

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

## 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 <sub>rms</sub> (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)

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

### Technical data

#### Power supply

Connection method	COMBICON plug-in screw terminal block
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#### 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 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
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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#### Approvals

UL Recognized / cUL Recognized / DNV / cULus Recognized

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#### Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

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

## Approvals

Approvals submitted

### Approval details

UL Recognized

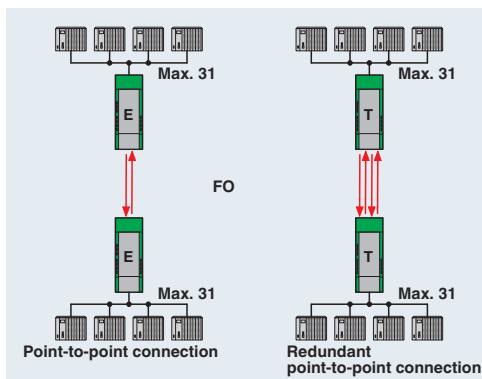
cUL Recognized

DNV

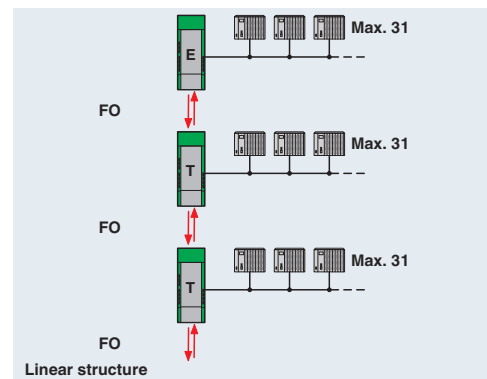
cULus Recognized

## Drawings

Application drawing



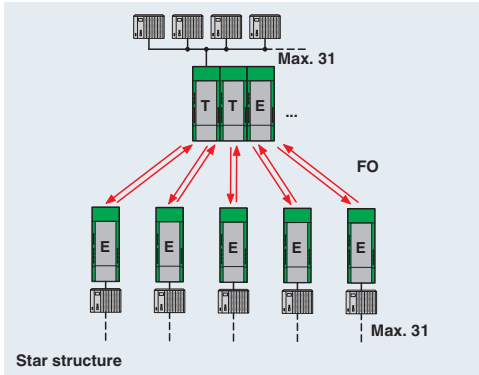
Application drawing



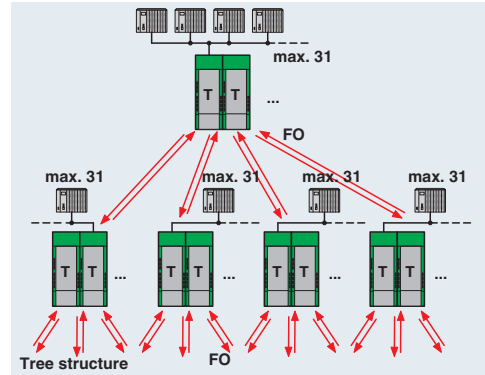
Redundant point-to-point connection

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

Application drawing

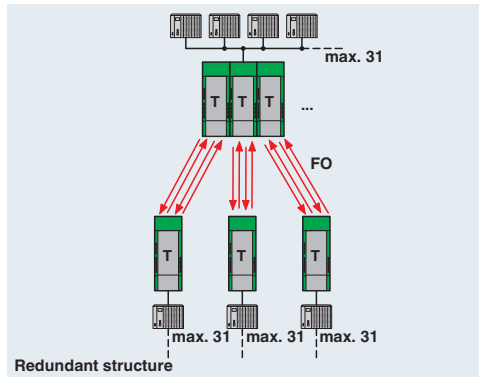


Application drawing



Redundant structure

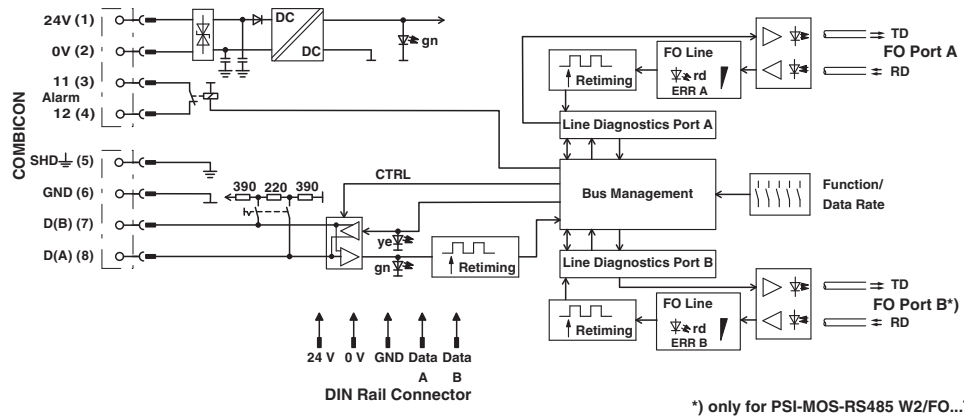
Application drawing



Tree structure

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Block diagram



\*) only for PSI-MOS-RS485 W2/FO...T

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



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- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



#### Как с нами связаться

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