

# AXL F RS UNI XC 1H - Communication module



2702006

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The figure shows the standard item

Axioline F, Communication module, Serial data transmission; interface: RS-232, RS-485, RS-422: 1; Transmission speed: 110 bps ... 250 kbps; transmission speed in the local bus: 100 Mbps; degree of protection: IP20; Extreme conditions version; Scope of supply: including bus base module and Axioline F connectors

## Product description

The module is designed for use within an Axioline F station. The module is used to operate standard I/O devices with serial interfaces on a bus system.

## Your advantages

- A serial input and output channel in RS-232, RS-422, and RS-485 format
- Various protocols supported
- Transmission speed can be set up to 250000 bps
- Parameterization via the PDI channel
- Device rating plate stored
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Partially coated PCBs

## Commercial data

Item number	2702006
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI251
GTIN	4046356909587
Weight per piece (including packing)	206.9 g
Weight per piece (excluding packing)	187.4 g
Customs tariff number	85176200
Country of origin	DE

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## Technical data

### Dimensions

Dimensional drawing	
Width	35 mm
Height	126.1 mm
Depth	54 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

### Notes

Note on application	
Note on application	Only for industrial use
Utilization restriction	
EMC note	EMC: class A product, see manufacturer's declaration in the download area

### Material specifications

Color (Housing)	gray (RAL 7042)
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### Interfaces

#### Axioline F local bus

Number of interfaces	2
Connection method	Bus base module
Transmission speed	100 Mbps

#### RS-232, RS-485, RS-422

Number of interfaces	1
Connection method	Push-in connection
Transmission speed	110 bps ... 250 kbps (can be parameterized)
Transmission physics	Copper
Protocols supported	Transparent, end-to-end, XON/XOFF, Modbus/RTU (client support)
Termination resistor	active, integrated
Data bits	5 ... 8
Stop bits	1 or 2
Input buffer	4 kByte
Output buffer	1 kByte

## System properties

### Programming data (LocalbusSlave)

Input address area	20 Byte
Output address area	20 Byte

### Fieldbus data telegram (PROFIBUS)

Required parameter data	14 Byte
Required configuration data	7 Byte

## Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any (no temperature derating)
Scope of supply	including bus base module and Axioline F connectors
Special properties	Extreme conditions version

### 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	1.2 W
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### Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 240 mA typ. 200 mA

### Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus ( $U_{BUS}$ ) / 5 V supply (I/Os)	1000 V DC, 1 min
Test voltage: 5 V supply of the local bus ( $U_{BUS}$ ) / functional ground	1000 V DC, 1 min
Test voltage: 5 V supply (I/O)/functional ground	1000 V DC, 1 min

## Connection data

### Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline F: system and installation" user manual.

### Axioline F connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross-sections in the "Axioline F: system and installation" user manual.
Conductor cross-section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>

Conductor cross-section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Standard, applications with UL approval, use in zone 2 potentially explosive area) -40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
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)

### Mechanical test

Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	5g
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	30g
Continuous shock in accordance with EN 60068-2-27/IEC 60068-2-27	10g

### Test (noxious gas)

Test standard	ISA-71.04-2013 G3 Harsh Group A IEC 60068-2-60:2015 Method 4
Temperature	25 °C ±1 K
Humidity (relative)	75 % ±3 %
Test duration	21 Days
Volume concentration H <sub>2</sub> S (Hydrogen sulfide)	50 ppb
Volume concentration NO <sub>2</sub> (Nitrogen dioxide)	1250 ppb
Volume concentration Cl <sub>2</sub> (Chlorine)	10 ppb
Volume concentration SO <sub>2</sub> (Sulfur dioxide)	300 ppb

## Standards and regulations

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

### ATEX

Identification	⊕ II 3 G Ex ec IIC T4 Gc
Certificate	UL 20 ATEX 2441X

### IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX ULD 20.0026X

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2702006

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## UL, USA/Canada

Identification	cULus
Certificate	E238705

## UL Ex, USA / Canada

Identification	Class I, Zone 2, AEx ec IIC T4
	Class I, Division 2, Groups A, B, C, D, T4
	Ex ec IIC T4 Gc X
Certificate	E366272

## CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	

## Mounting

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

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2702006

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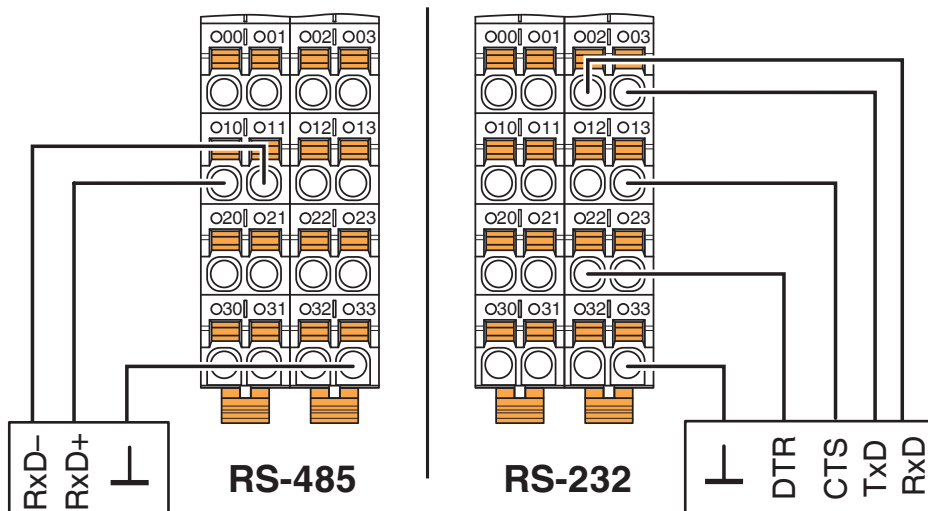
## Drawings

Dimensional drawing



## Dimensions

Connection diagram

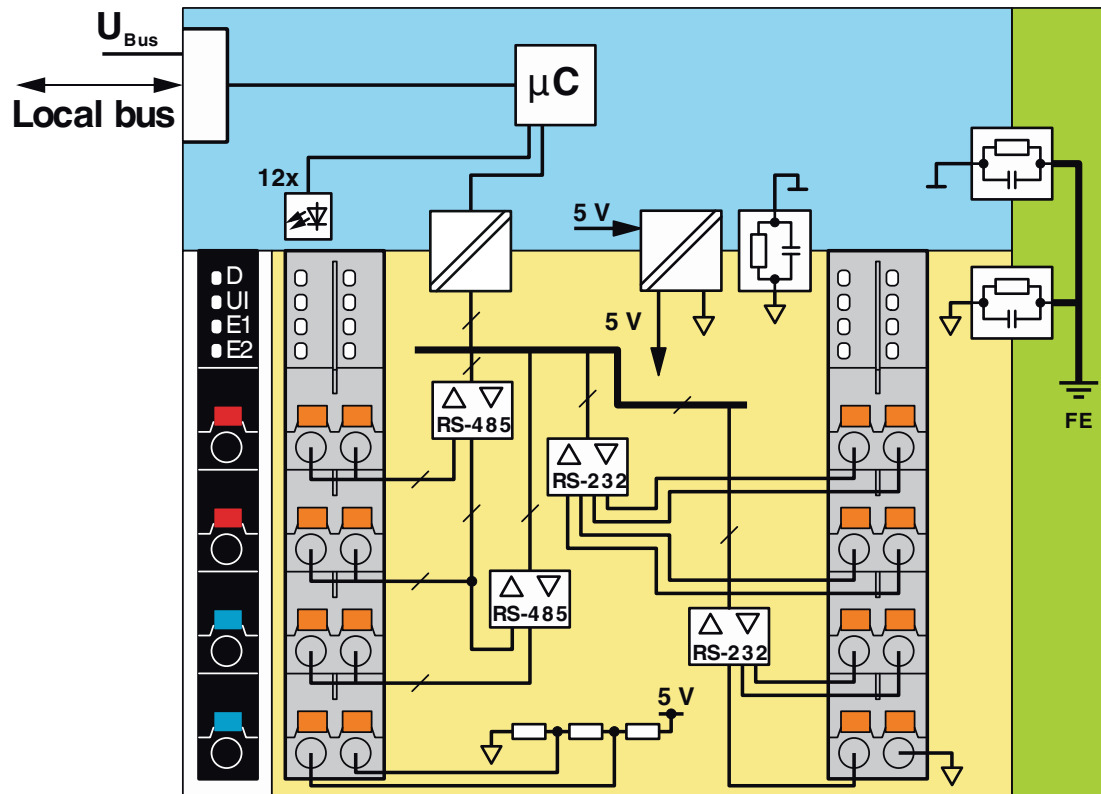


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2702006

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Block diagram



Internal wiring of the terminal points

2702006

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2702006>



**DNV GL**

Approval ID: TAA00000DF



**LR**

Approval ID: LR2480202TA-02



**PRS**

Approval ID: TE/1020/880590/21

**BSH**

Approval ID: 840



**RINA**

Approval ID: ELE008423XG001

**ABS**

Approval ID: 23-2449604-PDA



**cULus Listed**

Approval ID: E238705



**IECEx**

Approval ID: IECEx ULD 20.0026X



**ATEX**

Approval ID: UL 20 ATEX 2441X



**cULus Listed**

Approval ID: E366272



**CCC**

Approval ID: 2021122309114456\_CN

2702006

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## Classifications

### ECLASS

ECLASS-13.0	27242608
ECLASS-15.0	27242608

### ETIM

ETIM 10.0	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(a), 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.)	Lead(CAS: 7439-92-1)
	6,6'-di-tert-butyl-2,2'-methylenedi-p-cresol(CAS: 119-47-1)
SCIP	3e917e75-e34c-4846-98ca-98d91e2d2bbd

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