

# AXL F BK EIP XC - Bus coupler



1167192

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Axioline F, Bus coupler, EtherNet/IP™, RJ45 jack, Extreme conditions version, 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/IP™ network. It is the link to the Axioline F I/O system. Up to 63 Axioline F devices can be connected to the bus coupler. A corresponding EDS file is available for integrating the Axioline F station into the programming system. This file can be downloaded at: [www.phoenixcontact.com/product/1167192](http://www.phoenixcontact.com/product/1167192)

## 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
- Firmware can be updated
- Runtime in bus coupler is negligible (almost 0  $\mu$ s)
- Typical cycle time of the Axioline F local bus is around 10  $\mu$ s
- Web-based management
- Supports the operation of Axioline Smart Elements
- Supports passive Smart Elements (firmware version 1.30 or later)
- Supports IOL-CONF (firmware version 1.30 and later)
- Supports Diag+
- 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	1167192
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI21D
GTIN	4063151184674
Weight per piece (including packing)	244 g
Weight per piece (excluding packing)	177 g
Customs tariff number	85176200

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Country of origin	DE
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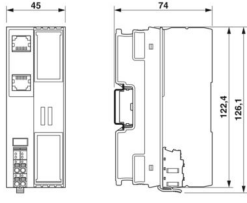
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## Technical data

### 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).

### Interfaces

#### EtherNet/IP™

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

#### Service

Number of interfaces	1
Connection method	USB type C

### System properties

#### System limits

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

### Product properties

Type	block modular
Product type	I/O component
Product family	Axioline F
Mounting position	any (observe temperature derating)

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Scope of delivery	including bus base module and Axioline F connector
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

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. 583 mA (2.0 A at $U_{BUS}$ , $U_L = 24$ V, applications with UL approval, use in zone 2 potentially explosive area) max. 670 mA (2.5 A on $U_{BUS}$ , $U_L = 24$ V)
Power consumption	max. 16 W (2.5 A on $U_{BUS}$ , $U_L = 24$ V) max. 14 W (2.0 A at $U_{BUS}$ , $U_L = 24$ V, applications with UL approval, use in zone 2 potentially explosive area)
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	max. 2.5 A max. 2 A (Applications with UL approval, use in zone 2 potentially explosive area)

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.
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.

Conductor connection

Connection method	Push-in connection
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>

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Conductor cross section AWG	24 ... 16
Stripping length	8 mm

## 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; mounting position: wall mounting on horizontal DIN rail) -25 °C ... 55 °C (Standard, applications with UL approval, use in zone 2 potentially explosive area; mounting position: any) -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)

## 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

### UKEX

Identification	⊕ II 3 G Ex ec IIC T4 Gc
Certificate	PxCIMA22UKEX2701949X

### IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX ULD 20.0026X

### UL, USA/Canada

Identification	cULus
Certificate	E238705

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## 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 (observe temperature derating)

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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

REACH SVHC	Lead 7439-92-1
	4,4'-isopropylidenediphenol (BPA) 80-05-7

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