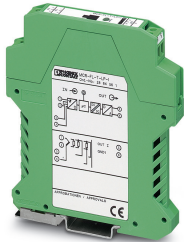


## Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

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MCR temperature measuring transducer: programmable, loop-powered, for resistance thermometers, thermocouples, resistance-type sensors and voltage sensors.

### Your advantages

- ✓ Freely programmable via MCR/PI-CONF-WIN
- ✓ Two-wire transmitter for resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors

**RoHS**

### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 017918 899820 |
| GTIN                                 | 4017918899820                                                                                           |
| Weight per Piece (excluding packing) | 110.910 g                                                                                               |
| Custom tariff number                 | 85437090                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Dimensions

|        |          |
|--------|----------|
| Width  | 12.5 mm  |
| Height | 99 mm    |
| Depth  | 114.5 mm |

#### Ambient conditions

|                                 |                                        |
|---------------------------------|----------------------------------------|
| Ambient temperature (operation) | -40 °C ... 85 °C                       |
| Degree of protection            | IP20                                   |
| Noise immunity                  | EN 61326-1 (IEC 61326) and NAMUR NE 21 |

# Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

## Technical data

### Input data

|                                     |                                                                                                                                                     |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| Configurable/programmable           | Yes, programmable                                                                                                                                   |
| Sensor types (RTD) that can be used | Pt, Ni (100, 500, 1000); minimum measurement range 10 K                                                                                             |
| Sensor types that can be used (TC)  | B, C, D, E, J, K, L, N, R, S, T, U; minimum measurement range 50 K/500 K                                                                            |
| Linear resistance measuring range   | Resistance-type sensor from 10 $\Omega$ to 400 $\Omega$ and from 10 $\Omega$ to 2000 $\Omega$ ; minimum measurement range 10 $\Omega$ /100 $\Omega$ |
| Connection technology               | 2-, 3-, 4-conductor                                                                                                                                 |

### Output data

|                                                |                                                                   |
|------------------------------------------------|-------------------------------------------------------------------|
| Output name                                    | Current output                                                    |
| Number of outputs                              | 1                                                                 |
| Configurable/programmable                      | Yes                                                               |
| Current output signal                          | 4 mA ... 20 mA                                                    |
|                                                | 20 mA ... 4 mA                                                    |
| Output current with wire break                 | $\leq 3.6$ mA or $\geq 21$ mA (adjustable)                        |
| Output current with short-circuit              | $\leq 3.6$ mA or $\geq 21$ mA (adjustable, not for thermocouples) |
| Output current range with overrange/underrange | $\leq 20.5$ mA / $\geq 3.8$ mA (linear increase/decrease)         |
| Load/output load current output                | max ( $V_{\text{supply}} - 12$ V) / 0.023 A (current output)      |

### Power supply

|                          |                     |
|--------------------------|---------------------|
| Designation              | Loop-powered        |
| Supply voltage range     | 12 V DC ... 35 V DC |
| Max. current consumption | < 3.5 mA            |

### Connection data

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 8 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross section solid    | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross section AWG      | 24 ... 14                                   |

### General

|                                           |                                                                                   |
|-------------------------------------------|-----------------------------------------------------------------------------------|
| Transmission error resistance thermometer | 0.2 K (Pt 100, Ni 100), 0.5 K (Pt 500, Ni 500), 0.3 K (Pt 1000, Ni 1000)          |
| Transmission error thermocouples          | typ. 0.5 K (K, J, T, E, L, U), 1.0 K (N, C, D), 2.0 K (S, B, R)                   |
| Transmission error resistance-type sensor | $\pm 0.1$ $\Omega$ (10...400 $\Omega$ ), $\pm 1.5$ $\Omega$ (10...2000 $\Omega$ ) |
| Transmission error voltage sensor         | $\pm 20$ $\mu$ V (-10...100 mV)                                                   |
| Step response (10-90%)                    | < 2 s                                                                             |
| Switch-on delay                           | 4 s                                                                               |
| Test voltage input/output                 | 2 kV (50 Hz, 1 min.)                                                              |
| Noise emission                            | EN 61326-1 (IEC 61326) and NAMUR NE 21                                            |

# Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

## Technical data

### General

|                   |                                                      |
|-------------------|------------------------------------------------------|
| Noise immunity    | EN 61326-1 (IEC 61326) and NAMUR NE 21               |
| Color             | green                                                |
| Housing material  | Polyamide PA non-reinforced                          |
| Mounting position | any                                                  |
| Configuration     | Using MCR-PI-CONF-WIN configuration software package |

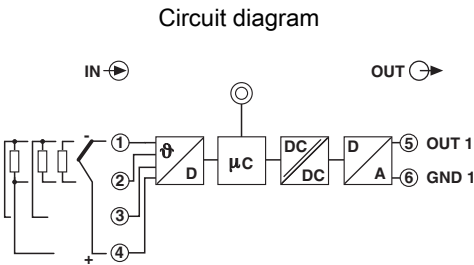
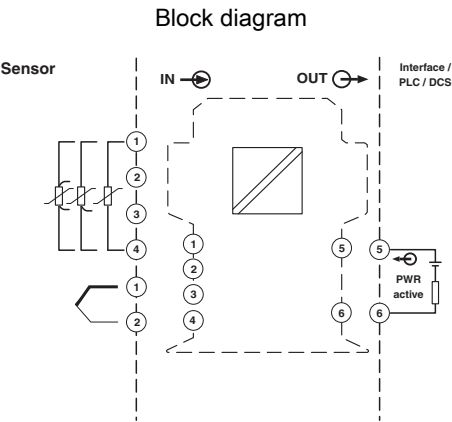
### Standards and Regulations

|                                  |                                        |
|----------------------------------|----------------------------------------|
| Noise emission                   | EN 61326-1 (IEC 61326) and NAMUR NE 21 |
| Noise immunity                   | EN 61326-1 (IEC 61326) and NAMUR NE 21 |
| Connection in acc. with standard | CUL                                    |

### Environmental Product Compliance

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

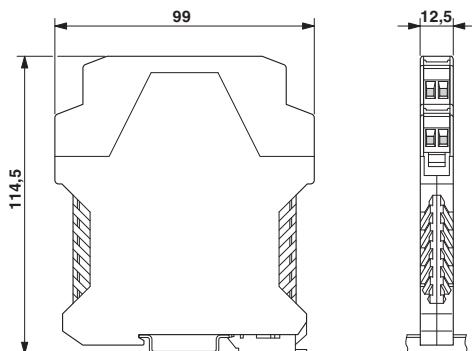
## Drawings



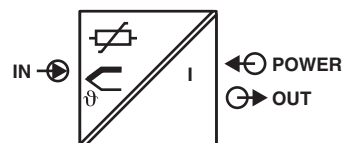
Block diagram MCR-FL-T-LP-I

## Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

Dimensional drawing



Pictogram



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27210129 |
| eCl@ss 11.0   | 27210129 |
| eCl@ss 4.0    | 27200200 |
| eCl@ss 4.1    | 27200200 |
| eCl@ss 5.0    | 27200200 |
| eCl@ss 5.1    | 27200200 |
| eCl@ss 6.0    | 27200200 |
| eCl@ss 7.0    | 27200206 |
| eCl@ss 9.0    | 27210129 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001446 |
| ETIM 3.0 | EC001446 |
| ETIM 4.0 | EC001446 |
| ETIM 6.0 | EC002919 |
| ETIM 7.0 | EC002919 |

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211506 |
| UNSPSC 7.0901 | 39121008 |
| UNSPSC 11     | 39121008 |
| UNSPSC 12.01  | 39121008 |
| UNSPSC 13.2   | 41112105 |
| UNSPSC 18.0   | 41112105 |

# Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

## Classifications

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 19.0 | 41112105 |
| UNSPSC 20.0 | 41112105 |
| UNSPSC 21.0 | 41112105 |

## Accessories

### Accessories

#### Adapter cable

Adapter cable - MCR-PAC-T - 2864590

Software adapter cable, 2.4 m for programming MCR-...-LP-...- and MCR-...-HT-... modules



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### Programming adapter

Programming adapter - MCR-PAC-T-USB - 2309000

Programming adapter with USB and T port interface, 2.4 m for programming FA MCR-..., MCR-...-LP-..., and MCR-...-HT-... modules

