FL MC EF 660 SCRJ - FO converters

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

Commercial data

Item number	2702944
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN06
Product key	DNC311
GTIN	4055626431260
Weight per piece (including packing)	172.7 g
Weight per piece (excluding packing)	172.7 g
Customs tariff number	85176200
Country of origin	DE

Technical data

Notes

Note on application

Note on application	Only for industrial use

Product properties

Product type	Media converter
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%)

Electrical properties

Electrical isolation	VCC // Ethernet
Maximum power dissipation for nominal condition	2.4 W
Test voltage data interface/power supply	1.5 kV_{rms} (50 Hz, 1 min.)
	1500 V

Supply

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)
Typical current consumption	≤ 85 mA (24 V DC)
Max. current consumption	100 mA (24 V DC)
Protective circuit	Reverse polarity protection

Output data

Switching

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

Connection data

Supply

Connection method	Plug-in screw terminal block (COMBICON), redundancy possible
Tightening torque	0.56 Nm ... 0.79 Nm

Interfaces

Signal	Ethernet
	PROFINET

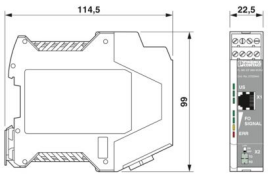
Data: optical FO

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)
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)
Connection method	SC-RJ
Wavelength	660 nm
Minimum receiver sensitivity	-23 dBm (980/1000 µm, static)
	-26.8 dBm (200/230 µm, static)
Transmission medium	Polymer fiber
	PCF fiber

Data: Ethernet interface, 100Base-T(X) in accordance with IEEE 802.3

Transmission speed	100 Mbps
Connection method	RJ45 jack, shielded
No. of channels	1
Transmission length	100 m (shielded twisted pair)
Transmission medium	Copper
Link through	Link fault pass through

Dimensions

Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Color (Housing)	green (RAL 6021)
Material (Housing)	PA V0

Cable/line

FO cable

Fiber types	980/1000 µm
	200/230 µm

	Polymer fiber
	PCF fiber

Mechanical tests

Free fall in accordance with IEC 60068-2-32	: 1 m
Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6	: 5g, 150 Hz, 1.5 h, in XYZ direction
Shock in accordance with EN 60068-2-27/IEC 60068-2-27	: 15g, 11 ms period, half-sine shock pulse

Environmental and real-life conditions

Ambient conditions

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

Approvals

CE

Certificate	CE-compliant

Corrosive gas test

Identification	ISA-S71.04-1985 G3 Harsh Group A

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Electrostatic discharge

Standards/regulations	EN 61000-4-2

Electrostatic discharge

Contact discharge	± 6 kV (Test Level 3)
Discharge in air	± 8 kV (Test Level 3)
Indirect discharge	± 6 kV
Comments	Criterion B

Electromagnetic HF field

Standards/regulations	EN 61000-4-3

Electromagnetic HF field

Frequency range	80 MHz ... 3 GHz (Test Level 3)
Field intensity	10 V/m
Comments	Criterion A

Fast transients (burst)

Standards/regulations	EN 61000-4-4

Fast transients (burst)

Input	± 2.2 kV (1 minute)
Signal	± 2.2 kV (1 minute)
Comments	Criterion B

Surge current load (surge)

Standards/regulations	EN 61000-4-5

Surge current load (surge)

Input	± 0.5 kV (Supply)
Signal	± 1 kV (Shielded cable)
Comments	Criterion B

Conducted interference

Standards/regulations	EN 61000-4-6

Conducted interference

Frequency range	0.15 MHz ... 80 MHz
Comments	Criterion A
Voltage	10 V

Emitted interference

Standards/regulations	EN 61000-6-4
Comments	Class A, industrial applications

Criteria

Criterion A	Normal operating behavior within the specified limits.
Criterion B	Temporary impairment to operational behavior that is corrected by the device itself.

Standards and regulations

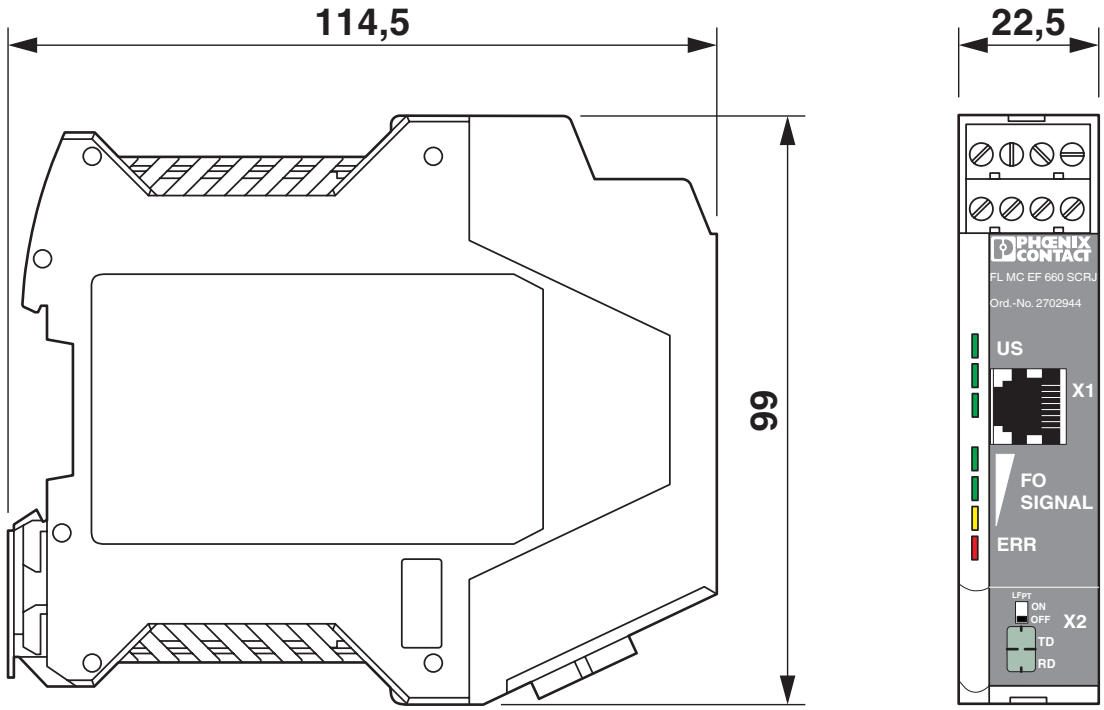
Free from substances that could impair the application of coating	VDMA 24364:2018-05

Mounting

Mounting type	DIN rail mounting

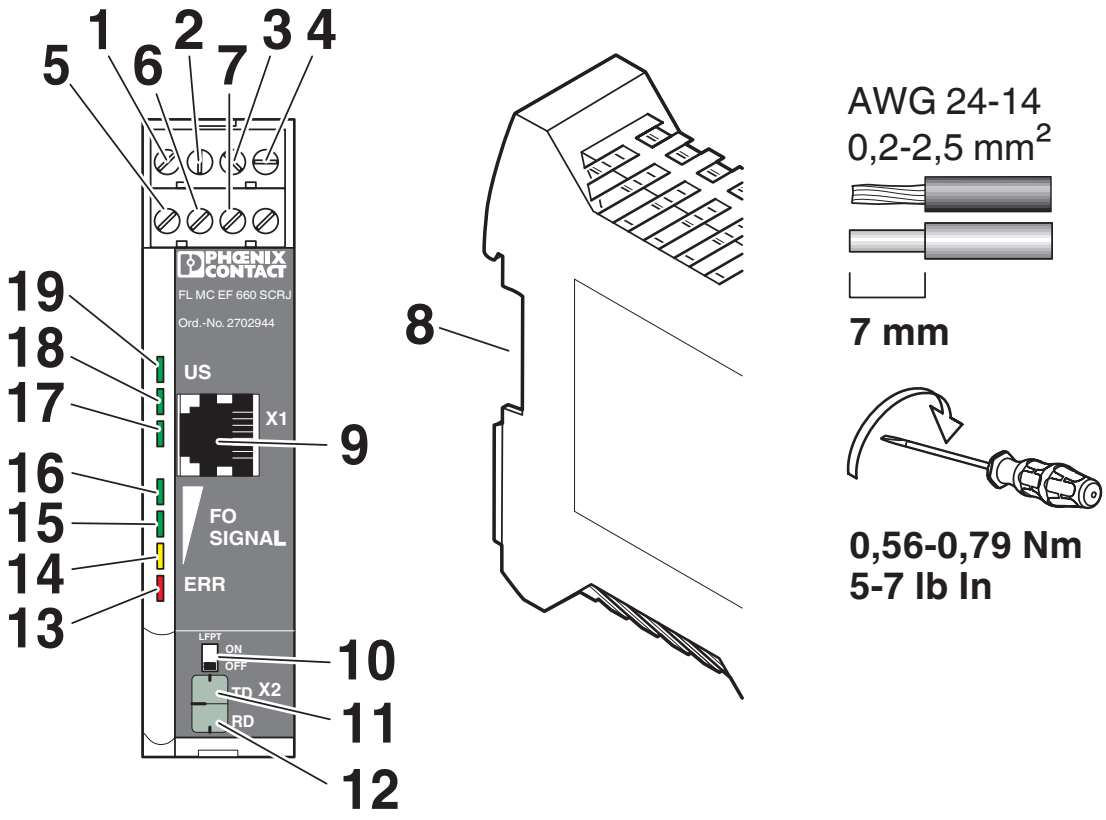
Drawings

Dimensional drawing



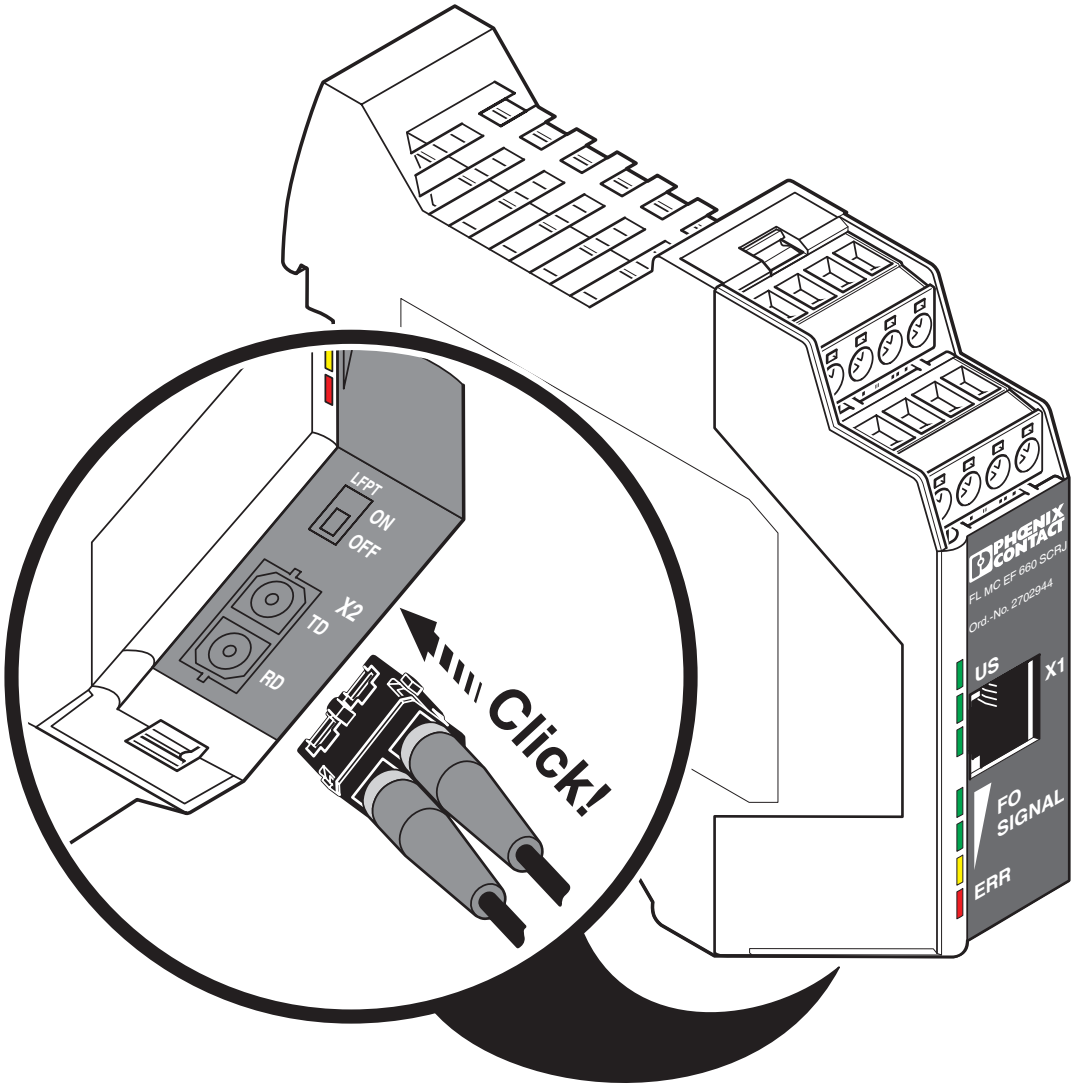
Slim design

Schematic diagram



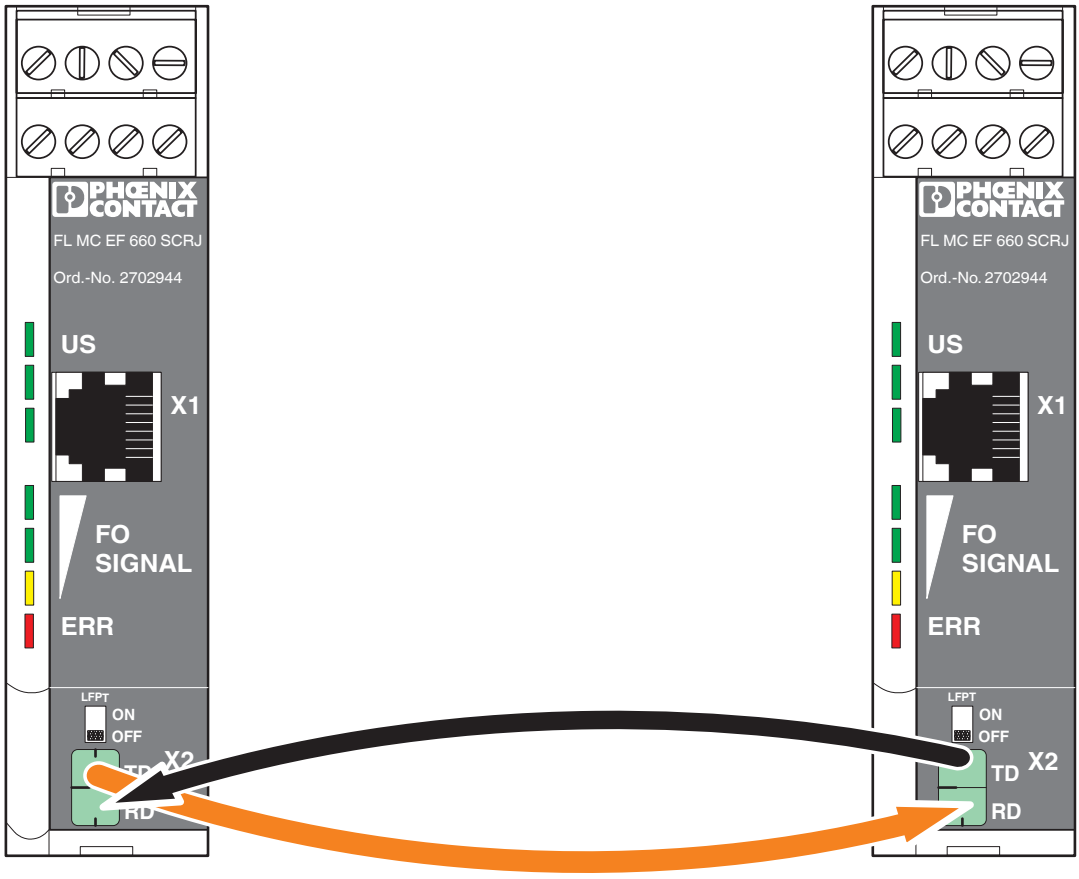
Function elements

Schematic diagram



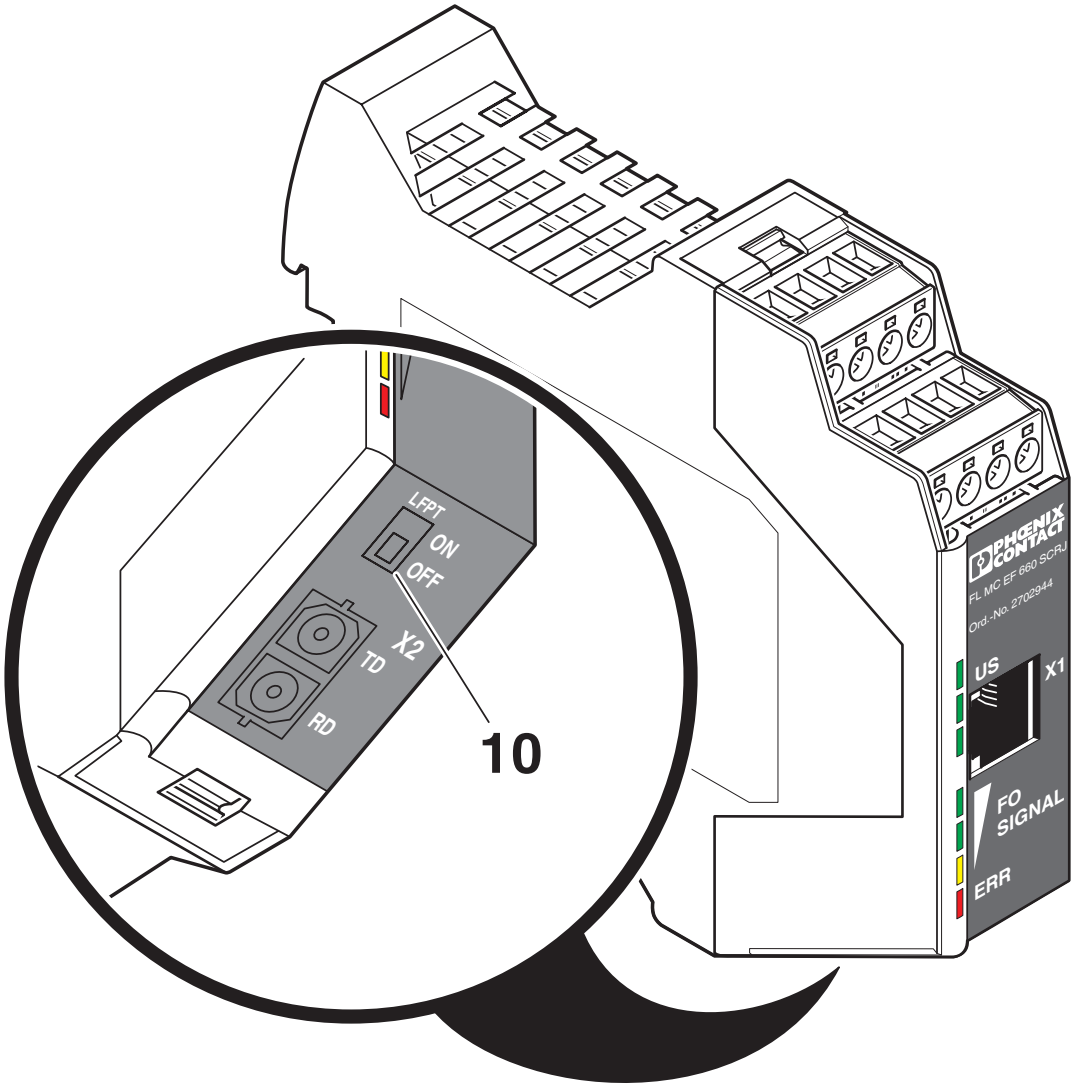
Connect the SC-RJ plug

Schematic diagram



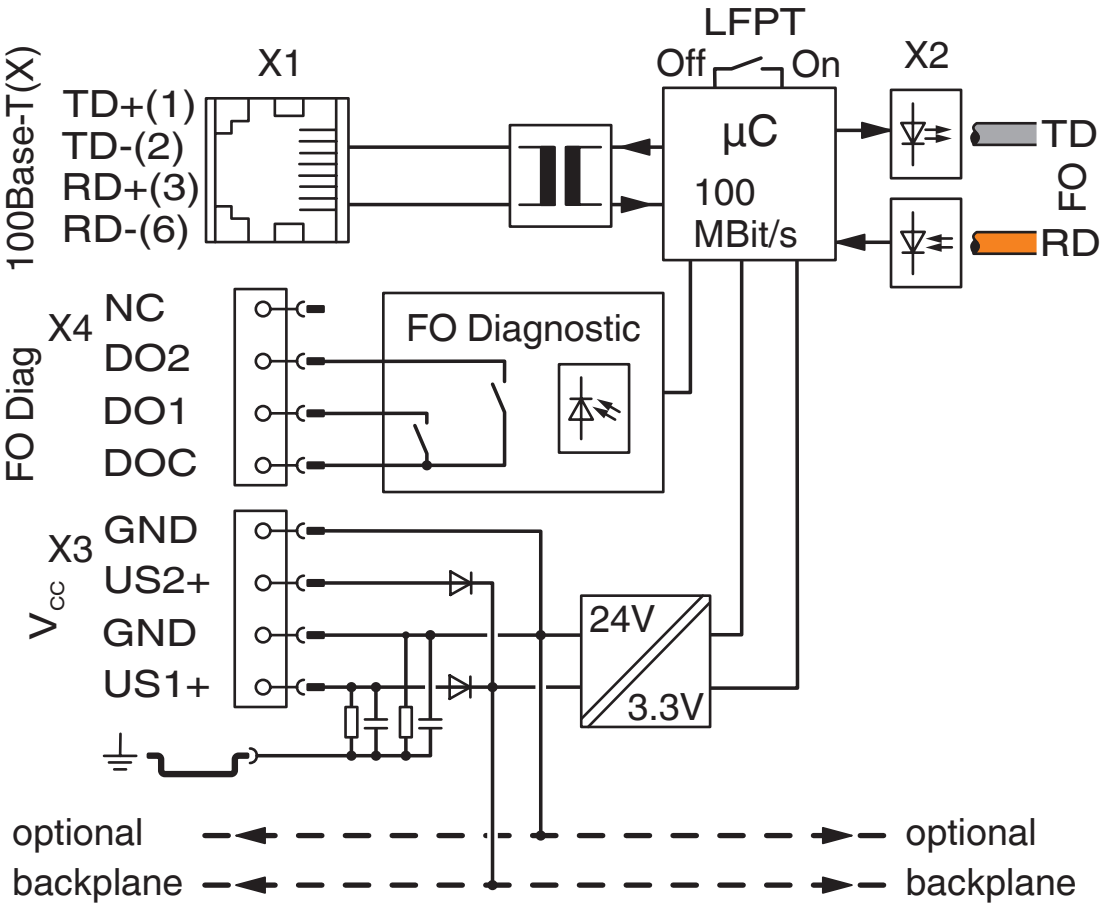
Signal direction for the fiber connection

Schematic diagram



Switch to activate LFPT

Block diagram



Classifications

ECLASS

ECLASS-13.0	19170411

ETIM

ETIM 9.0	EC001467

UNSPSC

UNSPSC 21.0	43223323

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	e5b45f75-6580-4bc8-a0f2-6e9cb96682c4

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