FO converters - PSI-MOS-RS485W2/FO 660 T - 2708300

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FO converter with integrated optical diagnosis, alarm contact, for RS-485 2-wire bus systems (SUCONET K, Modbus ...) up to 500 kbps, NRZ coding, T-coupler with two FO interfaces (FSMA), 660 nm, for polymer/HCS fiber cable

Product Features

- Can be combined with the PSI copper repeater in a modular way using DIN rail connectors
- Supply voltage and data signals routed through via DIN rail connectors
- Connections can be plugged in using a COMBICON screw terminal block
- Automatic data rate detection or fixed data rate setting via DIP switches
- High-quality electrical isolation between all interfaces (RS-485 // fiber optic ports // power supply // DIN rail connector)
- Redundant power supply possible by means of optional system power supply unit
- Approved for use in zone 2
- Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- Integrated optical diagnostics for continuous monitoring of fiber optic paths
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Suitable for data rates up to 500 kbps

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	240.0 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	99 mm
Depth	105 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 61000-6-2:2005

General

Bit delay	≤ 1 Bit
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // RS-485
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	200 g
Housing material	PA 6.6-FR
Color	green
MTBF	220 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	44 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nAC IIC T4 X (Please follow the special installation instructions in the documentation!)
	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U) (Please follow the special installation instructions in the documentation!)
UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
	Class I, zone 2, Ex nC nL IIC T5 X
	Class I, Div. 2, Groups A, B, C, D

Power supply

Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	130 mA
Typical current consumption	100 mA (24 V DC)

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Technical data

Power supply

Connection method	COMBICON plug-in screw terminal block

Serial interface

Interface 1	RS-485 interface, 2-wire
Operating mode	Semi-duplex
Connection method	Pluggable screw connection
File format/coding	UART (11/10 bit switchable; NRZ), slip-tolerant
Data direction switching	Automatic control
Transmission medium	Copper
Transmission length	≤ 1200 m (depending on the data rate, with shielded, twisted data cable)
Termination resistor	390 Ω
	220 Ω
	390 Ω (Can be connected)
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
Serial transmission speed	4,8/ 9,6/ 19,2/ 38,4/ 57,6/ 75/ 93,75/ 115,2/ 136/ 187,5/ 375/ 500

Optical interface FO

Transmit capacity, minimum	-5.3 dBm (980/1000 µm)
	-16 dBm (200/230 µm)
Minimum receiver sensitivity	-30.2 dBm
Overrange receiver	-3 dBm (980/1000 µm)
Wavelength	660 nm
Transmission length incl. 3 dB system reserve	100 m (With F-P 980/1000 230 dB/km with quick mounting connector)
	800 m (With F-K 200/230 10 dB/km with quick mounting connector)
Transmission medium	Polymer fiber
	HCS fiber
Transmission protocol	Protocol-transparent to the RS-485 interface
Connection method	F-SMA

Digital outputs

Output name	Relay output
Output description	Alarm output
Number of outputs	1
Maximum switching voltage	60 V DC

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Technical data

Digital outputs

	42 V AC
Limiting continuous current	0.46 A

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 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC001423

UNSPSC

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

Approvals

Approvals

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UL Recognized / cUL Recognized / DNV / cULus Recognized

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

FO converters - PSI-MOS-RS485W2/FO 660 T - 2708300

Approvals

Approvals submitted

Approval details

UL Recognized

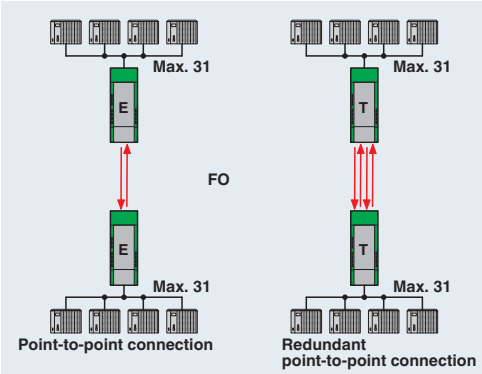
cUL Recognized

DNV

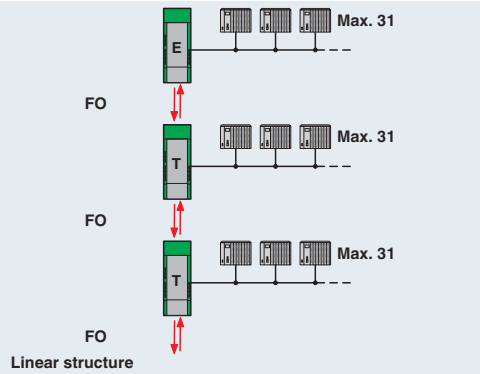
cULus Recognized

Drawings

Application drawing



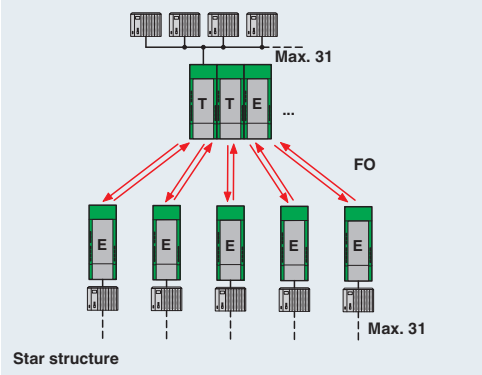
Application drawing



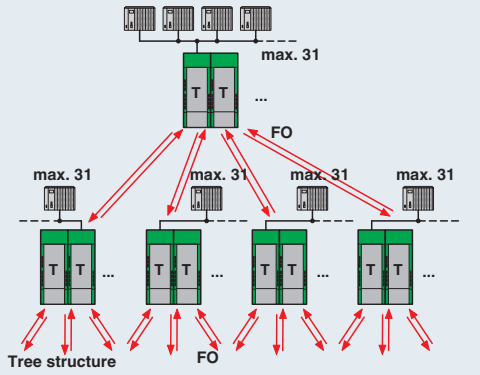
Redundant point-to-point connection

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Application drawing

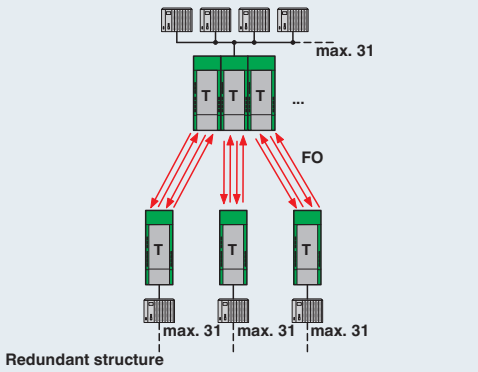


Application drawing



Redundant structure

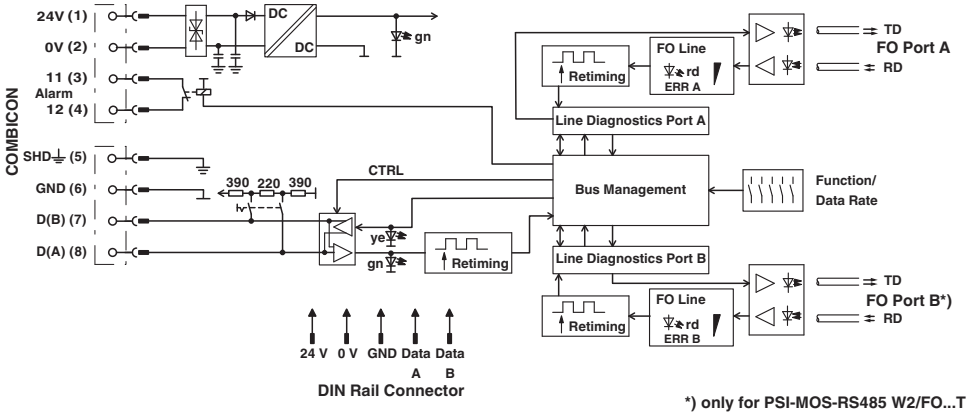
Application drawing



Tree structure

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Block diagram



*) only with PSI-MOS.../FO...T

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