

PSI-MOS-RS485W2/FO 850 E


Order No.: 2708339



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FO converter with integrated optical diagnosis, alarm contact, for RS-485 2-wire bus systems (SUCONET K, MODBUS ...) up to 500 kbps, NRZ coding, terminal equipment with an FO interface (BFOC), 850 nm, for HCS/fiber glass cable



Commercial data	
GTIN (EAN)	 4 017918 974039
sales group	H622
Pack	1 pcs.
Customs tariff	85176200
Catalog page information	Page 507 (IF-2011)

Product notes

WEEE/RoHS-compliant since:
04/18/2007



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Technical data	
Serial interface	
Interface 1	RS-485 interface, 2-wire
Operating mode	Semi-duplex
File format/coding	UART (11/10 bit switchable; NRZ), slip-tolerant

Data direction switching	Automatic control
Termination resistor	220 Ω can be connected; pull up/down 390 Ω
Transmission length	max. 1200 m (depending on the data rate, with shielded, twisted data cable)
Connection method	Pluggable screw connection
Serial transmission speed	4,8/ 9,6/ 19,2/ 38,4/ 57,6/ 75/ 93,75/ 115,2/ 136/ 187,5/ 375/ 500

Optical interface FO

Transmit capacity, minimum	-4 dBm (200/230 μm)
	-17.6 dBm (50/125 μm)
	-14 dBm (62,5/125 μm)
Minimum receiver sensitivity	-32.50 dBm (50/125 μm)
	-32.50 dBm (62,5/125 μm)
	-32.10 dBm (200/230 μm)
Maximum receiver sensitivity	-3 dBm (200/230 μm)
Wavelength	850 nm
Transmission length incl. 3 dB system reserve	2800 m (with F-K 200/230 8 dB/km with quick mounting connector)
	4200 m (with F-G 50/125 2.5 dB/km)
	3300 m (with F-G 62,5/125 3.0 dB/km)
Transmission protocol	Protocol-transparent to the RS-485 interface
Connection method	B-FOC (ST®)

Fault warning output

Maximum switching voltage	60 V DC
	42 V AC
Limiting continuous current	1 A

Power supply

Nominal supply voltage	24 V DC ± 25%
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

General data

Bit delay	≤ 1 Bit
Bit distortion, input	± 35 % (permitted)
Bit distortion, output	< 6.25 %

Width	35 mm
Height	99 mm
Depth	105 mm
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Ambient temperature (operation)	-20 °C ... 60 °C
Electrical isolation	(VCC // RS-485)
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
Housing material	PA V0, color green
Color	green
MTBF	272 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) 44 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
ATEX	Ex II 3 G Ex nAC IIC T4 X Ex II (2) GD [Ex op is] IIC (PTB 06 ATEX 2042 U)
UL, USA / Canada	Class I, zone 2, AEx nc IIC

Certificates / Approvals



Certification

CUL, UL

Certification Ex:

CUL-EX LIS, PTB, UL-EX LIS

Accessories

Item	Designation	Description
Cable/conductor		
2989174	FL MM PATCH 1,0 LC-ST	Assembled fiber optic cable, break-out cable, glass fiber multi-mode 50/125 µm, connector: LC/B-FOC (ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901809	FL MM PATCH 1,0 SC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901820	FL MM PATCH 1,0 ST-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901815	FL MM PATCH 1,0 ST-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2989271	FL MM PATCH 2,0 LC-ST	Assembled fiber optic cable, break-out cable, glass fiber multi-mode 50/125 µm, connector: LC/B-FOC (ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901821	FL MM PATCH 2,0 ST-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: B-FOC (ST) / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901816	FL MM PATCH 2,0 ST-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901801	FL MM PATCH 5,0 LC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, plug: LC / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901811	FL MM PATCH 5,0 SC-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901822	FL MM PATCH 5,0 ST-SCRJ	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: B-FOC (ST) / SCRJ, protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901817	FL MM PATCH 5,0 ST-ST	Assembled FO cable, break out cable, multi-mode glass fiber 50/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2989242	FL SM PATCH 1,0 LC-ST	Assembled fiber optic cable, break-out cable, glass fiber single mode 9/125 µm, connector: LC/B-FOC (ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 1 meter

2901832	FL SM PATCH 1,0 SC-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2901836	FL SM PATCH 1,0 ST-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 1 meter
2989349	FL SM PATCH 2,0 LC-ST	Assembled fiber optic cable, break-out cable, glass fiber single mode 9/125 µm, connector: LC/B-FOC (ST), degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901833	FL SM PATCH 2,0 SC-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901837	FL SM PATCH 2,0 ST-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 2 meters
2901828	FL SM PATCH 5,0 LC-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: LC / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901834	FL SM PATCH 5,0 SC-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: SC Duplex / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2901838	FL SM PATCH 5,0 ST-ST	Assembled FO cable, break out cable, single-mode glass fiber 9/125 µm, connector: B-FOC (ST) / B-FOC (ST), protection type: IP20, for installation in cable ducts or control cabinets, length: 5 meters
2744652	PSM-CABLE-PROFIB/FC	PROFIBUS cable, Fast Connect type, up to 12 Mbps (02YSY (ST)CY 1x2x22 AWG)
2799322	PSM-LWL-GDM-RUGGED-50/125	Glass fiber cable, duplex 50/125 µm, by the meter, without connector, for indoor installation
2799432	PSM-LWL-GDO- 50/125	Glass fiber cable, duplex 50/125 µm, by the meter, without connector, for outdoor installation
2799885	PSM-LWL-HCS-RUGGED-200/230	HCS cable, duplex 200/230 µm, by the meter, without connector, for indoor installation
2799445	PSM-LWL-HCSO-200/230	HCS cable, duplex 200/230 µm, by the meter, without connector, for outdoor installation
2744911	PSM-LWL/GDM-RUGGED	Glass fiber cable, duplex 50/125 µm, by the meter, with connector, for indoor installation
2744924	PSM-LWL/GDO	Glass fiber cable, duplex 50/125 µm, by the meter, with connector, for outdoor installation
2744937	PSM-LWL/HCS-RUGGED	HCS cable, duplex 200/230 µm, by the meter, with connector, for indoor installation

2744940	PSM-LWL/HCSO	HCS cable, duplex 200/230 µm, by the meter, with connector, for outdoor installation
General		
2709561	ME 17,5 TBUS 1,5/ 5-ST-3,81 GN	DIN rail connector for DIN rail power supply unit, gold-plated contacts, for DIN rail mounting, 5-pos.
2890014	ME 17,5 TBUS 1,5/PP000-3,81 BK	Plug component
2866983	MINI-SYS-PS-100-240AC/24DC/1.5	DIN rail power supply unit, primary-switched mode, slim design, output: 24 V DC / 1.5 A
2313096	PSI-REP-RS485W2	Modular repeater for electrical isolation and range increase in RS-485 2-wire bus systems up to 500 kbps, 4-way isolation, rail-mountable, supply 24 V DC
2313944	PSI-TERMINATOR-PB	Active termination resistor with redundant voltage supply for PROFIBUS and RS-485 bus systems. Compact design. Electrical isolation between supply and data interface. Bus termination can be switched. Integrated programming interface.
2760623	PSM PTK	Passive RS-485 T-distributor, fitted with one 9-pin D-SUB pin strip and two 9-pin D-SUB socket strips
2799364	PSM PTK-4	Passive RS-485 T-distributor, fitted with one 9-pin D-SUB pin strip and five 9-pin D-SUB socket strips
2744429	PSM-ME-RS485/RS485-P	Repeater, for potential separation and range increase in RS-485 2-wire bus systems, 3-way isolation, rail-mountable
Plug/Adapter		
2708481	PSM-SET-B-FOC/4-HCS	B-FOC (ST) connector set for HCS fiber, for self assembly consisting of 4 quick mounting connectors with bend protection sleeve
2799429	PSM-SET-BFOC-LINK/2	Coupling; set consisting of 2 couplings for connecting B-FOC plugs
2744241	SUBCON-PLUS 9/F	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
2744018	SUBCON-PLUS 9/M	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
2744267	SUBCON-PLUS F1	D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: Modbus, Modbus Plus, BITBUS, ARCNET, MULT/MININET (B&R), SYSTEM 2003 (B&R), P-NET, pin assignment: 1, 2, 3, 5, 6, 8; screw connection terminal blocks
2799490	SUBCON-PLUS F2	D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks
2744102	SUBCON-PLUS F5	D-SUB connector, 9-pos. female connector, two cable entries < 35°, bus system: Modbus, CEGELEC, pin assignment: 1, 1, 2, 3, 6, 7; screw connection terminal blocks

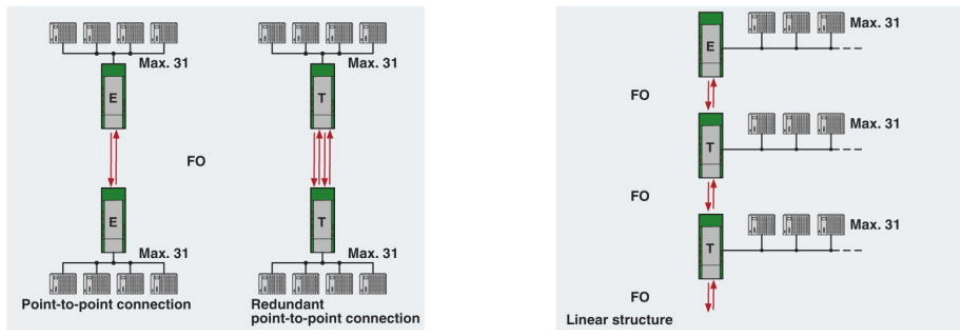
2761826	SUBCON-PLUS M1	D-SUB connector, 9-pos., male connector, two cable entries < 35°, bus system: Modbus, Modbus Plus, BITBUS, ARCNET, MULT/MININET (B&R), SYSTEM 2003 (B&R), P-NET, pin assignment: 1, 2, 3, 5, 6, 8 to two screw connection terminal blocks
2761839	SUBCON-PLUS M2	D-SUB connector, 9-pos., male connector, two cable entries < 35°, bus system: CAN, SUCONET K1, K2 (MOELLER), S-BUS (Saia), J-BUS (Merlin Gerin), pin assignment: 2, 3, 4, 5, 7, 9 to two screw connection terminal blocks

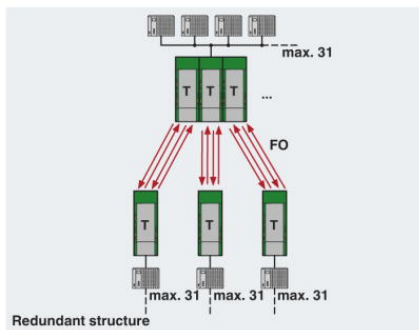
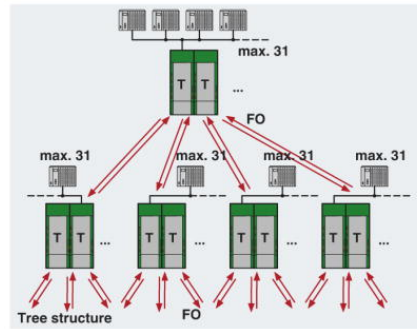
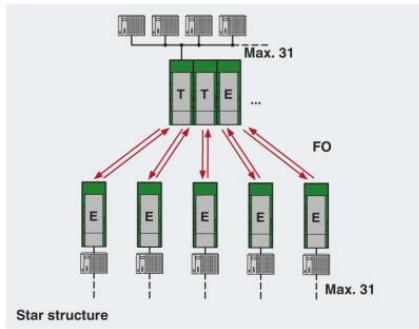
Tools

2799539	PSM-FO-POWERMETER	Fiber optic measuring case, consisting of an optical power meter, F-SMA, B-FOC adapters, reference fibers and operating instructions
2708465	PSM-HCS-KONFTOOL/B-FOC	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
2744623	PSM-STRIP-FC/PROFIB	Quick stripping tool for PROFIBUS cable, type Fast Connect
1205037	SZS 0,4X2,5 VDE	Screwdriver, bladed, VDE insulated, size: 0.4 x 2.5 x 80 mm, 2-component grip, with non-slip grip

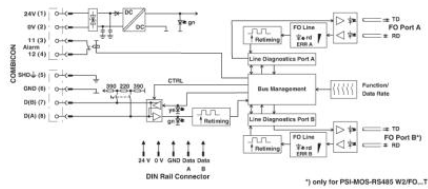
Diagrams/Drawings

Application drawing





Block diagram



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

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