

Temperature measuring transducer - MCR-FL-T-LP-I-EX - 2864574

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MCR head-mounted temperature transducers: Programmable loop-powered temperature transducers. Resistance thermometers, thermocouples, resistance-type sensors and voltage sensors.

Your advantages

- ✓ Input for resistance thermometers, thermocouples, and linear mV signals, Ex ia IIC
- ✓ Configuration via software
- ✓ Can be installed in zone 1
- ✓ 2-way electrical isolation
- ✓ 1-channel
- ✓ Loop-powered
- ✓ HART-compatible (MCR-FL-TS-LP-I-EX)
- ✓ Output: 4 mA ... 20 mA/20 mA ... 4 mA



Key Commercial Data

| | |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc |
| GTIN |  4 017918 907273 |
| GTIN | 4017918907273 |

Technical data

Dimensions

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

Ambient conditions

| | |
|---------------------------------|------------------|
| Ambient temperature (operation) | -40 °C ... 55 °C |
| Degree of protection | IP20 |

Input data

| | |
|---------------------------|-------------------|
| Configurable/programmable | Yes, programmable |
|---------------------------|-------------------|

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Technical data

Input data

| | |
|-------------------------------------|-----------------------------------------------------------------------|
| Sensor types (RTD) that can be used | Pt, Ni (100, 500, 1000); min. measurement range 10 K |
| Sensor types that can be used (TC) | B, C, D, E, J, K, L, N, R, S, T, U; min. measurement range 50 K/500 K |
| Connection technology | 2, 3, 4-wire |
| Input signal range | 10 Ω ... 400 Ω (min. measurement range 10 Ω) |
| | 10 Ω ... 2000 Ω (min. measurement range 100 Ω) |
| | -10 mV ... 100 mV (min. measurement range 5 mV) |

Output data

| | |
|------------------------------------------------|----------------------------------------------------------------------------------------|
| Signal output | Current output |
| Configurable/programmable | Yes |
| Current output signal | 4 mA ... 20 mA |
| | 20 mA ... 4 mA |
| Max. current output signal | ≤ 23 mA |
| Output current with short-circuit | ≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples) |
| Output current with wire break | ≤ 3.6 mA or ≥ 21 mA (adjustable) |
| Output current range with overrange/underrange | 3.8 mA ... 20.5 mA |
| Load/output load current output | ≤ 520 Ω (At $U_V = 24\text{ V}$; $U_{\text{supply}} = 12\text{ V} / 0.023\text{ A}$) |
| Configurable/programmable | no |

Power supply

| | |
|--------------------------|---------------------|
| Designation | Loop-powered |
| Supply voltage range | 12 V DC ... 30 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 ² ... 2.5 mm ² |
| Conductor cross section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross section AWG | 24 ... 14 |
| Torque | 0.5 Nm ... 0.6 Nm |
| pluggable | no |

General

| | |
|------------------------|------------------------------------------------------|
| Step response (10-90%) | < 2 s |
| Switch-on delay | 4 s |
| Configuration | Using MCR-PI-CONF-WIN configuration software package |
| Standards/regulations | NAMUR recommendation NE 21 |
| Housing material | Polyamide PA non-reinforced |
| Color | green |
| Line monitoring | NE 43 |

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Technical data

Safety data

| | |
|--------------------------------------|------------------------------------|
| Max. output voltage U_o | 4.4 V DC |
| Max. output current I_o | 9.6 mA |
| Max. output power P_o | 10.6 mW |
| Max. ambient temperature | T4 = 85 °C, T5 = 65 °C, T6 = 50 °C |
| Group | IIA |
| Max. external inductivity L_o | 100 mH |
| Max. external capacitance C_o | 12 µF |
| Group | IIB |
| Max. external inductivity L_o | 100 mH |
| Max. external capacitance C_o | 12 µF |
| Group | IIC |
| Max. external inductivity L_o | 100 mH |
| Max. external capacitance C_o | 2.4 µF |
| Safety-related maximum voltage U_m | 250 V |

Standards and Regulations

| | |
|-----------------------|-------------------------------|
| Standards/regulations | NAMUR recommendation NE 21 |
| Conformance | CE-compliant |
| ATEX | # II 2(1) G Ex ia IIC T4...T6 |
| UL, USA/Canada | cULus |
| Group | IIA |
| | IIB |
| | IIC |

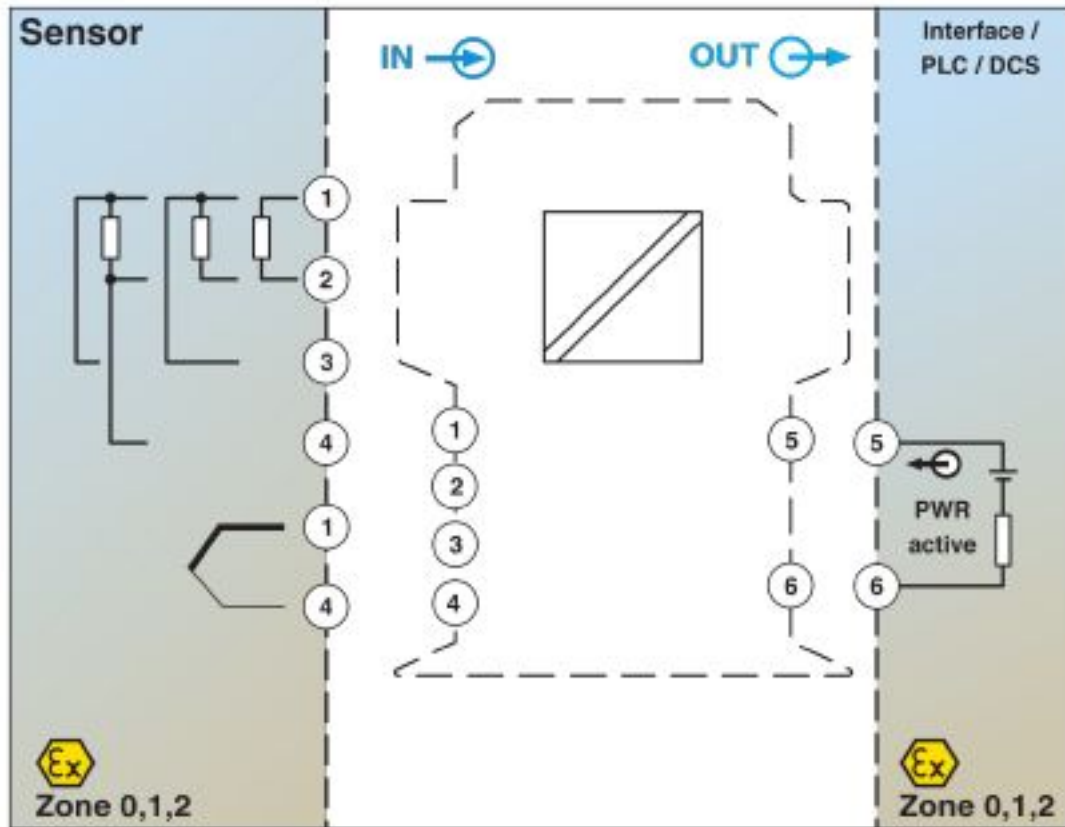
Environmental Product Compliance

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

Drawings

Temperature measuring transducer - MCR-FL-T-LP-I-EX - 2864574

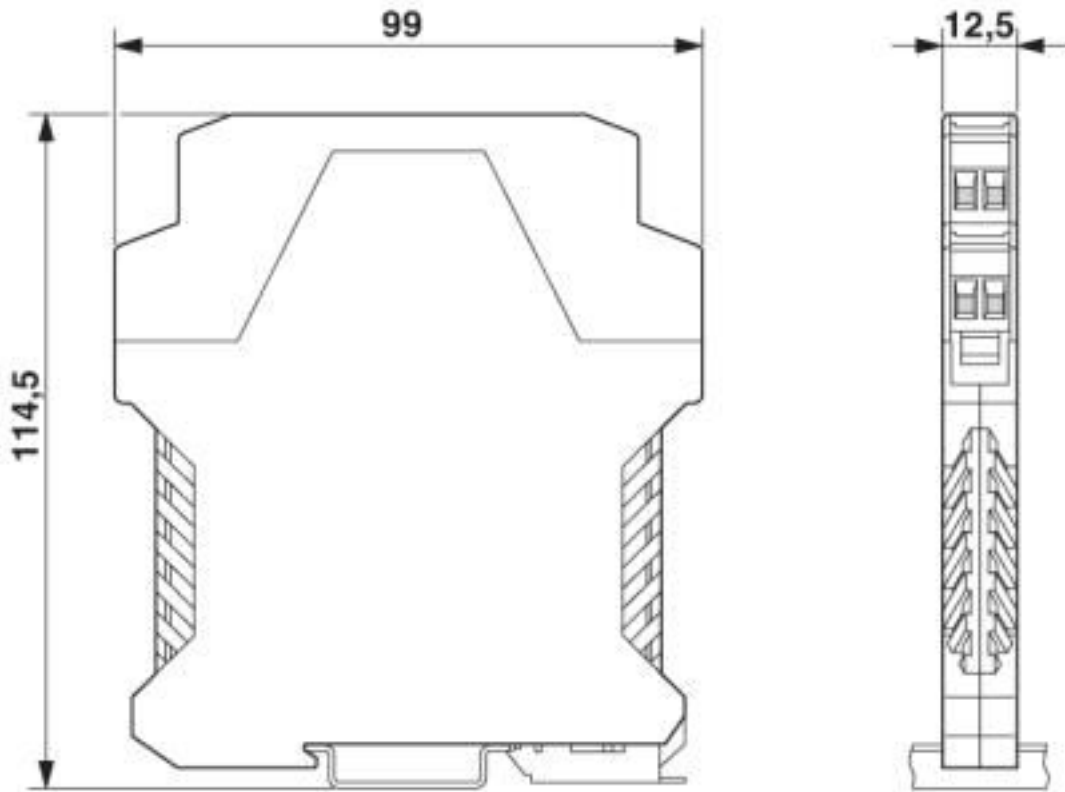
Block diagram



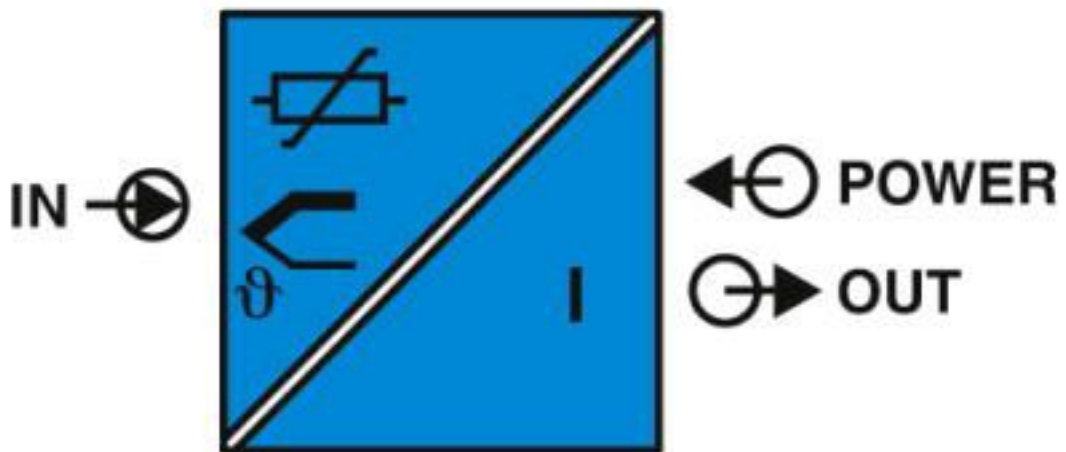
Block diagram MCR-FL-T-LP-I-EX

Temperature measuring transducer - MCR-FL-T-LP-I-EX - 2864574

Dimensional drawing



Pictogram



Classifications

eCl@ss

| | |
|---------------|----------|
| eCl@ss 10.0.1 | 27210129 |
| eCl@ss 4.0 | 27200200 |
| eCl@ss 4.1 | 27200200 |

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Classifications

eCl@ss

| | |
|------------|----------|
| eCl@ss 5.0 | 27200200 |
| eCl@ss 5.1 | 27200200 |
| eCl@ss 6.0 | 27200200 |
| eCl@ss 7.0 | 27200206 |
| eCl@ss 8.0 | 27200206 |
| eCl@ss 9.0 | 27210129 |

ETIM

| | |
|----------|----------|
| ETIM 2.0 | EC001446 |
| ETIM 3.0 | EC001446 |
| ETIM 4.0 | EC001446 |
| ETIM 5.0 | 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 |
| 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

Programming adapter

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Accessories

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



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