

AXL SE RS485 EF - Communication module



1507978

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Axioline Smart Elements, Communication module, interface RS-485: 1, Process data width: 64 bytes, Transparent protocol, End-to-end protocol, Modbus/RTU (client support), Modbus/RTU (server support), degree of protection: IP20

Product description

You can integrate Axioline Smart Elements into systems with the Smart Element interface. This Smart Element is used to operate standard I/O devices with a serial interface on a bus system.

Your advantages

- One serial input and output channel in RS-485 format
- Various protocols supported
- Transmission speed can be set up to 230,400 bps
- Number of data bits, stop bits and parity can be set
- Modbus/RTU client and server support
- Process data width: 64 bytes
- Device rating plate stored

Commercial data

Item number	1507978
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR05
Product key	DRIB51
GTIN	4063151969257
Weight per piece (including packing)	34.79 g
Weight per piece (excluding packing)	32.16 g
Customs tariff number	85176200
Country of origin	DE

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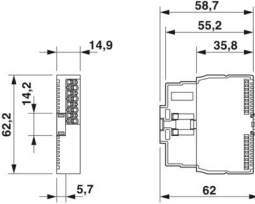


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Technical data

Dimensions

Dimensional drawing		
Width		14.9 mm
Height		62.2 mm
Depth		62 mm

Notes

Note on application

Note on application	Only for industrial use
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Interfaces

Smart Element interface

Number of interfaces	1
Connection method	Card edge connector
Transmission speed	See system in which you use the Smart Element.
Start time until ready to operate	< 500 ms

RS-485

Number of interfaces	1
Connection method	Push-in connection
Note on the connection method	Use shielded cables.
Transmission speed	100 bps ... 230400 bps (can be parameterized)
Transmission physics	Copper
Termination resistor	120 Ω (active, integrated)
Data bits	7 or 8
Stop bits	1 or 2
Input buffer	4 kByte
Output buffer	1 kByte

System properties

Module

ID code (hex)	none
Process data channel	512 bit
Input address area	64 Byte
Output address area	64 Byte

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Required parameter data	17 Byte
Required configuration data	7 Byte

Product properties

Product type	I/O component
Product family	Axioline Smart Elements
Type	modular
Mounting position	See the system in which the Smart Element is used.
Special properties	Process data width: 64 bytes
	Transparent protocol
	End-to-end protocol
	Modbus/RTU (client support)
	Modbus/RTU (server support)

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	0.7 W
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Potentials: Communications power supply of the Smart Elements (U_{SE})

Supply voltage	using card edge connectors
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Potentials: I/O supply (U_P)

Supply voltage	24 V DC (using card edge connectors)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 10 mA
	typ. 8 mA
Current consumption	min. 6 mA (without connected peripherals)
Protective circuit	Surge protection; See the system in which the Smart Element is used.
	Reverse polarity protection; Polarity protection diode

Electrical isolation/isolation of the voltage ranges

Test voltage: Communications supply / 24 V supply (I/O)	500 V AC, 50 Hz, 1 min
Test voltage: Logic supply / RS-485 interface	500 V AC, 50 Hz, 1 min
Test voltage: Communications supply / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (I/O) / RS-485 interface	500 V AC, 50 Hz, 1 min
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min
Test voltage: RS-485 interface / functional ground	500 V AC, 50 Hz, 1 min

Connection data

Connection technology

Connection name	I/O
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Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline Smart Elements" user manual.
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Conductor connection

Connection method	Push-in connection
Conductor cross-section rigid	0.25 mm² ... 1.5 mm²
Conductor cross-section flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Stripping length	8 mm

I/O

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline Smart Elements" user manual.
Conductor cross-section, rigid	0.25 mm² ... 1.5 mm²
Conductor cross-section, flexible	0.25 mm² ... 1.5 mm²
Conductor cross-section AWG	24 ... 16
Conductor cross-section, flexible, with ferrule, with plastic sleeve	0.25 mm² ... 1.5 mm²
Conductor cross-section flexible, with ferrule without plastic sleeve	0.25 mm² ... 1.5 mm²
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Standards and regulations

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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Mounting

Mounting type	Plug-in mounting (Smart Element slot)
Mounting position	See the system in which the Smart Element is used.

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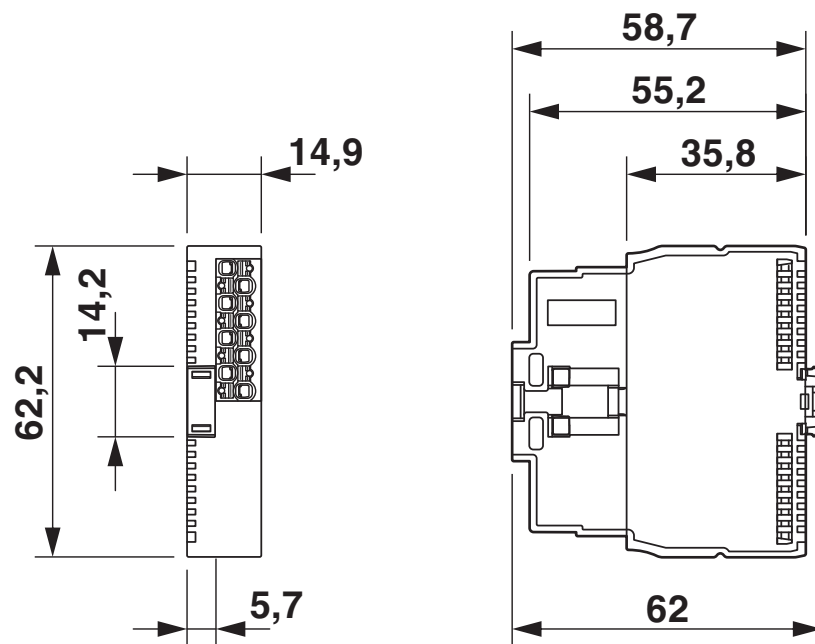
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Drawings

Dimensional drawing



Dimensions

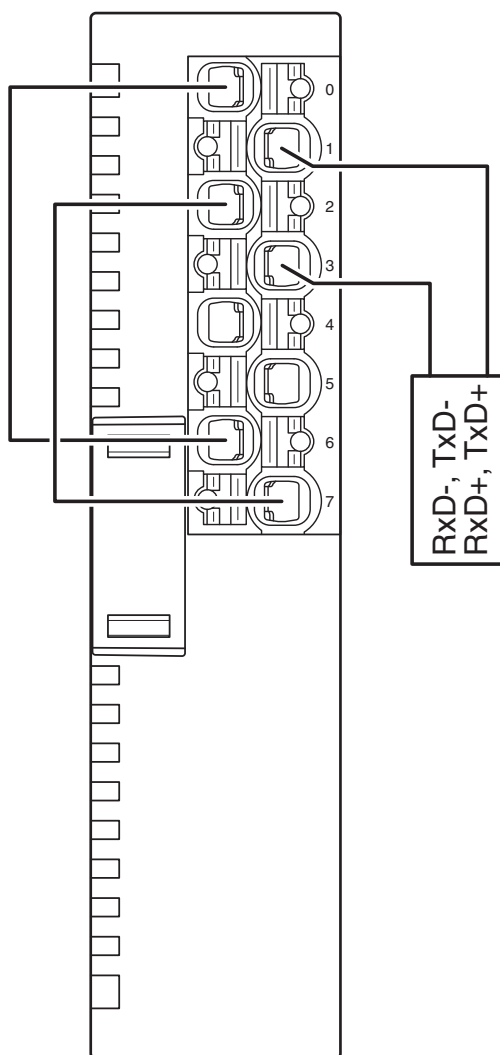
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Connection diagram



Smart Element as the network end point

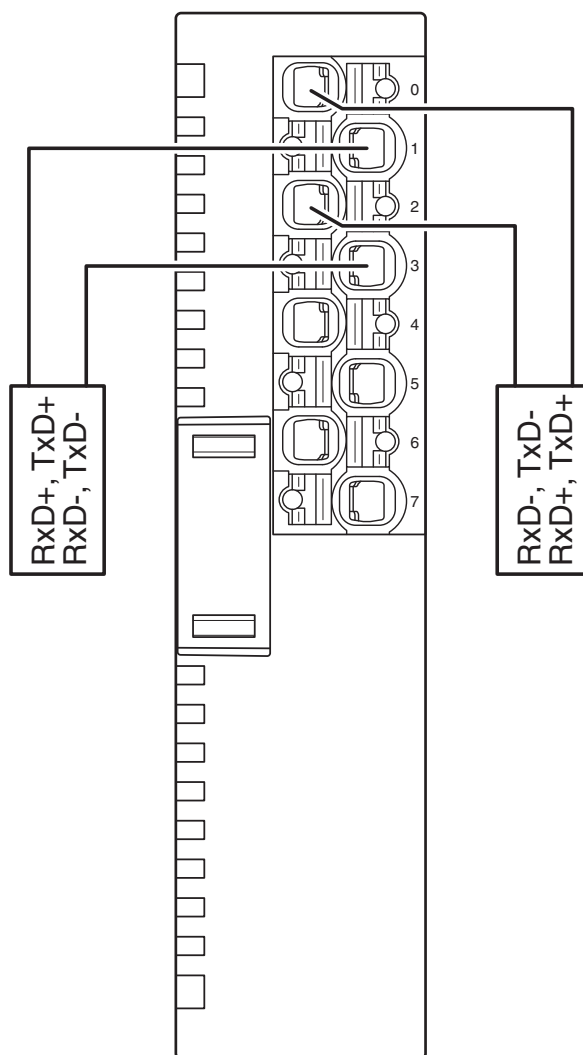
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Connection diagram

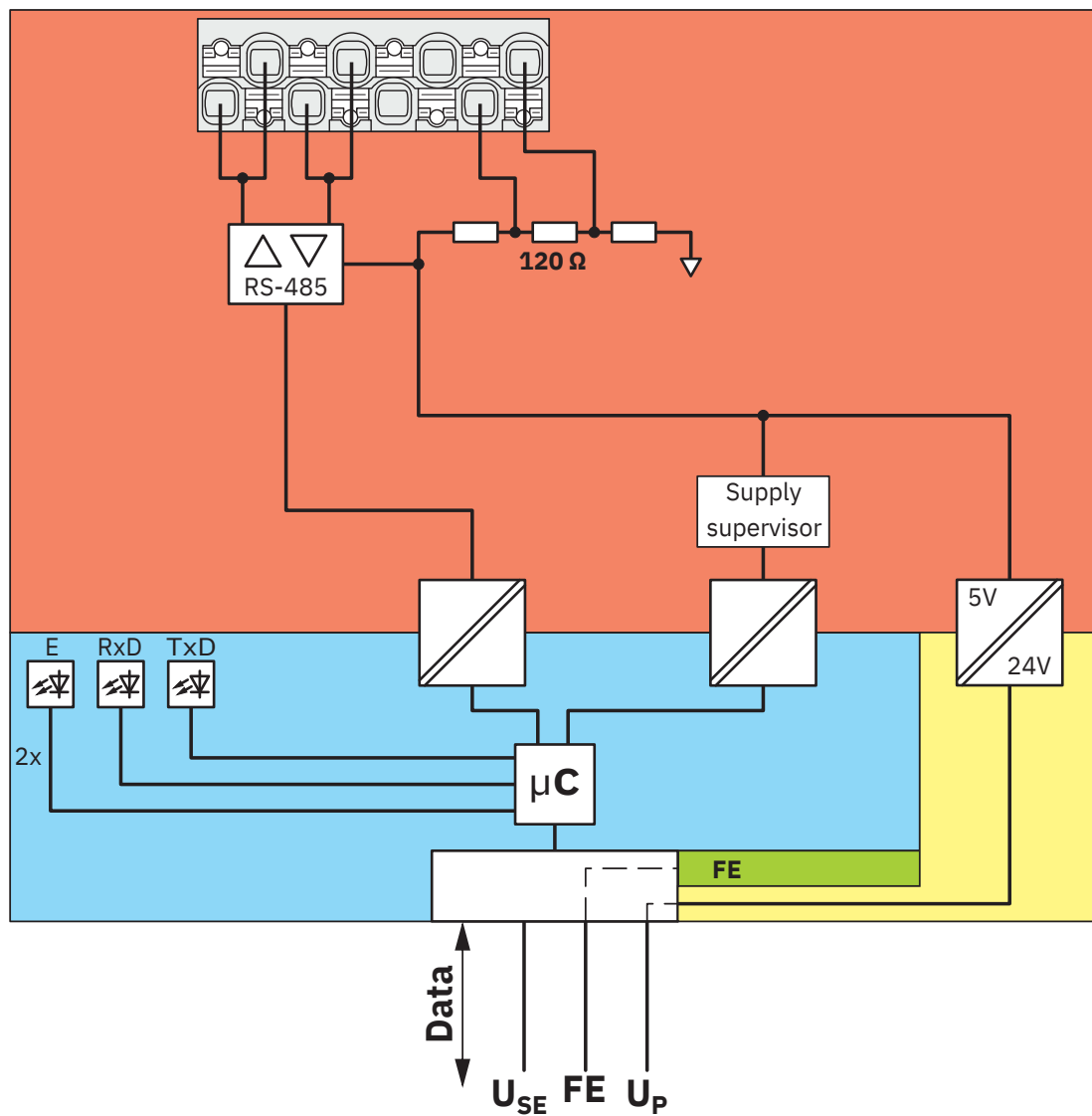


Smart Element in the middle of a network

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Block diagram



Internal wiring of the terminal points

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Approvals

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Approval ID: E238705

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