

AXL SE RS485 - Communication module



1088128

<https://www.phoenixcontact.com/gb/products/1088128>

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Axioline Smart Elements, Communication module, interface RS-485: 1, Process data width: 20 bytes, Transparent protocol, 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
- Data is transmitted in transparent mode
- Transmission speed can be set up to 230,400 bps
- Number of data bits, stop bits and parity can be set
- Device rating plate stored

Commercial data

Item number	1088128
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DRIB51
Product key	DRIB51
GTIN	4055626888002
Weight per piece (including packing)	35 g
Weight per piece (excluding packing)	35 g
Customs tariff number	85389091
Country of origin	DE

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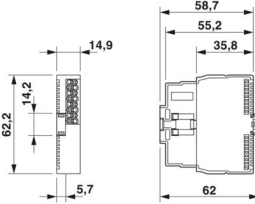


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Technical data

Dimensions

Dimensional drawing		
Width		14.9 mm
Height		62.2 mm
Depth		62 mm

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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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	1200 bps ... 230,400 bps (can be parameterized)
Transmission physics	Copper
Protocols supported	Transparent
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	160 bit

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Input address area	20 Byte
Output address area	20 Byte
Required parameter data	10 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: 20 bytes
	Transparent protocol

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. 18 mA
	typ. 10 mA
Current consumption	min. 6 mA (without connected peripherals)
Power consumption	max. 530 mW
	min. 144 mW
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 mm ² ... 1.5 mm ²
Conductor cross section flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
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 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.25 mm ² ... 1.5 mm ²
Conductor cross section AWG	24 ... 16
Conductor cross section, flexible, with ferrule, with plastic sleeve	0.25 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 1.5 mm ²
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	Smart Element slot
Mounting position	See the system in which the Smart Element is used.

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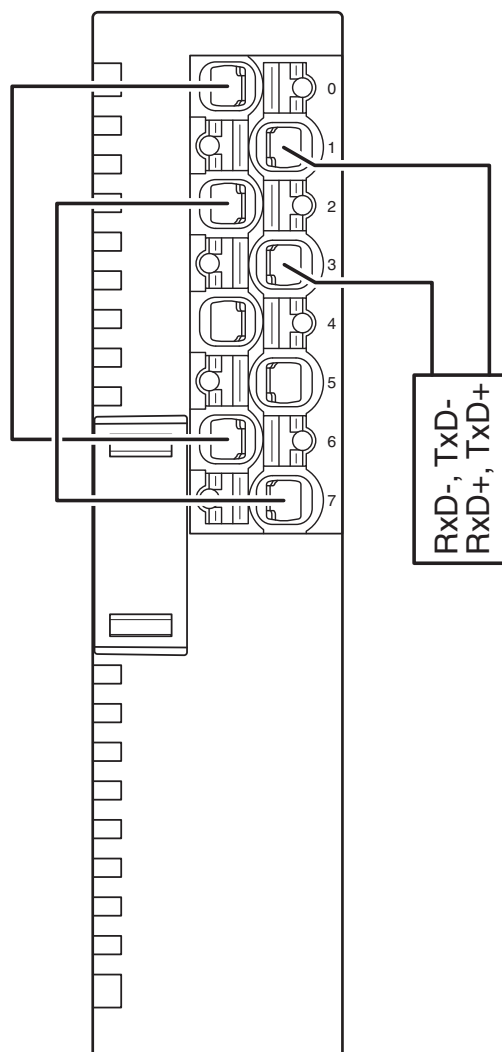
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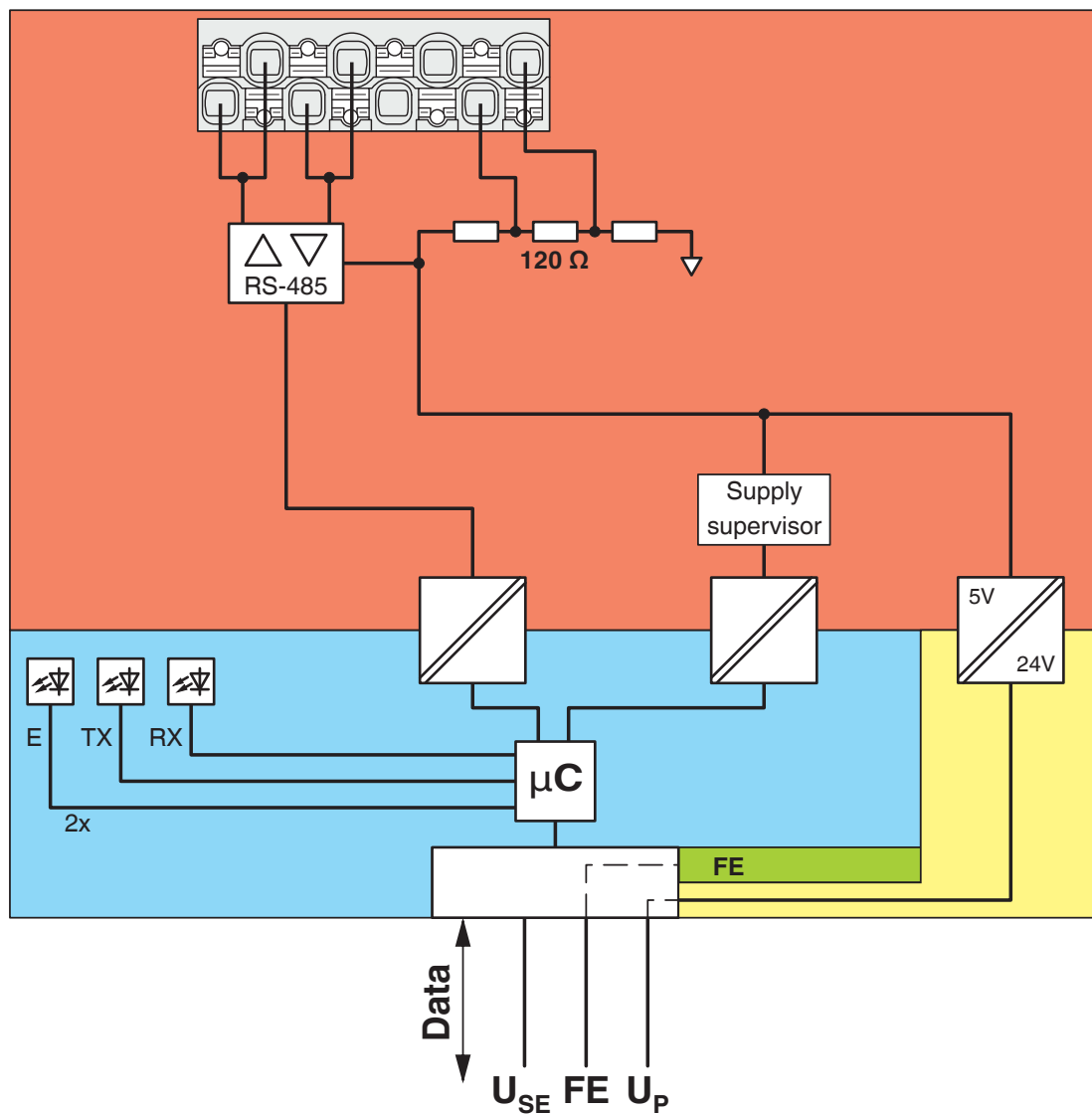
Drawings

Connection diagram



Smart Element as the network end point

Block diagram



Internal wiring of the terminal points

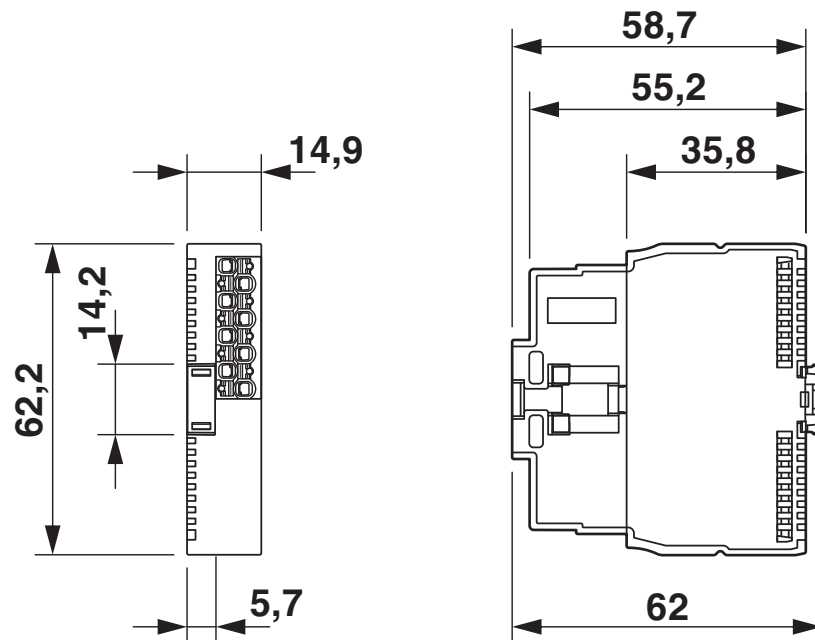
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Dimensional drawing



Dimensions

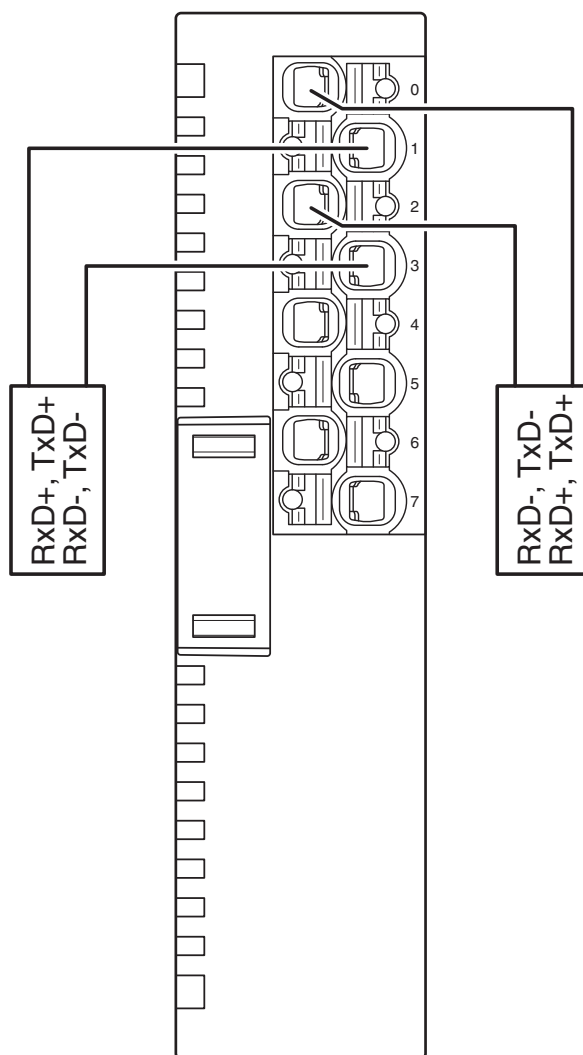
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Connection diagram



Smart Element in the middle of a network

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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1088128>

 **UL Listed**
Approval ID: E238705

 **EAC**
Approval ID: TR_TS_D_01831-19

 **cUL Listed**
Approval ID: E238705

 **LR**
Approval ID: LR23402057TA

DNV
Approval ID: TAA00003B0

 **RINA**
Approval ID: ELE263623XG

ABS
Approval ID: 24-2510075-PDA

cULus Listed

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Classifications

ECLASS

ECLASS-11.0	27242608
ECLASS-12.0	27242608
ECLASS-13.0	27242608

ETIM

ETIM 9.0	EC001604
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS	
Fulfills EU RoHS substance requirements	Yes
Exemption	7(c)-I
China RoHS	
Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.
EU REACH SVHC	
REACH candidate substance (CAS No.)	No substance above 0.1 wt%
EF3.0 Climate Change	
CO2e kg	2.42 kg CO2e

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Mandatory accessories

AXL F BP SE4 - Module carrier

1088135

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Axioline F, Backplane, 4 slots for Axioline Smart Elements, transmission speed in the local bus: 100 Mbps, degree of protection: IP20



AXL F BP SE6 - Module carrier

1088136

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Axioline F, Backplane, 6 slots for Axioline Smart Elements, transmission speed in the local bus: 100 Mbps, degree of protection: IP20



Accessories

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SZS 0,4X2,5 VDE - Screwdriver

1205037

<https://www.phoenixcontact.com/gb/products/1205037>



Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/gb/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm² ... 6.0 mm², lateral entry, trapezoidal crimp

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CRIMPFOX DUO 10 - Crimping pliers

1031721

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Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, UL 486F, form A, E, F, min. cross section: 0.14 mm², max. cross section: 10 mm², for TWIN ferrules up to 2 x 4 mm², automatic cross section adjustment, rotating die, lateral and frontal insertion, compression: Trapezoidal crimp, black/green

CRIMPFOX 10T-F - Crimping pliers

1134913

<https://www.phoenixcontact.com/gb/products/1134913>



Crimping pliers, contact connection type: Insulated and uninsulated ferrules, standards/specifications: DIN 46228-1, DIN 46228-4, min. cross section: 0.14 mm², max. cross section: 10 mm², For TWIN ferrules up to 2 x 4 mm², automatic cross section adjustment, frontal insertion, compression: Trapezoidal crimp, black

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MM-TML (EX4,2)R C1 TR/BK - Label

0803979

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Label, Roll, transparent/black, unlabeled, can be labeled with: THERMOFOX, THERMOMARK GO, THERMOMARK GO.K, mounting type: adhesive, lettering field size: continuous x 3.2 mm, Number of individual labels: 1

SK 5,0 WH:REEL - Marker strip

0805221

<https://www.phoenixcontact.com/gb/products/0805221>



Marker strip, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: adhesive, lettering field size: continuous x 5 mm, Number of individual labels: 10

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UM6M-TM (5X12) - Marker for terminal blocks

0830928

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Marker for terminal blocks, Strip, white, unlabeled, can be labeled with: TOPMARK NEO, TOPMARK LASER, BLUEMARK ID COLOR, BLUEMARK ID, BLUEMARK CLED, THERMOMARK PRIME, THERMOMARK CARD 2.0, THERMOMARK CARD, mounting type: snapped, for terminal block width: 5 mm, lettering field size: 5 x 12 mm, Number of individual labels: 24

UCT6M-TM 5 - Marker for terminal blocks

0830756

<https://www.phoenixcontact.com/gb/products/0830756>



Marker for terminal blocks, for marking ABB terminal blocks from the SNK series, Sheet, white, unlabeled, can be labeled with: THERMOMARK CARD, THERMOMARK CARD 2.0, THERMOMARK PRIME, BLUEMARK ID, BLUEMARK ID COLOR, TOPMARK LASER, TOPMARK NEO, mounting type: snapped, for terminal block width: 5.2 mm, lettering field size: 4.17 x 11.3 mm

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