

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



Fiber optic converter with integrated optical diagnostics, alarm contact, for PROFIBUS up to 12 Mbps, termination device with one fiber optic interface (SC-Duplex), 1300 nm, for fiberglass cable

Product description

The **PSI-MOS-PROFIB/FO...** devices convert copper-based PROFIBUS interfaces to fiber optics. The integrated optical diagnostics allow permanent monitoring of the FO paths during installation and also during operation. The floating switch contact is activated when the signal output on the fiber optic paths drops to a critical level. The **PSI-MOS-PROFIB/FO... E** terminal devices convert a PROFIBUS interface for a **FO cable**. They are ideal for point-to-point connections.

Your advantages

- Connections can be plugged in via a COMBICON screw terminal block
- Supply voltage and data signals routed through the 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
- Redundant power supply possible by means of optional system power supply unit
- High-quality electrical isolation between all interfaces (PROFIBUS // fiber optic ports // power supply // DIN rail connector)
- Approved for use in zone 2
- Floating switch contact for advance warning of critical FO paths
- Integrated optical diagnostics for continuous monitoring of FO paths
- Bit retiming for any cascading depth
- Suitable for all data rates up to 12 Mbps

Commercial data

Item number	2708559
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN06
Product key	DNC211
Catalog page	Page 431 (C-6-2019)
GTIN	4046356174060
Weight per piece (including packing)	234 g
Weight per piece (excluding packing)	187.38 g
Customs tariff number	85176200

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Country of origin	DE
-------------------	----

Technical data

Notes

Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
------------	---

Product properties

Product type	Media converter
MTTF	849 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	392 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	163 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
MTBF	406 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	92 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Electrical properties

Electrical isolation	VCC // RS-485
Maximum power dissipation for nominal condition	1.32 W
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)

Supply

Supply voltage range	18 V DC ... 32 V DC (via pluggable COMBICON screw terminal block)
Nominal supply voltage	24 V DC (in acc. with UL)
Typical current consumption	55 mA (24 V DC)
Max. current consumption	90 mA
	≤ 2 A (For operation in a joining station, via the DIN rail connector)

Output data

Switching

Output name	Relay output
Output description	Alarm output
Number of outputs	1
Maximum switching voltage	60 V DC (Resistive Load, General Load)
	30 V AC (Resistive load)
	42 V AC (peak, resistive load)
Limiting continuous current	0.46 A

Connection data

Supply

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Connection method	COMBICON plug-in screw terminal block
Stripping length	7.00 mm
Tightening torque	0.56 Nm ... 0.79 Nm

Interfaces

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Bit delay	< 1 bit (DIP 7 = OFF, standard operation)
	11 bit (DIP 7 = ON, redundancy operation)
Signal	PROFIBUS

Data: optical FO

No. of channels	1
Transmit capacity, minimum	-3.4 dBm (50/125 µm, multimode fiberglass)
	-4.7 dBm (62.5/125 µm, multimode fiberglass)
	-5.5 dBm (9/125 µm, singlemode fiberglass)
Transmission length incl. 3 dB system reserve	25 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 protocol	Protocol-transparent to the RS-485 interface
Connection method	SC duplex
Wavelength	1300 nm
Minimum receiver sensitivity	-25.5 dBm (Multi mode)
	-26.5 dBm (Singlemode)
Maximum receiver sensitivity	0 dBm
Transmission medium	Multi-mode fiberglass
	Single-mode fiberglass

Data: PROFIBUS acc. to IEC 61158, RS-485 2-wire, half duplex, automatic control

Serial transmission speed	≤ 12 Mbps
Connection method	D-SUB-9 female connector
Transmission length	≤ 1200 m (depending on the data rate, with shielded, twisted pair data cable)
Single conductor/terminal point, rigid	0.2 mm ² ... 2.5 mm ²
Single-wire/terminal point, flexible	0.2 mm ² ... 2.5 mm ²
Max. AWG conductor cross section, flexible	14
Min. AWG conductor cross section, flexible	24
Single-wire/terminal point, rigid AWG max.	14
Single-wire/terminal point, rigid AWG min.	24
Transmission medium	2-wire twisted pair, shielded
File format/coding	UART (11 Bit, NRZ)
Data direction switching	Automatic control
Output nominal voltage	5 V DC ±0.25 (50 mA)

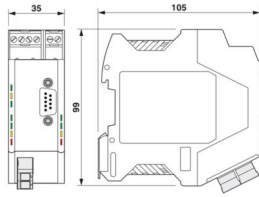
Dimensions

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Dimensional drawing	
Width	35 mm
Height	105 mm
Depth	106 mm

Material specifications

Color (Housing)	gray (RAL 7042)
Material Housing	PA 6.6-FR

Cable/line

FO cable

Fiber types	50/125 µm
	62.5/125 µm
	9/125 µm
	Fiberglass

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
	≤ 2000 m (Hazardous locations)
Permissible humidity (operation)	30 % ... 95 % (non-condensing)

Approvals

CE

Certificate	CE-compliant
-------------	--------------

ATEX

Identification	⊕ II 3 G Ex ec IIC T4 Gc
Certificate	UL 21 ATEX 2550X
Note	Please follow the special installation instructions in the documentation!

IECEX

Identification	Ex ec IIC T4 Gc
----------------	-----------------

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Certificate	IECEX ULD 21.00013X
-------------	---------------------

UL, USA/Canada

Identification	Class I, Zone 2, AEx ec IIC T4 Gc
	Ex ec IIC T4 Gc X
	Class I, Div. 2, Groups A, B, C, D

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A
----------------	----------------------------------

EMC data

Noise immunity	EN 61000-6-2:2005
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011

Electrostatic discharge

Standards/regulations	EN 61000-4-2
-----------------------	--------------

Electrostatic discharge

Contact discharge	± 6 kV
Discharge in air	± 8 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3
-----------------------	--------------

Electromagnetic HF field

Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4
-----------------------	--------------

Fast transients (burst)

Input	± 2 kV
Signal	± 2 kV
Comments	Criterion B

Surge current load (surge)

Standards/regulations	EN 61000-4-5
-----------------------	--------------

Surge current load (surge)

Input	± 0.5 kV
Signal	± 1 kV
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6
-----------------------	--------------

Conducted interference

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 55011
Comments	Class A, industrial applications

Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Standards and regulations

Free from substances that could impair the application of coating	in accordance with VW-AUDI-Seat central standard P-VW 3.10.7 57 65 0
---	--

Mounting

Mounting type	DIN rail mounting
---------------	-------------------

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Classifications

ECLASS

ECLASS-11.0	19170411
ECLASS-12.0	19170411
ECLASS-13.0	19170411

ETIM

ETIM 9.0	EC001467
----------	----------

UNSPSC

UNSPSC 21.0	43201500
-------------	----------

PSI-MOS-PROFIB/FO1300 E - FO converters



2708559

<https://www.phoenixcontact.com/us/products/2708559>

Environmental product compliance

China RoHS	Environmentally Friendly Use Period = 50 years For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"
------------	--

Phoenix Contact 2024 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com