

FO converters - FL MC EF 1300 SM SC - 2902856

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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
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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

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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

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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

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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

