

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

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's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



FO converter with integrated optical diagnostics, for DeviceNet™, CAN, CANopen® up to 800 kbps, extension/redundancy module, interfaces: 1 x FO (BFOC), 850 nm, for PCF/fiberglass cable (multimode)

### Product Description

The PSI-MOS-DNET... fiber optic transmission system enables DeviceNet™ and CANopen® users to benefit from simple and interference-free networking based on fiber optics. In addition, bus cable short circuits only affect the specific potential segment concerned. This increases overall availability, and improves flexibility when designing the bus topology. The use of fiber optic technology enables branch lines and star and tree structures to be created.


The 22.5 mm space-saving devices from the PSI-MOS-DNET CAN/FO... series feature an internal backplane. The maximum network expansion that can be achieved (sum total of copper and fiber optic cables) essentially depends on the data rate used.

### Your advantages

- ✓ Data rates of up to 800 kbps, set via DIP switches
- ✓ 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 fiber optic paths
- ✓ High-quality electrical isolation between all interfaces (DeviceNet // fiber optic port // power supply // backplane)
- ✓ Integrated bus termination resistor can be connected internally
- ✓ Integrated backplane for routing through the supply voltage and data signals
- ✓ Connections can be plugged in using a COMBICON screw terminal block
- ✓ Floating switch contact in the basic module for leading alarm generation in relation to critical fiber optic paths



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 943219
GTIN	4017918943219

### Technical data

#### Note

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

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

## Technical data

### Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 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 the manufacturer's declaration for altitude operation)
Degree of protection	IP20
Noise immunity	EN 61000-6-2:2005

### Interfaces

Interface 1	CAN interface, in accordance with ISO/IS 11898 for DeviceNet, CAN, CANopen
Connection method	Pluggable screw connection
File format/coding	Bit stuffing, NRZ
Transmission medium	Copper
Transmission length	≤ 5000 m (Dependent on the data rate and the protocol used)
Serial transmission speed	≤ 800 kbps

### Optical interface FO

Transmit capacity, minimum	-17.9 dBm (50/125 μm)
	-14.1 dBm (62,5/125 μm)
	-5.1 dBm (200/230 μm)
Minimum receiver sensitivity	-32.5 dBm (50/125 μm)
	-32.5 dBm (62,5/125 μm)
	-32.1 dBm (200/230 μm)
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2800 m (With F-K 200/230 10 dB/km with quick mounting connector)
	4800 m (with F-G 50/125 2.5 dB/km)
	4200 m (with F-G 62,5/125 3.0 dB/km)
Transmission medium	PCF fiber
	Multi-mode fiberglass
Connection method	B-FOC (ST®)

### Power supply

Nominal supply voltage	24 V DC (With UL approval)
Supply voltage range	10 V DC ... 30 V DC
Max. current consumption	100 mA
Typical current consumption	100 mA (24 V DC)
Connection method	Pluggable COMBICON screw terminal block through basic module

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

## Technical data

### General

Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Electrical isolation	VCC // CAN
Test voltage data interface/power supply	1.5 kV <sub>rms</sub> (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Noise emission	EN 55011
Net weight	107.98 g
Housing material	PA 6.6-FR
Color	green
MTBF	323 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	49 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))

### 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	ATEX, FO interface
Identification	# II (2) G [Ex op is Gb] IIC
	# II (2) D [Ex op is Db] IIIC
Certificate	PTB 06 ATEX 2042 U
Additional text	Please follow the special installation instructions in the documentation!
Designation	UL, USA/Canada
Identification	Class I, Zone 2, AEx nc IIC T5
	Class I, Div. 2, Groups A, B, C, D
Designation	PTB
	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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
Connection in acc. with standard	CUL

### Environmental Product Compliance

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

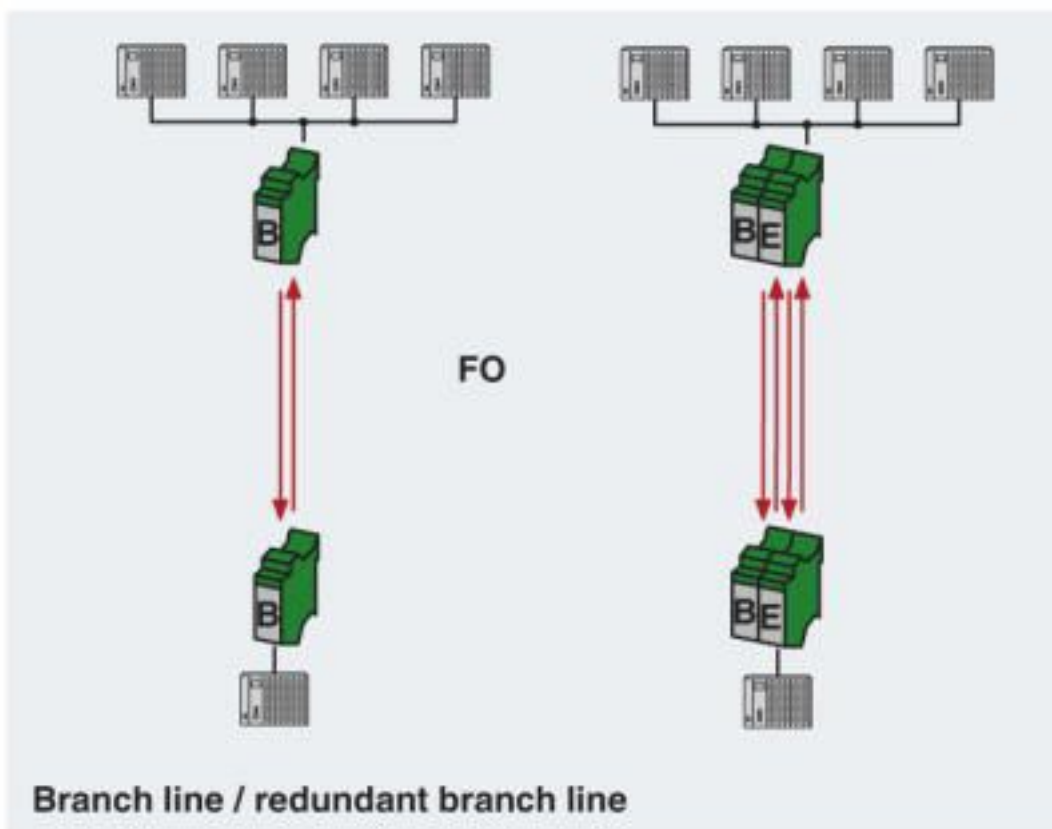
## Technical data

### 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

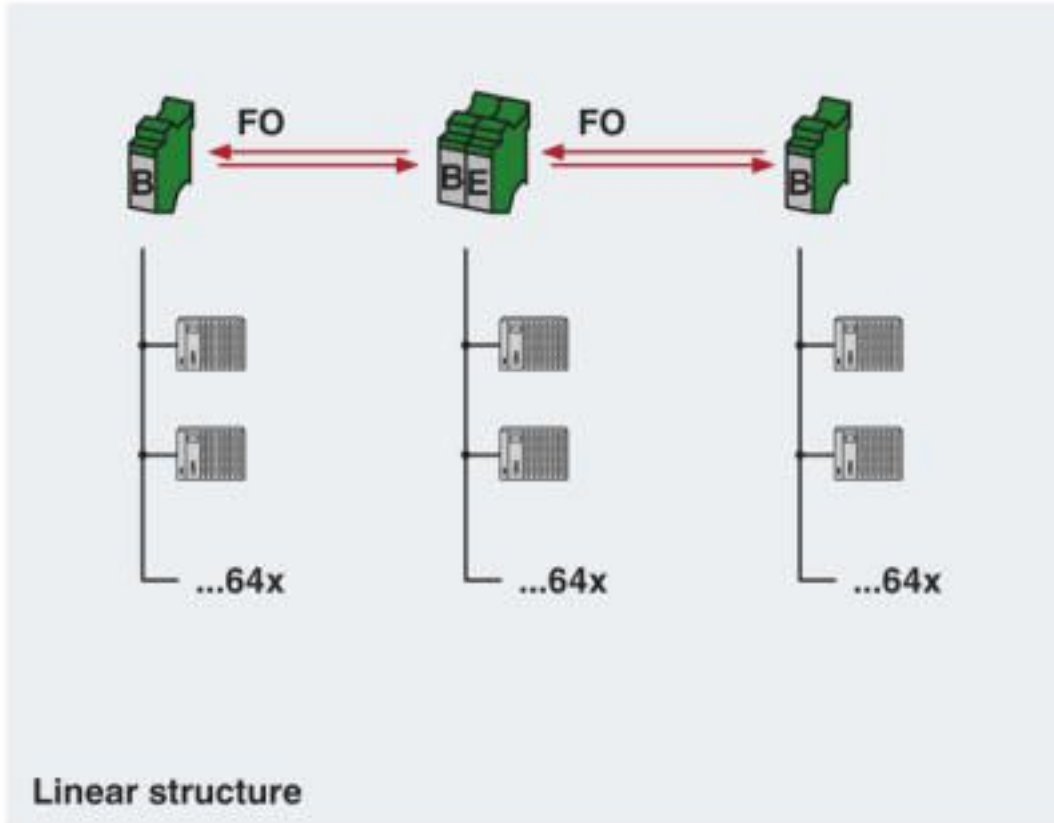
Application drawing



Branch line / redundant branch line

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

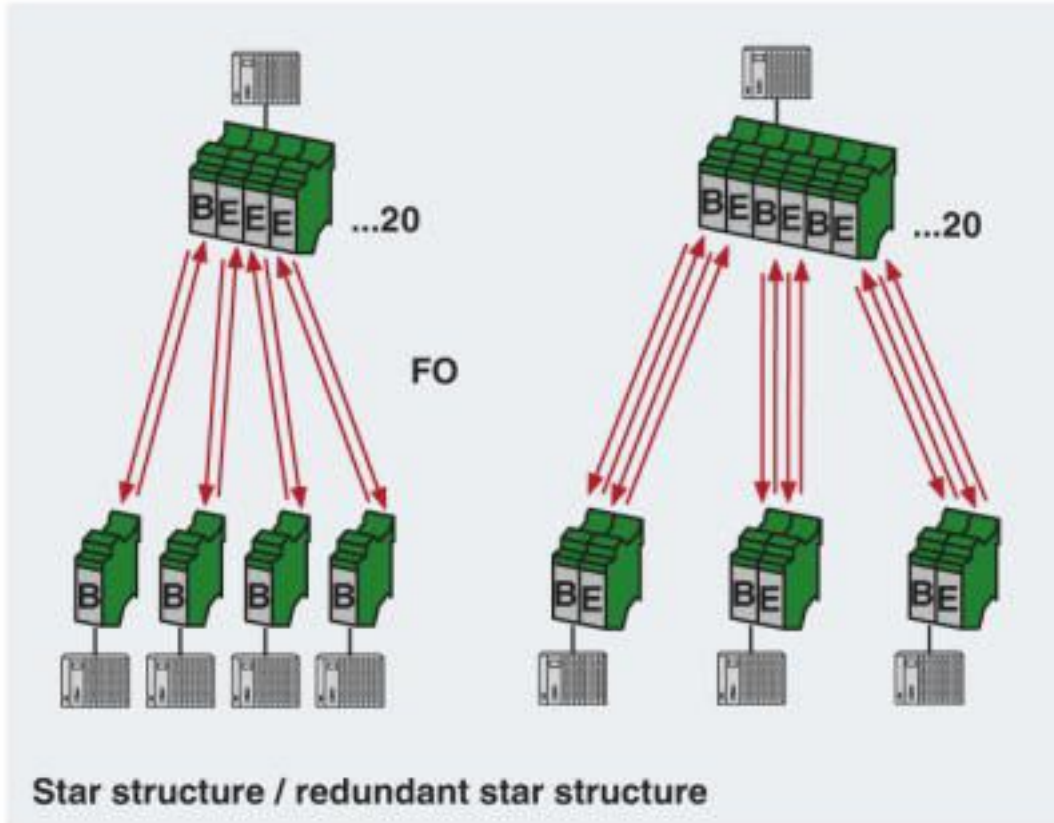
Application drawing



Line structure

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

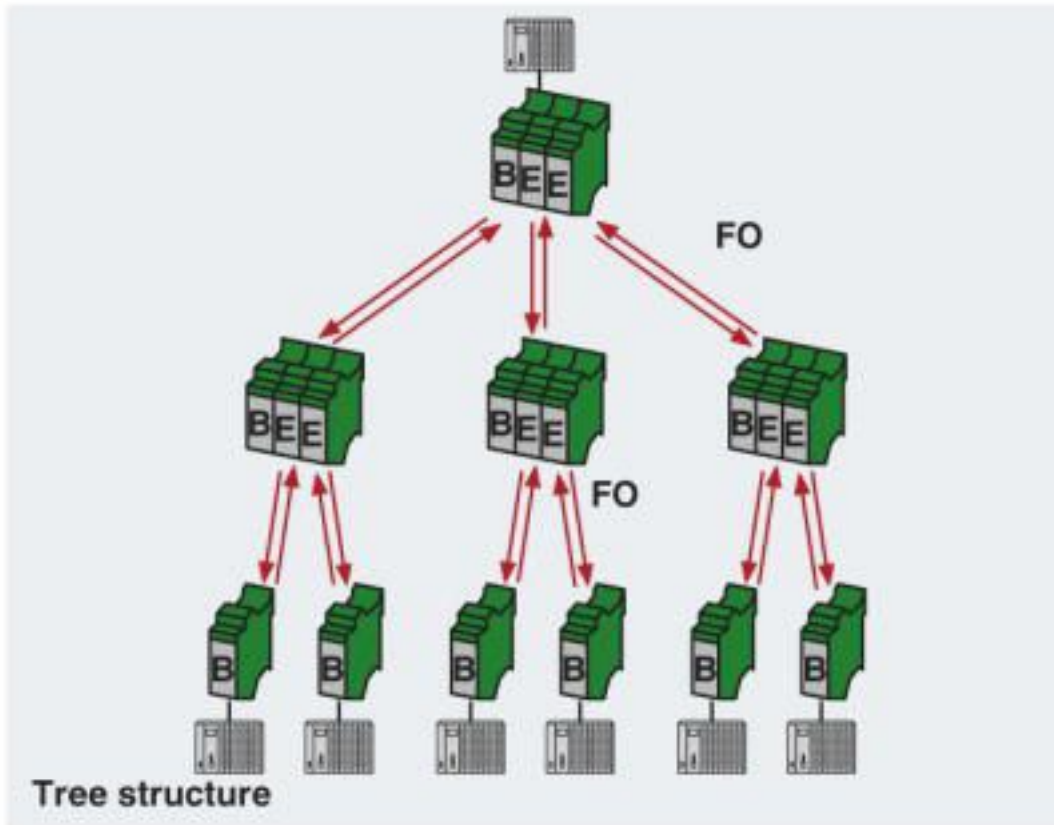
Application drawing



Star structure / redundant star structure

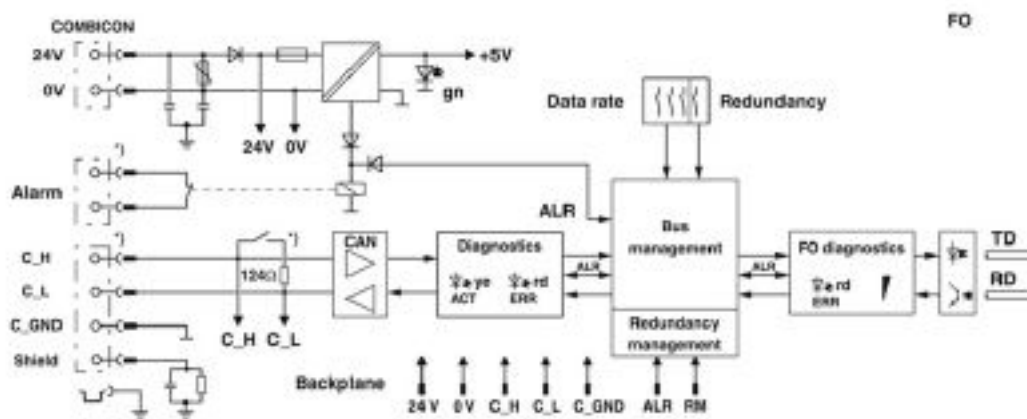
# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

Application drawing



Tree structure

Block diagram



\*) Only for basic module

\*) Only in the basic module

# FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

## 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
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 Recognized / cUL Recognized / cULus Recognized

---

#### Ex Approvals

UL Listed / null / null

---

### Approval details



## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Approvals

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
---------------	--	---	---------------

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
----------------	--	---	---------------

cULus Recognized			
------------------	--	--	--

### Accessories

#### Accessories

#### Data cable by the meter

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



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

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



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

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



Fiber glass cable, duplex 50 µm/125 µm, by the meter, without male connector, for installation in stationary systems and machines

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Accessories

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



Fiberglass cable, duplex 50/125 µm, by the meter, without connector, for outdoor installation

---

Bus system cable - SAC-5P-920/... - 1511504



Bus system cable, CANopen<sup>®</sup>, DeviceNet<sup>™</sup>, 4-position, PUR halogen-free, violet RAL 4001, shielded, cable length: Free entry (0.5 ... 400 m)

---

### Data cable preassembled

FO patch cable - FOC-HCS-RUGGED-1014/IP20/... - 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 patch cable - FOC-HCS-RUGGED-1014/... - 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 - FOC-HCSO-1015/IP20/... - 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.

---

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Accessories

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 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.

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.

### Data plug

Assembly tool - PSM-HCS-KONFTOOL/B-FOC - 2708465



HCS assembly kit for B-FOC(ST) quick mounting connectors, including stripping blade, stripping pliers, aramide yarn scissors, fiber stripper, microscope, fiber cleaving tool for standard HCS and HCS GI fibers, four B-FOC(ST) connectors for standard HCS fiber, and documentation

Measuring instrument - PSM-FO-POWERMETER - 2799539



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

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Accessories

Fiber optic coupling - PSM-SET-BFOC-LINK/2 - 2799429



Coupling; set consisting of 2 couplings for connecting B-FOC plugs

---

D-SUB bus connector - SUBCON-PLUS-CAN - 2744694



D-SUB connector, 9-pos. female connector, two cable entries < 35° to one terminal block row, bus system: CAN, CANopen®, SafetyBUS p up to 1 Mbps, termination resistor can be switched on via slide switch, pin assignment: 2, 3, 7; screw connection terminal blocks

---

D-SUB bus connector - SUBCON-PLUS-CAN/PG - 2708119



D-SUB connector, 9-pos. socket, cable entry < 35°, bus system: CAN, CANopen®, SafetyBUS p up to 1 Mbps, with PG D-SUB socket for connecting a programming device, termination resistor can be switched on via slide switch, pin assignment: 2, 3, 7, 9; screw terminal blocks

---

D-SUB bus connector - SUBCON-PLUS-CAN/AX - 2306566



D-SUB connector, 9-pos. female connector, axial version with two cable entries, bus system: CAN, CANopen, SafetyBUS p; pin assignment: 2, 3, 7; screw connection terminal blocks

---

FO connectors - PSM-SET-B-FOC/4-HCS - 2708481



B-FOC (ST) connector set for PCF fiber, for self assembly consisting of 4 quick mounting connectors with bend protection sleeve

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Accessories

D-SUB bus connector - SUBCON-PLUS-CAN/90/PG/M12 - 2902322



D-SUB plug, 9-pos., socket, with PG-D-SUB pin, assignment: 2, 3, 5, 6, 7, 9; two M12 cable glands (A-coded) under 90°. Bus system: CAN, CANopen®. Termination resistor via separate M12 terminator.

D-SUB bus connector - SUBCON-PLUS-CAN/90/M12 - 2902323



D-SUB plug, 9-pos., socket, assignment: 2, 3, 5, 6, 7, 9; two M12 cable glands (A-coded) under 90°. Bus system: CAN, CANopen®. Termination resistor via separate M12 terminator.

D-SUB bus connector - SUBCON-PLUS-CAN/35/PG/M12 - 2902324



D-SUB plug, 9-pos., socket, with PG-D-SUB pin, assignment: 2, 3, 5, 6, 7, 9; two M12 cable glands (A-coded) under 35°. Bus system: CAN, CANopen®. Termination resistor via separate M12 terminator.

D-SUB bus connector - SUBCON-PLUS-CAN/35/M12 - 2902325



D-SUB plug, 9-pos., socket, assignment: 2, 3, 5, 6, 7, 9; two M12 cable glands (A-coded) under 35°. Bus system: CAN, CANopen®. Termination resistor via separate M12 terminator.

D-SUB bus connector - SUBCON-PLUS-CAN/AX/M12 - 2902326



D-SUB plug, 9-pos., socket, assignment: 2, 3, 5, 6, 7, 9; two M12 cable glands (A-coded) under 180° (axial). Bus system: CAN, CANopen®. Termination resistor via separate M12 terminator.

## FO converters - PSI-MOS-DNET CAN/FO 850/EM - 2708096

### Accessories

#### D-SUB bus connector - SUBCON-PLUS-CAN - 2744694



D-SUB connector, 9-pos. female connector, two cable entries < 35° to one terminal block row, bus system: CAN, CANopen®, SafetyBUS p up to 1 Mbps, termination resistor can be switched on via slide switch, pin assignment: 2, 3, 7; screw connection terminal blocks

---

#### D-SUB bus connector - SUBCON-PLUS-CAN/PG - 2708119



D-SUB connector, 9-pos. socket, cable entry < 35°, bus system: CAN, CANopen®, SafetyBUS p up to 1 Mbps, with PG D-SUB socket for connecting a programming device, termination resistor can be switched on via slide switch, pin assignment: 2, 3, 7, 9; screw terminal blocks

---

#### D-SUB bus connector - SUBCON-PLUS-CAN/AX - 2306566



D-SUB connector, 9-pos. female connector, axial version with two cable entries, bus system: CAN, CANopen, SafetyBUS p; pin assignment: 2, 3, 7; screw connection terminal blocks

---

### Screwdriver tools

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



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

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Fibre Optic Transmitters, Receivers, Transceivers](#) category:*

*Click to view products by [Phoenix Contact](#) manufacturer:*

Other Similar products are found below :

[HFBR-1532ETZ](#) [STV.2413-574-00262](#) [TRPRG1VA1C000E2G](#) [TOTX1350\(V,F\)](#) [FTLX3813M349](#) [SCN-1428SC](#) [FWLF-1519-7D-49](#) [LTK-ST11MB](#) [HFD8003-002/XBA](#) [HFD3020-500-ABA](#) [FTLF1429P3BCVA](#) [S6846](#) [SCN-2638SC](#) [FTL410QE4N](#) [FTLC9555FEPM](#) [TQS-QG4H9-J83](#) [SCN-1570SC](#) [SCN-1601SC](#) [SCN-1338SC](#) [SFPPT-SR3-01](#) [HFD8003-500-XBA](#) [SCN-1383SC](#) [FTLC9555SEPM](#) [2333569-1](#) [LNK-ST11HB-R6](#) [FTLX6875MCC](#) [FTL4C1QL3L](#) [FTL4C1QE3L](#) [FTL4C1QL3C](#) [1019682](#) [1019683](#) [1019705](#) [HFBR-1415Z](#) [OPF693-2](#) [AFBR-5803ATQZ](#) [AFBR-5803ATZ](#) [PLR135/T9](#) [TGW-Q14BB-FCQ](#) [AFBR-5803AZ](#) [TQS-Q1LH8-XCA03](#) [TQS-Q1LH8-XCA05](#) [TQS-Q1LH8-XCA10](#) [TQS-Q1LH9-2CA](#) [HFBR-1414Z](#) [HFBR-1527Z](#) [HFBR-1528Z](#) [HFBR-2406Z](#) [HFBR-2505AZ](#) [HFBR-2532Z](#) [HFBR-1532Z](#)