

FO converters - FL MC EF 660 SCRJ - 2702944

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FO converter, for converting 100Base-T to polymer and PCF fiber (660 nm), SC-RJ FO connection (PROFINET standard), can be mounted on a DIN rail, 24 V DC supply

Product Description

Optical transmission with FO technology provides superior immunity to interference at maximum transmission ranges without restricting the transmission bandwidth.


You can therefore replace wear-sensitive and maintenance-intensive connections and reduce downtimes in your systems.

Your advantages

- ✓ Link fault pass through (LFPT) function for easy connection monitoring
- ✓ Very low delay times
- ✓ Mounting on a DIN rail
- ✓ Backplane bus contact, enabling alternative or redundant 24 V power supply



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 431260
GTIN	4055626431260
Weight per Piece (excluding packing)	160.000 g
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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Technical data

Dimensions

Caption	Slim design
Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 70 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Altitude	≤ 5000 m (For restrictions, see the manufacturer's declaration for altitude operation)
Degree of protection	IP20

General

Electrical isolation	VCC // Ethernet
Test voltage data interface/power supply	1500 V
	1.5 kV _{rms} (50 Hz, 1 min.)
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Mounting type	DIN rail mounting
Net weight	172.7 g
Housing material	PA V0
Color	green
MTTF	929 Years (SN 29500 standard, temperature 25°C, operating cycle 21%)
	461 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%)
	204 Years (SN 29500 standard, temperature 40°C, operating cycle 100%)

Power supply

Connection method	Plug-in screw terminal block (COMBICON), redundancy possible
Supply voltage range	18 V DC ... 32 V DC (via pluggable COMBICON screw terminal block)
	18 V DC ... 32 V DC (as an alternative or redundant, via backplane bus contact and system current supply)
Max. current consumption	100 mA (24 V DC)
Typical current consumption	≤ 85 mA (24 V DC)
Protective circuit	Reverse polarity protection
Connection method	Plug-in screw terminal block (COMBICON), redundancy possible

Interfaces

Interface 1	Ethernet interface, 100Base-T(X) in accordance with IEEE 802.3
No. of ports	1

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Interfaces

Connection method	RJ45 jack, shielded
Transmission medium	Copper
Transmission length	100 m (shielded twisted pair)
Link through	Link fault pass through
Transmission speed	100 Mbps

Optical interface FO

Transmit capacity, minimum	min. -8 dBm ((980/1000 µm) static)
	min. -19 dBm ((200/230 µm) static)
Transmit capacity, maximum	max. -2 dBm ((980/1000 µm) static)
	max. -11 dBm ((200/230 µm) static)
Minimum receiver sensitivity	-23 dBm ((980/1000 µm) static)
	-26.8 dBm ((200/230 µm) static)
Wavelength	660 nm
Transmission length incl. 3 dB system reserve	50 m (Polymer fiber with F-P 980/1000 230 dB/km)
	100 m (PCF fiber with F-K 200/230 8 dB/km)
Transmission medium	Polymer fiber
	PCF fiber
Connection method	SC-RJ

Digital outputs

Output name	Relay output
Number of outputs	2
Contact type	N/O contact
Maximum switching voltage	60 V AC/DC
Max. switching current	1 A

Conformance/approvals

Designation	CE
Identification	CE-compliant
Designation	Corrosive gas test
Identification	ISA-S71.04-1985 G3 Harsh Group A

Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Type of test	Free fall in acc. with IEC 60068-2-32
Test result	1 m
Type of test	Vibration resistance in acc. with EN 60068-2-6/IEC 60068-2-6
Test result	5g, 150 Hz, 1.5 h, in XYZ direction

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Standards and Regulations

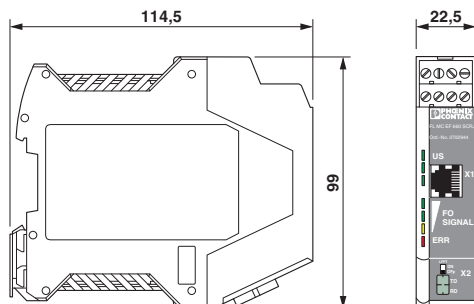
Type of test	Shock in acc. with EN 60068-2-27/IEC 60068-2-27
Test result	15g, 11 ms period, half-sine shock pulse
Free from substances that could impair the application of coating	according to P-VW 3.10.7 57 65 0 VW-AUDI-Seat central standard
Standards/regulations	EN 61000-4-2
Contact discharge	± 6 kV (Test Level 3)
Indirect discharge	± 6 kV
Standards/regulations	EN 61000-4-3
Frequency range	80 MHz ... 3 GHz (Test Level 3)
Standards/regulations	EN 61000-4-4
Comments	Criterion B
Standards/regulations	EN 61000-4-5
Signal	± 1 kV (Shielded cable)
Standards/regulations	EN 61000-6-4
	EN 61000-4-6
Frequency range	0.15 MHz ... 80 MHz
Conducted noise emission	EN 61000-6-3 Class B, domain of use: residential and small commercial
Designation	Air clearances and creepage distances

Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

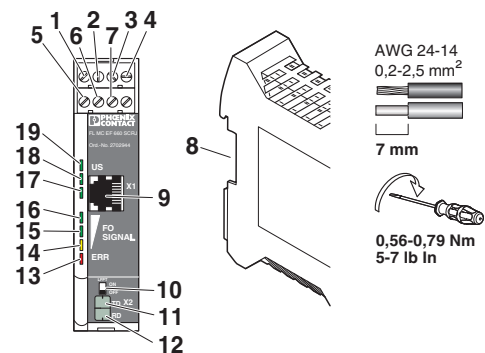
Drawings

Dimensional drawing



Slim design

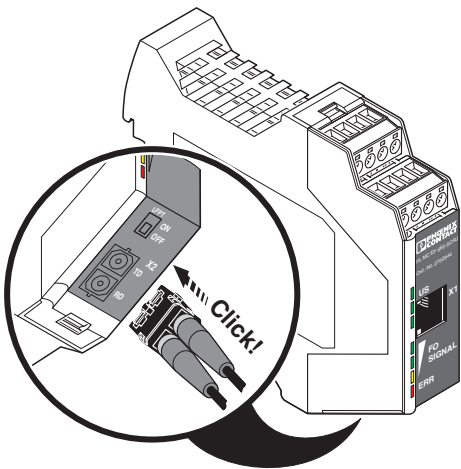
Schematic diagram



Function elements

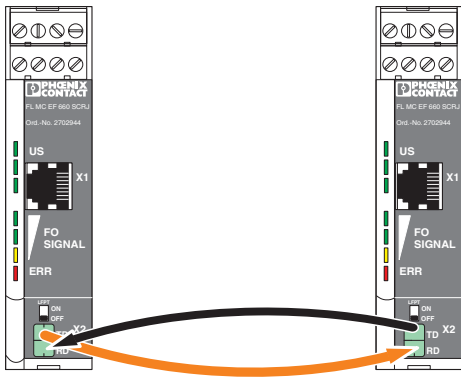
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Schematic diagram



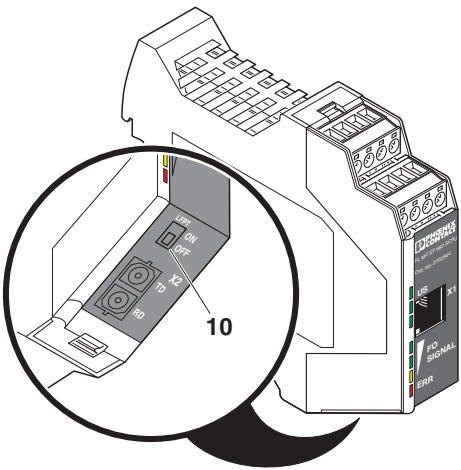
Connect the SC-RJ plug

Schematic diagram



Signal direction for the fiber connection

Schematic diagram



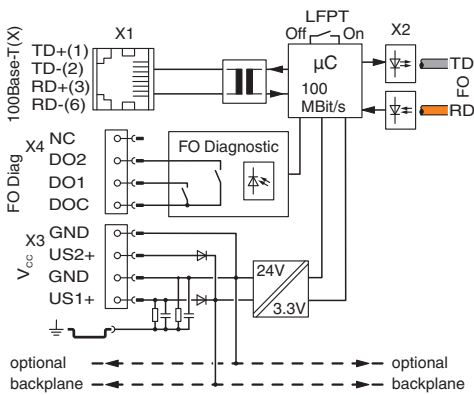
Switch for disabling LFPT

Classifications

eCl@ss

eCl@ss 10.0.1	19170132
eCl@ss 11.0	19170411
eCl@ss 7.0	19170114
eCl@ss 9.0	19170114

Block diagram



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Classifications

ETIM

ETIM 6.0	EC001467
ETIM 7.0	EC001467