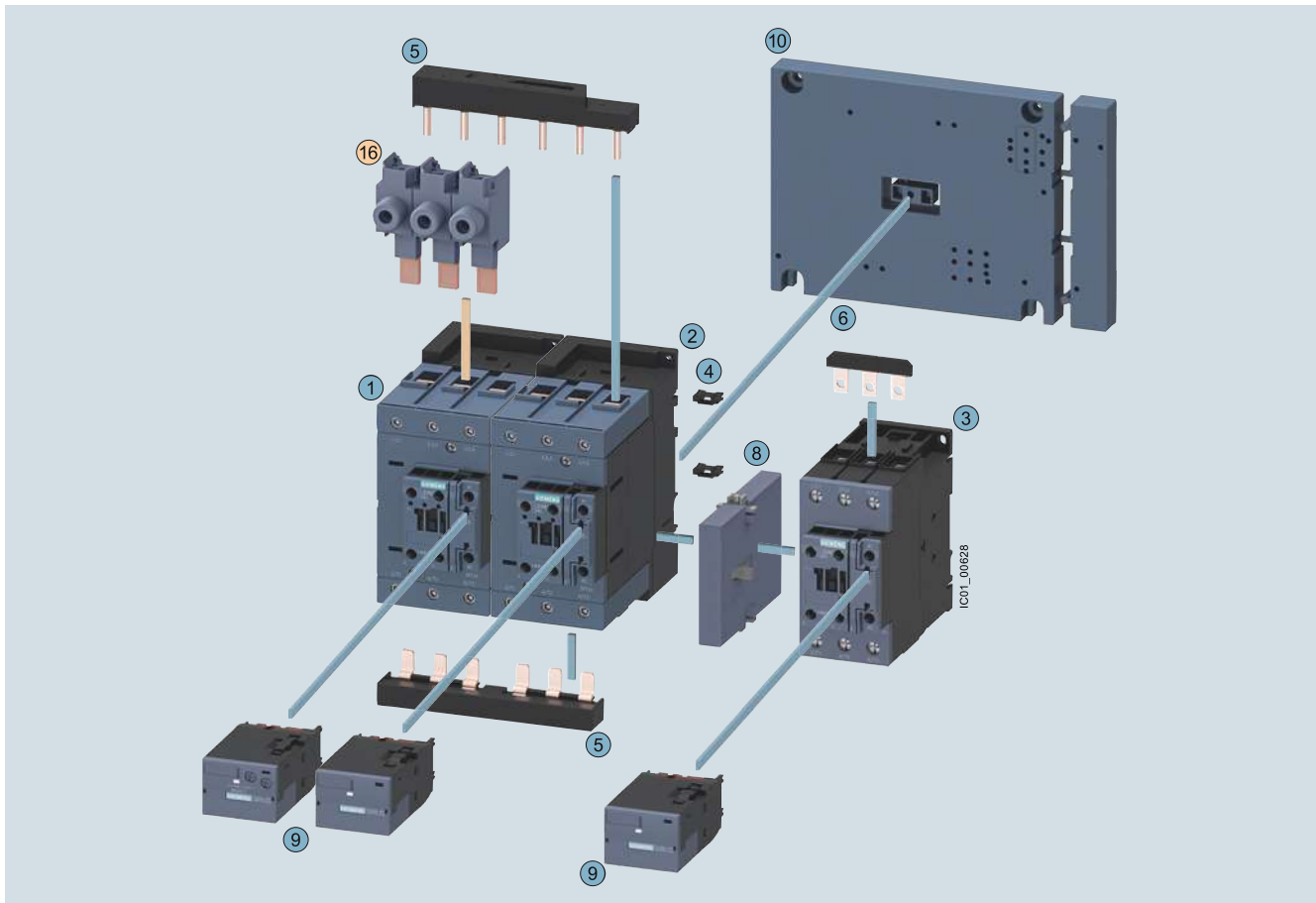
¹⁾ Complete contactor assembly for star-delta (wye-delta) starting in size S2-S2-S0 (not shown): The 3RA2933-2C assembly kit is to be used here, see page 3/110.

Complete contactor assemblies for star-delta (wye-delta) starting see page 3/181.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S3-S3-S2¹⁾ · Up to 90 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
16 Single-phase infeed terminal (3 units are required)	3RA2943-3L	3/114

Complete contactor assembly for star-delta (wye-delta) starting

Individual parts	Type	Page
1 2 3 Contactors, 55 kW	3RT2045	3/56, 3/64
1 2 3 Contactors, 75 kW	3RT2045	3/56, 3/64
1 2 3 Contactors, 90 kW	3RT2046	3/56, 3/64
4 ... 7 Assembly kit S3-S3-S2 comprising:	3RA2943-2C	3/110
4 Two connectors for three contactors (not required for fully pre-wired contactor assemblies for star-delta (wye-delta) starting)		
5 Wiring modules on top and bottom (S3-S2) for connecting the main and auxiliary circuits and a cable set for the auxiliary circuit		
6 Star jumper S2		
7 Cable for connecting the A2 coil contact from the line contactor with the A2 coil contact of the delta contactor (not shown in the drawing)		
8 Mechanical interlock	3RA2934-2B	3/113
9 Function modules for star-delta (wye-delta) starting	3RA2816-0EW20	3/105
10 Base plate star-delta (wye-delta)	3RA2942-2F	3/117

¹⁾ Contactor assembly for star-delta (wye-delta) starting for customer assembly in size S3-S3-S3 (not shown): The 3RA2943-2BB assembly kit is to be used here, see page 3/110.

Complete contactor assemblies for star-delta (wye-delta) starting see page 3/182.

Contactors Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Technical specifications

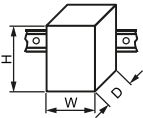
More information

Technical specifications, see
<https://support.industry.siemens.com/cs/ww/en/ps/16150/td>
 FAQs, see <https://support.industry.siemens.com/cs/ww/en/ps/16150/faq>

Manuals, see

- System Manual "SIRIUS – System Overview",
<https://support.industry.siemens.com/cs/WW/en/view/60311318>
- Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies",
<https://support.industry.siemens.com/cs/WW/en/view/60306557>
- Application Manual "SIRIUS Controls with IE3/IE4 motors;
<https://support.industry.siemens.com/cs/ww/en/view/94770820>

Unless otherwise indicated, the technical specifications correspond to those of the 3RT individual contactors (see from page 3/19 onwards) and 3RU2 overload relays (see from page 7/80 onwards).

Type			3RA2415	3RA2416	3RA2417	3RA2423	3RA2425	3RA2426
Sizes			S00-S00-S00	S00-S00-S00	S00-S00-S00	S0-S0-S0	S0-S0-S0	S0-S0-S0
General data								
Dimensions (W x H x D) with function module								
• AC operation - Screw terminals - Spring-type terminals • DC operation - Screw terminals - Spring-type terminals		mm	135 x 68 x 145			135 x101 x 171		
		mm	135 x 84 x 145			135 x114 x 171		
		mm	135 x 68 x 145			135 x101 x 181		
		mm	135 x 84 x 145			135 x114 x 181		
Individual contactors								
• Q11 line contactor	Type		3RT2015	3RT2017	3RT2018	3RT2024	3RT2026	3RT2027
• Q13 delta contactor	Type		3RT2015	3RT2017	3RT2018	3RT2024	3RT2026	3RT2027
• Q12 star contactor	Type		3RT2015	3RT2015	3RT2016	3RT2024	3RT2024	3RT2026
Mechanical endurance			Operating cycles					
			3 million					
Unassigned auxiliary contacts of the individual contactors			For circuit diagrams of the control circuit, see Manual "SIRIUS – SIRIUS 3RT Contactors/Contactor Assemblies", https://support.industry.siemens.com/cs/WWW/en/view/60306557.					
Short-circuit protection								
Main circuit without overload relays								
• Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB; NEOZED, type 5SE with single or double infeed								
Greatest rated current of the fuse according to IEC 60947-4-1								
- Type of coordination "1"	A		35		63		100	125
- Type of coordination "2"	A		20		25		35	63
Auxiliary circuit								
Short-circuit test								
• With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current $I_k = 1$ kA acc. to IEC 60947-5-1	A		10					
	A		6 (up to $I_k < 0.5$ kA; ≤ 260 V), If the auxiliary contact of the overload relay is connected in the contactor coil circuit.					
• With miniature circuit breaker, C characteristic with short-circuit current $I_k = 400$ A	A		10					
	A		6 (up to $I_k < 0.5$ kA; ≤ 260 V), If the auxiliary contact of the overload relay is connected in the contactor coil circuit.					
Short-circuit protection with overload relay			See Configuration Manual "Configuring SIRIUS Innovations – Selection Data for Fuseless and Fused Load Feeders", https://support.industry.siemens.com/cs/ww/en/view/39714188					

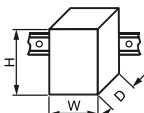
Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Type		3RA2415	3RA2416	3RA2417	3RA2423	3RA2425	3RA2426
Sizes		S00-S00-S00	S00-S00-S00	S00-S00-S00	S0-S0-S0	S0-S0-S0	S0-S0-S0
Rated data of the main contacts							
Current-carrying capacity with reversing time up to 10 s							
• Rated operational current I_e	At 400 V A	12	17	25		40	55
	690 V A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V kW	3.3	4.7	7.2		12	16.6
	400 V kW	5.8	8.2	12.5		21	30.1
	690 V kW	5.8	7.5	18		20.4	33
• Switching frequency with overload relay	h^{-1}	15					
Current-carrying capacity with reversing time up to 15 s							
• Rated operational current I_e	At 400 V A	12	17	25		31	44
	690 V A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V kW	3.3	4.7	7.2		9.4	13.8
	400 V kW	5.8	8.2	12.5		16.3	24
	690 V kW	5.8	7.5	18		20.4	33
• Switching frequency with overload relay	h^{-1}	15					
Current-carrying capacity with reversing time up to 20 s							
• Rated operational current I_e	At 400 V A	12	17	25		28	39
	690 V A	6.9	9	20.8		22.5	35
• Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V kW	3.3	4.7	7.2		8.5	12.2
	400 V kW	5.8	8.2	12.5		14.7	21.3
	690 V kW	5.8	7.5	18		20.4	33
• Switching frequency with overload relay	h^{-1}	15					

Contactors Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Type			3RA2434	3RA2435	3RA2436	3RA2437	3RA2444	3RA2445	3RA2446
Sizes			S2-S2-S0	S2-S2-S0	S2-S2-S0	S2-S2-S2	S3-S3-S2	S3-S3-S2	S3-S3-S2
General data									
Dimensions (W x H x D) with function module									
- AC and DC operation - Screw terminals		mm	177.5 x 142 x 223				220 x 180 x 244		
Individual contactors									
Q11 line contactor	Type		3RT2035	3RT2035	3RT2036	3RT2037	3RT2045	3RT2045	3RT2046
Q13 delta contactor	Type		3RT2035	3RT2035	3RT2036	3RT2037	3RT2045	3RT2045	3RT2046
Q12 star contactor	Type		3RT2026	3RT2027	3RT2028	3RT2035	3RT2035	3RT2036	3RT2037
Mechanical endurance	Operating cycles		1 million						
Unassigned auxiliary contacts of the individual contactors			For circuit diagrams of the control circuit, see Manual "SIRIUS - SIRIUS 3RT Contactors/Contactor assemblies", https://support.industry.siemens.com/cs/ww/en/view/60306557 .						
Short-circuit protection									
Main circuit without overload relays									
Fuse links, operational class gG: LV HRC, type 3NA; DIAZED, type 5SB NEOZED type 5SE with single or double infeed									
Greatest rated current of the fuse according to IEC 60947-4-1									
- Type of coordination "1"	A		160	200	250				
- Type of coordination "2"	A		80		125	160			
Auxiliary circuit									
Short-circuit test									
With fuse links, operational class gG: DIAZED, type 5SB; NEOZED, type 5SE with short-circuit current $I_k = 1$ kA acc. to IEC 60947-5-1	A		10						
	A		6 (up to $I_k < 0.5$ kA; ≤ 260 V), If the auxiliary contact of the overload relay is connected in the contactor coil circuit.						
With miniature circuit breaker, C characteristic with short-circuit current $I_k = 400$ A	A		10						
	A		6 (up to $I_k < 0.5$ kA; ≤ 260 V), If the auxiliary contact of the overload relay is connected in the contactor coil circuit.						
Short-circuit protection with overload relay			See Configuration Manual "Configuring SIRIUS Innovations – Selection Data for Fuseless and Fused Load Feeders" , https://support.industry.siemens.com/cs/ww/en/view/39714188				On request		
Rated data of the main contacts									
Current-carrying capacity with reversing time up to 10 s									
Rated operational current	At 400 V	A	On request						
	690 V	A	On request						
Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
Switching frequency with overload relay			h^{-1}	15					
Current-carrying capacity with reversing time up to 15 s									
Rated operational current	At 400 V	A	On request						
	690 V	A	On request						
Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
Switching frequency with overload relay			h^{-1}	15					
Current-carrying capacity with reversing time up to 20 s									
Rated operational current	At 400 V	A	On request						
	690 V	A	On request						
Rated power for three-phase motors with 50 Hz and 60 Hz	At 230 V	kW	On request						
	400 V	kW	On request						
	690 V	kW	On request						
Switching frequency with overload relay			h^{-1}	15					

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

IE3/IE4 ready
SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Selection and ordering data

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S00-S00-S00 · Up to 11 kW

PU (UNIT, SET, M) = 1
 PS* = 1 unit
 PG = 41B



3RA241.-8XF31-1A.0

3RA241.-8XF31-2A.0

3RA241.-8XE31-1BB4

Rated data AC-3				Rated control supply voltage $U_s^{1)}$	SD	Screw terminals			SD	Spring-type terminals		
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU			Article No.	Price per PU	
	230 V	400 V	690 V									
A	kW	kW	kW	V	d				d			
AC operation, 50/60 Hz												
12	3.3	5.5	9.2	24 AC	2	3RA2415-8XF31-1AB0	2	3RA2415-8XF31-2AB0				
				110 AC	2	3RA2415-8XF31-1AF0	5	3RA2415-8XF31-2AF0				
				230 AC	2	3RA2415-8XF31-1AP0	2	3RA2415-8XF31-2AP0				
16	4.7	7.5	9.2	24 AC	2	3RA2416-8XF31-1AB0	5	3RA2416-8XF31-2AB0				
				110 AC	2	3RA2416-8XF31-1AF0	5	3RA2416-8XF31-2AF0				
				230 AC	2	3RA2416-8XF31-1AP0	2	3RA2416-8XF31-2AP0				
25	5.5	11	11	24 AC	2	3RA2417-8XF31-1AB0	5	3RA2417-8XF31-2AB0				
				110 AC	2	3RA2417-8XF31-1AF0	5	3RA2417-8XF31-2AF0				
				230 AC	2	3RA2417-8XF31-1AP0	2	3RA2417-8XF31-2AP0				
DC operation												
12	3.3	5.5	9.2	24 DC	2	3RA2415-8XF31-1BB4	2	3RA2415-8XF31-2BB4				
16	4.7	7.5	9.2	24 DC	2	3RA2416-8XF31-1BB4	2	3RA2416-8XF31-2BB4				
25	5.5	11	11	24 DC	2	3RA2417-8XF31-1BB4	2	3RA2417-8XF31-2BB4				
For IO-Link connection												
12	3.3	5.5	9.2	24 DC	2	3RA2415-8XE31-1BB4	2	3RA2415-8XE31-2BB4				
16	4.7	7.5	9.2	24 DC	2	3RA2416-8XE31-1BB4	2	3RA2416-8XE31-2BB4				
25	5.5	11	11	24 DC	2	3RA2417-8XE31-1BB4	2	3RA2417-8XE31-2BB4				
For AS-Interface connection												
12	3.3	5.5	9.2	24 DC	5	3RA2415-8XH31-1BB4	2	3RA2415-8XH31-2BB4				
16	4.7	7.5	9.2	24 DC	2	3RA2416-8XH31-1BB4	5	3RA2416-8XH31-2BB4				
25	5.5	11	11	24 DC	2	3RA2417-8XH31-1BB4	2	3RA2417-8XH31-2BB4				

¹⁾ Coil operating range
 - at 50 Hz: 0.8 to 1.1 × U_s
 - at 60 Hz: 0.85 to 1.1 × U_s .

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/172.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

IE3/IE4 ready

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S0-S0-S0 · Up to 22 kW

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA242.-8XF32-1A.2

3RA242.-8XF32-2A.2

3RA242.-8XE32-1BB4

Rated data AC-3				Rated control supply voltage U_s ¹⁾	SD	Screw terminals			SD	Spring-type terminals		
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU			Article No.	Price per PU	
A	230 V	400 V	690 V									
kW	kW	kW	kW	V	d			d				
AC operation, 50/60 Hz												
25	7.1	11	19	24 AC	2	3RA2423-8XF32-1AC2	2	3RA2423-8XF32-2AC2				
				110 AC	2	3RA2423-8XF32-1AG2	5	3RA2423-8XF32-2AG2				
				230 AC	5	3RA2423-8XF32-1AL2	5	3RA2423-8XF32-2AL2				
32/40	11.4	15/18.5	19	24 AC	2	3RA2425-8XF32-1AC2	2	3RA2425-8XF32-2AC2				
				110 AC	2	3RA2425-8XF32-1AG2	5	3RA2425-8XF32-2AG2				
				230 AC	5	3RA2425-8XF32-1AL2	5	3RA2425-8XF32-2AL2				
50	--	22	19	24 AC	2	3RA2426-8XF32-1AC2	5	3RA2426-8XF32-2AC2				
				110 AC	2	3RA2426-8XF32-1AG2	5	3RA2426-8XF32-2AG2				
				230 AC	5	3RA2426-8XF32-1AL2	5	3RA2426-8XF32-2AL2				
DC operation												
25	7.1	11	19	24 DC	2	3RA2423-8XF32-1BB4	2	3RA2423-8XF32-2BB4				
32/40	11.4	15/18.5	19	24 DC	2	3RA2425-8XF32-1BB4	2	3RA2425-8XF32-2BB4				
50	--	22	19	24 DC	2	3RA2426-8XF32-1BB4	2	3RA2426-8XF32-2BB4				
For IO-Link connection												
25	7.1	11	19	24 DC	2	3RA2423-8XE32-1BB4	5	3RA2423-8XE32-2BB4				
32/40	11.4	15/18.5	19	24 DC	2	3RA2425-8XE32-1BB4	5	3RA2425-8XE32-2BB4				
50	--	22	19	24 DC	2	3RA2426-8XE32-1BB4	5	3RA2426-8XE32-2BB4				
For AS-Interface connection												
25	7.1	11	19	24 DC	5	3RA2423-8XH32-1BB4	2	3RA2423-8XH32-2BB4				
32/40	11.4	15/18.5	19	24 DC	5	3RA2425-8XH32-1BB4	5	3RA2425-8XH32-2BB4				
50	--	22	19	24 DC	2	3RA2426-8XH32-1BB4	5	3RA2426-8XH32-2BB4				

¹⁾ Coil operating range
- at 50 Hz: 0.8 to $1.1 \times U_s$
- at 60 Hz: 0.85 to $1.1 \times U_s$.

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/173.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

IE3/IE4 ready SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S2-S2-S0 · Up to 45 kW and S2-S2-S2 · 55 kW

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA2437-8XF32-1A.2



3RA2434-8XE32-1NB3

Rated data AC-3				Rated control supply voltage $U_s^{(1)}$	SD	Screw terminals 		SD	Spring-type terminals 	
Operational current I_e up to 400 V		Ratings of three-phase motors at 50 Hz and				Article No.			Article No.	
	230 V	400 V	690 V			Price per PU		Price per PU		
A	kW	kW	kW	V	d		d			
AC operation, 50/60 Hz										
50/65	19.6	22/30	34	24 AC	5	3RA2434-8XF32-1AC2	--			
				110 AC	5	3RA2434-8XF32-1AG2	--			
				230 AC	▶	3RA2434-8XF32-1AL2	--			
80	25	37	63	24 AC	2	3RA2435-8XF32-1AC2	--			
				110 AC	2	3RA2435-8XF32-1AG2	--			
				230 AC	▶	3RA2435-8XF32-1AL2	--			
86	27	45	63	24 AC	2	3RA2436-8XF32-1AC2	--			
				110 AC	2	3RA2436-8XF32-1AG2	--			
				230 AC	▶	3RA2436-8XF32-1AL2	--			
115	37	55	93	24 AC	5	3RA2437-8XF32-1AC2	--			
				110 AC	5	3RA2437-8XF32-1AG2	--			
				230 AC	▶	3RA2437-8XF32-1AL2	--			
AC/DC operation										
50/65	19.6	22/30	34	24 ... 33 AC/DC	▶	3RA2434-8XF32-1NB3	--			
80	25	37	63	24 ... 33 AC/DC	2	3RA2435-8XF32-1NB3	--			
86	27	45	63	24 ... 33 AC/DC	2	3RA2436-8XF32-1NB3	--			
115	37	55	93	24 ... 33 AC/DC	5	3RA2437-8XF32-1NB3	--			
DC operation										
For IO-Link connection										
50/65	19.6	22/30	34	24 DC	5	3RA2434-8XE32-1NB3	--			
80	25	37	63	24 DC	5	3RA2435-8XE32-1NB3	--			
86	27	45	63	24 DC	5	3RA2436-8XE32-1NB3	--			
115	37	55	93	24 DC	5	3RA2437-8XE32-1NB3	--			
For AS-Interface connection										
50/65	19.6	22/30	34	24 DC	5	3RA2434-8XH32-1NB3	--			
80	25	37	63	24 DC	5	3RA2435-8XH32-1NB3	--			
86	27	45	63	24 DC	5	3RA2436-8XH32-1NB3	--			
115	37	55	93	24 DC	5	3RA2437-8XH32-1NB3	--			

1) Operating range
- AC coil:
at 50 Hz 0.8 to 1.1 x U_s ,
at 60 Hz 0.85 to 1.1 x U_s
- AC/DC coil: 0.8 to 1.1 x U_s
- DC coil: 0.8 to 1.1 x U_s .

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/174.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

SIRIUS 3RA24 contactor assemblies for star-delta (wye-delta) starting, up to 90 kW

IE3/IE4 ready

NEW

Fully wired and tested contactor assemblies for star-delta (wye-delta) starting · Size S3-S3-S2 · Up to 90 kW

PU (UNIT, SET, M) = 1
PS* = 1 unit
PG = 41B



3RA244.-8XF32-1A.2

3RA244.-8XE32-1NB3

3RA244.-8XH32-1NB3

Rated data AC-3				Rated control supply voltage (U_s ¹⁾	SD	Screw terminals			SD	Spring-type terminals			
Operational current I_e up to 400 V	Ratings of three-phase motors at 50 Hz and					Article No.	Price per PU			Article No.	Price per PU		
A	kW	kW	kW	V	d								
AC operation, 50/60 Hz													
115	30	55	90	24 AC	X	3RA2444-8XF32-1AC2		--					
				110 AC	X							3RA2444-8XF32-1AG2	--
				230 AC	X							3RA2444-8XF32-1AL2	--
150	37	75	110	24 AC	X	3RA2445-8XF32-1AC2		--					
				110 AC	X							3RA2445-8XF32-1AG2	--
				230 AC	X							3RA2445-8XF32-1AL2	--
160	45	90	132	24 AC	X	3RA2446-8XF32-1AC2		--					
				110 AC	X							3RA2446-8XF32-1AG2	--
				230 AC	X							3RA2446-8XF32-1AL2	--
AC/DC operation													
115	30	55	90	24 ... 33 AC/DC	X	3RA2444-8XF32-1NB3		--					
150	37	75	110	24 ... 33 AC/DC	X	3RA2445-8XF32-1NB3		--					
160	45	90	132	24 ... 33 AC/DC	X	3RA2446-8XF32-1NB3		--					
DC operation													
For IO-Link connection													
115	30	55	90	24 DC	X	3RA2444-8XE32-1NB3		--					
150	37	75	110	24 DC	X	3RA2445-8XE32-1NB3		--					
160	45	90	132	24 DC	X	3RA2446-8XE32-1NB3		--					
For AS-Interface connection													
115	30	55	90	24 DC	X	3RA2444-8XH32-1NB3		--					
150	37	70	110	24 DC	X	3RA2445-8XH32-1NB3		--					
160	45	90	132	24 DC	X	3RA2446-8XH32-1NB3		--					

¹⁾ Operating range

- AC coil:
 - at 50 Hz 0.8 to 1.1 x U_s ,
 - at 60 Hz 0.85 to 1.1 x U_s
- AC/DC coil: 0.8 to 1.1 x U_s
- DC coil: 0.8 to 1.1 x U_s .

Representation of the complete contactor assemblies for star-delta (wye-delta) starting with optionally mountable accessories, see page 3/175.

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Overview

The individual parts for the contactor assemblies for star-delta (wye-delta) starting for customer assembly must be ordered separately.

- 3RT contactors: The operating times of the individual 3RT10 contactors are rated in such a way that no overlapping of the contact making and the arcing time between two contactors can occur on reversing, provided they are interlocked by way of their auxiliary switches (NC contact interlock) and the mechanical interlock.
For assemblies with AC operation and 50/60 Hz, a dead interval of 50 ms must be provided when used with voltages over 500 V; a dead interval of 30 ms is recommended for use with voltages up to and including 400 V. These dead times do not apply to assemblies with DC operation.
The operating times of the individual contactors are not affected by the mechanical interlock.
- Mechanical interlock
- Wiring kits: consisting of wiring modules or link rails and star jumpers
- Adapter for the mechanical interlock between S6 and S3
- Base plate

Additional components

- For momentary-contact operation: auxiliary switch (NO contact) for self-locking
- 3RB2 overload relays (see from page 7/109 onwards), SIMOCODE pro 3UF7 motor management and control devices (from page 10/14 onwards) or 3RN thermistor motor protection evaluation units (page 10/164) can be used for overload protection.
The overload relay can be either mounted onto the line contactor or separately fitted. It must be set to 0.58 times the rated motor current.
- Optional surge suppression for the S3 contactors; the contactors in sizes S6 to S12 are wired as standard with varistors.

The contactor assemblies for star-delta (wye-delta) starting for customer assembly are designed for standard applications.

Note:

Contactor assemblies for star-delta (wye-delta) starting in special applications such as very heavy starting¹⁾ or star-delta (wye-delta) starting of special motors must be customized. Help with designing such special applications is available from our Technical Assistance,
Tel.: +49 (911) 895-5900
E-mail: technical-assistance@siemens.com.

¹⁾ For effective support from Technical Assistance you must provide the following details:

- Rated motor voltage
- Rated motor current
- Service factor, operating values
- Motor starting current factor
- Starting time
- Ambient temperature.

More information

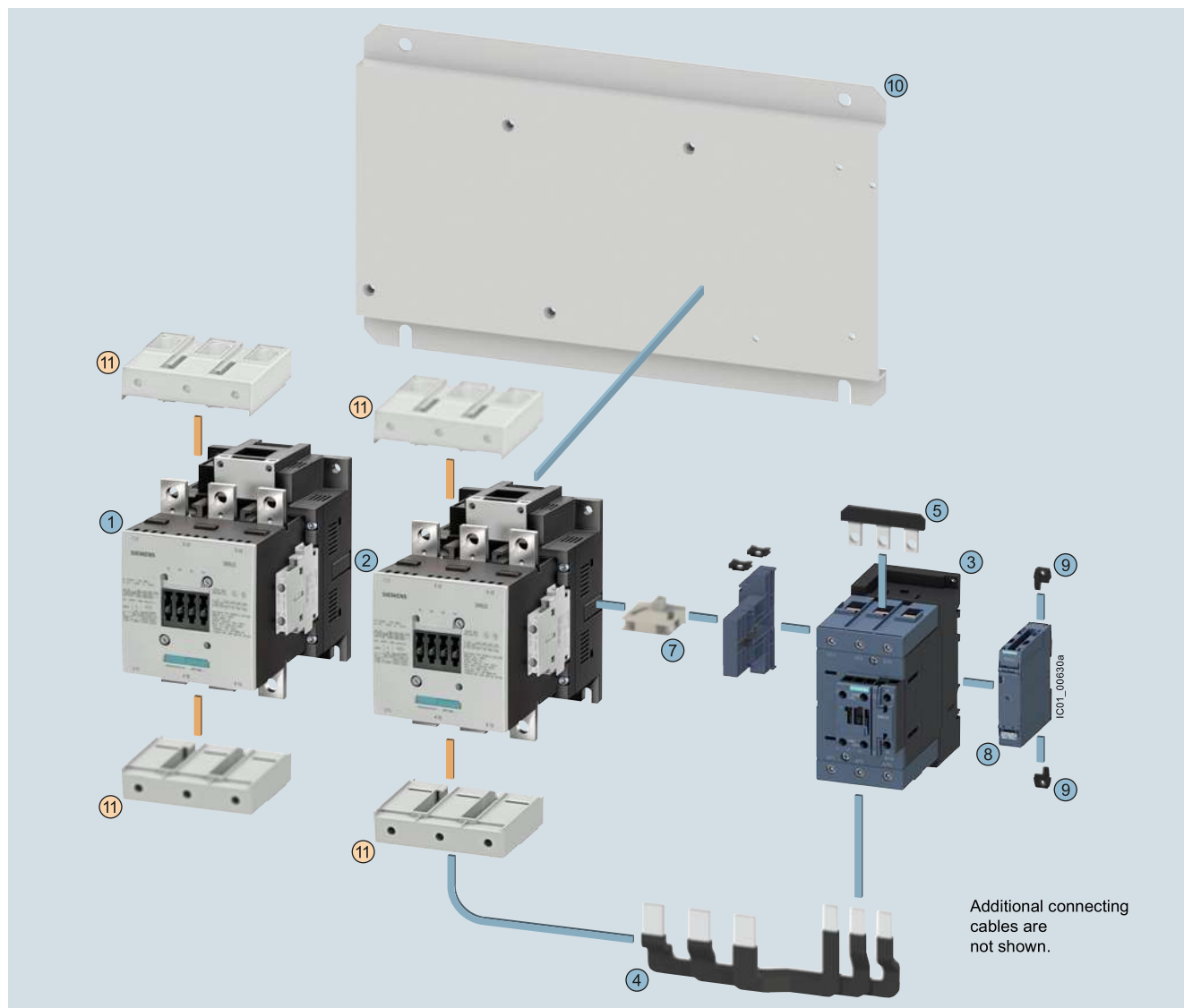
Home page, see www.siemens.com/sirius

Industry Mall, see www.siemens.com/product?3RA24_3RT

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S6-S6-S3 · Up to 160 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
11 Box terminal blocks	3RT1955-4G	3/114

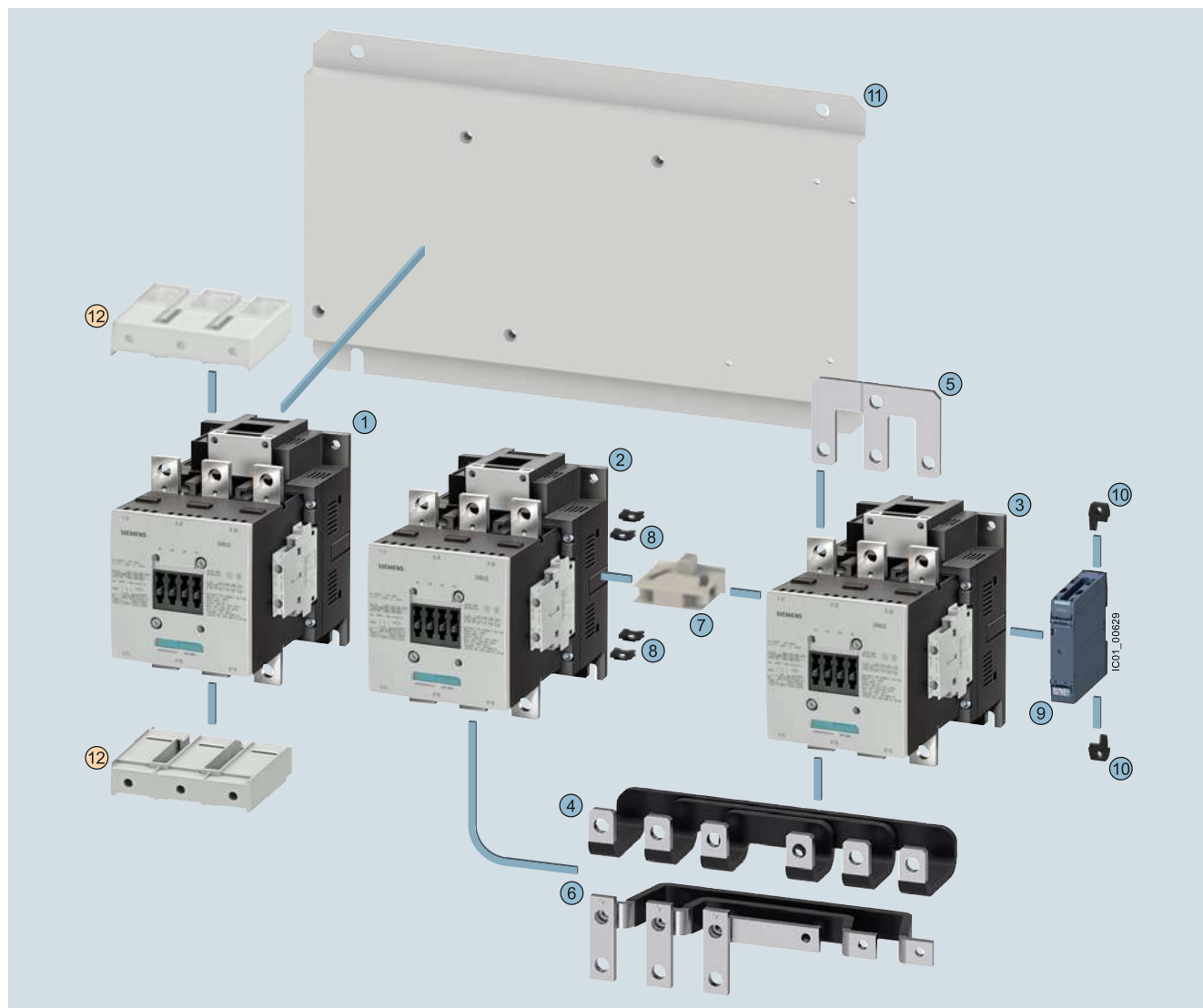
Contactor assemblies for customer assembly

Individual parts		Type			Page
		Q11	Q13	Q12	
1 2 3	Contactors, 110 kW	3RT1054	3RT1054	3RT2045	3/56, 3/64, 3/68 ... 3/72
1 2 3	Contactors, 132 kW	3RT1055	3RT1055	3RT2046	3/56, 3/64, 3/68 ... 3/72
1 2 3	Contactors, 160 kW	3RT1056	3RT1056	3RT2047	3/56, 3/64, 3/68 ... 3/72
4	Assembly kit S6-S6-S3 for contactors with box terminals comprising: Wiring modules, bottom	3RA1953-3G			3/111
5	Star jumper S3	3RT1946-4BA31			3/112
6	Adapter for the mechanical interlock between S6 and S3 (including two connectors)	3RA1954-2G			3/113
7	Mechanical interlock between S6 and S3	3RA1954-2A			3/113
8	Timing relay with star-delta (wye-delta) function	3RP257			10/46
9	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-OAA00			10/47
10	Base plate star-delta (wye-delta)	3RA1952-2E			3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S6-S6-S6 · Up to 160 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
12 Box terminal blocks	3RT1955-4G	3/114

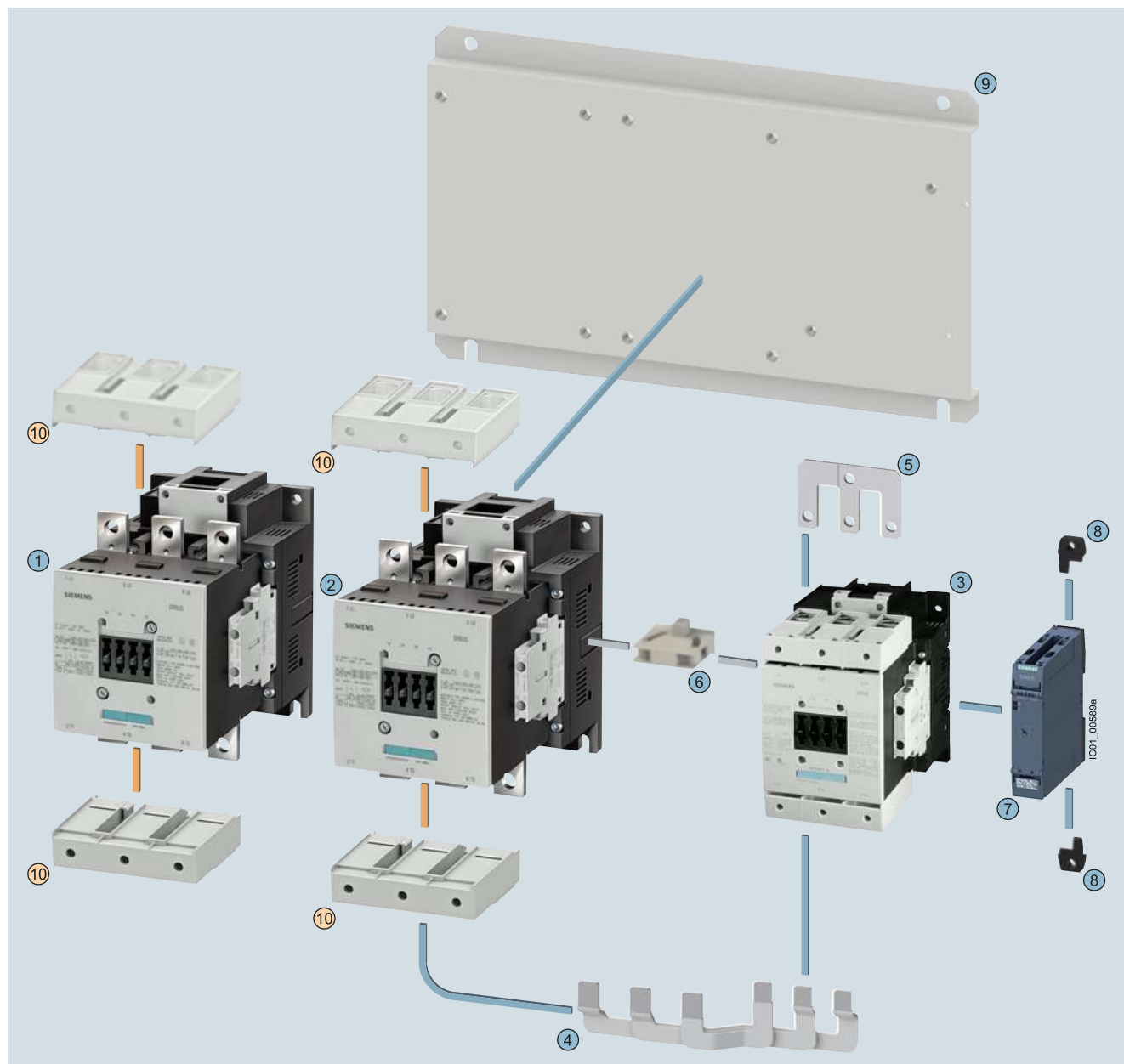
Contactor assemblies for customer assembly

Individual parts		Type			Page
		Q11	Q13	Q12	
①②③	Contactors, 110 kW	3RT1054	3RT1054	3RT1054	3/70 ... 3/72
①②③	Contactors, 132 kW	3RT1055	3RT1055	3RT1055	3/70 ... 3/72
①②③	Contactors, 160 kW	3RT1056	3RT1056	3RT1056	3/70 ... 3/72
④⑤	<u>Assembly kit S6-S6-S6 for contactors with box terminals comprising:</u>	3RA1953-2B			3/111
	④ Link rails, bottom				
	⑤ Star jumper S6				
⑤⑥	<u>Assembly kit S6-S6-S6 for contactors without box terminals comprising:</u>	3RA1953-2N			3/111
	⑥ Link rails, bottom				
	⑤ Star jumper S6				
⑦	Mechanical interlock	3RA1954-2A			3/113
⑧	Four connectors	3RA1932-2D			3/113
⑨	Timing relay with star-delta (wye-delta) function	3RP257.			10/46
⑩	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/47
⑪	Base plate star-delta (wye-delta)	3RA1952-2F			3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S10-S10-S6 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately Type Page

10 Box terminal blocks 3RT1966-4G 3/114

Contactor assemblies for customer assembly

Individual parts

Type

Q11

Q13

Q12

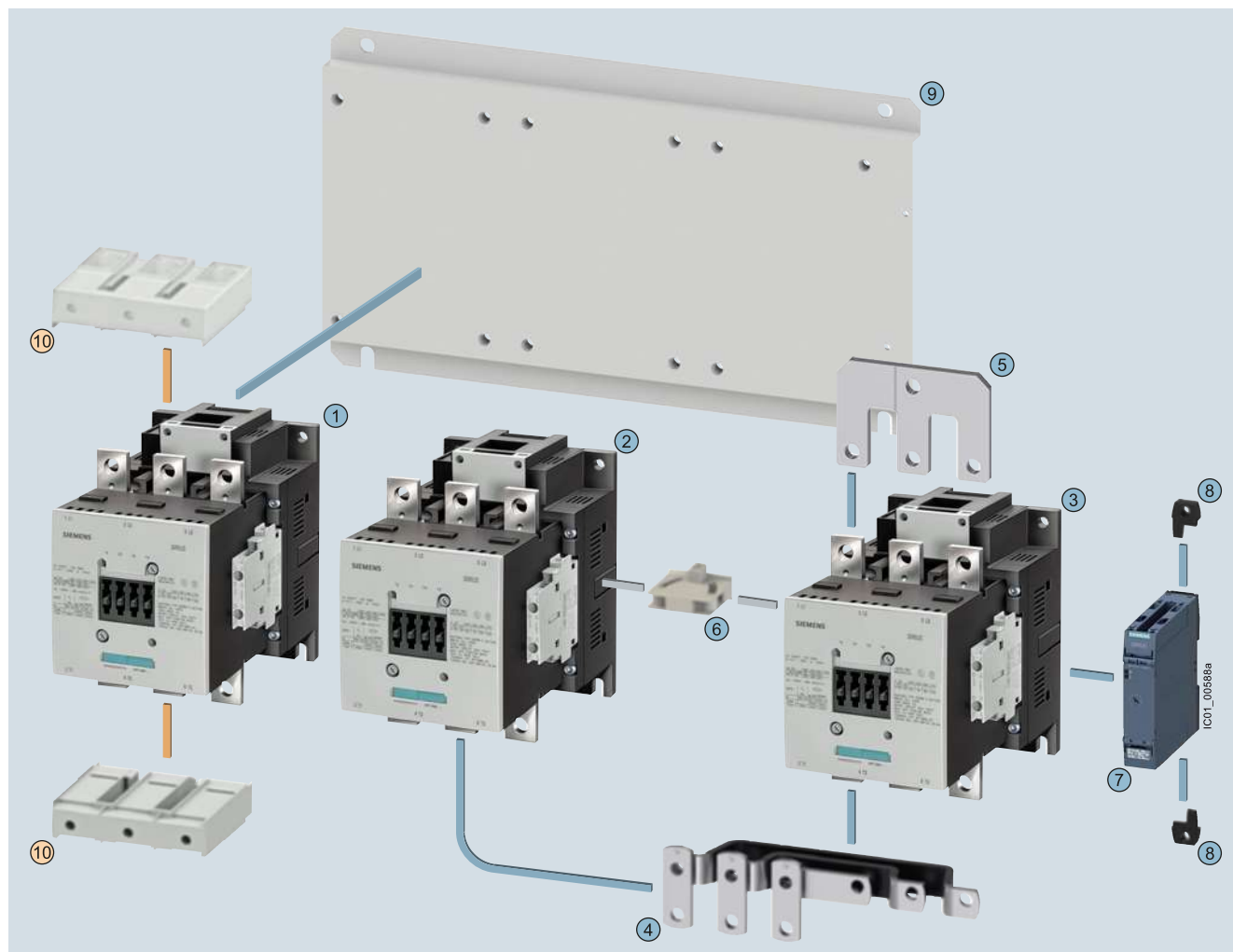
Page

1 2 3	Contactors, 200 kW	3RT1.64	3RT1.64	3RT1064	3/70 ... 3/72, 3/134
1 2 3	Contactors, 250 kW	3RT1.65	3RT1.65	3RT1055	3/70 ... 3/72, 3/134
4	Assembly kit S10-S10-S6 for contactors with box terminals comprising: Wiring modules, bottom	3RA1963-3E			3/111
5	Star jumper S6	3RT1956-4BA31			3/112
6	Mechanical interlock between S10 and S6	3RA1954-2A			3/113
7	Timing relay with star-delta (wye-delta) function	3RP257.			10/46
8	Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00			10/47
9	Base plate star-delta (wye-delta)	3RA1962-2E			3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S10-S10-S10 · Up to 250 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
10 Box terminal blocks	3RT1966-4G	3/114

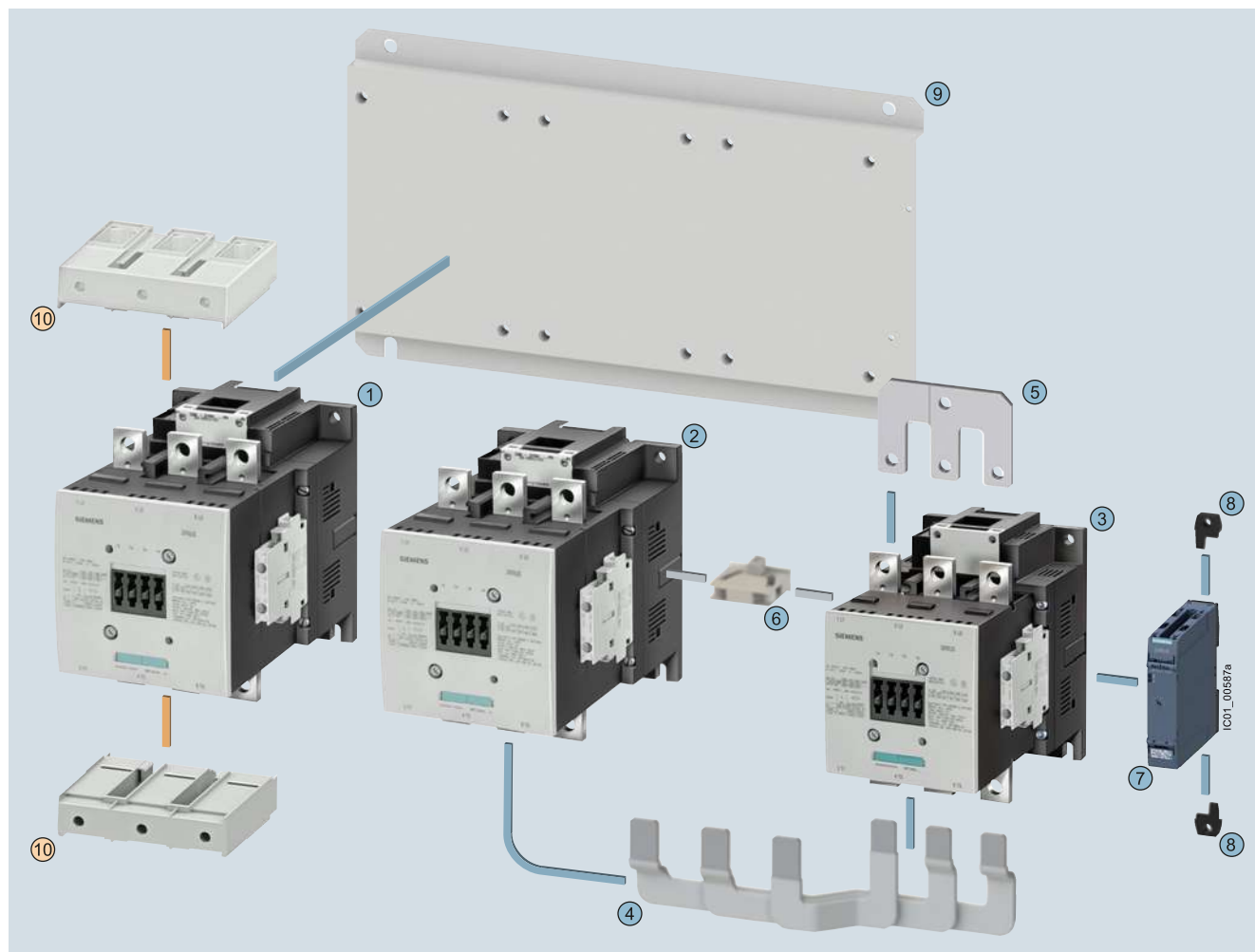
Contactor assemblies for customer assembly

Individual parts	Type	Page
1 2 3 Contactors, 200 kW	Q11 3RT1.64	3/70 ... 3/72, 3/134
1 2 3 Contactors, 250 kW	Q13 3RT1.64	3/70 ... 3/72, 3/134
4 5 Assembly kit S10-S10-S10 for contactors without box terminals comprising:	Q12 3RT1.65	3/70 ... 3/72, 3/134
4 Link rails, bottom	3RA1963-2B	3/111
5 Star jumper S10		
6 Mechanical interlock	3RA1954-2A	3/113
7 Timing relay with star-delta (wye-delta) function	3RP257	10/46
8 Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00	10/47
9 Base plate star-delta (wye-delta)	3RA1962-2F	3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S12-S12-S10 · Up to 500 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
10 Box terminal blocks	3RT1966-4G	3/114

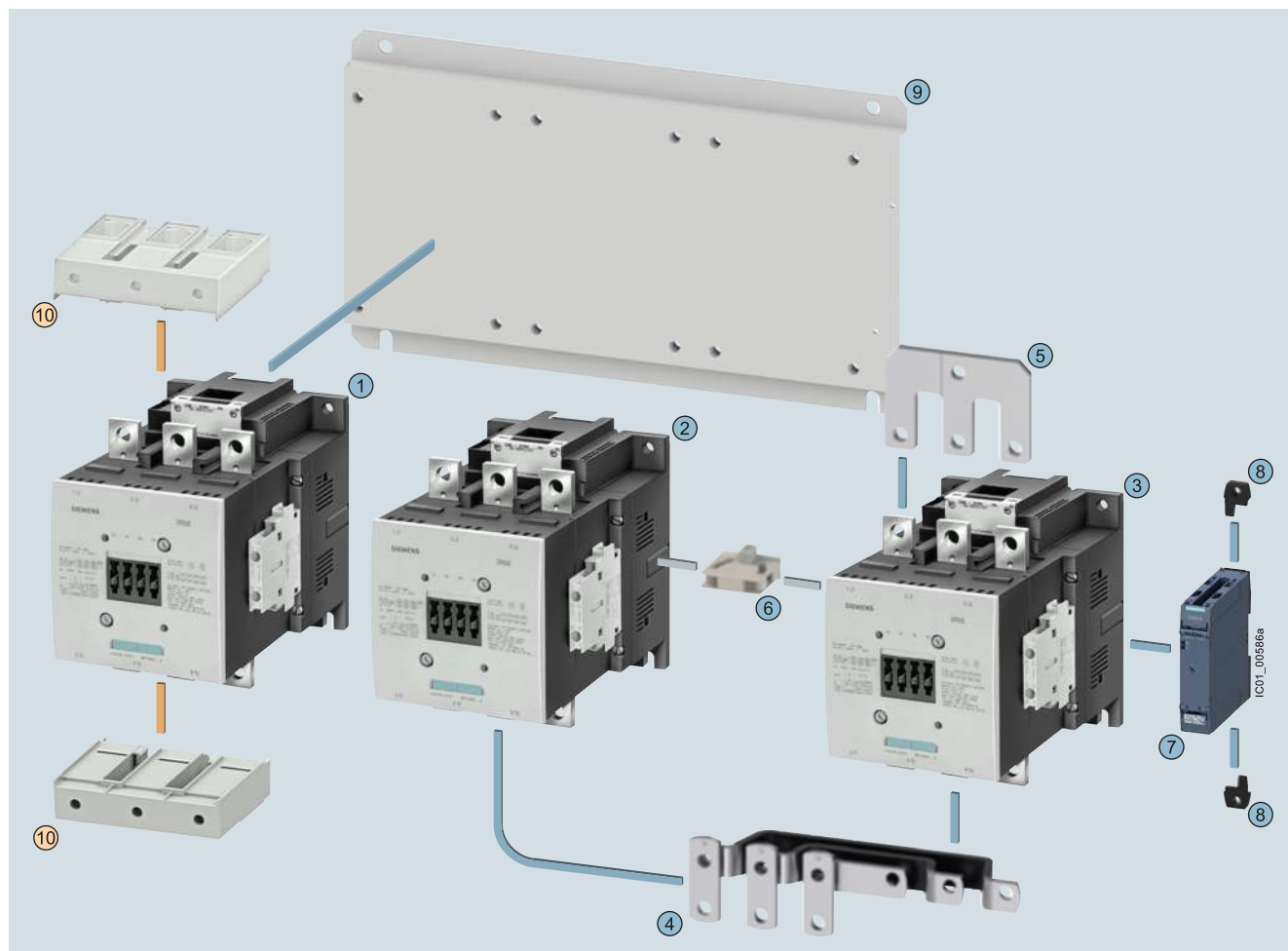
Contactor assemblies for customer assembly

Individual parts	Type	Page
1 2 3 Contactors, 355 kW	Q11 3RT1.75 Q13 3RT1.75 Q12 3RT1064	3/70 ... 3/72, 3/134
1 2 3 Contactors, 400 kW	3RT1.75 3RT1.75 3RT1.65	3/70 ... 3/72, 3/134
1 2 3 Contactors, 500 kW	3RT1.76 3RT1.76 3RT1.66	3/70 ... 3/72, 3/134
4 Assembly kit S12-S12-S10 for contactors with box terminals comprising: Wiring modules, bottom	3RA1973-3E	3/111
5 Star jumper S10	3RT1966-4BA31	3/112
6 Mechanical interlock between S12 and S10	3RA1954-2A	3/113
7 Timing relay with star-delta (wye-delta) function	3RP257.	10/46
8 Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00	10/47
9 Base plate star-delta (wye-delta)	3RA1972-2E	3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Contactor assemblies for star-delta (wye-delta) starting consisting of SIRIUS 3RT contactors, up to 500 kW

Contactor assemblies for star-delta (wye-delta) starting for customer assembly · Sizes S12-S12-S12 · Up to 500 kW



Mountable accessories (optional)

To be ordered separately	Type	Page
10 Box terminal blocks	3RT1966-4G	3/114

Contactor assemblies for customer assembly

Individual parts	Type	Page
1 2 3 Contactors, 400 kW	3RT1.75	3/70 ... 3/72, 3/134
1 2 3 Contactors, 500 kW	3RT1.76	3/70 ... 3/72, 3/134
4 5 Assembly kit S12-S12-S12 for contactors without box terminals comprising:	3RA1973-2B	3/111
4 Link rails, bottom		
5 Star jumper S12		
6 Mechanical interlock	3RA1954-2A	3/113
7 Timing relay with star-delta (wye-delta) function	3RP257.	10/46
8 Push-in lugs for star-delta (wye-delta) timing relays	3ZY1311-0AA00	10/47
9 Base plate star-delta (wye-delta)	3RA1972-2F	3/117

Contactor Assemblies for Star-Delta (Wye-Delta) Starting

Notes

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