

Bus coupler - AXL F BK ETH XC - 2701949

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Axioline F XC, Bus coupler, Modbus/TCP(UDP), RJ45 socket, Extreme conditions version, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connector

The figure shows the standard item

Product Description

The bus coupler is intended for use within a Modbus/TCP (UDP) network and represents the link to the Axioline F I/O system. Up to 63 Axioline F devices can be connected to the bus coupler.


Your advantages

- 2 Ethernet ports (with integrated switch)
- Transmission speed of 10 Mbps and 100 Mbps
- Rotary coding switches for setting the IP address assignment and other functions
- Modbus/TCP (UDP) support
- BootP and DHCP
- 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
- Firmware can be updated
- Runtime in the bus coupler is negligible (almost 0 µs) (for Modbus/UDP)
- Typical cycle time of the Axioline F local bus is around 10 µs



Modbus/TCP (UDP) COMPLETE BUS

Key Commercial Data

| | |
|--------------|---|
| Packing unit | 1 pc |
| GTIN |  4 046356 901239 |
| GTIN | 4046356901239 |

Technical data

Note

| | |
|-------------------------|---|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---|

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Technical data

Dimensions

| | |
|--------------------|---|
| Width | 45 mm |
| Height | 126.1 mm |
| Depth | 74 mm |
| Note on dimensions | The depth is valid when a TH 35-7,5 DIN rail is used (according to EN 60715). |

Ambient conditions

| | |
|--|---|
| Ambient temperature (operation) | -25 °C ... 60 °C (Standard; mounting position: wall mounting on horizontal DIN rail) |
| | -25 °C ... 55 °C (Standard; mounting position: any) |
| | -40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.) |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 5 % ... 95 % (non-condensing) |
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing) |
| 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) |
| Degree of protection | IP20 |

Connection data

| | |
|---------------------------------------|--|
| Designation | Axiline F connector |
| Connection method | Push-in connection |
| Note on the connection method | Please observe the information provided on conductor cross sections in the "Axiline F: system and installation" user manual. |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 1.5 mm ² |
| Conductor cross section flexible min. | 0.2 mm ² |
| Conductor cross section flexible max. | 1.5 mm ² |
| Conductor cross section AWG min. | 24 |
| Conductor cross section AWG max. | 16 |
| Stripping length | 8 mm |

General

| | |
|-------------------------------|------------------------------------|
| Mounting type | DIN rail |
| Net weight | 177 g |
| Note on weight specifications | with connector and bus base module |

Interfaces

| | |
|-------------------------------|--|
| Designation | Modbus/TCP (UDP) |
| No. of channels | 2 |
| Connection method | RJ45 socket |
| Note on the connection method | Auto negotiation and autocrossing |
| Transmission speed | 10/100 Mbps (Half or full duplex mode (automatic detection, can be adjusted manually)) |
| Transmission physics | Ethernet in RJ45 twisted pair |

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Technical data

Interfaces

| | |
|--------------------|----------------------|
| Designation | Axioline F local bus |
| Connection method | Bus base module |
| Transmission speed | 100 Mbps |
| Designation | Service |
| Connection method | Micro USB type B |

System limits of the bus coupler

| | |
|---|-----------------------|
| Number of supported devices | max. 63 (per station) |
| Number of local bus devices that can be connected | max. 63 |

Axioline potentials

| | |
|----------------------|--|
| Designation | Communications power U_L feed-in (the supply of the Axioline F local bus U_{Bus} is generated from U_L) |
| Supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption | max. 583 mA (with 2 A at U_{Bus} for the I/Os and $U_L = 24$ V) |
| Power consumption | max. 14 W (with 2 A load at U_{Bus} for the I/Os) |
| Designation | Axioline F local bus supply (U_{Bus}) |
| Supply voltage | 5 V DC (via bus base module) |
| Power supply unit | 2 A |
| Type of protection | Surge protection of the supply voltage |
| | Polarity reversal protection of the supply voltage |

Standards and Regulations

| | |
|------------------|---|
| Mechanical tests | Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5g |
| | Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30g |
| | Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10g |
| Protection class | III, IEC 61140, EN 61140, VDE 0140-1 |

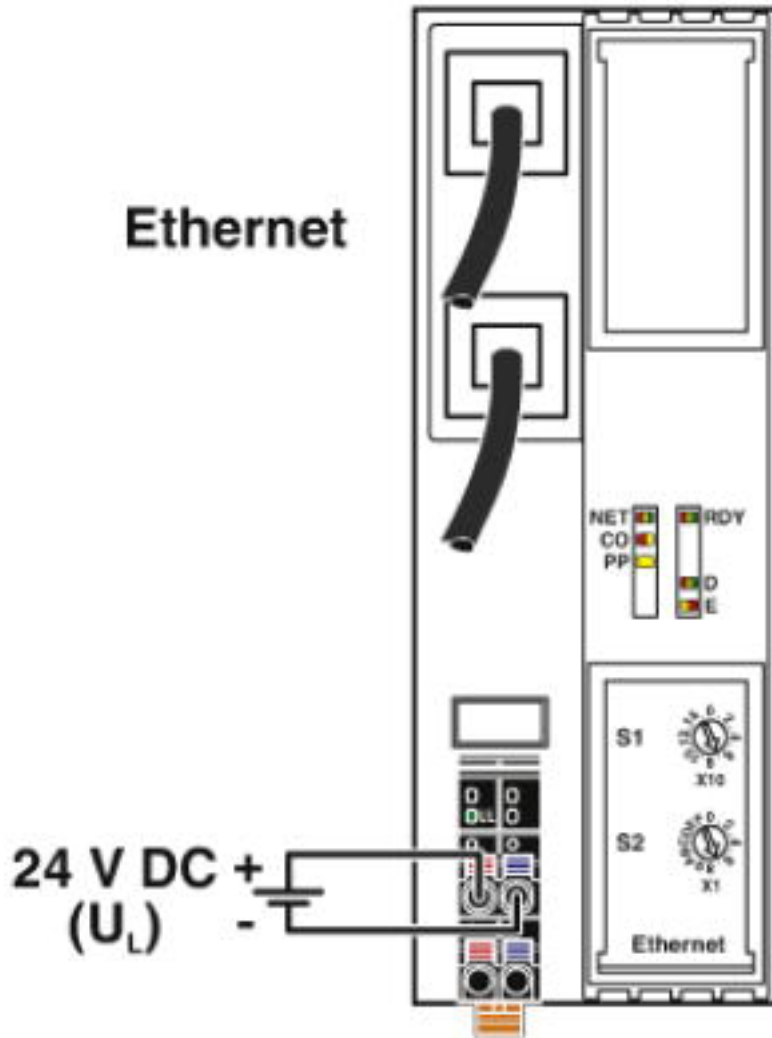
Environmental Product Compliance

| | |
|------------|---|
| REACH SVHC | Lead 7439-92-1 |
| China RoHS | Environmentally friendly use period: unlimited = EFUP-e |
| | No hazardous substances above threshold values |

Drawings

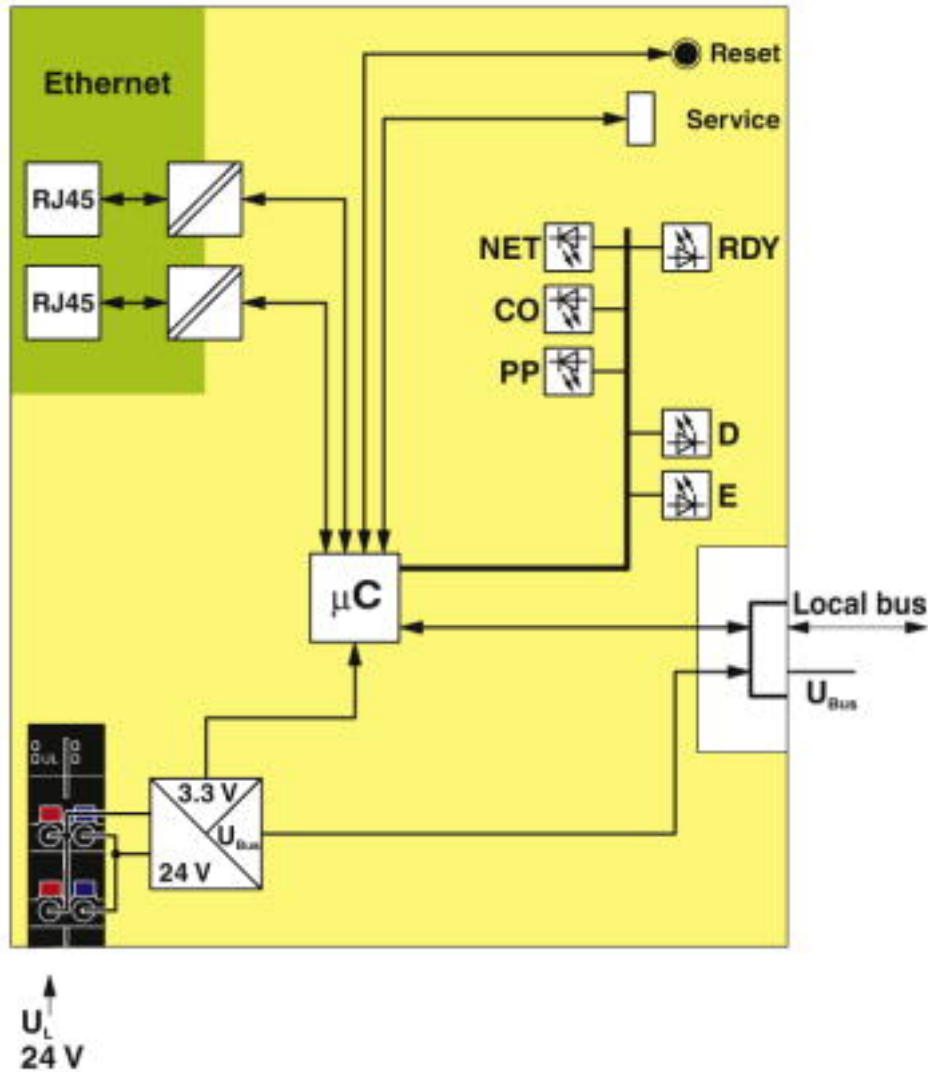
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Connection diagram



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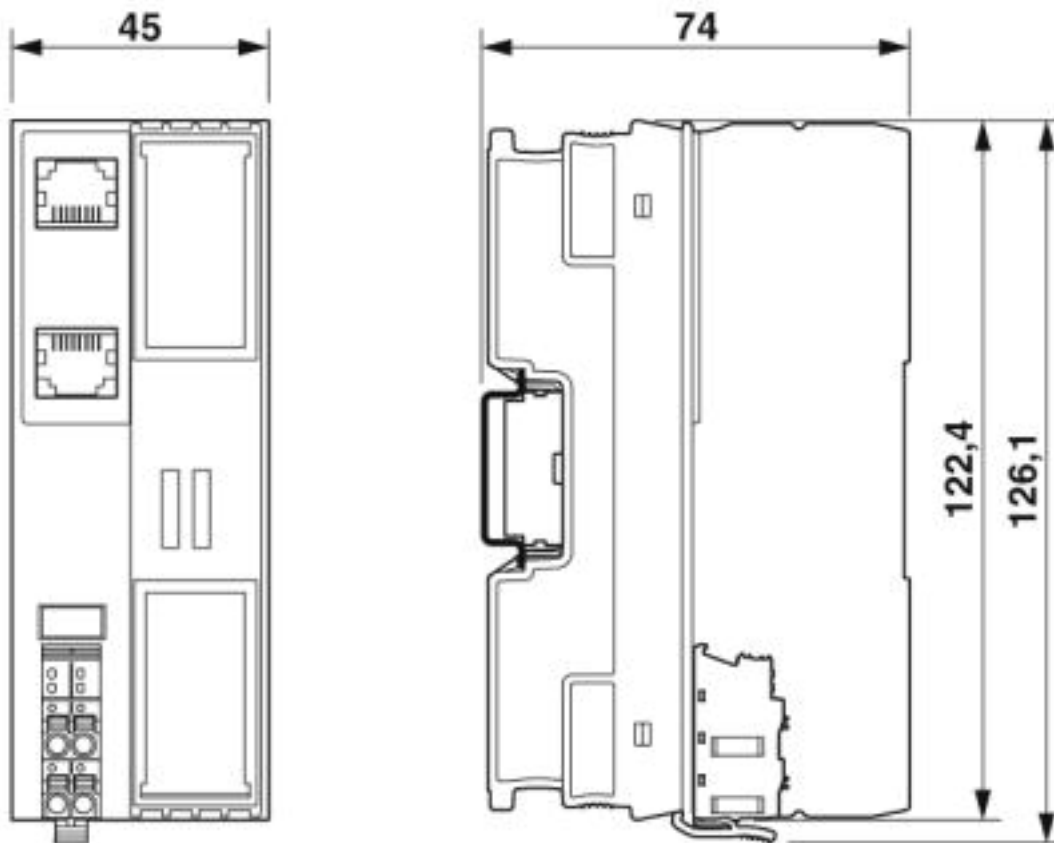
Block diagram



Internal wiring of the terminal points

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Dimensional drawing



Approvals

Approvals

Approvals

DNV GL / PRS / BV / LR / KR / NK / ABS / BSH / RINA / UL Listed / cUL Listed / cULus Listed

Ex Approvals

Approval details

| | | | |
|--------|--|---|------------|
| DNV GL | | https://approvalfinder.dnvgl.com/ | TAA00000DF |
|--------|--|---|------------|

| | | | |
|-----|--|---|-------------------|
| PRS | | http://www.prs.pl/ | TE/2239/880590/19 |
|-----|--|---|-------------------|

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Approvals

| | | | |
|--------------|--|---|------------------|
| BV | | http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials | 36433/B0 BV |
| LR | | http://www.lr.org/en | 14-20019 |
| KR | | http://www.krs.co.kr/eng/main/main.aspx | HMB17372-AC002 |
| NK | | http://www.classnk.or.jp/hp/en/ | 14A006 |
| ABS | | http://www.eagle.org/eagleExternalPortalWEB/ | 18-HG1767360-PDA |
| BSH | | http://www.bsh.de/de/index.jsp | 840 |
| RINA | | http://www.rina.org/en | ELE256518XG |
| UL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cUL Listed | | http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm | FILE E 238705 |
| cULus Listed | | | |

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