

# AXL F BK SAS - Bus coupler

2701457

<https://www.phoenixcontact.com/us/products/2701457>

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Axioline F, Bus coupler, Ethernet (IEC 61850, MMS, GOOSE), RJ45 jack, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connector

## Product description

The bus coupler is intended for use within an Ethernet network (IEC 61850, MMS, GOOSE). The bus coupler creates the link to the Axioline F I/O system and the industrial I/O signals connected to it. 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
- Supports IEC 61850, MMS, and GOOSE
- BootP and DHCP
- Firmware can be updated
- Web-based management
- Supports operation of the digital and analog modules of the Axioline F and Axioline SE product families

## Commercial data

Item number	2701457
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI21G
GTIN	4046356753982
Weight per piece (including packing)	232.2 g
Weight per piece (excluding packing)	177 g
Customs tariff number	85389091
Country of origin	DE

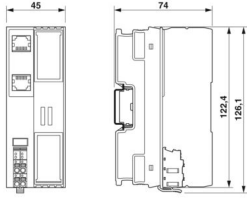
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## Technical data

### Dimensions

Dimensional drawing	
Width	45 mm
Height	126.1 mm
Depth	74 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

### Material specifications

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

Supported protocols	MMS
	GOOSE
	SNMP
	HTTP
	TFTP
	FTP
	BootP
	DHCP
SNTP	

#### Ethernet (IEC 61850, MMS, GOOSE)

Number of interfaces	2
Connection method	RJ45 jack
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

#### Axioline F local bus

Number of interfaces	1
Connection method	Bus base module

Transmission speed	100 Mbps
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#### Service

Number of interfaces	1
Connection method	Micro USB type B

### System properties

#### System limits

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

#### Programming data

Register length (master)	1484 Byte
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### Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Mounting position	any (observe temperature derating)
Scope of supply	including bus base module and Axioline F connector

#### 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	3.7 W
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Potentials: 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 draw	max. 570 mA (with 2 A at $U_{BUS}$ for the I/Os and $U_L = 24$ V)
Current consumption	typ. 105 mA (without I/Os and $U_L = 24$ V)
Protective circuit	Surge protection; electronic
	Reverse polarity protection; electronic

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

Supply voltage	5 V DC (via bus base module)
Power supply unit	2 A

#### Electrical isolation/isolation of the voltage ranges

Test voltage: Ethernet interface 1 / Ethernet interface 2	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / 24 V communications voltage ( $U_L$ ) feed-in	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 2 / 24 V communications voltage ( $U_L$ ) feed-in	1500 V AC, 50 Hz, 1 min
Test voltage: Ethernet interface 1 / functional ground	1500 V AC, 50 Hz, 1 min

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Test voltage: Ethernet interface 2 / functional ground	1500 V AC, 50 Hz, 1 min
Test voltage: 24 V communications voltage ( $U_L$ ) feed-in / functional ground	500 V AC, 50 Hz, 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 (Mounting position: panel mounting on horizontal DIN rail) -25 °C ... 55 °C (Mounting position: any)
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

## Standards and regulations

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

Mounting type	DIN rail mounting
Mounting position	any (observe temperature derating)

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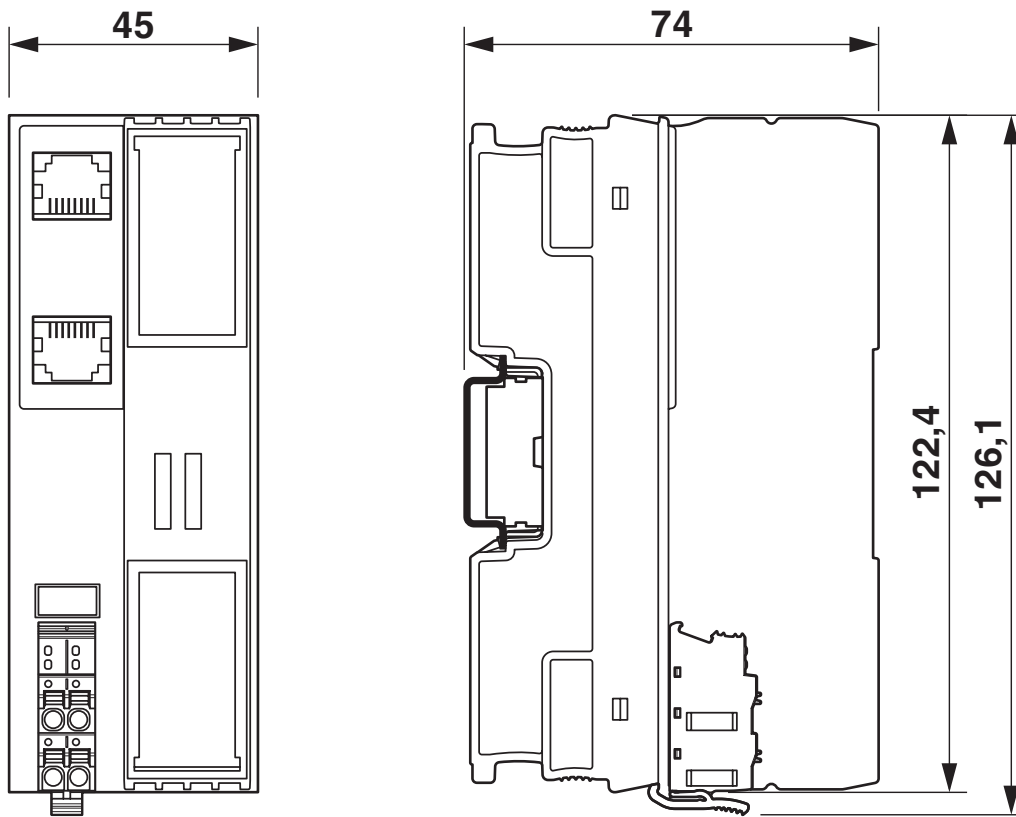
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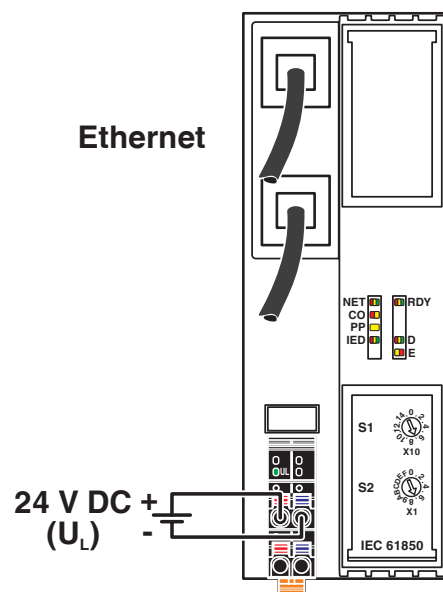


## Drawings

Dimensional drawing



Connection diagram



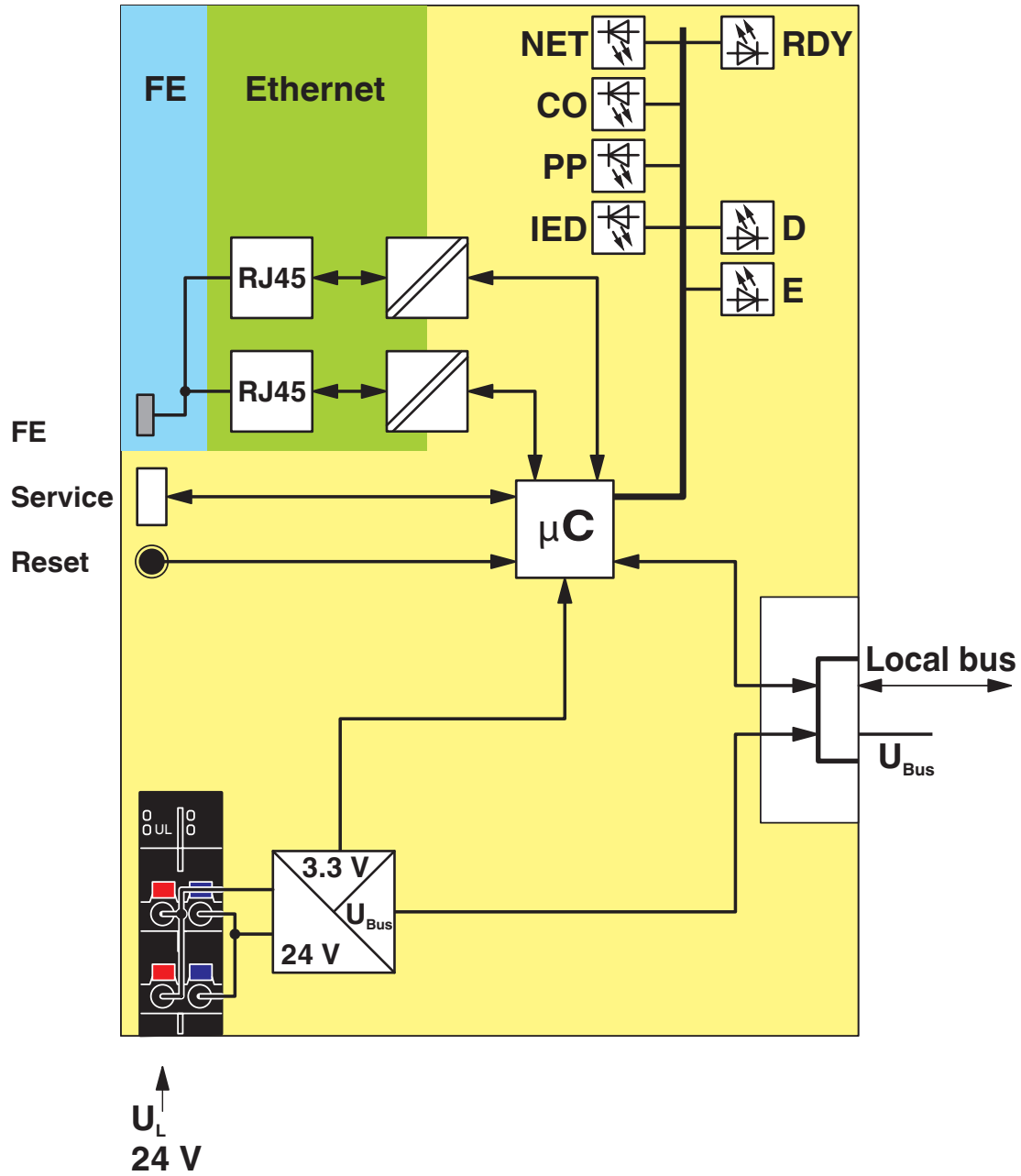
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Block diagram



Internal wiring of the terminal points

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## Classifications

### ECLASS

ECLASS-13.0

27242608

### ETIM

ETIM 9.0

EC001604

### 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.)	4,4'-isopropylidenediphenol(CAS: 80-05-7)
	Lead(CAS: 7439-92-1)
SCIP	48767cd9-b280-46ad-bfc4-27ffe5881112

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