

## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

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Fiber optic converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, termination device with one fiber optic interface (SC duplex), 1300 nm, for fiberglass cable

### Your advantages

- ✓ Supply voltage and data signals routed through via DIN rail connectors
- ✓ Connections can be plugged in using a COMBICON screw terminal block
- ✓ Redundant power supply possible by means of optional system power supply unit
- ✓ High-quality electrical isolation between all interfaces (RS-232 // fiber optic ports // power supply // DIN rail connector)
- ✓ Approved for use in zone 2
- ✓ Integrated optical diagnostics for continuous monitoring of fiber optic paths
- ✓ Floating switch contact for leading alarm generation in relation to critical fiber optic paths
- ✓ Automatic data rate detection for all data rates up to 115.2 kbps



### Key Commercial Data

Packing unit	1 pc
GTIN	
GTIN	4046356176286

### Technical data

#### Note

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

Width	35 mm
Height	99 mm
Depth	105 mm

#### Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
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## Technical data

### Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

### General

Transmission channels	2 (1/1), RxD, TxD, full duplex
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // V.24 (RS-232)
Test voltage data interface/power supply	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC directive 89/336/EC
Noise emission	EN 55011
Net weight	183.78 g
Housing material	PA 6.6-FR
Color	green
MTBF	549 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	113 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

### Power supply

Nominal supply voltage	24 V DC (With UL approval)
Supply voltage range	18 V DC ... 32 V DC
Typical current consumption	100 mA (24 V DC)
Connection method	COMBICON plug-in screw terminal block

### Interfaces

Interface 1	V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1
Connection method	D-SUB 9 plug
Transmission medium	Copper
Transmission length	≤ 15 m
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 flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Serial transmission speed	115.2 kbps (NRZ)

### Optical interface FO

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## Technical data

### Optical interface FO

No. of channels	1
Wavelength	1300 nm
Transmission length incl. 3 dB system reserve	27 km (With F-G 50/125 0.7 dB/km at 1300 nm)
	22 km (with F-G 62.5/125 0.8 dB/km at 1300 nm)
	45 km (With F-E 9/125 0,4 dB/km at 1300 nm)
Transmission medium	Multi-mode fiberglass
	Single-mode fiberglass
Transmission protocol	Transparent to protocol for RS-232 interface
Connection method	SC duplex

### Digital outputs

Output name	Relay output
Output description	Alarm output
Number of outputs	1
Maximum switching voltage	60 V DC
	42 V AC
Limiting continuous current	1 A

### Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	ATEX
Identification	# II 3 G Ex nA nC IIC T4 Gc X
Additional text	Please follow the special installation instructions in the documentation!
Designation	UL, USA/Canada
Identification	508 Listed
	508 Recognized
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive 89/336/EC
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 10...150 Hz, 2.5 h, in XYZ direction
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g, 11 ms period, half-sine shock pulse
Noise emission	EN 55011
Noise immunity	EN 61000-6-2:2005
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV

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## Technical data

### Standards and Regulations

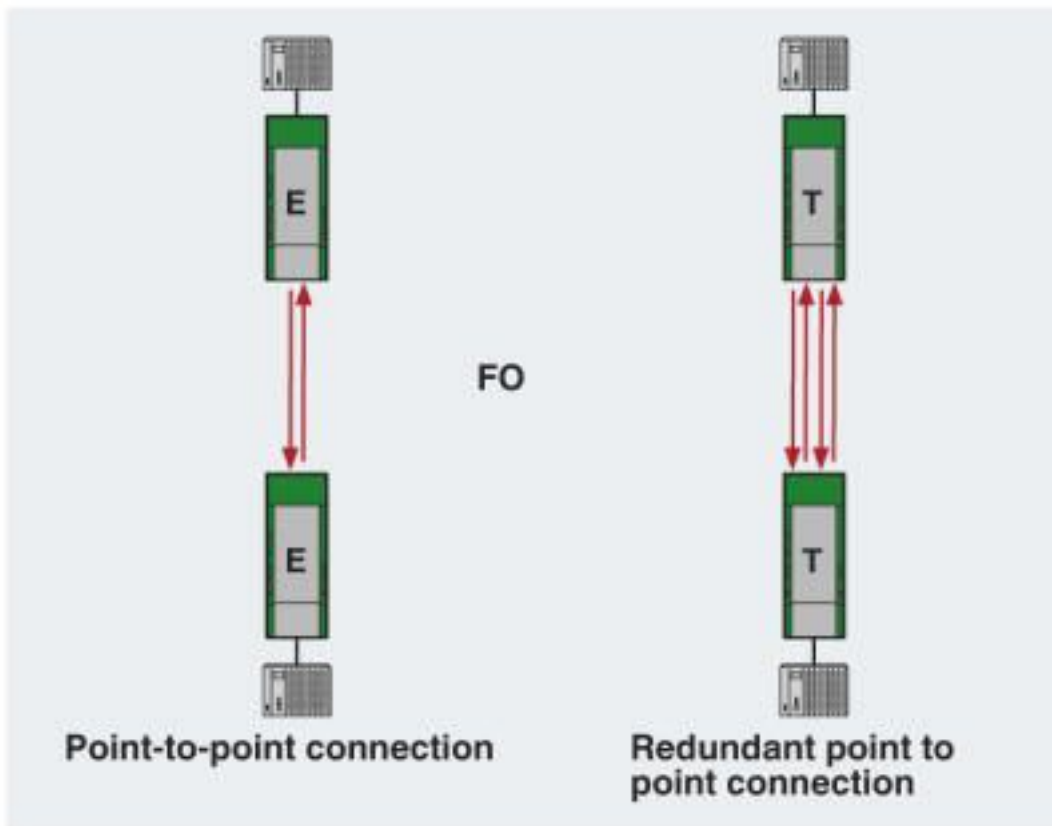
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV
Standards/regulations	EN 55011
	EN 61000-4-6

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

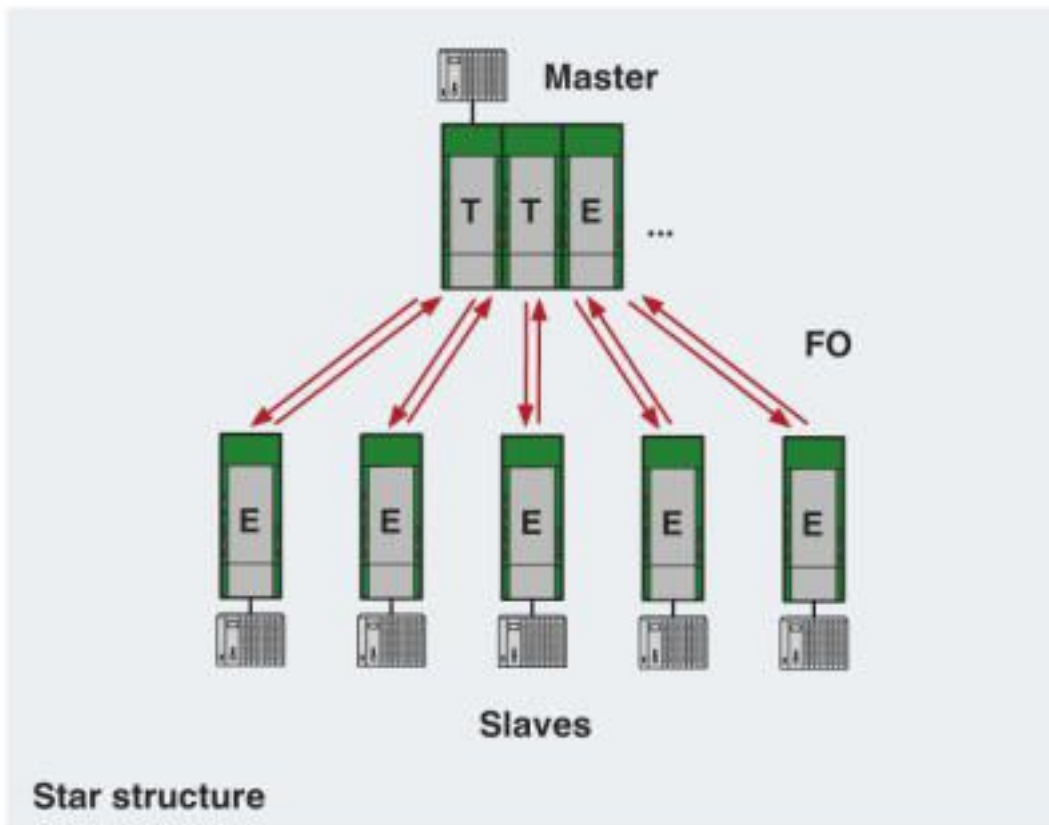
Application drawing



Redundant point-to-point connection

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Application drawing



Star structure

## Classifications

eCl@ss

eCl@ss 10.0.1	19170132
eCl@ss 4.0	27230200
eCl@ss 4.1	27230200
eCl@ss 5.0	27230200
eCl@ss 5.1	27230200
eCl@ss 6.0	19179200
eCl@ss 7.0	19179290
eCl@ss 8.0	19179290
eCl@ss 9.0	19170114

ETIM

ETIM 2.0	EC001423
ETIM 3.0	EC001423
ETIM 4.0	EC001423
ETIM 5.0	EC000310

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## Classifications

### ETIM

ETIM 6.0	EC001467
ETIM 7.0	EC001467

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43222604
UNSPSC 18.0	43223323
UNSPSC 19.0	43223323
UNSPSC 20.0	43223323
UNSPSC 21.0	43223323

## Approvals

### Approvals

#### Approvals

UL Listed / UL Recognized / cUL Recognized / cUL Listed / cULus Recognized / cULus Listed

#### Ex Approvals

#### ATEX

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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UL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Recognized		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
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## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

### Approvals

cULus Recognized



cULus Listed



### Accessories

#### Accessories

##### Data cable by the meter

FO cable - PSM-LWL-GDO- 50/125 - 2799432



Fiberglass cable, duplex 50/125  $\mu\text{m}$ , by the meter, without connector, for outdoor installation

FO cable - PSM-LWL-GDM-RUGGED- 50/125 - 2799322



Fiber glass cable, duplex 50  $\mu\text{m}$ /125  $\mu\text{m}$ , by the meter, without male connector, for installation in stationary systems and machines

##### Data cable preassembled

FO patch cable - FL MM PATCH 1,0 LC-SC - 2989161



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 LC-SC - 2989268



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

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### Accessories

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#### FO patch cable - FL MM PATCH 5,0 LC-SC - 2901800



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

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#### FO patch cable - FL MM PATCH 1,0 SC-SC - 2901805



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

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#### FO patch cable - FL MM PATCH 2,0 SC-SC - 2901807



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

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#### FO patch cable - FL MM PATCH 5,0 SC-SC - 2901808



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

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#### FO patch cable - FL MM PATCH 1,0 SC-ST - 2901809



Assembled FO cable, break out cable, multimode fiberglass 50/125 µm (OM2), connector: SC duplex/B-FOC(ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

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## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

### Accessories

#### FO patch cable - FL MM PATCH 2,0 SC-ST - 2901810



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: SC duplex/B-FOC(ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

#### FO patch cable - FL MM PATCH 5,0 SC-ST - 2901811



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: SC duplex/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

#### FO patch cable - FL MM PATCH 1,0 SC-SCRJ - 2901812



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

#### FO patch cable - FL MM PATCH 2,0 SC-SCRJ - 2901813



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

#### FO patch cable - FL MM PATCH 5,0 SC-SCRJ - 2901814



Assembled FO cable, break out cable, multimode fiberglass 50/125  $\mu\text{m}$  (OM2), connector: SC duplex/SC-RJ, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

### Accessories

#### FO patch cable - FL SM PATCH 1,0 LC-SC - 2989190



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber)  
connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

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#### FO patch cable - FL SM PATCH 2,0 LC-SC - 2989297



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber)  
connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

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#### FO patch cable - FL SM PATCH 5,0 LC-SC - 2901827



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber)  
connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

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#### FO patch cable - FL SM PATCH 1,0 SC-SC - 2901829



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber)  
connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

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#### FO patch cable - FL SM PATCH 2,0 SC-SC - 2901830



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber)  
connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

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## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

### Accessories

#### FO patch cable - FL SM PATCH 5,0 SC-SC - 2901831



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: SC duplex/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

#### FO patch cable - FL SM PATCH 1,0 SC-ST - 2901832



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: SC duplex/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

#### FO patch cable - FL SM PATCH 2,0 SC-ST - 2901833



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: SC duplex/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

#### FO patch cable - FL SM PATCH 5,0 SC-ST - 2901834



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 µm (OS2, Low Water Peak Fiber) connector: SC duplex/B-FOC(ST®), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 5 m

#### FO patch cable - FOC-GDM-RUGGED-1016/IP20/... - 2901558



Robust GOF installation cable for assembly (IP20 heads only) for installation in stationary systems and machines, aramid strain-relief elements, with individual elements made from FRNC material, halogen-free, ozone and UV resistant, with a polyurethane (PUR) outer sheath

## FO converters - PSI-MOS-RS232/FO1300 E - 2708588

### Accessories

FO patch cable - FOC-GDM-RUGGED-1016/... - 1402193



rugged GOF installation cable for inner areas with highly tear-proof aramid strain-relief elements. Individual elements consist of highly flexible FRNC material. The cable is halogen-free, ozone and UV resistant and has a rugged polyurethane (PUR) outer sheath.

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FO patch cable - FOC-GDO-1017/IP20/... - 2901559



Highly rugged GOF round cable (IP20 heads only) for assembly and for outdoor installation with integrated moisture barrier as well as rodent-proof scrim. Individual elements made from highly flexible FRNC material. The wire is ozone and UV resistant with a very rugged polyethylene outer sheath.

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