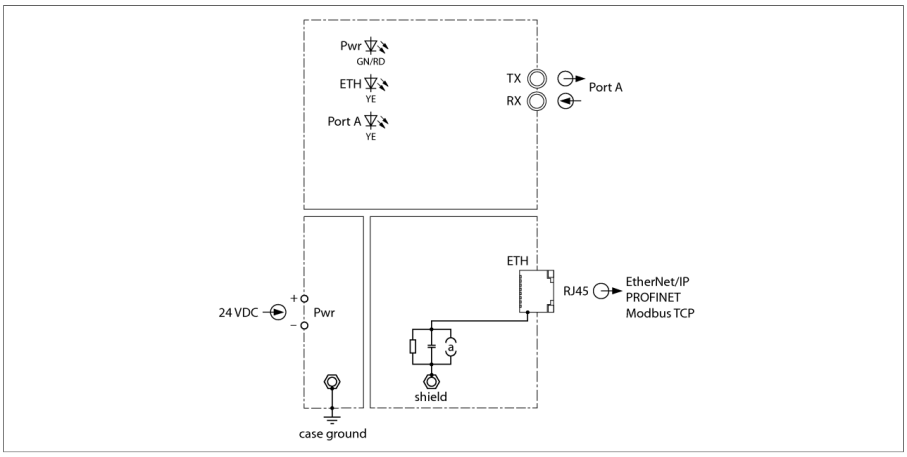
excom I/O System
100BASE-TX — Fiber-Optic Ethernet Media Converter for Zone 2
FOCEN11-3G



The FOCEN11-3G fiber-optic media converter converts 100BASE-TX signals from copper cables to fiber-optic cables and vice versa. Intrinsically safe bus signals from zone 1 can thus be transmitted potential-free and interference-free over long distances.

The 1-channel FOCEN11… have an RJ45 female connector and a fiber-optic port with ST connection. Two converters are always required to build an optical line.

When using an OM1 fiber-optic cable (62.5/125 µm), the minimum transmission range is 2500 m, and for OM2 (50/125 µm), the minimum transmission range is 1500 m.

For diagnostic purposes, three status LEDs (power supply, fiber-optic segments, RS485 segment and detection of the transmission rate in the RS485 segment) as well as a fault signal output are available.

The series of fiber-optic media converters consists of a total of two converters, which differ in the 100BASE-TX signals and the installation location.

- FOCEN11-3G, 1-channel
- FOCEN11EX-2G, 1-channel

The 3G versions can be installed in zone 2 and have a standard 100BASE-TX interface. The 2G versions with intrinsically safe 100BASE-TX interfaces (IS-100BASE-TX) may be installed in zone 1. In all versions, the fiber-optic interface is intrinsically safe, so that all converters can interconnect. Only devices with the same IS-100BASE-TX interface, e.g. the GEN-2G, may be connected to the IS-100BASE-TX (intrinsically safe Ethernet).

The unmanaged media converter supports 100 Mbps, half/full duplex and auto crossing, as well as DLR and MRP protocols in a ring network.

Equipotential bonding is implemented with a threaded bolt that is only connected to the housing. The shielding of the Ethernet cable is implemented via a separate connection with the option of choosing between capacitive or direct grounding. The housing potential is not connected with the shielding potential.

- Ethernet media converter
- Support for Ethernet protocols Modbus TCP, EtherNet/IP and PROFINET
- Transmission length up to 2.5 km
- RJ45 interface (100BASE-TX)
- 1-port switch, 10/100 Mbps
- Intrinsically safe fiber-optic interface
- Mounting in zone 2 and in non-Ex areas

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Type	FOCEN11-3G
ID	100000554
Nominal voltage	24 VDC
Operating voltage U_B	18…32 VDC
Current consumption	119 mA
Power consumption	≤ 2.8 W
Power dissipation	≤ 3.8 W
Galvanic isolation	Complete galvanic isolation acc. to EN 60079-11, rated voltage 250 V
Test voltage	500 V
Number of channels	1

Protocol detection	automatic
Transmission rate	10/100 Mbps, half/full duplex, autonegotiation, autocrossing
Type of optical fiber	Multimode fiber 62.5/125 µm Multimode fiber 50/125 µm

Ex approval acc. to conformity certificate	IECEx BVS 23.0025X
Ex approval acc. to conformity certificate	BVS 23 ATEX E 038X
Device designation	Ⓔx II 3(1) G Ex ec mc [op is Ga] IIC T4 Gc
Device designation	Ⓔx II (1) D [Ex op is Da] IIIC

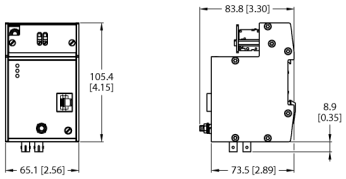
Displays/Operating elements	
Operational readiness	1 × green/red
Baud rate detection	2 × yellow

Electrical connection	1 × Ex e terminal, 2-pin, screw connection 2 × BFOC/2.5 (St) male connector
Bus connection	1 × RJ45 female connector

Housing material	Anodized aluminium
Connection mode	snap-fit on DIN rail (DIN 60715)
Protection class	IP20
Ambient temperature	-40…+70 °C
Storage temperature	-40…+85 °C
Relative humidity	≤ 93 % at 40 °C acc. to IEC 60068-2-78
Vibration test	Acc. to IEC 60068-2-6
Shock test	Acc. to IEC 60068-2-27
EMC	Acc. to EN 61326-1 Acc. to Namur NE21
MTTF	69 years acc. to SN 29500 (Ed. 99) 40 °C
Dimensions	65 x 105 x 73.5 mm

Approvals	ATEX IECEx

Dimensions



mm [inch]

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