

MCR-FL-TS-LP-I-EX-200 - Temperature measuring transducer



2904871

<https://www.phoenixcontact.com/us/products/2904871>

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Measurement and control temperature transducers, resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors. Replacement part: 1012249 MACX MCR-EX-TS-I-OLP-C.

Your advantages

- Preconfigured to 200 °C
- Can be installed in zone 1
- 2-way electrical isolation
- Output: 4 mA ... 20 mA/20 mA ... 4 mA
- Loop-powered
- 1-channel
- HART-compatible

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2904871 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | NULL |
| Product key | DK1XXX |
| GTIN | 4046356902465 |
| Weight per piece (including packing) | 125.1 g |
| Weight per piece (excluding packing) | 103.6 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

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Technical data

Product properties

| | |
|--------------|-------------------------|
| Product type | Temperature transmitter |
| Application | Temperature |

Electrical properties

| | |
|---|--|
| Switch-on delay | 4 s |
| Line monitoring | NE 43 |
| Test voltage input/output | 2 kV AC (50 Hz, 60 s) |
| Step response (10-90%) | < 2 s |
| Transmission error voltage sensor | ±20 µV (-10 mV ... 100 mV) |
| 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 | ±0.1 Ω (10 ... 400 Ω), ±1.5 Ω (10 ... 2000 Ω) |
| 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) |

Supply

| | |
|--------------------------|---------------------|
| Designation | Loop-powered |
| Supply voltage range | 12 V DC ... 30 V DC |
| Max. current consumption | < 3.5 mA |

Input data

Signal

| | |
|--------------|-------------|
| Input signal | Temperature |
|--------------|-------------|

Measurement

| | |
|-------------------------------------|---|
| Configurable/programmable | no, preconfigured |
| 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 |
| Temperature measuring range | -25 °C ... 200 °C |
| Linear resistance measuring range | 10 Ω ... 400 Ω (min. measurement range 10 Ω) |
| Linear mV signal range | -10 mV ... 100 mV (min. measurement range 5 mV) |

Output data

Switching:

| | |
|---------------------------|----|
| Configurable/programmable | no |
|---------------------------|----|

Signal

| | |
|---------------------------|----------------------------------|
| Output description | Current output |
| Configurable/programmable | no |
| Current output signal | 4 mA ... 20 mA 20 mA ... 4 mA |

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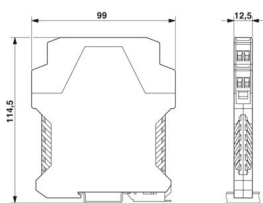
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| | |
|--|--|
| Max. current output signal | ≤ 23 mA |
| Output current with short-circuit | ≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples) |
| Output current with wire break | ≤ 3.6 mA or ≥ 21 mA (adjustable) |
| Output current range with overrange/underrange | 3.8 mA ... 20.5 mA |
| Load/output load current output | ≤ 520 Ω (At $U_V = 24\text{ V}$; $U_{\text{supply}} - 12\text{ V} / 0.023\text{ A}$) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Pluggable screw connection |
| Stripping length | 8 mm |
| Screw thread | M3 |
| Conductor cross-section rigid | 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 |
| Tightening torque | 0.5 Nm ... 0.6 Nm |

Dimensions

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

Material specifications

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|--|-----------------------------|
| Color | green (RAL 6021) |
| Flammability rating according to UL 94 | V0 |
| Housing material | Polyamide PA non-reinforced |

Environmental and real-life conditions

Ambient conditions

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

Approvals

CE

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

Standards and regulations

Standards

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| | |
|-----------------------|----------------------------|
| Standards/regulations | NAMUR recommendation NE 21 |
|-----------------------|----------------------------|

Mounting

| | |
|-------------------|-------------------|
| Mounting type | DIN rail mounting |
| Mounting position | any |

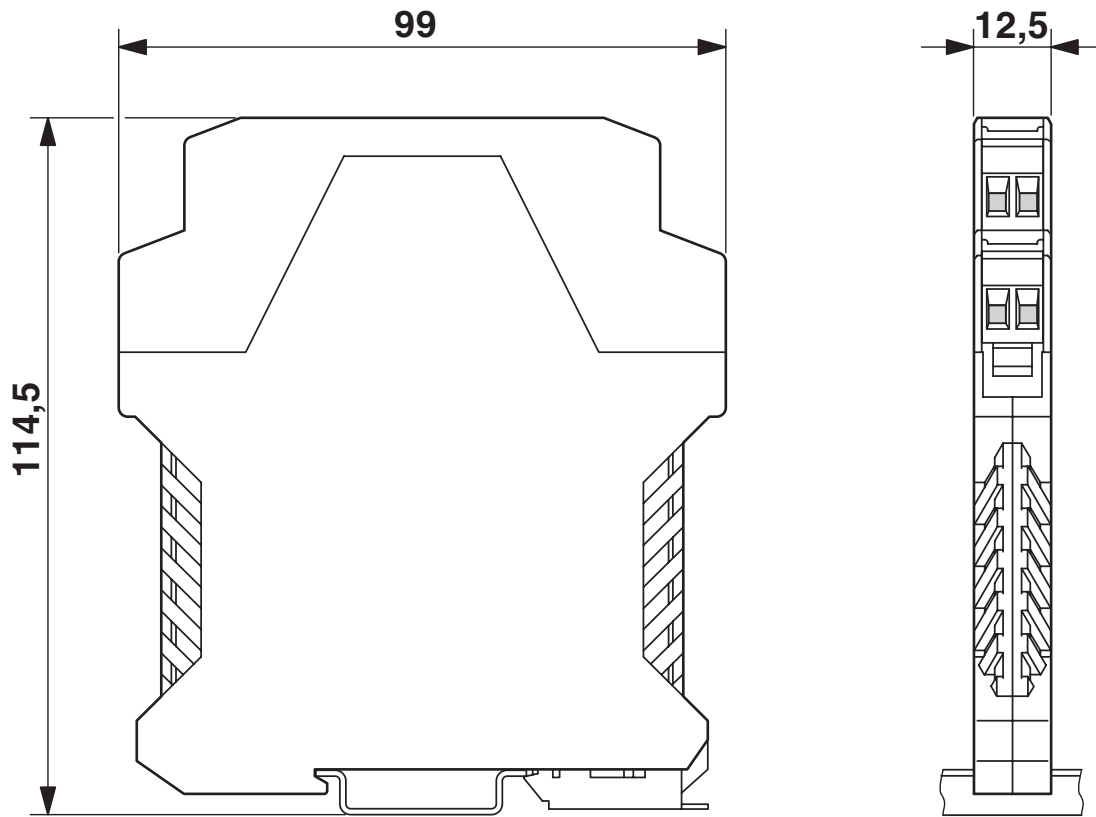
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Drawings

Dimensional drawing



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Environmental product compliance

China RoHS

| | |
|--|--|
| 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. |
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EU REACH SVHC

| | |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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