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Bus coupler - FLM BK ETH M12 DI 8 M12-2TX - 2736916

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The Ethernet bus coupler opens a local bus for up to 16 devices. Additional functions: 10 Mbps and 100 Mbps, auto negotiation, auto crossover, 8 digital inputs, channel-specific diagnostics, short-circuit and overload protection, M12 fast connection technology.

Product Description

The Fieldline Modular FLM BK ETH M12 DI8 M12 bus coupler with 8 digital inputs couples a Fieldline Modular local bus station to an Ethernet network and is also used for measuring digital signals. The bus coupler consists of two Ethernet connections that are designed as D-coded M12 sockets. Additional Ethernet devices can be connected due to the integrated, manageable 3-port switch to implement a line structure. The transmission speeds are 10 Mbps and 100 Mbps and are automatically selected by the device (auto negotiation). The interfaces can automatically interchange the receive and transmit cables (autocrossover). Following network protocols are supported by the FLM BK ETH M12 DI8 M12 bus coupler:

- Modbus/TCP
- Modbus/UDP
- DDI (Device Driver Interface)

The Ethernet bus coupler provides a powerful local bus as lower-level bus. The total length of the local bus is 20 m and it can connect up to 16 I/O units. Selectable transmission speeds in the range 500 kBaud to 2 Mbaud allow for flexible adaptation to the application and also permit savings on warehousing costs. The local bus connection is provided by 5-pos. B-coded M12 connectors. The four double-occupied sensor slots can be assigned through 5-pos. A-coded M12 connectors with sensors in 2, 3 or 4 conductor technology respectively.

The sensor supply is short-circuit and overload-protected and thus guarantees a high plant availability. The diagnosis and status indicators for voltage supply, network and local bus operation with the corresponding monitoring functions reduce bus downtime and provide support if service becomes necessary.

The high-performance SPEEDCON technology used allows connection times to be reduced by up to 90 %. The classic M12 connections can continued to be used with full compatibility.

Why buy this product

- Modbus TCP
- 8 inputs, 24 V DC
- M12 connection technology with SPEEDCON fast locking system

Ethernet

Key Commercial Data

Packing unit	1 STK
GTIN	 4 046356 094283

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Bus coupler - FLM BK ETH M12 DI 8 M12-2TX - 2736916

Technical data

Dimensions

Width	70 mm
Height	178 mm
Depth	50 mm
Drill hole spacing	178 mm

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (storage/transport)	95 %
Air pressure (operation)	80 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Degree of protection	IP65/IP67

General

Net weight	280 g
Mounting type	Wall mounting
	Wall mounting, optionally on mounting plate

Interfaces

Fieldbus system	Ethernet
Designation	Ethernet (Modbus TCP)
Connection method	M12 connectors, D-coded
Designation connection point	Copper cable
Transmission speed	10/100 MBit/s (auto negotiation)
Number of positions	4

Local bus gateway

Designation	Local bus gateway
Connection method	M12 connector, B-coded
Transmission speed	500 kbaud/2 Mbaud, can be selected
Max. number of local bus devices	16
Max. length of local bus	20 m

Power supply for module electronics

Connection method	M12 connector
Designation	U _L
Supply voltage	24 V DC
Supply voltage range	18 V DC ... 30 V DC (including ripple)
Supply current	< 100 mA

Fieldline potentials

Voltage supply U _L	24 V DC
Power supply at U _L	max. 4 A
Current consumption from U _L	max. 118 mA (At 2 Mbaud)

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Technical data

Fieldline potentials

	typ. 118 mA (At 2 Mbaud)
	max. 60 mA (At 500 kBaud)
	typ. 60 mA (At 500 kBaud)
Voltage supply U_s	24 V DC
Power supply at U_s	max. 4 A
Current consumption from U_s	typ. 5 mA (plus power supply for sensors)
	max. 600 mA

Digital inputs

Input name	Digital inputs
Connection method	M12 connector
	2, 3, 4-wire
Number of inputs	8 (EN 61131-2 type 1)
Protective circuit	Short-circuit protection, overload protection of the sensor supply Protection against polarity reversal
Filter time	3 ms
Input characteristic curve	IEC 61131-2 type 1
Input voltage	24 V DC
Input voltage range "0" signal	-30 V DC ... 5 V DC
Input voltage range "1" signal	13 V DC ... 30 V DC

Standards and Regulations

Test section	To I/O 500 V DC
Connection in acc. with standard	CUL
Protection class	III, IEC 61140, EN 61140, VDE 0140-1

Classifications

eCl@ss

eCl@ss 4.0	27250203
eCl@ss 4.1	27250203
eCl@ss 5.0	27250203
eCl@ss 5.1	27242608
eCl@ss 6.0	27242608
eCl@ss 7.0	27242608
eCl@ss 8.0	27242608

ETIM

ETIM 2.0	EC001434
ETIM 3.0	EC001604
ETIM 4.0	EC001604
ETIM 5.0	EC001604

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Classifications

UNSPSC

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

Approvals

Approvals

Approvals

UL Recognized / cUL Recognized / cULus Recognized

Ex Approvals

UL Recognized / cUL Recognized / cULus Recognized

Approvals submitted

Approval details

UL Recognized

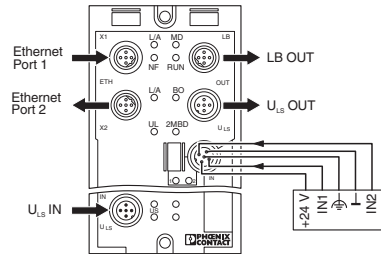
cUL Recognized

cULus Recognized

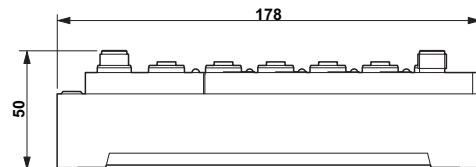
Drawings

Bus coupler - FLM BK ETH M12 DI 8 M12-2TX - 2736916

Connection diagram



Dimensional drawing



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PHOENIX CONTACT GmbH & Co. KG
Flachsmarktstr. 8
32825 Blomberg
Germany
Tel. +49 5235 300
Fax +49 5235 3 41200
<http://www.phoenixcontact.com>



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Product	Code	Reference	Product link
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