

FO converters - PSI-MOS-RS232/FO 850 T - 2708423

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FO converter with integrated optical diagnosis, alarm contact, for RS-232 interfaces up to 115.2 kbps, T-coupler with two FO interfaces (BFOC), 850 nm, for HCS/fiber glass cable

Why buy this product

- Connections can be plugged in using a COMBICON screw terminal block
- Supply voltage and data signals routed through via DIN rail connectors
- High-quality electrical isolation between all interfaces (RS-232 // 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
- 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
- Automatic data rate detection for all data rates up to 115.2 kbps



Key commercial data

Packing unit	1
Minimum order quantity	1
Catalog page	Page 513 (IF-2011)
GTIN	 4 017918 974114
Custom tariff number	85176200
Country of origin	GERMANY

Technical data

Note:

Utilization restriction	The operation of this device does not meet the general EMC protection requirements for residential areas. Please take the appropriate precautions.
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Serial interface

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

Serial interface

Transmission medium	Copper
Transmission length	≤ 15 m
Connection method	D-SUB-9 male connector
Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	2.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Serial transmission speed	115.2 kbps (NRZ)

Optical interface FO

Transmit capacity, minimum	-4.6 dBm (200/230 μm)
Transmit capacity, minimum	-17.6 dBm (50/125 μm)
Transmit capacity, minimum	-13.6 dBm (62,5/125 μm)
Minimum receiver sensitivity	-33.20 dBm
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2800 m (with F-K 200/230 8 dB/km with quick mounting connector)
Transmission length incl. 3 dB system reserve	4200 m (with F-G 50/125 2.5 dB/km)
Transmission length incl. 3 dB system reserve	4800 m (with F-G 62,5/125 3.0 dB/km)
Transmission medium	HCS fiber
Transmission medium	Multi-mode fiberglass
Connection method	B-FOC (ST [®])

Fault warning output

Maximum switching voltage	60 V DC
Maximum switching voltage	42 V AC
Limiting continuous current	0.46 A

Power supply

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

General data

Transmission channels	2 (1/1), RxD, TxD, full duplex
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %
Width	35 mm
Height	99 mm
Depth	105 mm
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	30 % ... 95 % (no condensation)

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Technical data

General data

Altitude	5000 m (For restrictions see manufacturer's declaration)
Electrical isolation	(VCC // V.24 (RS-232))
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Noise emission	EN 55011
Noise immunity	EN 61000-6-2:2005
Degree of protection	IP20
Net weight	200 g
Housing material	PA 6.6-FR
Color	green
MTBF	177 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
MTBF	26 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
ATEX	# II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)
UL, USA / Canada	Class I, Zone 2, AEx nc IIC T5
UL, USA / Canada	Class I, zone 2, Ex nC nL IIC T5 X
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D

Classifications

ETIM

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

UNSPSC

UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	43201553
UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008

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

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Approvals

Approvals

Approvals


UL Recognized / cUL Recognized / cULus Recognized


Ex Approvals


ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Recognized 

cUL Recognized 

cULus Recognized 

Accessories

Accessories

Cable/conductor

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



HCS cable, duplex 200/230 μm , by the meter, without connector, for indoor installation

FO cable - PSM-LWL/HCS-RUGGED - 2744937



HCS cable, duplex 200/230 μm , by the meter, with connector, for indoor installation

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Accessories

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



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

FO cable - PSM-LWL/HCSO - 2744940



HCS cable, duplex 200/230 μm , by the meter, with connector, for outdoor installation

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



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

FO cable - PSM-LWL/GDM-RUGGED - 2744911



Fiberglass cable, duplex 50/125 μm , by the meter, with connector, for indoor installation

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



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

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Accessories

FO cable - PSM-LWL/GDO - 2744924



Fiberglass cable, duplex 50/125 μm , by the meter, with connector, for outdoor installation

Data cable - PSM-KA9SUB9/BB/0,5METER - 2708520



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

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



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

Data cable - PSM-KA 9 SUB 25/BB/2METER - 2761059



RS-232 cable, 9-pos. D-SUB female connector 25-pos on D-SUB female connector

Adapter cable - PSM-KAD-IL RS232/9SUB/B/0,8M - 2319200



Adapter cable to connect the IB IL RS232 and IB IL RS232-PRO Inline communication terminals to the interface converter, e.g. modem, Com server, Bluetooth or fiber optics.

FO patch cable - FL MM PATCH 1,0 LC-ST - 2989174



Assembled fiber optic cable, break-out cable, fiberglass multi-mode 50/125 μm , connector: LC/B-FOC (ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 m

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Accessories

FO patch cable - FL MM PATCH 2,0 LC-ST - 2989271



Assembled fiber optic cable, break-out cable, fiberglass multi-mode 50/125 μm , connector: LC/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 LC-ST - 2901801



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 μm , plug: LC / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

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



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 μm , connector: SC Duplex / B-FOC, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 m

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



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 μm , connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 1,0 ST-ST - 2901815



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 μm , connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 m

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Accessories

FO patch cable - FL MM PATCH 2,0 ST-ST - 2901816



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 ST-ST - 2901817



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL MM PATCH 1,0 ST-SCRJ - 2901820



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 µm, connector: SC Duplex / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL MM PATCH 2,0 ST-SCRJ - 2901821



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 µm, connector: B-FOC (ST) / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL MM PATCH 5,0 ST-SCRJ - 2901822



Assembled FO cable, break out cable, multi-mode fiberglass 50/125 µm, connector: B-FOC (ST) / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

FO patch cable - FL SM PATCH 1,0 LC-ST - 2989242



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

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Accessories

FO patch cable - FL SM PATCH 2,0 LC-ST - 2989349



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 μm , connector: LC/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 LC-ST - 2901828



Assembled FO cable, break out cable, single-mode fiberglass 9/125 μm , connector: LC / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

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



Assembled FO cable, break out cable, single-mode fiberglass 9/125 μm , connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 m

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



Assembled FO cable, break out cable, single-mode fiberglass 9/125 μm , connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 m

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



Assembled FO cable, break out cable, single-mode fiberglass 9/125 μm , connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

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Accessories

FO patch cable - FL SM PATCH 1,0 ST-ST - 2901836



Assembled FO cable, break out cable, single-mode fiberglass 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 m

FO patch cable - FL SM PATCH 2,0 ST-ST - 2901837



Assembled FO cable, break out cable, single-mode fiberglass 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL SM PATCH 5,0 ST-ST - 2901838



Assembled FO cable, break out cable, single-mode fiberglass 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 m

Plug/Adapter

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



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

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



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

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Accessories

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



D-SUB connector, 9-pos. female connector, two cable entries < 35°, 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 - SUBCON-PLUS 9/M - 2744018



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

Tools

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, 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

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



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

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Accessories

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



DIN rail power supply unit, primary-switched mode, slim design, output: 24 V DC / 1.5 A

Electronic housing - ME 17,5 TBUS 1,5/ 5-ST-3,81 GN - 2709561



DIN rail connector for DIN rail power supply unit, gold-plated contacts, for DIN rail mounting, 5-pos.

Electronic housing - ME 17,5 TBUS 1,5/PP000-3,81 BK - 2890014

Plug component

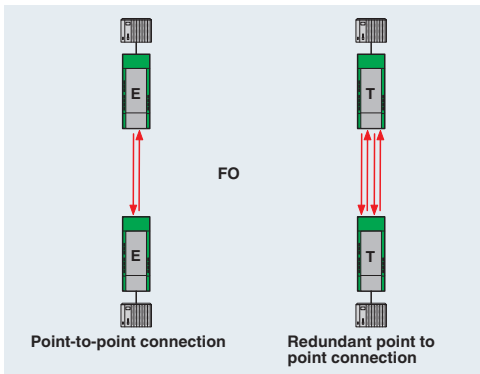
Interface converter - PSM-ME-RS232/RS485-P - 2744416



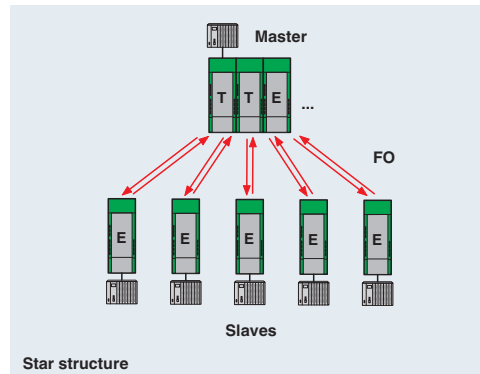
Interface converter, for converting RS-232 (V.24) to RS-422 (V.11) and RS-485, with electrical isolation, 2 channels, rail-mountable

Drawings

Application drawing

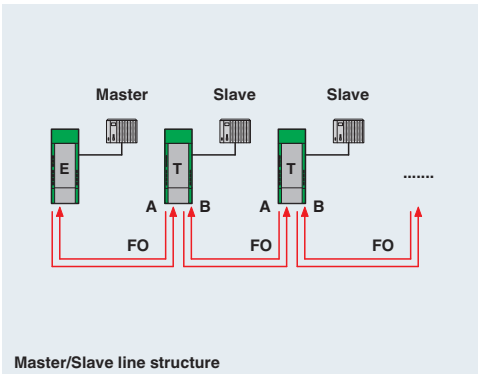


Application drawing



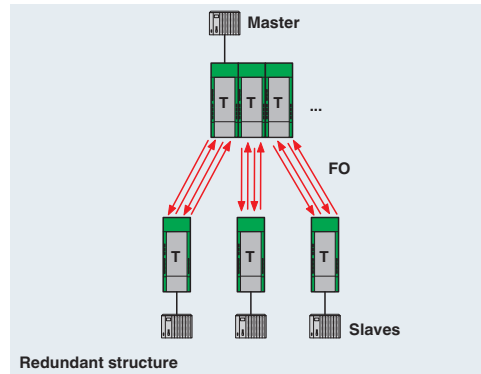
FO converters - PSI-MOS-RS232/FO 850 T - 2708423

Application drawing



Master/Slave line structure

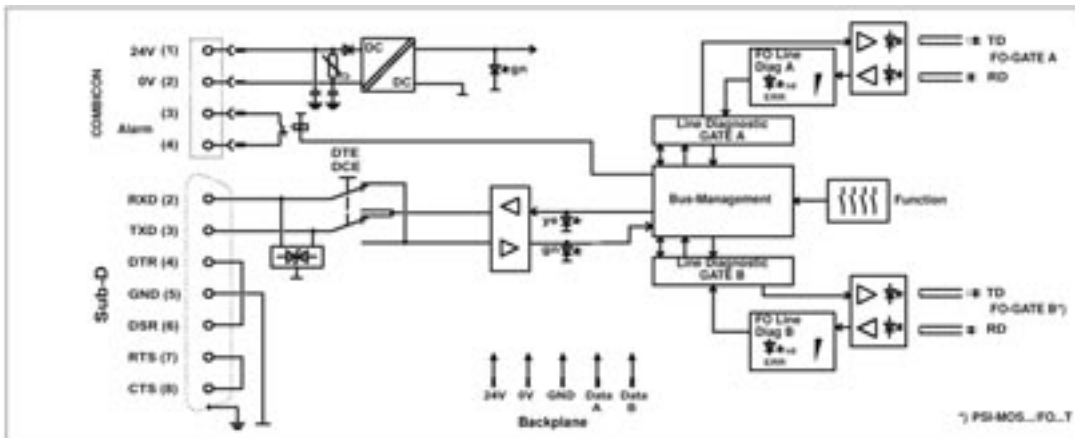
Application drawing



Redundant structure

Master/Slave line structure

Block diagram



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