

MC 1000E-SM40 WDM A - FO converters



1330885

<https://www.phoenixcontact.com/us/products/1330885>

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Fiber optic converter with SC simplex connection (1310 nm) for 100Base-TX to singlemode fiber optics, DIN rail mountable, extended temperature range, redundant power supply, IECEx, ATEX, UL HazLoc, IEC 61850, IEEE 1613, DNV.

Product description

The MC 1000E-SM40 WDM A media converter comes with one 10/100 Mbps twisted-pair RJ45 port and one 100 Mbps WDM single-mode fiber port with an SC-simplex 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
- Network structure according to IEC 61850-3
- IEEE 1613
- Class 1 laser product complies with EN 60825-1

Commercial data

| | |
|--------------------------------------|---------------|
| Item number | 1330885 |
| Packing unit | 1 pc |
| Minimum order quantity | 1 pc |
| Sales key | DN06 |
| Product key | DNC314 |
| GTIN | 4063151626532 |
| Weight per piece (including packing) | 283.5 g |
| Weight per piece (excluding packing) | 180 g |
| Customs tariff number | 85176200 |
| Country of origin | CA |

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Technical data

Notes

Note on application

| | |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

Product properties

| | |
|----------------|--|
| Product type | Media converter |
| Product family | MC 1000E |
| MTTF | 69.1 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) |
| | 508.3 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) |
| | 702.5 Years (Telcordia standard, temperature 25 °C, operating cycle 100 % (7 days a week, 24 hours a day)) |

Electrical properties

| | |
|---|-------|
| Maximum power dissipation for nominal condition | 1.5 W |
|---|-------|

Supply

| | |
|-----------------------------|-------------------------|
| Supply voltage range | 12 V DC ... 57 V DC |
| Nominal supply voltage | 24 V DC |
| | 48 V DC |
| Typical current consumption | 62 mA (24 V DC) |
| Max. current consumption | 170 mA (12 V DC, 75 °C) |

Output data

Signal

| | |
|-----------------------|--|
| Voltage output signal | 12 V DC ... 48 V DC (depending on the input voltage) |
| Current output signal | 100 mA |

Connection data

Supply

| | |
|---|---|
| Connection method | Push-in spring connection |
| Single conductor/terminal point, rigid | 0.2 mm ² ... 2.5 mm ² |
| Single-wire/terminal point, flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section, flexible [AWG] | 24 ... 12 |
| Stripping length | 10.00 mm |

Interfaces

| | |
|--------|----------|
| Signal | Ethernet |
|--------|----------|

Data: optical FO

| | |
|----------------------------|--|
| Transmit capacity, minimum | -8 dBm (9/125 µm, singlemode fiberglass) |
|----------------------------|--|

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| | |
|------------------------------|---|
| Transmit capacity, maximum | 0 dBm (9/125 µm, singlemode fiberglass) |
| Connection method | SC simplex |
| Wavelength | 1310 nm (transmit) 1550 nm (receive) |
| Minimum receiver sensitivity | -34 dBm (9/125 µm, singlemode fiberglass) |
| Maximum receiver sensitivity | 0 dBm (9/125 µm, singlemode fiberglass) |
| Transmission medium | Single-mode fiberglass |

Data: Ethernet interface, 10/100Base-T(X) in accordance with IEEE 802.3

| | |
|------------------------|-------------------------------|
| Transmission speed | 10/100 Mbps |
| Connection method | RJ45 jack, shielded |
| No. of channels | 1 |
| Transmission length | 100 m (shielded twisted pair) |
| Transmission medium | Copper |
| 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 | 9/125 µm Fiberglass |
|-------------|------------------------|

Mechanical tests

| | |
|--|---|
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | Operation: 5g, 150 Hz, Criterion 3 |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27 | Operation: 30g, 11 ms half-sine shock pulse |

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) |

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| | |
|----------------------------------|--|
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing) |
| Shock | 300 m/s ² , 11 ms (IEC 60068-2) |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

UL, USA/Canada

| | |
|----------------|--|
| Identification | Class I, Division 2, Groups A, B, C, and D, T4 |
| | Class I, Zone 2, IIC T4 |

IECEX

| | |
|----------------|-------------------|
| Identification | Ex ec IIC T4 Gc |
| Certificate | IECEX UL 25.0019X |

ATEX

| | |
|----------------|--------------------------|
| Identification | ⊕ II 3 G Ex ec IIC T4 Gc |
| Certificate | UL 25 ATEX 3348X |

EMC data

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|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | IEC 61850-3, IEEE 1613 |

Electrostatic discharge

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|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

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|----------|-------------|
| Comments | Criterion B |
|----------|-------------|

Electromagnetic HF field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-3 |
|-----------------------|--------------|

Electromagnetic HF field

| | |
|----------|-------------|
| Comments | Criterion A |
|----------|-------------|

Fast transients (burst)

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|-----------------------|--------------|
| Standards/regulations | EN 61000-4-4 |
|-----------------------|--------------|

Fast transients (burst)

| | |
|----------|-------------|
| Comments | Criterion A |
|----------|-------------|

Surge current load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Surge current load (surge)

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|----------|-------------|
| Comments | Criterion B |
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Conducted interference

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

| | |
|----------|-------------|
| Comments | Criterion A |
|----------|-------------|

Emitted interference

| | |
|-----------------------|----------|
| Standards/regulations | EN 55032 |
|-----------------------|----------|

Mounting

| | |
|-----------------------|--|
| Mounting type | DIN rail mounting |
| Mounting position | on horizontal DIN rail NS 35 in acc. with EN 60715 |
| Useable DIN rail type | DIN rail: 35 mm |

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Approvals

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cULus Listed

Approval ID: E238705

BSH

Approval ID: BSH Nr. 1176



IECEE CB Scheme

Approval ID: CA-11671-M1-UL

DNV

Approval ID: TAA00003RU



IECEx

Approval ID: IECEx UL 25.0019X



ATEX

Approval ID: UL 25 ATEX 3348X



cULus Listed

Approval ID: E196811

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Classifications

ECLASS

| | |
|-------------|----------|
| ECLASS-13.0 | 19170411 |
| ECLASS-15.0 | 19170411 |

ETIM

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| ETIM 10.0 | EC001467 |
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UNSPSC

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|-------------|----------|
| UNSPSC 21.0 | 43223323 |
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Environmental product compliance

EU RoHS

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

China RoHS

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|--|---|
| 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.) | No substance above 0.1 wt% |
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Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com