AXL F BK ETH - Bus coupler

2688459

https://www.phoenixcontact.com/in/products/2688459

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Axioline F, Bus coupler, Modbus/TCP(UDP), 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 a Modbus/TCP (UDP) network. 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

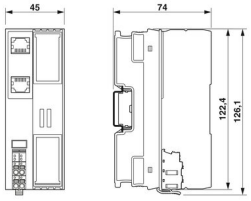
- 2 Ethernet ports (with integrated switch)
- Transmission speed of 10 Mbps and 100 Mbps
- Rotary coding switches for setting the IP address assignment and other functions
- Firmware can be updated
- Runtime in the bus coupler is negligible (almost 0 µs) (for Modbus/UDP)
- Typical cycle time of the Axioline F local bus is around 10 µs
- Web-based management
- Security in the network: Port disconnection possible via web-based management (firmware version 1.31 or later)
- 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+

Commercial Data

Item number	2688459
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DRI
Product Key	DRI21B
Catalog Page	Page 71 (C-6-2019)
GTIN	4046356710770
Weight per Piece (including packing)	221.7 g
Weight per Piece (excluding packing)	177 g
Customs tariff number	85176200
Country of origin	DE

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

Modbus/TCP (UDP)

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 (from HW 05)
	Micro USB type B (up to HW 04)

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)
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

Maximum power dissipation for nominal condition	14 W

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, up to HW 04)
	max. 670 mA (2.5 A at U_{Bus}, U_L = 24 V, HW 05 or later)
Power consumption	max. 14 W (2.0 A at U_{Bus}, U_L = 24 V, up to HW 04)
	max. 16 W (2.5 A at U_{Bus}, U_L = 24 V, HW 05 or later)
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 A (up to HW 04)
	max. 2.5 A (from HW 05)

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 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²
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 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²

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: wall 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)

Standards and regulations

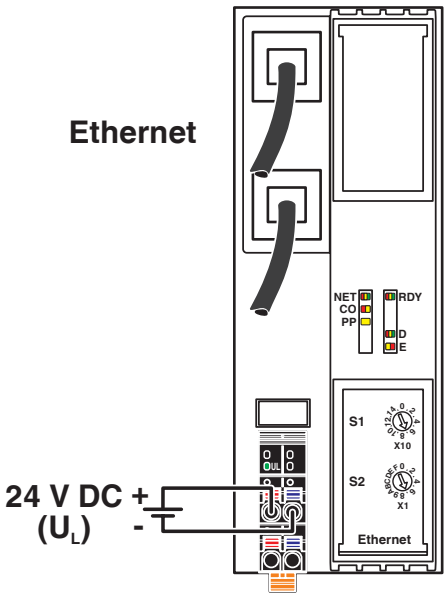
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)

Mounting

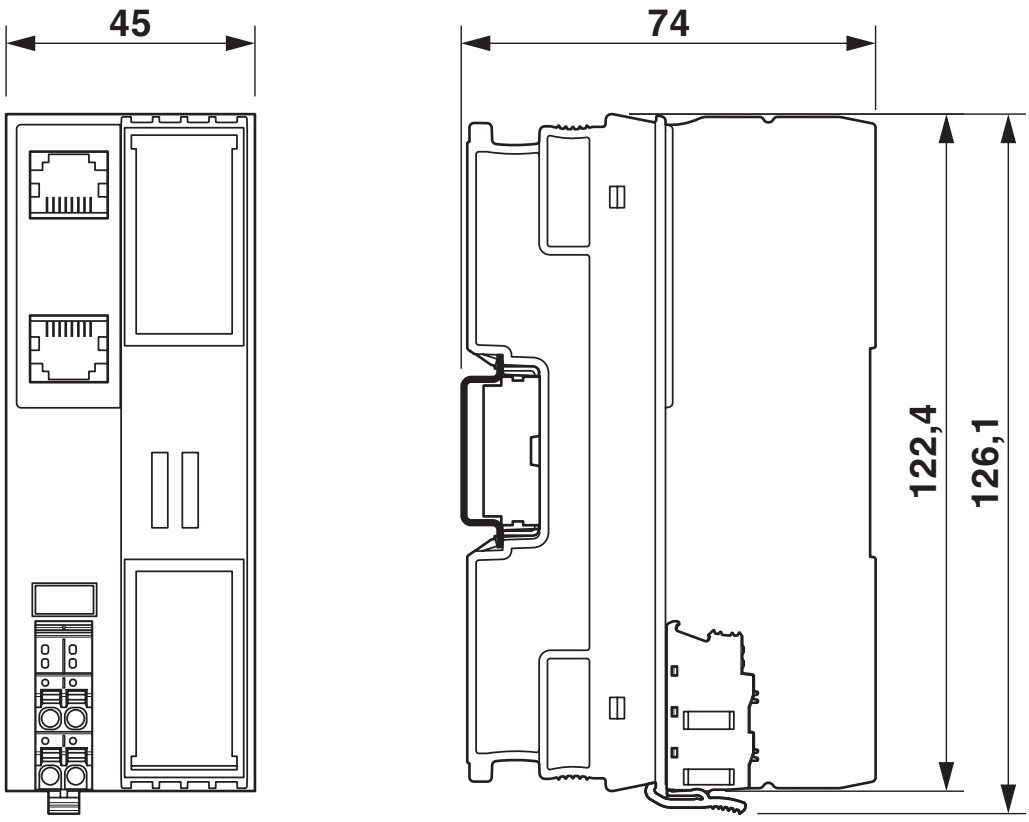
Mounting type	DIN rail mounting
Mounting position	any (observe temperature derating)

Drawings

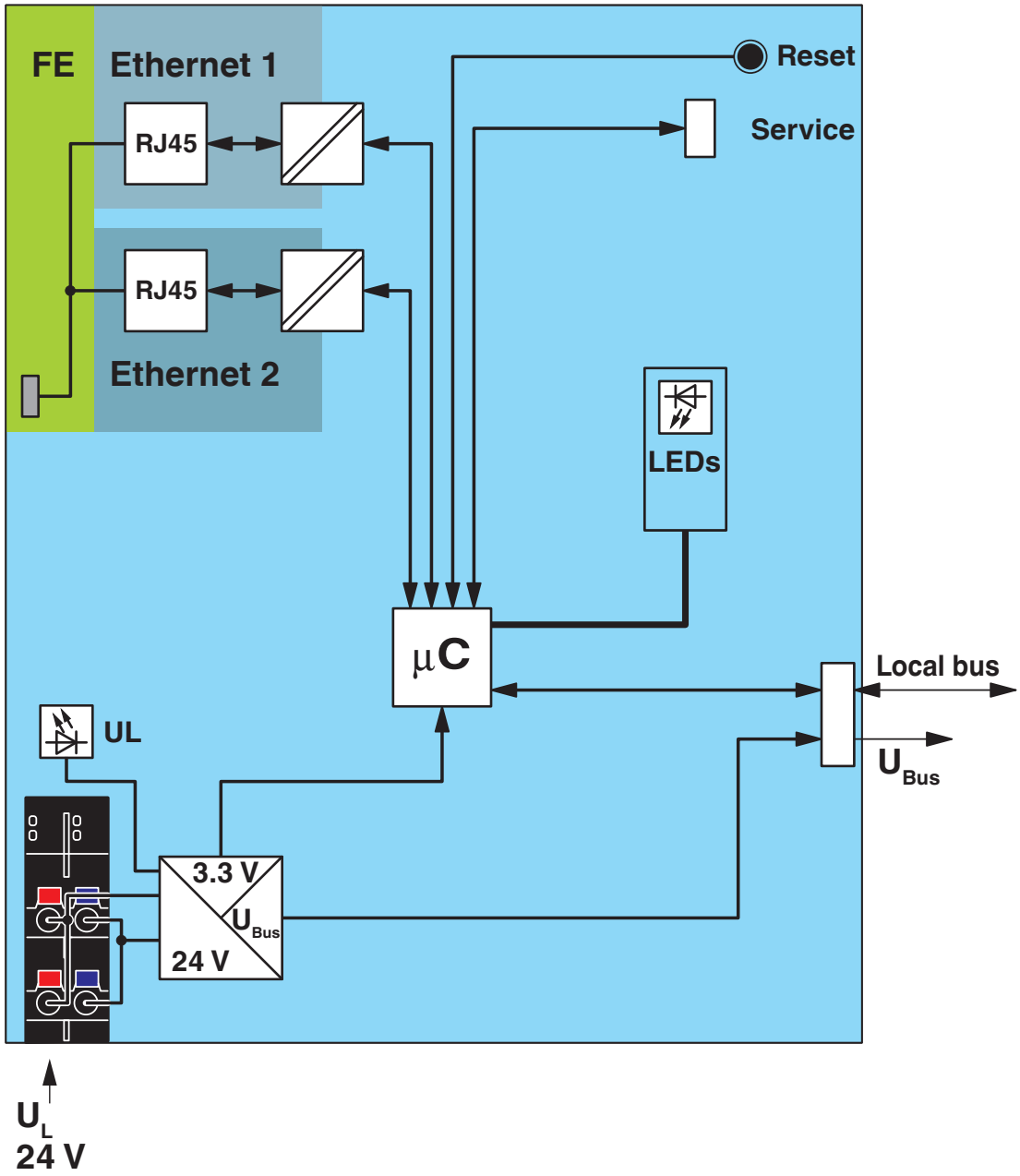
Connection diagram



Dimensional drawing



Block diagram



Internal wiring of the terminal points

Approvals

EAC
Approval ID: RU*DE*08.B.00529/19

DNV GL
Approval ID: TAA00000DF

LR
Approval ID: LR2001902TA

NK
Approval ID: 14A006

BV
Approval ID: 36433/B4 BV

PRS
Approval ID: TE/1020/880590/21

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

KC
Approval ID: MSIP-REI-PCK-2688459

RINA
Approval ID: ELE283021XG

cUL Listed
Approval ID: FILE E 238705

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Classifications

ECLASS

ECLASS-11.0	27242608
ECLASS-12.0	27242608
ECLASS-13.0	27242608

ETIM

ETIM 8.0	EC001604

UNSPSC

UNSPSC 21.0	32151600

Environmental Product Compliance

REACh SVHC	Lead 7439-92-1

Accessories

AXL F BS BK - Bus connector

2701422

https://www.phoenixcontact.com/in/products/2701422

Axioline F bus base module for housing type BK

FL PLUG RJ45 GR/2 - RJ45 connector

2744856

https://www.phoenixcontact.com/in/products/2744856

RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: Crimp connection, cable outlet: straight, color: green, Ethernet

FL PLUG RJ45 GN/2 - RJ45 connector

2744571

https://www.phoenixcontact.com/in/products/2744571

RJ45 connector, design: RJ45, degree of protection: IP20, number of positions: 8, 1 Gbps, CAT5 (IEC 11801:2002), material: Plastic, connection method: Crimp connection, cable outlet: straight, color: green, Ethernet

FL CAT5 HEAVY - Data cable

2744814

https://www.phoenixcontact.com/in/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^2, solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

FL CAT5 FLEX - Installation cable

2744830

https://www.phoenixcontact.com/in/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)

FL CRIMPTOOL - Assembly tool

2744869

https://www.phoenixcontact.com/in/products/2744869

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

ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

https://www.phoenixcontact.com/in/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

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

0829580

https://www.phoenixcontact.com/in/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 x 10, 15 x 5 mm, 1 x 5.8 x 5 mm, Number of individual labels: 50

EMT (35X18,7)R - Insert label

0801831

https://www.phoenixcontact.com/in/products/0801831

Insert label, for marking Phoenix Contact Axioline modules, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, lettering field size: 35 x 18.7 mm, Number of individual labels: 500

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

2404677

https://www.phoenixcontact.com/in/products/2404677

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

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

1021809

https://www.phoenixcontact.com/in/products/1021809

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

CAB-USB A/MICRO USB B/2,0M - Connecting cable

2701626

https://www.phoenixcontact.com/in/products/2701626

Connecting cable, for connecting the controller to a PC for PC Worx and LOGIC+, USB A to micro USB B, 2 m in length.

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