

Bus coupler - AXL F BK EC - 2688899

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Axioline F bus coupler for EtherCAT® (including bus base module and connector)

Product description

The bus coupler represents the link between an EtherCAT® network and the Axioline F system. Up to 63 Axioline F devices can be connected to an existing EtherCAT® system using the bus coupler.

Product Features

- ✓ Up to 63 additional Axioline devices can be connected
- ✓ 2 RJ45 connections
- ✓ Rotary encoding switch
- ✓ Automatic addressing
- ✓ Station mapped as a modular EtherCAT® device using a modular device profile (MDP)
- ✓ Station can be mapped as a block device
- ✓ Acyclic data communication (mailbox protocols)
- ✓ Cyclic (synchronous) data communication
- ✓ Diagnostic and status indicators
- ✓ Firmware can be updated
- ✓ Typical cycle time of the Axioline F local bus is around 10 µs



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	220.0 GRM
Custom tariff number	85389091
Country of origin	Germany

Technical data

Dimensions

Width	45 mm
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Technical data

Dimensions

Height	125.9 mm
Depth	74 mm
Note on dimensions	The depth is valid when a TH 35-7.5 DIN rail is used (according to EN 60715).

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Mounting position: wall mounting on horizontal DIN rail)
	-25 °C ... 55 °C (Mounting position: any)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)
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)
Degree of protection	IP20

Connection data

Designation	Axioline F connector
Connection method	Push-in technology
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm

General

Weight	177 g
Note on weight specifications	with connector and bus base module
Mounting type	DIN rail
Protection class	III, IEC 61140, EN 61140, VDE 0140-1
Conformance with EMC directives	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B; 6 kV contact discharge, 8 kV air discharge
	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A; Field intensity: 10 V/m
	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
	Noise immunity test in accordance with EN 61000-6-2 Transient surge voltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B; DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical); fieldbus cable shield: ±1 kV

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Technical data

General

	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A; Test voltage 10 V
	Noise emission test according to EN 61000-6-3 Radio interference properties EN 55022 Class B
Mechanical tests	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6 5 g
	Shock in acc. with EN 60068-2-27/IEC 60068-2-27 30 g
	Continuous shock according to EN 60068-2-27/IEC 60068-2-27 10 g
Diagnostics messages	Emergency messages
	Messages via object 10F3 _{hex} Diagnosis history

Interfaces

Fieldbus system	Fernbus
Designation	EtherCAT®
Connection method	RJ45 socket, auto negotiation and autocrossing
Transmission speed	100 MBit/s (Full duplex)
Transmission physics	Ethernet in RJ45 twisted pair
Fieldbus system	Lokalbus
Designation	Axioline F local bus
Connection method	Bus base module
Transmission speed	100 MBit/s
Designation	Service
Connection method	Micro USB type B

System limits of the bus coupler

Amount of process data	1024 Byte (for each data direction)
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63
Designation	EtherCAT®
System-specific protocols	Mailbox protocols CAN application layer over EtherCAT®
	Mailbox protocols File access over EtherCAT®
Type of addressing	Auto-increment addressing
	Fixed position addressing
	Logical addressing
	Explicit device ID
Specification	ETG.1000 V1.02

Axioline potentials

Supply of communications power U _L	24 V DC
Current consumption from U _L	typ. 105 mA (without I/Os and U _L = 24 V)

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Axioline potentials

	max. 570 mA (with 2 A at U_{Bus} for the I/Os and $U_L = 24 V$)
Communications power U_{Bus}	5 V DC (via bus base module)
Current supply at U_{Bus}	2 A

Classifications

eCl@ss

eCl@ss 4.0	27240490
eCl@ss 4.1	27240490
eCl@ss 5.0	27242208
eCl@ss 5.1	27242608
eCl@ss 6.0	27242608
eCl@ss 7.0	27242608
eCl@ss 8.0	27242608

ETIM

ETIM 3.0	EC001604
ETIM 4.0	EC001604
ETIM 5.0	EC001604

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	39121311
UNSPSC 12.01	39121311
UNSPSC 13.2	39121311

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

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Approvals

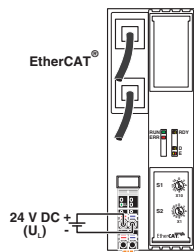
Approvals submitted

Approval details

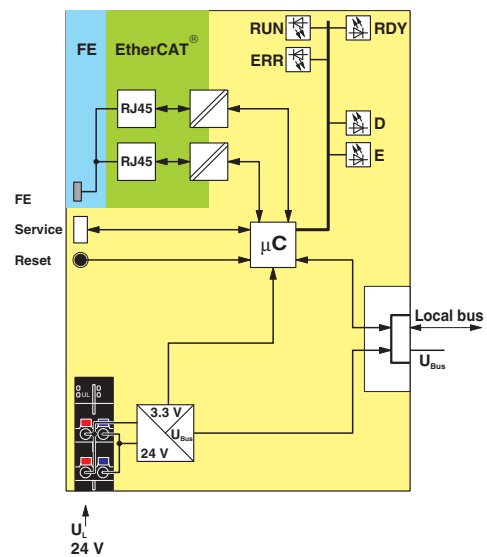


Drawings

Connection diagram



Block diagram



Internal wiring of the terminal points

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Dimensioned drawing

