

Bus coupler - AXL F BK ETH XC



2701949

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Axioline F, Bus coupler, Modbus/TCP(UDP), 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 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 μ s) (for Modbus/UDP)
- Typical cycle time of the Axioline F local bus is around 10 μ s
- 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+
- 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	2701949
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	DRI21B
Product Key	DRI21B
Catalog Page	Page 71 (C-6-2019)
GTIN	4046356901239
Weight per Piece (including packing)	222 g
Weight per Piece (excluding packing)	177 g

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Customs tariff number	85176200
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).

Material specifications

Color	traffic grey A RAL 7042
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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 02) Micro USB type B (up to HW 01)

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

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Type	block modular
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. 583 mA (2 A at U_{BUS} , $U_L = 24$ V, up to HW 01)
	max. 670 mA (2.5 A at U_{BUS} , $U_L = 24$ V, HW 02 or later)
	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. 14 W (2 A at U_{BUS} , $U_L = 24$ V, up to HW 01)
	max. 16 W (2.5 A at U_{BUS} , $U_L = 24$ V, HW 02 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 01)
	max. 2.5 A (from HW 02)
	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 ² ... 1.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 1.5 mm ²
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.

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Conductor cross section, rigid	0.2 mm ² ... 1.5 mm ²
Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
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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Approval data

ATEX

Identification	<input type="checkbox"/> II 3 G Ex ec IIC T4 Gc
Certificate	UL 20 ATEX 2441X

UKEX

Identification	<input type="checkbox"/> 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

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

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CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	<input type="checkbox"/> , 2021122309114456

Mounting

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

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Classifications

ECLASS

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

ETIM

ETIM 8.0	EC001604
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UNSPSC

UNSPSC 21.0	32151600
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