

# PSI-MOS-RS422/FO 850 E

Order No.: 2708355



<http://eshop.phoenixcontact.de/phoenix/treeViewClick.do?UID=2708355>

FO converter with integrated optical diagnosis, alarm contact, for RS-422/RS-485 4-wire/ INTERBUS to 2 Mbps, terminal equipment with an FO interface (BFOC), 850 nm, for HCS/fiber glass cable



| Commercial data          |                    |
|--------------------------|--------------------|
| GTIN (EAN)               |                    |
| sales group              | H622               |
| Pack                     | 1 pcs.             |
| Customs tariff           | 85176200           |
| Catalog page information | Page 509 (IF-2011) |

**Product notes**

WEEE/RoHS-compliant since: 07/18/2007

<http://www.download.phoenixcontact.com>  
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| Technical data          |  |
|-------------------------|--|
| <b>Serial interface</b> |  |
| Interface 1             | RS-422 interface in acc. with ITU-T V.11, EIA/TIA-422, DIN 66348-1 |
| Operating mode          | Full duplex  |

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|                           |   |
|---------------------------|---|
| Transmission length       | max. 1000 m (depending on the data rate, with shielded, twisted data cable) |
| Connection method         | Pluggable screw connection  |
| Serial transmission speed | Maximum 2 Mbps  |

#### Optical interface FO

|   |   |
|---|---|
| Transmit capacity, minimum                    | -4.6 dBm (200/230 $\mu$ m)                                      |
|   | -17.6 dBm (50/125 $\mu$ m)                                      |
|   | -13.6 dBm (62.5/125 $\mu$ m)                                    |
| 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) |
|   | 4200 m (with F-G 50/125 2.5 dB/km)                              |
|   | 4800 m (with F-G 62,5/125 3.0 dB/km)                            |
| Connection method                             | B-FOC (ST <sup>®</sup> )  |

#### 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 $\pm$ 25%                     |
| Supply voltage range        | 18 V DC ... 32 V DC                   |
| Typical current consumption | 130 mA (24 V DC)                      |
| Connection method           | COMBICON plug-in screw terminal block |

#### General data

|   |                             |
|---|-----------------------------|
| Transmission channels                   | 2 (1/1) RD, TD, full duplex |
| Bit distortion, input                   | $\pm$ 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-422)             |

|  |   |
|--|---|
| Test voltage data interface/power supply | 1.5 kV <sub>rms</sub> (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                                     | 320 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))    |
|  | 48 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  |
|------------------------|-------------------------|--|
| <b>Cable/conductor</b> |                         |  |
| 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 |
| 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  |
| <b>General</b>      |                                |   |
| 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   |
| 2744416             | PSM-ME-RS232/RS485-P           | Interface converter, for converting RS-232 (V.24) to RS-422 (V.11) and RS-485, with electrical isolation, 2 channels, rail-mountable  |
| <b>Plug/Adapter</b> |                                |   |
| 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   |

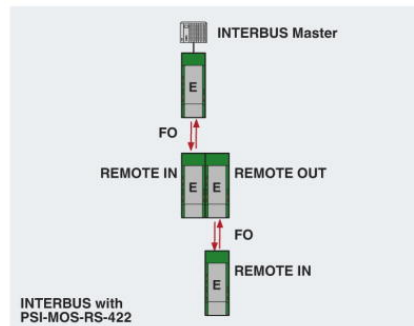
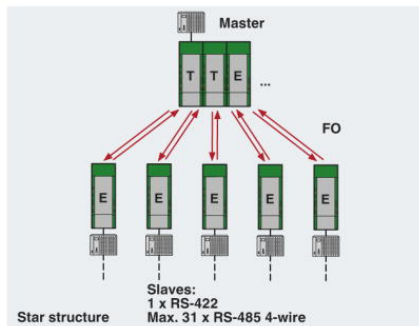
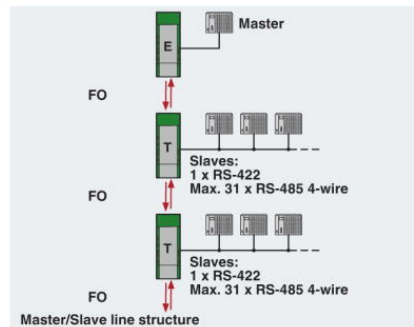
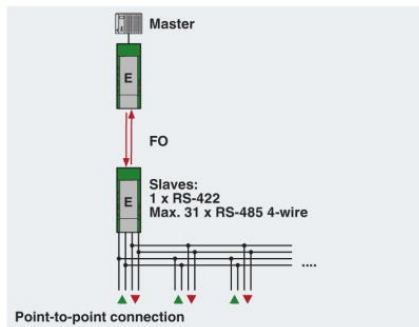
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|---------|---------------------|---|
| 2799429 | PSM-SET-BFOC-LINK/2 | Coupling; set consisting of 2 couplings for connecting B-FOC plugs  |
| 2744241 | SUBCON-PLUS 9/F     | D-SUB connector, 9-pos. female connector, two cable entries < 35°, universal 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  |

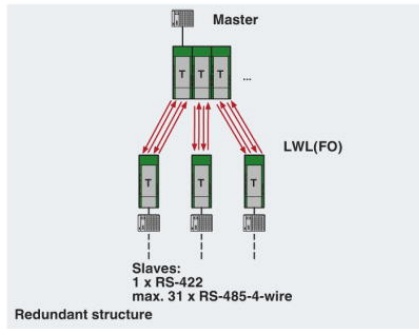
**Tools**

|         |                        |  |
|---------|------------------------|--|
| 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 |
| 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  |

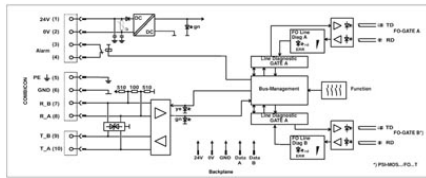
**Diagrams/Drawings**

Application drawing





Block diagram



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

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