

# MC 1000E-SM20 ST - FO converters



1330723

<https://www.phoenixcontact.com/gb/products/1330723>

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Fiber optic converter with ST (B-FOC) fiber optic connection (1310 nm) for converting 100Base-TX to single-mode fiberglass. Auto MDI(X) function, DIN rail mountable with ruggedized EMI protection and wide temperature range.

## Product description

The MC 1000E-SM20 ST media converter comes with one 10/100 Mbps twisted-pair RJ45 port and one 100 Mbps single-mode fiber port with an ST (B-FOC) connector, ruggedized EMI protection, and wide temperature range.

## Your advantages

- Auto MDI/MDI-X switch-over
- Data transfer rates of 100 Mbps
- Link fault pass through (LFPT) function for easy connection monitoring

## Commercial data

Item number	1330723
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DNC314
Product key	DNC314
GTIN	4063151626761
Weight per piece (excluding packing)	180 g

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## Technical data

### Product properties

Product type	Media converter
MTTF	69.1 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%)
	508.3 Years ()
	551.7 Years (Telcordia standard, temperature 25 °C, operating cycle 100 % (7 days a week, 24 hours a day))

### Electrical properties

#### Supply

Supply voltage range	12 V DC ... 57 V DC
Nominal supply voltage	24 V DC
	48 V DC
Typical current consumption	20 mA (24 V DC)
Max. current consumption	170 mA

### Connection data

#### Supply

Connection method	Push-in spring connection
Conductor cross section, flexible	0.20 mm <sup>2</sup> ... 2.50 mm <sup>2</sup>
Conductor cross section, rigid	0.20 mm <sup>2</sup> ... 2.50 mm <sup>2</sup>
Conductor cross section, flexible [AWG]	24 ... 12
Conductor cross section AWG	24 ... 12
Stripping length	10.00 mm

### Interfaces

Signal	Ethernet
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#### Data: optical FO

Transmit capacity, minimum	-15 dBm
Transmit capacity, maximum	-8 dBm
Connection method	B-FOC (ST)
Wavelength	1310 nm
Minimum receiver sensitivity	-34 dBm
Transmission medium	Single-mode fiberglass

#### Data: Ethernet interface, 100Base-Tx in acc. with IEEE 802.3u

Transmission speed	10/100 Mbps
Connection method	RJ45 jack, shielded
No. of channels	1
Transmission length	100 m (twisted pair, shielded)
Transmission medium	Copper

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Signal LEDs	LNK/ACT, SPD, Err, US, US2
Auto-negotiation modes	Auto
Link through	Link fault pass through
MDI-/MDI-X switchover	Auto-MDI(X)

## Dimensions

Width	22.5 mm
Height	125 mm
Depth	90 mm

## Material specifications

Housing material	Polyamide fiber reinforced
	Aluminum / steel sheet DC01

## Cable/line

### FO cable

Fiber types	50/125 µm
	62.5/125 µm
	Fiberglass

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP30
Ambient temperature (operation)	-40 °C ... 75 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m (in acc. with UL)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Shock	300 m/s <sup>2</sup> , 11 ms (IEC 60068-2)

## Approvals

### ATEX

Identification	II 3G Ex ec IIC T4 Gc
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### IECEX

Identification	Ex ec IIC T4 Gc
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## EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
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### Electrostatic discharge

Standards/regulations	EN 61000-4-2
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### Electrostatic discharge

Comments	Criterion B
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## Electromagnetic HF field

Standards/regulations	EN 61000-4-3
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## Electromagnetic HF field

Comments	Criterion A
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## Fast transients (burst)

Standards/regulations	EN 61000-4-4
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## Fast transients (burst)

Comments	Criterion A
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## Surge current load (surge)

Standards/regulations	EN 61000-4-5
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## Surge current load (surge)

Comments	Criterion B
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## Conducted interference

Standards/regulations	EN 61000-4-6
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## Conducted interference

Comments	Criterion A
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## Emitted interference

Standards/regulations	EN 55032
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## Mounting

Mounting type	DIN rail: 35 mm
Mounting position	On horizontal DIN rail NS 35 in acc. with EN 60715

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## Classifications

### ECLASS

ECLASS-11.0	19170411
ECLASS-12.0	19170411
ECLASS-13.0	19170411

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## Environmental product compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

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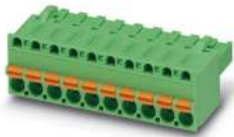
<https://www.phoenixcontact.com/gb/products/1330723>

## Accessories

### FKCT 2,5/ 3-ST KMGY BD:US,GND - PCB connector

1087544

<https://www.phoenixcontact.com/gb/products/1087544>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of rows: 1, number of positions: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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### FKCT 2,5/ 3-ST KMGY - PCB connector

1998263

<https://www.phoenixcontact.com/gb/products/1998263>



PCB connector, nominal cross section: 2.5 mm<sup>2</sup>, color: light grey, nominal current: 12 A, rated voltage (III/2): 320 V, contact surface: Tin, contact connection type: Socket, number of potentials: 3, number of rows: 1, number of positions: 3, number of connections: 3, product range: FKCT 2,5/..-ST, pitch: 5 mm, connection method: Push-in spring connection, conductor/PCB connection direction: 0 °, locking clip: - Locking clip, plug-in system: COMBICON MSTB 2,5, locking: without, mounting: without, type of packaging: packed in cardboard

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## DT-LAN-CAT.6+ - Surge protection device

2881007

<https://www.phoenixcontact.com/gb/products/2881007>



Surge protection in accordance with Class E<sub>A</sub> (CAT6<sub>A</sub>), for Gigabit Ethernet (up to 10 Gbps), token ring, FDDI/CDDI, ISDN, and DS1. Suitable for Power over Ethernet (PoE++ / 4PPoE) "Mode A" and "Mode B". RJ45 attachment plug with separate grounding cable and ground connection snap-on foot for NS 35 DIN rails.

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## FL DIN-RAIL ADAPTER 22.5 - Mounting panel

1085485

<https://www.phoenixcontact.com/gb/products/1085485>



The FL DIN-RAIL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a standard 35 mm DIN rail, in any orientation.



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## FL PANEL ADAPTER 22.5 - Mounting panel

1085488

<https://www.phoenixcontact.com/gb/products/1085488>



The FL PANEL ADAPTER 22.5 is designed to allow products 22.5 mm wide to be mounted flush to a panel, in any orientation.

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## E/NS 35 N - End bracket

0800886

<https://www.phoenixcontact.com/gb/products/0800886>



End clamp, width: 9.5 mm, color: gray

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## FL CAT5 PATCH 0,5 - Patch cable

2832263

<https://www.phoenixcontact.com/gb/products/2832263>

Patch cable, CAT5, assembled, 0.5 m



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## FL CAT5 PATCH 1,0 - Patch cable

2832276

<https://www.phoenixcontact.com/gb/products/2832276>

Patch cable, CAT5, assembled, 1 m



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## FL CAT5 PATCH 2,0 - Patch cable

2832289

<https://www.phoenixcontact.com/gb/products/2832289>

Patch cable, CAT5, assembled, 2 m



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## NBC-R4AC-R4AC-IE8A/.../... - Patch cable

1411854

<https://www.phoenixcontact.com/gb/products/1411854>

Patch cable, degree of protection: IP20, number of positions: 8, 10 Gbps, CAT6<sub>A</sub>, cable outlet: straight, Ethernet



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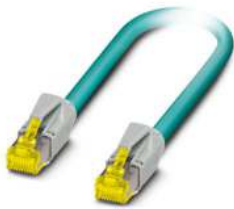
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## NBC-R4AC/10G-R4AC/10G-94F/2,0 - Patch cable

1408360

<https://www.phoenixcontact.com/gb/products/1408360>



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 2.0 m

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## NBC-R4AC/10G-R4AC/10G-94F/3,0 - Patch cable

1408365

<https://www.phoenixcontact.com/gb/products/1408365>



Patch cable, CAT6<sub>A</sub>, 4-pair, shielded, connection not crossed (line), assembled at both ends with RJ45/IP20 connectors, outer sheath material: PUR, length: 3.0 m

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## FOC-ST:PA-SC:PA-OM2:D01/1 - FO patch cable

1115574

<https://www.phoenixcontact.com/gb/products/1115574>

Multi-mode OM2 duplex jumper, ST-SC, UPC polishing, length 1 m



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## FOC-ST:PA-SC:PA-OM2:D01/2 - FO patch cable

1115573

<https://www.phoenixcontact.com/gb/products/1115573>

Multi-mode OM2 duplex jumper, ST-SC, UPC polishing, length 2 m



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## FOC-ST:PA-ST:PA-OM2:D01/1 - FO patch cable

1115560

<https://www.phoenixcontact.com/gb/products/1115560>

Multi-mode OM2 duplex jumper, ST-ST, UPC polishing, length 1 m



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## FOC-ST:PA-ST:PA-OM2:D01/2 - FO patch cable

1115557

<https://www.phoenixcontact.com/gb/products/1115557>

Multi-mode OM2 duplex jumper, ST-ST, UPC polishing, length 2 m



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## FOC-LC:PA-ST:PA-OM2:D01/1 - Fiber optic cable

1115588

<https://www.phoenixcontact.com/gb/products/1115588>

Multi-mode OM2 duplex jumper, LC-ST, UPC polishing, length 1 m



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## FOC-LC:PA-ST:PA-OM2:D01/2 - Fiber optic cable

1115587

<https://www.phoenixcontact.com/gb/products/1115587>

Multi-mode OM2 duplex jumper, LC-ST, UPC polishing, length 2 m



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## SZS 0,4X2,0 - Screwdriver

1205202

<https://www.phoenixcontact.com/gb/products/1205202>



Micro screwdriver, bladed, size: 0.4 x 2.0 x 60 mm, 2-component grip, with non-slip grip and twist cap

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