

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

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.



FO converter with integrated optical diagnostics, alarm contact, for RS-232 interfaces up to 115.2 kbps, terminal device with one FO interface (FSMA), 660 nm, for polymer/PCF fiber cable

Your advantages

- Supply voltage and data signals routed through the DIN rail connectors
- Connections can be plugged in via 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
- Intrinsically safe fiber optic interface (Ex op is) for direct connection to devices in zone 1
- Integrated optical diagnostics for continuous monitoring of FO paths
- Floating switch contact for advance warning of critical FO paths
- Automatic data rate detection for all data rates up to 115.2 kbps
- Shipbuilding approval in accordance with DNV GL

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Commercial Data

Item number	2708368
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DNC215
Catalog Page	Page 439 (C-6-2019)
GTIN	4017918974060
Weight per Piece (including packing)	243.2 g
Weight per Piece (excluding packing)	233.3 g
Customs tariff number	85176200
Country of origin	DE

Technical Data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
----------	---

Utilization restriction

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

Product properties

Product type	Media converter
MTTF	1093 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	468 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	194 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)
MTBF	485 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	91 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

Electrical properties

Electrical isolation	VCC // V.24 (RS-232)
Maximum power dissipation for nominal condition	2.4 W
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)

Supply

Supply voltage range	18 V DC ... 30 V DC
Nominal supply voltage	24 V DC (in acc. with UL)
Typical current consumption	100 mA (24 V DC)
Max. current consumption	120 mA
Connection method	COMBICON plug-in screw terminal block

Output data

Switching

Output name	Relay output
Output description	Alarm output
Number of outputs	1
Maximum switching voltage	60 V DC
	42 V AC
Limiting continuous current	0.46 A

Connection data

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Supply

Connection method	COMBICON plug-in screw terminal block
Torque	0.56 Nm ... 0.79 Nm

Interfaces

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Signal	Modbus
Transmission channels	2 (1/1), RxD, TxD, full duplex

Data: optical FO

Transmit capacity, minimum	-4.6 dBm (980/1000 µm)
	-16.6 dBm (200/230 µm)
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 protocol	Transparent to protocol for RS-232 interface
Connection method	F-SMA
Wavelength	660 nm
Minimum receiver sensitivity	-31.2 dBm
Transmission medium	Polymer fiber
	PCF fiber

Data: V.24 (RS-232) interface in acc. with ITU-T V.28, EIA/TIA-232, DIN 66259-1

Serial transmission speed	4.8 Kbps ... 115.2 Kbps
Connection method	D-SUB 9 plug
Transmission length	≤ 15 m
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section solid min.	0.2 mm ²
Conductor cross section AWG max.	14
Conductor cross section AWG min.	24
Transmission medium	Copper
File format/coding	UART (11 Bit, NRZ)
Data direction switching	Automatic control

Dimensions

Width	35 mm
Height	99 mm
Depth	105 mm

Material specifications

Color	green
-------	-------

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Material	PA 6.6-FR (Housing)
----------	---------------------

Cable / line

FO cable

Fiber types	980/1000 µm
	200/230 µm
	Polymer fiber
	PCF fiber

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)
Permissible humidity (operation)	30 % ... 95 % (non-condensing)

Approval data

CE

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

EAC

Identification	EAC
----------------	-----

ATEX

Identification	<input type="checkbox"/> II 3 G Ex nA nC IIC T4 Gc X
Note	Please follow the special installation instructions in the documentation!

ATEX, FO interface

Identification	<input type="checkbox"/> II (2) G [Ex op is Gb] IIC
	<input type="checkbox"/> II (2) D [Ex op is Db] IIIC
Certificate	PTB 06 ATEX 2042 U
Note	Please follow the special installation instructions in the documentation!

UL, USA / Canada

Identification	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

KC approval for South Korea

Certificate	KCC-REI-PCK-FL2708368
-------------	-----------------------

Corrosive gas test

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

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

Shipbuilding

Identification	DNV GL
----------------	--------

DNV GL data

Temperature	B
Humidity	A
Vibration	A
EMC	B
Enclosure	Required protection according to the Rules shall be provided upon installation on board

EMC data

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

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

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Conducted interference

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

Conducted interference

Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 55011
Comments	Class A, industrial applications
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

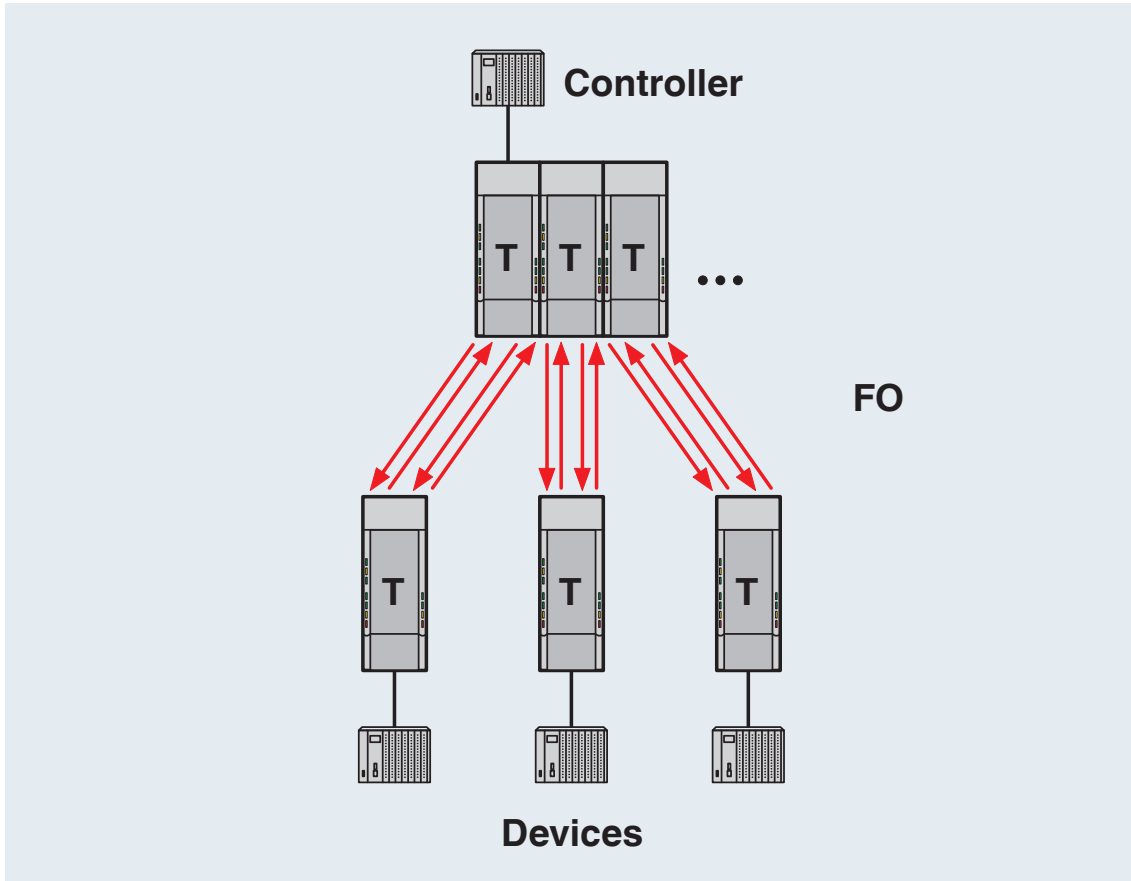
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
---	--

Mounting

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

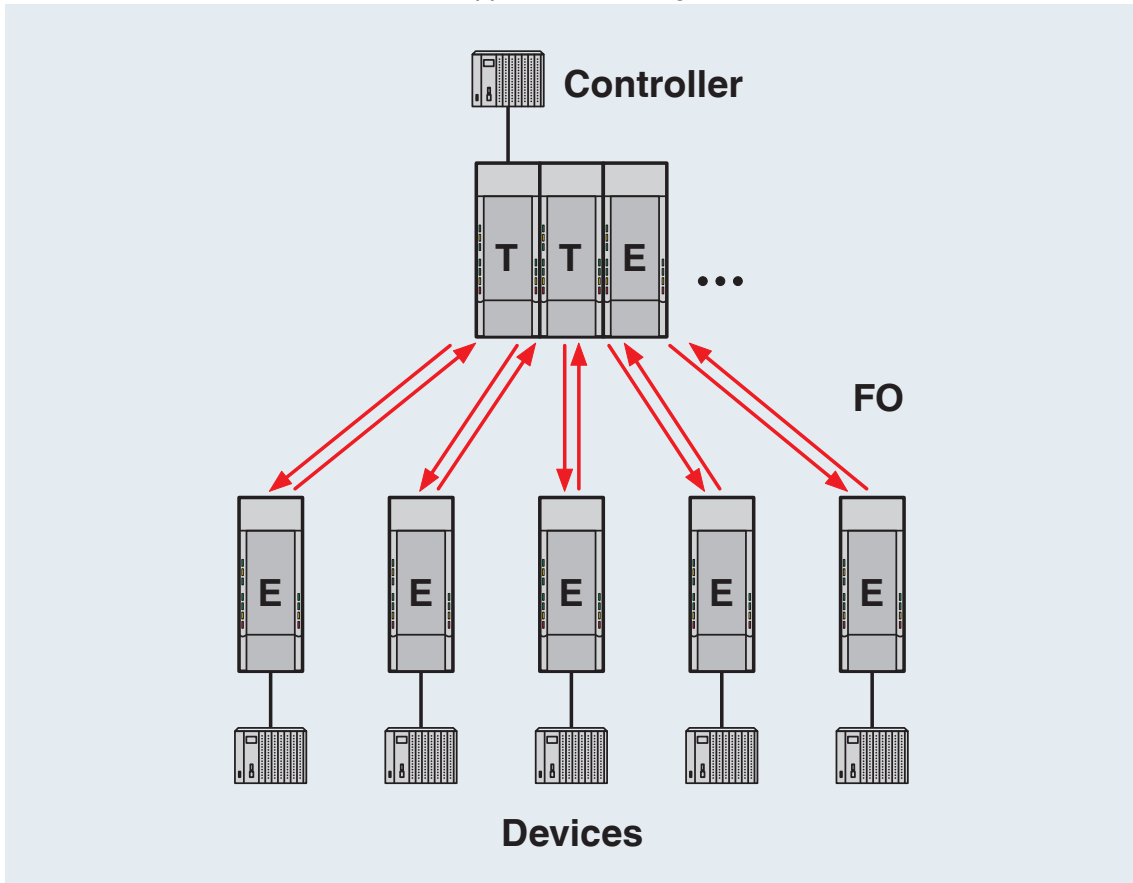
Drawings

Application drawing



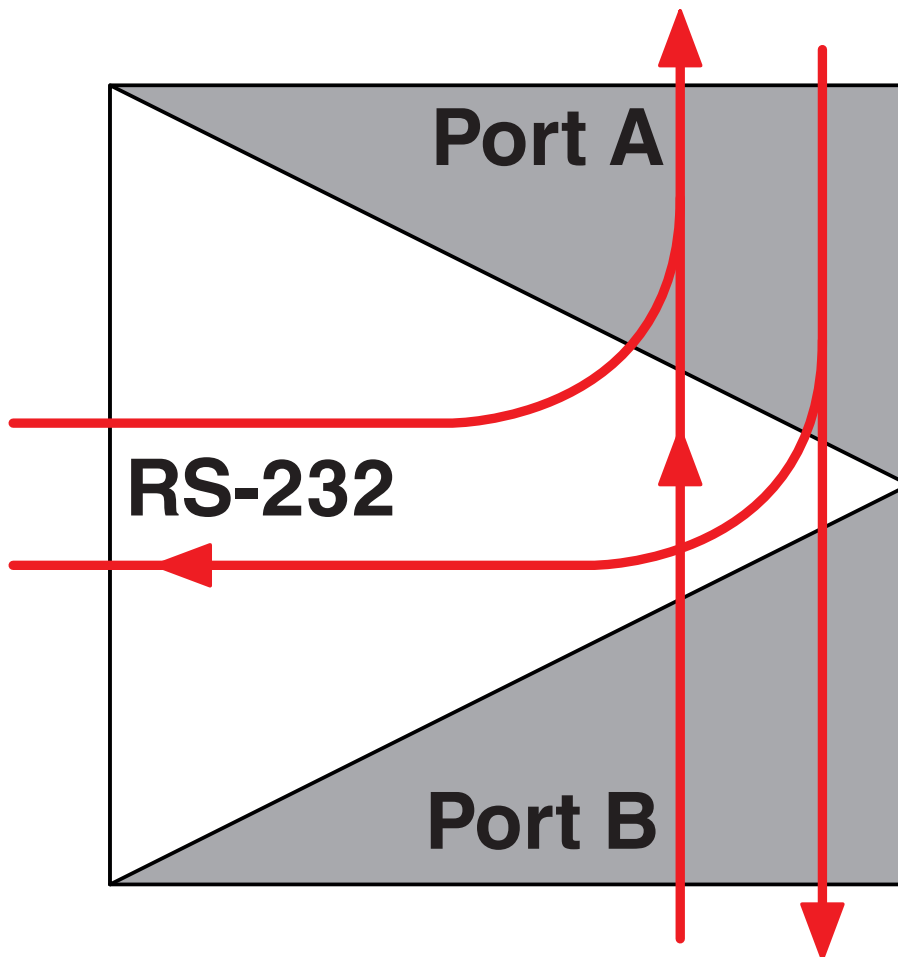
Redundant structure

Application drawing



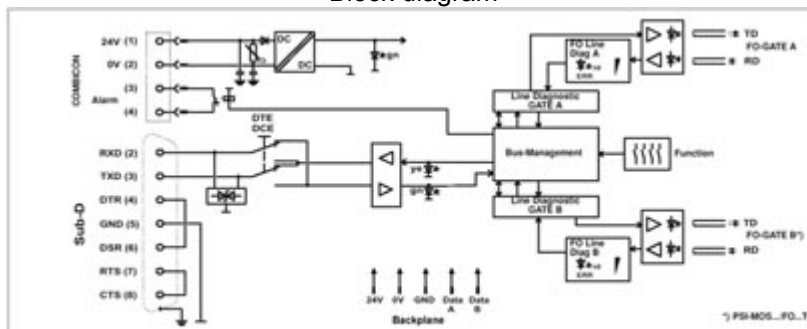
Star structure

Schematic diagram



Port assignment in a line structure

Block diagram

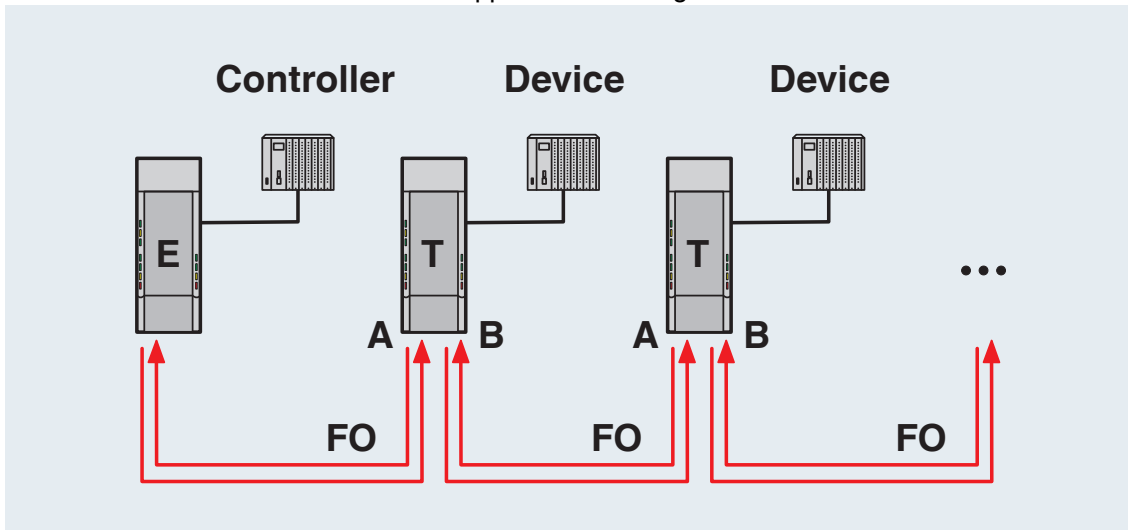


*) only with PSI-MOS.../FO...T

2708368

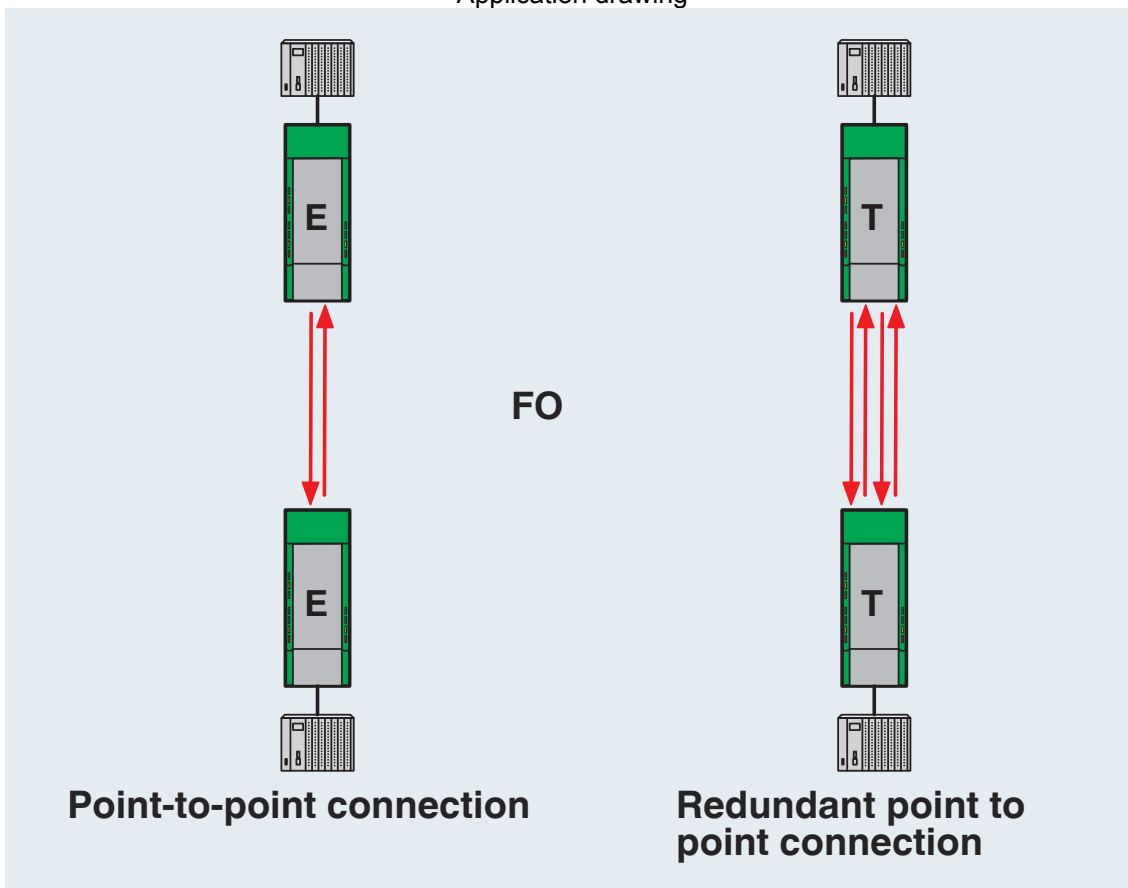
<https://www.phoenixcontact.com/il/products/2708368>

Application drawing



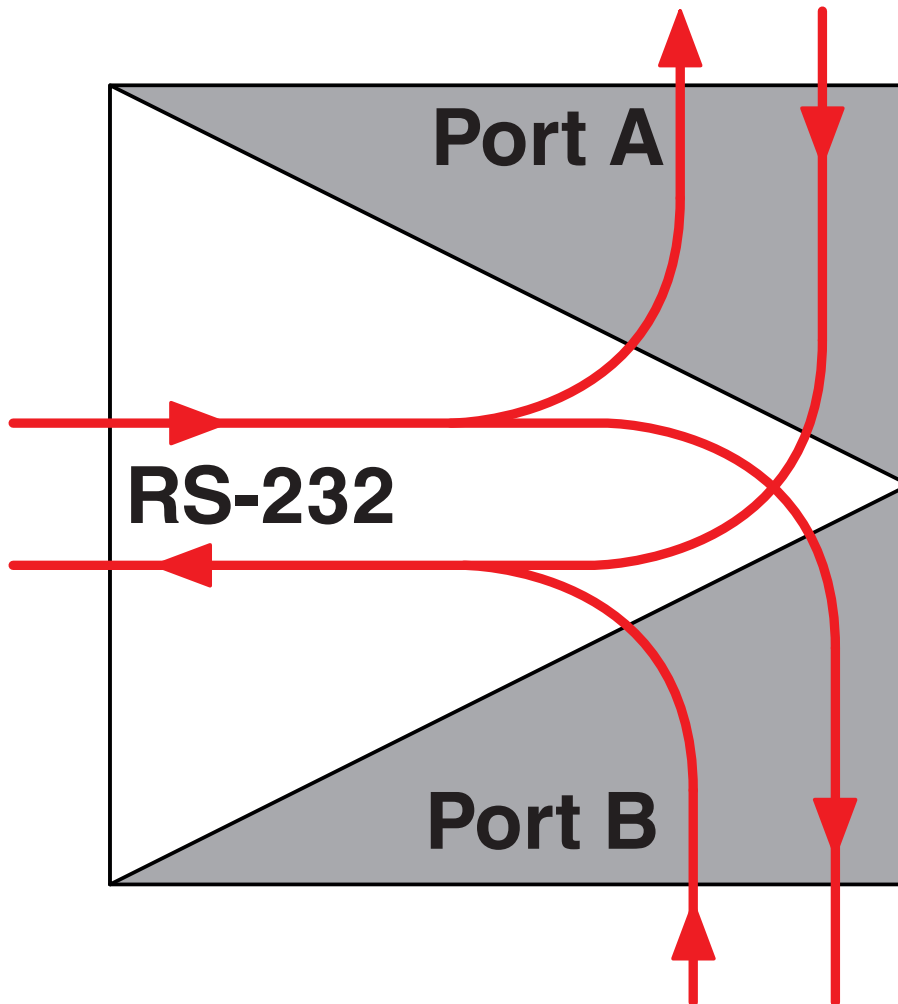
Controller-device line structure

Application drawing



Redundant point-to-point connection

Schematic diagram



Port assignment in star structures

2708368

<https://www.phoenixcontact.com/il/products/2708368>

Approvals

 **cUL Recognized**
Approval ID: FILE E 238705


 **UL Recognized**
Approval ID: FILE E 238705

 **EAC**
Approval ID: TR TS_D_01871-19

 **DNV GL**
Approval ID: TAA00001KR


	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
			-	-


 **KC**
Approval ID: KCC-REI-PCK-FL270836

 **ATEX**
Approval ID: PTB 06 ATEX 2042U

	Nominal Voltage U_N	Nominal Current I_N	Cross Section AWG	Cross Section mm^2
			-	-

 **ATEX**
Approval ID: PxCIF06ATEX2708261X

 **cUL Listed**
Approval ID: FILE E 199827

 **UL Listed**
Approval ID: FILE E 199827

cULus Recognized

cULus Listed

FO converters - PSI-MOS-RS232/FO 660 E

2708368

<https://www.phoenixcontact.com/il/products/2708368>



FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Classifications

ECLASS

ECLASS-9.0	19170114
ECLASS-10.0.1	19170132
ECLASS-11.0	19170411

ETIM

ETIM 8.0	EC001467
----------	----------

UNSPSC

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

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Accessories

Measuring instrument

Measuring instrument - PSM-FO-POWERMETER - 2799539

<https://www.phoenixcontact.com/il/products/2799539>



Fiber optic measuring case, consisting of an optical power meter, F-SMA, B-FOC adapters, reference fibers and operating instructions

Assembly tool

Assembly tool - PSM-POF-KONFTOOL - 2744131

<https://www.phoenixcontact.com/il/products/2744131>



Polymer fiber DIY case, consisting of: Stripping knife, stripping pliers, polishing wheels for F-SMA and SC-RJ quick mounting connectors, polishing pad and emery paper

FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Assembly tool

Assembly tool - PSM-HCS-KONFTOOL - 2799526

<https://www.phoenixcontact.com/il/products/2799526>



PCF assembly kit for F-SMA quick mounting connectors, including stripping blade, stripping pliers, aramide yarn scissors, fiber stripper, microscope, fiber cleaving tool for standard HCS fibers, four F-SMA connectors for standard PCF fibers, and documentation

Assembly tool

Assembly tool - PSM-SET-FSMA-POLISH - 2799348

<https://www.phoenixcontact.com/il/products/2799348>



Polymer fiber polishing set, for F-SMA quick mounting connectors

2708368

<https://www.phoenixcontact.com/il/products/2708368>

Screwdriver

Screwdriver - SZS 0,4X2,5 VDE - 1205037

<https://www.phoenixcontact.com/il/products/1205037>

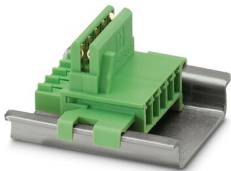


Screwdriver, slot-headed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

DIN rail bus connectors

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561

<https://www.phoenixcontact.com/il/products/2709561>



DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 5-pos.

FO converters - PSI-MOS-RS232/FO 660 E

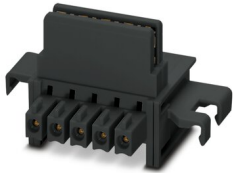
2708368

<https://www.phoenixcontact.com/il/products/2708368>

DIN rail bus connectors

DIN rail bus connectors - ME 17,5 TBUS 1,5/PP000-3,81 BK - 2890014

<https://www.phoenixcontact.com/il/products/2890014>

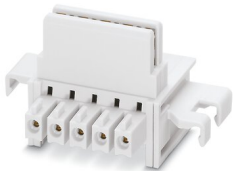


DIN rail connector for DIN rail mounting. Universal for TBUS housing. Gold-plated contacts, 2-pos.

DIN rail bus connectors

DIN rail bus connectors - ME 17,5 TBUS 1,5/ 5-ST-3,81 KMGY - 2713645

<https://www.phoenixcontact.com/il/products/2713645>



DIN rail connector, color: light gray, nominal current: 8 A (parallel contacts), rated voltage (III/2): 125 V, number of positions: 5, pitch: 3.81 mm, locking: without, mounting: without, type of packaging: packed in cardboard, Item with gold-plated contacts, bus connectors for connecting with electronics housings, 5 parallel contacts

FO converters - PSI-MOS-RS232/FO 660 E

2708368

<https://www.phoenixcontact.com/il/products/2708368>

D-SUB bus connector

D-SUB bus connector - SUBCON-PLUS 9/F - 2744241

<https://www.phoenixcontact.com/il/products/2744241>



D-SUB connector, 9-pos. female connector, two 35° cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

D-SUB bus connector

D-SUB bus connector - SUBCON-PLUS 9/M - 2744018

<https://www.phoenixcontact.com/il/products/2744018>



D-SUB connector, 9-pos., male connector, two 35° cable entries, universal type for all systems, pin assignment: 1, 2, 3, 4, 5, 6, 7, 8, 9 to one screw connection terminal block

FO converters - PSI-MOS-RS232/FO 660 E

2708368

<https://www.phoenixcontact.com/il/products/2708368>

Data cable

Data cable - PSM-KA9SUB9/BB/2METER - 2799474

<https://www.phoenixcontact.com/il/products/2799474>

RS-232 cable, 9-pos. D-SUB socket on 9-pos. D-SUB socket, 9-wire, 1:1



Fiber optic coupling

Fiber optic coupling - PSM-SET-FSMA-LINK/2 - 2799416

<https://www.phoenixcontact.com/il/products/2799416>

Coupling; set consisting of 2 couplings for connecting F-SMA plugs



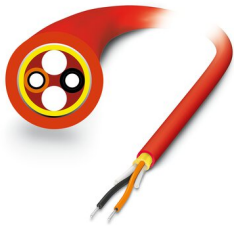
2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO patch cable

FO patch cable - FOC-RUGGED-1012/IP20/... - 2901548

<https://www.phoenixcontact.com/il/products/2901548>



Robust POF installation cable for assembly (IP20 heads only) for installation in stationary systems and machines with individual elements made of polyamide (PA), halogen-free, ozone and UV resistant, with reinforced polyurethane (PUR) outer sheath

FO patch cable

FO patch cable - FOC-RUGGED-FLEX-1013/IP20/... - 2901549

<https://www.phoenixcontact.com/il/products/2901549>



Highly flexible POF round cable (IP20 heads only) for use in drag chains. Individual elements made from extremely wear-resistant polyamide (PA). The cable is halogen-free, ozone and UV resistant, and has a rugged polyurethane (PUR) outer sheath.

2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO patch cable

FO patch cable - FOC-KDHEAVY-1011/IP20/... - 2901553

<https://www.phoenixcontact.com/il/products/2901553>



POF installation cable for assembly (IP20 heads only) for installation in stationary systems and machines with individual elements made of polyamide (PA), halogen-free, ozone and UV resistant, with a polyurethane (PUR) outer sheath

FO patch cable

FO patch cable - FOC-HCS-RUGGED-1014/IP20/... - 2901555

<https://www.phoenixcontact.com/il/products/2901555>



Robust PCF 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/FO 660 E

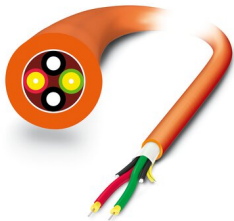
2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO patch cable

FO patch cable - FOC-HCS-RUGGED-1014/... - 1402191

<https://www.phoenixcontact.com/il/products/1402191>



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

FO patch cable

FO patch cable - FOC-HCSO-1015/IP20/... - 2901557

<https://www.phoenixcontact.com/il/products/2901557>



Highly rugged PCF 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.

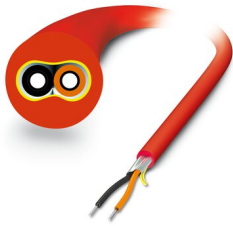
2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO cable

FO cable - PSM-LWL-KDHEAVY-980/1000 - 2744319

<https://www.phoenixcontact.com/il/products/2744319>



Polymer fiber cable, duplex 980 μm /1000 μm , medium-weight version for installation in stationary systems and machines, by the meter without male connector

FO cable

FO cable - PSM-LWL-RUGGED-980/1000 - 2744322

<https://www.phoenixcontact.com/il/products/2744322>



Polymer fiber cable, duplex 980 μm /1000 μm , heavy-weight version for installation in stationary systems and machines, by the meter without male connector

2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO cable

FO cable - PSM-LWL-RUGGED-FLEX-980/1000 - 2744335

<https://www.phoenixcontact.com/il/products/2744335>



Polymer fiber cable, duplex 980/1000 μm , heavy-weight, highly flexible version for flexible conduit applications, by the meter, without connector

FO cable

FO cable - PSM-LWL-HCS-RUGGED-200/230 - 2799885

<https://www.phoenixcontact.com/il/products/2799885>



PCF cable, duplex 200 μm /230 μm , by the meter without male connector, for installation in stationary systems and machines

FO converters - PSI-MOS-RS232/FO 660 E

2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO cable

FO cable - PSM-LWL-HCSO-200/230 - 2799445

<https://www.phoenixcontact.com/il/products/2799445>



PCF cable, duplex 200/230 μm , by the meter, without connector, for outdoor installation

Power supply unit

Power supply unit - QUINT4-SYS-PS/1AC/24DC/2.5/SC - 2904614

<https://www.phoenixcontact.com/il/products/2904614>



Primary-switched power supply unit, QUINT POWER, Screw connection, DIN rail mounting, input: 1-phase, output: 24 V DC / 2.5 A

FO converters - PSI-MOS-RS232/FO 660 E

2708368

<https://www.phoenixcontact.com/il/products/2708368>

FO connectors

FO connectors - PSM-SET-FSMA/4-KT - 2799720

<https://www.phoenixcontact.com/il/products/2799720>

F-SMA plug set for polymer fiber, for self assembly consisting of 4 quick mounting connectors with bend protection sleeve



FO connectors

FO connectors - PSM-SET-FSMA/4-HCS - 2799487

<https://www.phoenixcontact.com/il/products/2799487>

F-SMA plug set for PCF fiber, for self assembly consisting of 4 quick mounting connectors with bend protection sleeve



FO converters - PSI-MOS-RS232/FO 660 E



2708368

<https://www.phoenixcontact.com/il/products/2708368>

Interface converter

Interface converter - PSM-ME-RS232/RS485-P - 2744416

<https://www.phoenixcontact.com/il/products/2744416>



Interface converter, for converting RS-232 (V.24) to RS-422 (V.11) and RS-485, with electrical isolation, 2 channels, rail-mountable

Phoenix Contact 2022 © - all rights reserved

<https://www.phoenixcontact.com>

PHOENIX CONTACT Israel Ltd.
P.O.B. 1799 Industrial Park Hasharon
Quadima 60920
+972-9-8915700
info@phoenixcontact.co.il