

# Bus coupler - AXL F BK EIP XC



1167192

<https://www.phoenixcontact.com/pc/products/1167192>

Please be informed that the data shown in this PDF document is generated from our Online Catalog. Please find the complete data in the user documentation. Our General Terms of Use for Downloads are valid.



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: [phoenixcontact.net/product/1167192](https://phoenixcontact.net/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 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
Product Key	DRI21D
GTIN	4063151184674
Weight per Piece (including packing)	223 g
Weight per Piece (excluding packing)	177 g
Customs tariff number	85176200
Country of origin	DE

# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>

## 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).

### Material specifications

Color	traffic grey A RAL 7042
-------	-------------------------

### 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
------	---------------

# Bus coupler - AXL F BK EIP XC



1167192

<https://www.phoenixcontact.com/pc/products/1167192>

Product type	I/O component
Mounting position	any (observe temperature derating)
Scope of delivery	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

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

## 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 solid	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

### 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>

# Bus coupler - AXL F BK EIP XC



1167192

<https://www.phoenixcontact.com/pc/products/1167192>

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

## 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)
------------------	---------------------------------------

## Approval data

### ATEX

Identification	<input type="checkbox"/> II 3 G Ex ec IIC T4 Gc
Certificate	UL 20 ATEX 2241X

### IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX ULD 20.0026X

### UL, USA / Canada

Identification	cULus
Certificate	E238705

### UL Ex, USA / Canada

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

## Mounting

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

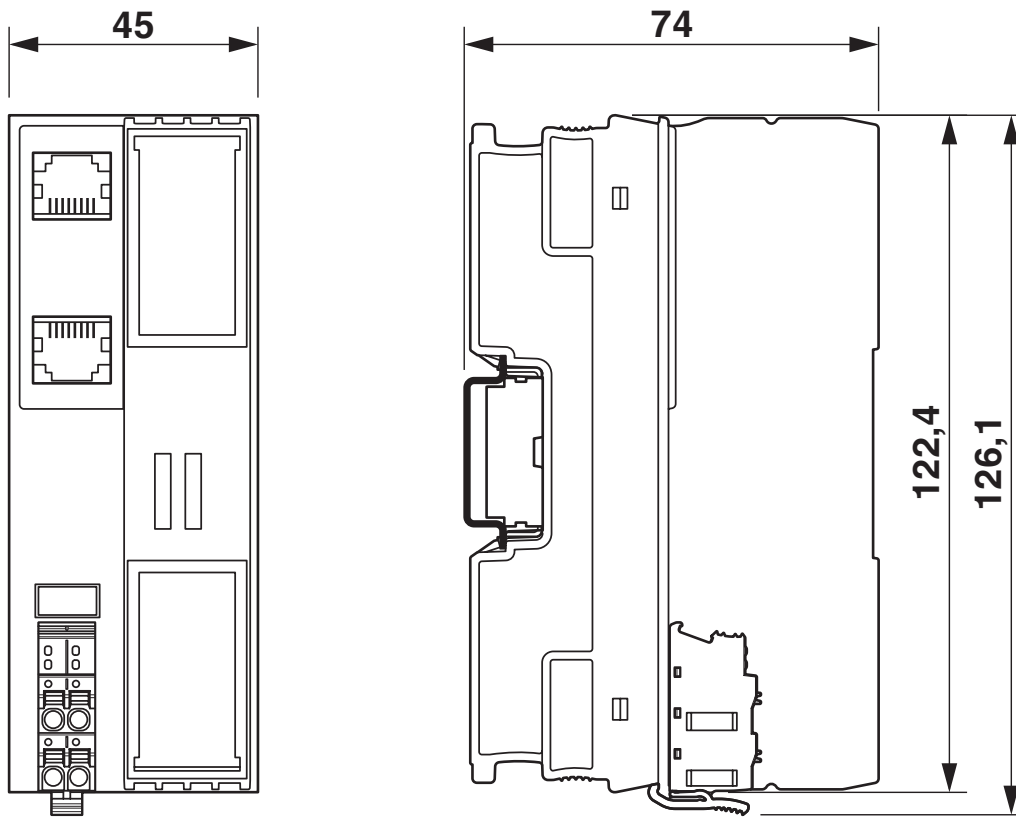
# Bus coupler - AXL F BK EIP XC

1167192

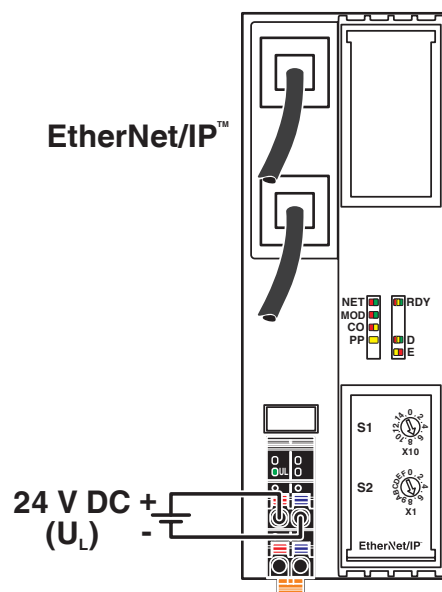
<https://www.phoenixcontact.com/pc/products/1167192>

## Drawings

Dimensional drawing



Connection diagram

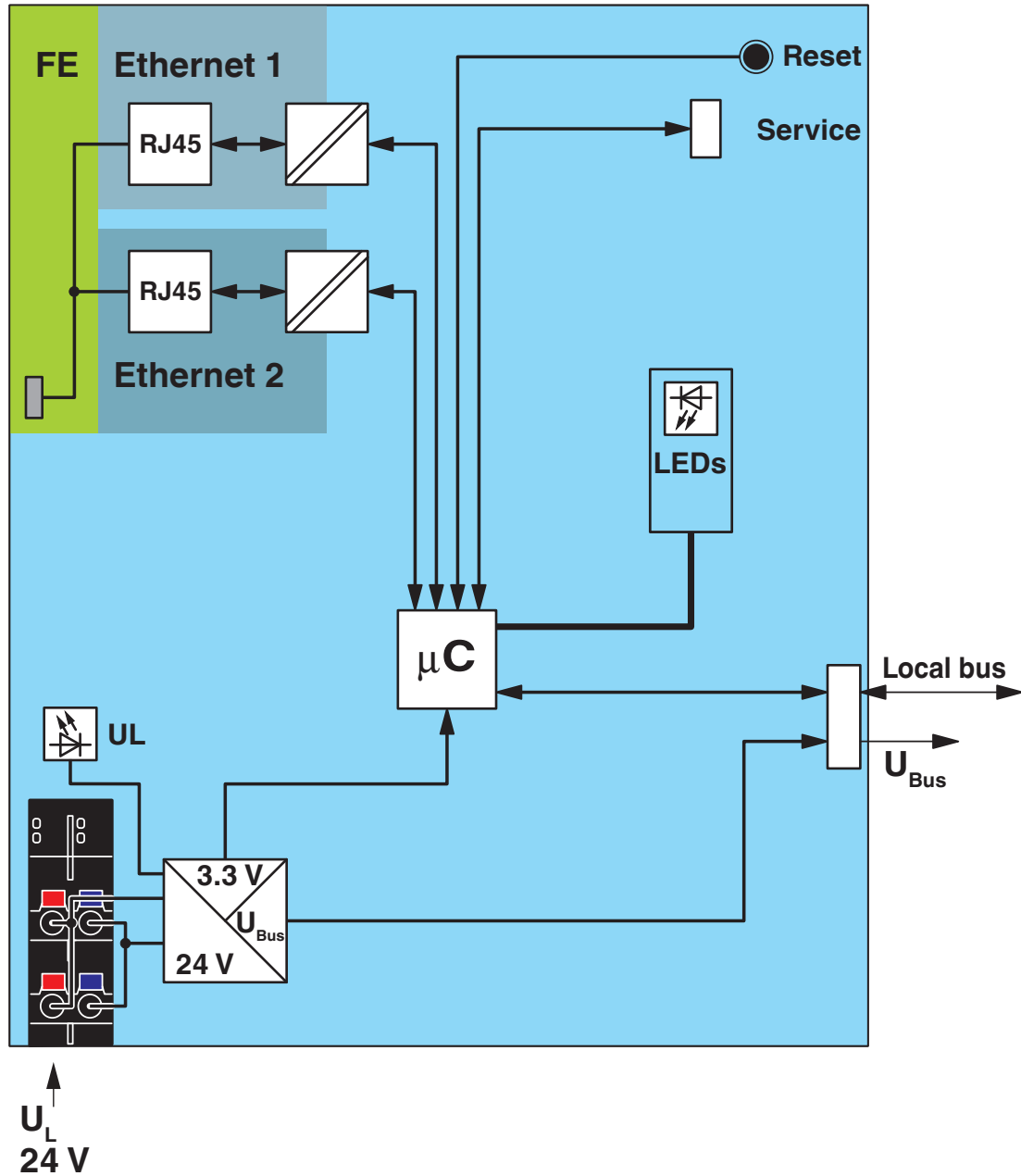


# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>

Block diagram



Internal wiring of the terminal points


# Bus coupler - AXL F BK EIP XC





1167192

<https://www.phoenixcontact.com/pc/products/1167192>


## Approvals

 **UL Listed**  
Approval ID: FILE E 238705

 **cUL Listed**  
Approval ID: FILE E 238705

 **IECEX**  
Approval ID: IECEX ULD 20.0026X

 **ATEX**  
Approval ID: UL 20 ATEX 2441X

 **cULus Listed**  
Approval ID: FILE E 366272

**cULus Listed**

# Bus coupler - AXL F BK EIP XC



1167192

<https://www.phoenixcontact.com/pc/products/1167192>

## Classifications

### ECLASS

ECLASS-9.0	27242608
ECLASS-10.0.1	27242608
ECLASS-11.0	27242608

### ETIM

ETIM 8.0	EC001604
----------	----------

### UNSPSC

UNSPSC 21.0	32151600
-------------	----------



# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>



## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1

# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>



## Accessories

### Bus connector

Bus connector - AXL F BS BK - 2701422

<https://www.phoenixcontact.com/pc/products/2701422>

Axioline F bus base module for housing type BK



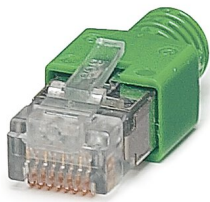
---

### RJ45 connector

RJ45 connector - FL PLUG RJ45 GR/2 - 2744856

<https://www.phoenixcontact.com/pc/products/2744856>

RJ45 connector, shielded, with bend protection sleeve, 2 pieces, gray for straight cables, for assembly on site. For connections that are not crossed, it is recommended that you use the connector set with gray bend protection sleeve.



# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>



## RJ45 connector

RJ45 connector - FL PLUG RJ45 GN/2 - 2744571

<https://www.phoenixcontact.com/pc/products/2744571>



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, green for crossed cables, for assembly on site. For connections that are crossed, it is recommended that the connector set with green bend protection sleeves is used.

---

## Network cable

Network cable - FL CAT5 HEAVY - 2744814

<https://www.phoenixcontact.com/pc/products/2744814>



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm<sup>2</sup>, solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>



## Installation cable

Installation cable - FL CAT5 FLEX - 2744830

<https://www.phoenixcontact.com/pc/products/2744830>



By the meter, Installation cable, Ethernet CAT5 (100 Mbps), shielded, PUR halogen-free, water blue RAL 5021, 4-wire (2x2xAWG26/7; SF/UTP), color single wire: white/orange-orange, white/green-green, cable length: Free entry (1.0 ... 1000.0 m)

---

## Assembly tool

Assembly tool - FL CRIMPTOOL - 2744869

<https://www.phoenixcontact.com/pc/products/2744869>



Crimping pliers, for assembling the RJ45 plugs FL PLUG RJ45..., for assembly on site

# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>

## Zack marker strip

Zack marker strip - ZB 20,3 AXL UNPRINTED - 0829579

<https://www.phoenixcontact.com/pc/products/0829579>



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

---

## Zack Marker strip, flat

Zack Marker strip, flat - ZBF 10/5,8 AXL UNPRINTED - 0829580

<https://www.phoenixcontact.com/pc/products/0829580>



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.15 mm, lettering field size: 4 of 10.15 x 5 mm and 1 of 5.8 x 5 mm, Number of individual labels: 50

# Bus coupler - AXL F BK EIP XC



1167192

<https://www.phoenixcontact.com/pc/products/1167192>

## Insert label

Insert label - EMT (35X18,7)R - 0801831

<https://www.phoenixcontact.com/pc/products/0801831>



Insert label, Roll, white, unlabeled, can be labeled with: THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, THERMOMARK ROLL X1, THERMOMARK ROLL 2.0, THERMOMARK ROLL, mounting type: snapped, lettering field size: 35 x 18.7 mm, Number of individual labels: 500

---

## Connecting cable

Connecting cable - CAB-USB C/ USB C/1,8M - 1021809

<https://www.phoenixcontact.com/pc/products/1021809>

Connecting cable, for connecting the controller to a PC from USB C to USB C



# Bus coupler - AXL F BK EIP XC

1167192

<https://www.phoenixcontact.com/pc/products/1167192>



## Connecting cable

Connecting cable - CAB-USB A/ USB C/1,8M - 2404677

<https://www.phoenixcontact.com/pc/products/2404677>

Connecting cable, for connecting the controller to a PC from USB A to USB C



---

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG

Flachsmarktstraße 8

D-32825 Blomberg

+49 (0) 5235-3 00

[info@phoenixcontact.com](mailto:info@phoenixcontact.com)