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FO converters - PSI-MOS-DNET/FO 850 T - 2313986

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Fiber optic converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 1000 kbps, T-coupler, interfaces: 1 x CAN, 1 x Alarm, 2 x FO (B-FOC), 850 nm, for HCS/fiberglass (multi-mode)

Product Features

- ☑ Data rates of up to 1000 kbps
- ☑ Supply voltage and data signals routed through via DIN rail connectors
- ☑ Can be combined with the PSI copper repeater in a modular way using DIN rail connectors
- ☑ Automatic data rate detection or fixed data rate setting via DIP switches
- ☑ Integrated optical diagnostics for continuous monitoring of fiber optic paths
- ☑ High-quality electrical isolation between all interfaces (DeviceNet // fiber optic ports // power supply // DIN rail connector)
- ☑ Connections can be plugged in using a COMBICON screw terminal block
- ☑ Redundant power supply possible by means of optional system power supply unit
- ☑ Approved for use in zone 2
- ☑ Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- ☑ Floating switch contact for leading alarm generation in relation to critical fiber optic paths

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	0.26 GRM
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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

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Technical data

Dimensions

Width	35 mm
Height	102 mm
Depth	119 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
Degree of protection	IP20
Noise immunity	EN 61000-6-2

Serial interface

Interface 1	CAN interface, in accordance with ISO/IS 11898 for DeviceNet, CAN, CANopen
Operating mode	Semi-duplex
No. of channels	2 (CAN_High / CAN_Low)
Connection method	COMBICON plug-in screw terminal block
File format/coding	Bit stuffing, NRZ
Transmission medium	2-wire twisted pair, shielded
Transmission method	CSMA/CA
Transmission length	$\leq$ 5000 m (Dependent on the data rate and the protocol used)
Number of INTERBUS devices	$\leq$ 64 (per potential segment)
	$\leq$ 63 (DeviceNet™, can be addressed logically)
	$\leq$ 128 (CANopen®, can be addressed logically)
Termination resistor	124 Ω (Integrated and ready to be switched)
Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14

Optical interface FO

Transmit capacity, minimum	-13.5 dBm (50/125 µm)
	-12.3 dBm (62,5/125 µm)
	-10.2 dBm (200/230 µm)
Minimum receiver sensitivity	-28.1 dBm (50/125 µm)
	-28.1 dBm (62,5/125 µm)

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Optical interface FO

	-28.1 dBm (200/230 μm)
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	1800 m (with F-K 200/230 8 dB/km with quick mounting connector)
	4600 m (with F-G 50/125 2.5 dB/km)
	4200 m (with F-G 62,5/125 3.0 dB/km)
Transmission medium	HCS fiber
	Multi-mode fiberglass
Transmission protocol	Protocol transparent for CAN interface
Connection method	B-FOC (ST®)

Digital outputs

Output name	Relay output
Number of outputs	1
Contact type	N/O contact
Minimum switching voltage	11 V DC
Maximum switching voltage	30 V DC
Limiting continuous current	500 mA

Power supply

Nominal supply voltage	24 V DC
Supply voltage range	11 V DC ... 30 V DC (via pluggable COMBICON screw terminal block)
Typical current consumption	150 mA (24 V DC)

General

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // CAN
Test voltage data interface/power supply	1.5 kV$_{rms}$ (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Net weight	161 g
Housing material	PA 6.6-FR
Color	green
MTBF	400 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	64 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	543 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))

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General

	247 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	102 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II (2) D [Ex op is Db] IIIC (PTB 06 ATEX 2042 U) (Please follow the special installation instructions in the documentation!)
	# II (2) G [Ex op is Gb] IIC (PTB 06 ATEX 2042 U) (Please follow the special installation instructions in the documentation!)
	# II 3 G Ex nA IIC T4 Gc X (Please follow the special installation instructions in the documentation!)
UL, USA / Canada	508 listed

Classifications

eCl@ss

eCl@ss 4.0	27230207
eCl@ss 4.1	27230207
eCl@ss 5.0	27230207
eCl@ss 5.1	27230207
eCl@ss 6.0	27230207
eCl@ss 7.0	27230207
eCl@ss 8.0	27143136

ETIM

ETIM 3.0	EC000236
ETIM 4.0	EC000236
ETIM 5.0	EC001467

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553

Approvals

Approvals

FO converters - PSI-MOS-DNET/FO 850 T - 2313986

Approvals

Approvals

UL Listed / cUL Listed / DNV / cULus Listed

Ex Approvals

ATEX

Approvals submitted

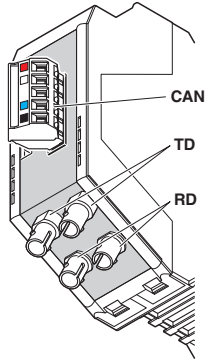## Approval details

UL Listed

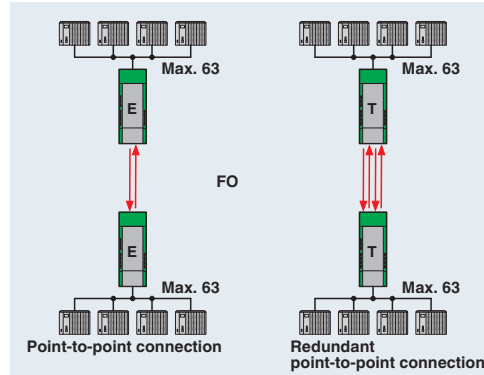cUL Listed

DNV

cULus Listed

Drawings

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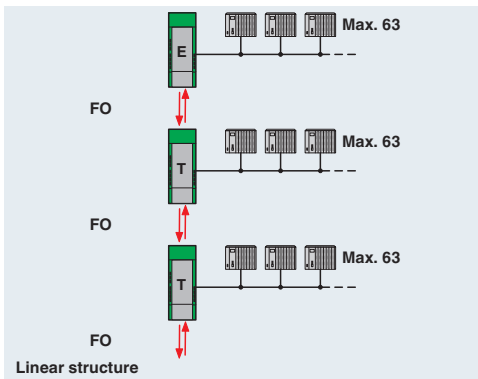# FO converters - PSI-MOS-DNET/FO 850 T - 2313986

Schematic diagram

Application drawing

Device connections

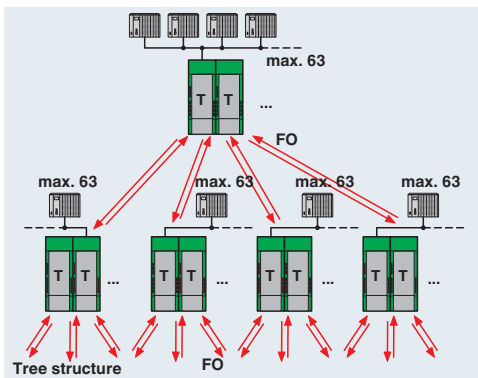Point-to-point connection

Application drawing
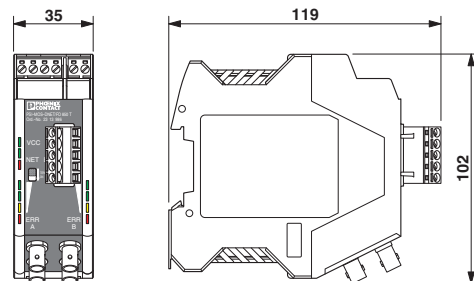
Application drawing

Line structure

Star structure

Application drawing

Dimensioned drawing

Tree structure

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Block diagram