

FO converters - FL MC EF 1300 SM SC - 2902856

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 SC duplex fiber optic connection (1300 nm), for converting 10/100Base-T(X) to single-mode fiberglass (9/125 µm). Auto negotiation and auto MDI(X) function. Comprehensive link diagnostics. DIN-rail mountable, 18 ... 30 V DC supply.

Product Features

- ✓ Transmission ranges up to 36 km
- ✓ Auto negotiation
- ✓ Auto MDI/MDI-X switch-over
- ✓ Link fault pass through (LFP) and far end fault (FEF) functions for easy connection monitoring
- ✓ Data rates 10/100 Mbps



Ethernet



Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	180.0 GRM
Custom tariff number	85176200
Country of origin	Germany

Technical data

Note

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

Dimensions

Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

FO converters - FL MC EF 1300 SM SC - 2902856

Technical data

Ambient conditions

Permissible humidity (operation)	30 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	30 % ... 95 % (non-condensing)
Altitude	5000 m (For restrictions see manufacturer's declaration)
	2000 m (With UL approval)
Degree of protection	IP20

General

Electrical isolation	according to IEEE 802.3
	VCC // FE // Ethernet
Test voltage data interface/power supply	1.5 kV _{rms} (50 Hz, 1 min.)
Standards/regulations	EN 60950-1
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Net weight	120 g
Housing material	PA 6.6-FR
Color	green
MTBF	284 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day))
	74 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day))
MTTF	1400 Years (SN 29500 standard, temperature 25°C, operating cycle 21 % (5 days a week, 8 hours a day))
	599 Years (SN 29500 standard, temperature 40 °C, operating cycle 34.25 % (5 days a week, 12 hours a day))
	101 Years (SN 29500 standard, temperature 40°C, operating cycle 100 % (7 days a week, 24 hours a day))
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X (Please follow the special installation instructions in the documentation!)
UL, USA / Canada	cULus listed UL 508
	Class I, Zone 2, AEx nA IIC T4
	Class I, Zone 2, Ex nA IIC T4 Gc X
	Class I, Div. 2, Groups A, B, C, D

Power supply

Supply voltage range	18 V DC ... 30 V DC (Screw connection)
	18 V DC ... 30 V DC (as an alternative or redundant, via backplane bus contact and system current supply)
Typical current consumption	< 100 mA (24 V DC)
Protective circuit	Protection against polarity reversal
Connection method	Plug-in screw terminal block (COMBICON), redundancy possible
Conductor cross section stranded max.	2.50 mm²

FO converters - FL MC EF 1300 SM SC - 2902856

Technical data

Power supply

Conductor cross section stranded min.	0.20 mm ²
Conductor cross section solid max.	2.50 mm ²
Conductor cross section solid min.	0.20 mm ²
Max. AWG conductor cross section, stranded	14
Min. AWG conductor cross section, stranded	24
Conductor cross section AWG/kcmil max	14
Conductor cross section AWG/kcmil min.	24

Serial interface

Interface 1	Ethernet interface, 10/100BASE-T(X) in acc. with IEEE 802.3u
Connection method	RJ45 socket, shielded
Transmission medium	Copper
Transmission length	100 m (twisted pair, shielded)
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
Auto-negotiation modes	Auto
Link through	Link fault pass through
Basic functions	Store-and-forward media converter
MDI-/MDI-X switchover	Auto-MDI(X)
Signal LEDs	Activity, link status, 10/100 Mbps

Optical interface FO

Transmit capacity, minimum	≥ -15 dBm ((9/125 μm) dynamic in link mode (average))
Transmit capacity, maximum	≤ -8 dBm ((9/125 μm) dynamic in link mode (average))
Minimum receiver sensitivity	-31 dBm (dynamic in link mode (average))
Overrange receiver	-7 dBm (dynamic in link mode (average))
Wavelength	1300 nm
Transmission length incl. 3 dB system reserve	36 km (With F-E 9/125 0.36 dB/km)
	32 km (With F-E 9/125 0.4 dB/km)
	26 km (With F-E 9/125 0.5 dB/km)
Transmission medium	Single-mode fiberglass
Connection method	SC duplex

FO converters - FL MC EF 1300 SM SC - 2902856

Classifications

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
eCl@ss 8.0	27143136

ETIM

ETIM 3.0	EC000310
ETIM 4.0	EC000310
ETIM 5.0	EC001467

UNSPSC

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

Approvals

Approvals

Approvals

UL Listed / cUL Listed / DNV / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

FO converters - FL MC EF 1300 SM SC - 2902856

Approvals

UL Listed 

cUL Listed 

DNV

cULus Listed 

Accessories

Accessories

Data cable by the meter

Cable - FL CAT5 HEAVY - 2744814



CAT5-SF/UTP cable (J-02YS(ST)C HP 2 x 2 x 24 AWG), heavy-duty installation cable, 2 x 2 x 0.22 mm², solid conductor, shielded, outer sheath: 7.8 mm diameter, inner sheath: 5.75 mm ± 0.15 mm diameter

Network cable - FL CAT5 FLEX - 2744830



CAT5-SF/UTP cable (J-LI02YS(ST)C H 2 x 2 x 26 AWG), light-duty, flexible installation cable 2 x 2 x 0.14 mm², stranded, shielded, outer sheath: 5.75 mm ± 0.15 mm diameter

Data cable preassembled

FO converters - FL MC EF 1300 SM SC - 2902856

Accessories

FO patch cable - FL SM PATCH 1,0 LC-SC - 2989190



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

FO patch cable - FL SM PATCH 2,0 LC-SC - 2989297



Assembled fiber optic cable, break-out cable, fiberglass single mode 9/125 μm , connector: LC/SC duplex, degree of protection: IP20, for installation in cable ducts or control cabinets, length: 2 m

FO patch cable - FL SM PATCH 5,0 LC-SC - 2901827



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

FO patch cable - FL SM PATCH 1,0 SC-SC - 2901829



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

FO patch cable - FL SM PATCH 2,0 SC-SC - 2901830



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

FO converters - FL MC EF 1300 SM SC - 2902856

Accessories

FO patch cable - FL SM PATCH 5,0 SC-SC - 2901831



Assembled FO cable, break out cable, single-mode fiberglass 9/125 µm, connector: SC Duplex / SC-Duplex 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

Data plug

RJ45 connector - VS-08-RJ45-5-Q/IP20 - 1656725



RJ45 connector, IP20, CAT5e, 8-pos., with QUICKON fast connection technology, for 26 ... 23 AWG 1-wire and 7-wire conductors, for 4.5 mm ... 8.0 mm cable diameter, labeling: TIA 568 B, color: gray

FO converters - FL MC EF 1300 SM SC - 2902856

Accessories

DIN rail connector

DIN rail connector - ME 22,5 TBUS 1,5/ 5-ST-3,81 GN - 2707437



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

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



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

Plug

RJ45 connector - FL PLUG RJ45 GR/2 - 2744856



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, gray for straight cables, for assembly on site. For connections that are not crossed, it is recommended that you use the connector set with gray bend protection sleeve.

RJ45 connector - FL PLUG RJ45 GN/2 - 2744571



RJ45 connector, shielded, with bend protection sleeve, 2 pieces, green for crossed cables, for assembly on site. For connections that are crossed, it is recommended that the connector set with green bend protection sleeves is used.

Power supply

