

# FL MC 2000T SC - FO converters

2891315

<https://www.phoenixcontact.com/us/products/2891315>



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FO converter with SC duplex fiber optic connection (1300 nm), for converting 100Base-TX to multi-mode fiberglass. Auto MDI(X) function and comprehensive link diagnostics. DIN rail mountable with wide operating temperature range.

## Product description

The FL MC 2000T media converter comes with one 10/100 Mbps twisted-pair RJ45 port and one 100 Mbps multimode fiber optics port with an SC-duplex connector

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2891315       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DN06          |
| Product key                          | DNC312        |
| GTIN                                 | 4046356869577 |
| Weight per piece (including packing) | 310.2 g       |
| Weight per piece (excluding packing) | 298.7 g       |
| Customs tariff number                | 85176200      |
| Country of origin                    | TW            |

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## Technical data

### Notes

#### Note on application

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

### Product properties

|              |                                                                              |
|--------------|------------------------------------------------------------------------------|
| Product type | Media converter                                                              |
| MTTF         | 77.82 Years (MIL-HDBK-217F standard, temperature 25°C, operating cycle 100%) |
| Signal delay | 865 ns (Pass-through mode)                                                   |
|              | 835 ns (Auto converter mode, 100 Mbps, static)                               |

### Electrical properties

|                                          |                                |
|------------------------------------------|--------------------------------|
| Electrical isolation                     | VCC // FE // Ethernet          |
| Test voltage data interface/power supply | 1500 V AC (500 V AC, 1 minute) |

#### Supply

|                             |                     |
|-----------------------------|---------------------|
| Supply voltage range        | 12 V DC ... 48 V DC |
| Nominal supply voltage      | 24 V DC             |
| Typical current consumption | 110 mA (24 V DC)    |

### Output data

#### Switching

|                           |              |
|---------------------------|--------------|
| Output name               | Relay output |
| Output description        | Alarm output |
| Number of outputs         | 1            |
| Contact switching type    | N/C contact  |
| Maximum switching voltage | 24 V DC      |
| Max. switching current    | 100 mA       |

### Connection data

#### Supply

|                                         |                                                              |
|-----------------------------------------|--------------------------------------------------------------|
| Connection method                       | Plug-in screw terminal block (COMBICON), redundancy possible |
| Conductor cross-section, flexible       | 0.20 mm² ... 2.50 mm²                                        |
| Conductor cross-section, rigid          | 0.20 mm² ... 2.50 mm²                                        |
| Conductor cross-section, flexible [AWG] | 24 ... 12                                                    |
| Conductor cross-section AWG             | 24 ... 12                                                    |
| Tightening torque                       | 5 Nm ... 7 Nm                                                |

### Interfaces

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

Data: optical FO

|                                               |                                                      |
|-----------------------------------------------|------------------------------------------------------|
| Transmit capacity, minimum                    | -19 dBm                                              |
| Transmit capacity, maximum                    | -14 dBm                                              |
| Transmission length incl. 3 dB system reserve | 8 km (fiberglass with F-G 62.5/125 0.7 dB/km F1000)  |
|                                               | 3.3 km (fiberglass with F-G 62.5/125 2.6 dB/km F600) |
|                                               | 9.6 km (fiberglass with F-G 50/125 0.7 dB/km F1200)  |
|                                               | 5.3 km (fiberglass with F-G 50/125 1.6 dB/km F800)   |
| Connection method                             | SC duplex                                            |
| Wavelength                                    | 1310 nm                                              |
| Minimum receiver sensitivity                  | -32 dBm                                              |
| Maximum receiver sensitivity                  | -14 dBm                                              |
| Transmission medium                           | Multi-mode fiberglass                                |
|                                               | GI-HCS fiber                                         |

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

|                           |                                |
|---------------------------|--------------------------------|
| Data rate                 | 10/100 Mbps                    |
| Serial transmission speed | 10/100 Mbps                    |
| Connection method         | RJ45 jack, shielded            |
| No. of channels           | 1                              |
| Transmission length       | 100 m (twisted pair, shielded) |
| Transmission medium       | Copper                         |
| Signal LEDs               | LNK/ACT, 100                   |
| Auto-negotiation modes    | Auto                           |
| Link through              | Link fault pass through        |
| MDI-/MDI-X switchover     | Auto-MDI(X)                    |

## Dimensions

|        |        |
|--------|--------|
| Width  | 28 mm  |
| Height | 110 mm |
| Depth  | 70 mm  |

## Material specifications

|                  |          |
|------------------|----------|
| Housing material | Aluminum |
|------------------|----------|

## Mechanical tests

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

## Environmental and real-life conditions

### Ambient conditions

|                                         |                               |
|-----------------------------------------|-------------------------------|
| Degree of protection                    | IP20                          |
| Ambient temperature (operation)         | -40 °C ... 75 °C              |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C              |
| Altitude                                | 4850 m                        |
| Permissible humidity (operation)        | 5 % ... 95 % (non-condensing) |

|                                          |                                            |
|------------------------------------------|--------------------------------------------|
| Permissible humidity (storage/transport) | 5 % ... 95 % (non-condensing)              |
| Shock                                    | 300 m/s <sup>2</sup> , 11 ms (IEC 60068-2) |
| Air pressure (operation)                 | 86 kPa ... 108 kPa                         |
| Air pressure (storage/transport)         | 66 kPa ... 108 kPa                         |

## Approvals

### Conformity/Approvals

|                  |                                    |
|------------------|------------------------------------|
| Conformance      | CE-compliant                       |
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D |

## EMC data

|                               |                                           |
|-------------------------------|-------------------------------------------|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
|-------------------------------|-------------------------------------------|

### Electrostatic discharge

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

### Electrostatic discharge

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

### Electromagnetic HF field

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

### Electromagnetic HF field

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

### Fast transients (burst)

|                       |              |
|-----------------------|--------------|
| 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)

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

### Conducted interference

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

### 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 |

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## Classifications

### ECLASS

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

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001467 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 43201500 |
|-------------|----------|

## Environmental product compliance

### EU RoHS

|                                         |                    |
|-----------------------------------------|--------------------|
| Fulfills EU RoHS substance requirements | Yes                |
| Exemption                               | 6(c), 7(a), 7(c)-I |

### China RoHS

|                                        |                                                                                                                                                                                                                                   |
|----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-10                                                                                                                                                                                                                           |
|                                        | 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                                | 12778737-fc59-46a5-9294-fbc5989d4550 |