



Ethernet Isolator

FieldConnex®

EI-0D2-10Y-10B-LT

- Galvanic isolation between intrinsically safe and non-intrinsically safe port
- 10/100 MBit/s according to IEEE 802.3/.3u
- Installation in Zone 2, Ethernet in Zone 1 or Zone 0
- Standard Ethernet patch or crossover cable
- DIN rail mounting and OEM version

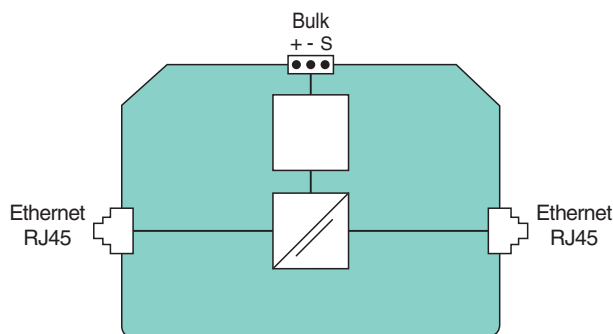
Ethernet isolator, module with intrinsically safe port (Ex ia) for DIN rail mounting



Function

The Ethernet Isolator is an intrinsically safe isolated barrier. It enables cost effective and simple installation in hazardous areas up to Zone 0. It supports high-speed Ethernet and can be mounted in Zone 2. At each end of the trunk, an Ethernet Isolator is installed. In combination, they provide the intrinsically safe energy limitation. The Ethernet Isolator offers a wire-based alternative to wireless LAN, fiber optic solutions, and Ex e installations. In safe area applications, a single Ethernet Isolator can be used for galvanic isolation. The Ethernet Isolator is compatible with all IEEE standards. It provides high noise immunity and low heat dissipation in a compact housing.

Connection



Zone 2/Div. 2

Technical Data

General specifications

Installation in hazardous area	Zone 2
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Supply

Rated voltage	U_r	19.2 ... 35 V DC
Rated current	I_r	150 ... 100 mA
Power dissipation		3 W

Ethernet Interface

Intrinsically safe port	10 BASE-T/100 BASE-TX
Non-intrinsically safe port	10 BASE-T/100 BASE-TX
Connection type	2 x RJ-45 , IEC 60603-7
Connector pinout	socket ; EIA/TIA 568 B

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

 **PEPPERL+FUCHS**

Technical Data

Transfer rate	10/100 Mbit/s , Auto-Negotiation
Operating mode	half/full duplex
Cable type	CAT5e S/FTP AWG 24, Installation cable, L/R ratio max. 10 µH/Ω of all strand combinations
I.S. cable length	typ. 100 m/20 °C
Total cable length	typ. 200 m/20 °C
Number of isolators	max. 2 in series connection
Indicators/operating means	
LED PWR	green: Power on
LED ACT	yellow: communication active
LED 10/100	yellow ON: Transfer rate 100 MBit/s , OFF: 10 MBit/s
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013
Standard conformity	
Galvanic isolation	EN 50020
Degree of protection	IEC 60529
Climatic conditions	DIN IEC 721
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Ethernet	IEEE 802.3 , IEEE 802.3u
Ambient conditions	
Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	≤ 95 % non-condensing
Shock resistance	15 g 11 ms
Vibration resistance	1 g 10 ... 150 Hz
Pollution degree	max. 2, according to IEC 60664
Mechanical specifications	
Connection type	RJ45
Core cross section	up to 2.5 mm ²
Housing material	Polyamide PA 66
Degree of protection	IP20
Mass	195 g
Mounting	DIN rail mounting
Data for application in connection with hazardous areas	
EU-type examination certificate	PTB 07 ATEX 2025 X
Marking	Ⓢ II (1) G [Ex ia Ga] IIB , Ⓢ II (1) D [Ex ia Da] IIIC , Ⓢ II 3(1)G Ex nA [ia Ga] IIB T4 Gc Ⓢ II 3 (1D) G Ex nA [ia IIIC Da] IIB T4 Gc Ⓢ I (M1) [Ex ia Ma] I
Supply	
Maximum safe voltage	U _m 253 V AC
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010
International approvals	
CSA approval	CSA 15.70016295
Control drawing	116-B032
Approved for	Class I, Zone 2, AEx/Ex nA [ia Ga] IIB T4 Gc Class I, Zone 2, AEx/Ex nA [ia Da IIIC] IIB T4 Gc
IECEx approval	IECEx PTB 09.0053X
Approved for	[Ex ia Ga] IIB [Ex ia Da] IIIC Ex nA [ia Ga] IIB T4 Gc Ex nA [ia IIIC Da] IIB T4 Gc [Ex ia Ma] I

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Technical Data

Certificates and approvals	
Patents	This product may be covered by the following patent: US7,687,791
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

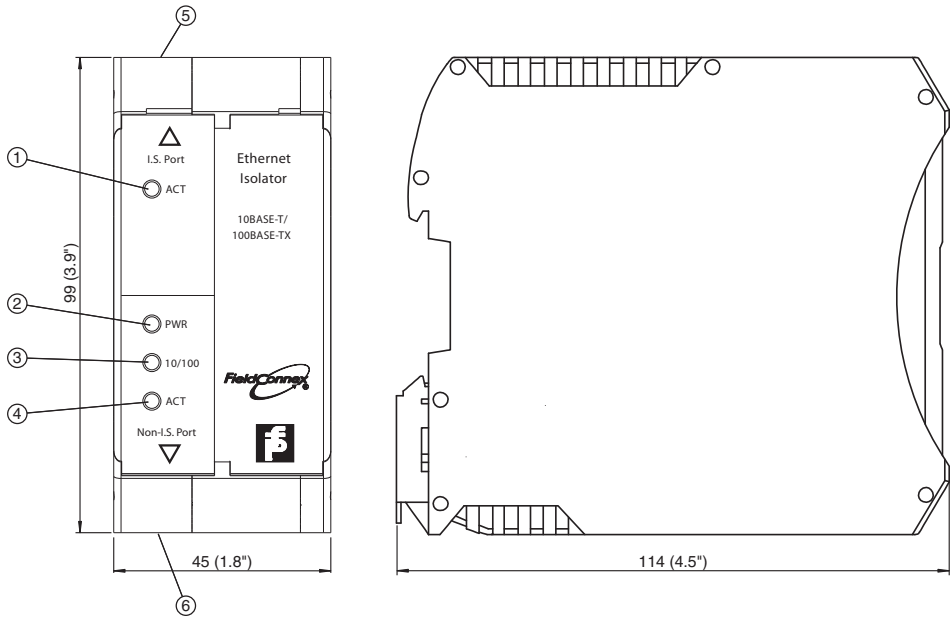
Assembly



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Additional Information

Dimensions and Assembly

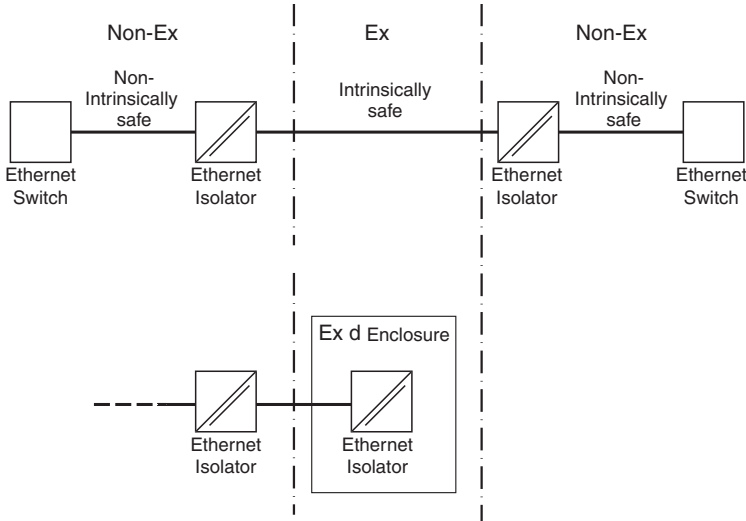


- Description:

 - 1 LED Communication active intrinsically safe port
 - 2 LED Power
 - 3 LED Transfer rate
- 4 LED Communication active non-intrinsically safe port
 - 5 Intrinsically safe connector female
 - 6 Non-Intrinsically safe connector female

Installation

Examples



Installation notes see manual.

Ethernet Cable Overview for Interconnection

The cross-table below gives a general idea which Ethernet cable has to be used for interconnection of two Ethernet Isolators or an Ethernet Isolator to another device.

	Ethernet Isolator I.S.-port	Ethernet Isolator non-I.S.-port
Ethernet Isolator I.S.-port	Crossover cable	not allowed
Switched standard-port	not allowed	Crossover cable
Switch uplink-port	not allowed	Standard patch cable
Notebook	not allowed	Standard patch cable
Workstation	not allowed	Standard patch cable

Device with auto-crossover functionality	not allowed	Standard patch cable
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