

MCR-SL-PT100-SP - Temperature monitoring



2814948

<https://www.phoenixcontact.com/us/products/2814948>

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MCR temperature relay, for Pt 100 in 2-conductor technology, input: -100 °C ... +700 °C



Your advantages

- Adjustable switching hysteresis
- Electrical isolation
- Relay changeover contact output
- Switching point can be freely selected in the temperature range from -100°C ... +700°C

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2814948 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C401 |
| Product key | DK1XXX |
| GTIN | 4017918820381 |
| Weight per piece (including packing) | 123.5 g |
| Weight per piece (excluding packing) | 101.5 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

Technical data

Notes

Utilization restriction

| | |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

Product properties

| | |
|--------------|------------------------------|
| Product type | Temperature monitoring relay |
|--------------|------------------------------|

Electrical properties

| | |
|---|-------------------------|
| Linearity error | < 0.1 % |
| Maximum power dissipation for nominal condition | 900 mW |
| Test voltage, input/output/supply | 1.5 kV AC (50 Hz, 60 s) |
| Maximum temperature coefficient | < 0.01 %/K |
| Temperature coefficient, typical | 0.005 %/K |

Supply

| | |
|--------------------------|---------------------|
| Supply voltage range | 20 V DC ... 30 V DC |
| Max. current consumption | < 30 mA |

Input data

Measurement

| | |
|-------------------------------------|--|
| Sensor types (RTD) that can be used | Pt 100 (IEC 60751/EN 60751) |
| Temperature measuring range | -100 °C ... 700 °C |
| Temperature measuring range: Pt 100 | -100 °C ... 700 °C (freely adjustable) |
| Sensor input current | approx. 1 mA |
| Connection technology | 2-conductor |

Output data

Switching: Relay

| | |
|------------------------|---|
| Contact switching type | 1 changeover contact |
| Contact material | AgSnO, hard gold-plated |
| Max. switching current | 50 mA (for gold layer, 30 V AC/ 36 V DC) 2 A (in case of a destroyed gold layer, 250 V AC) |
| Typical response time | approx. 6 ms |
| Typical release time | approx. 200 ms |
| Status display | Red LED (short-circuit/wire break) Yellow LED (relay active) |

Connection data

| | |
|-------------------|------------------|
| Connection method | Screw connection |
| Stripping length | 8 mm |

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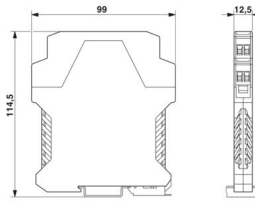


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| | |
|----------------------------------|---|
| Screw thread | M3 |
| Conductor cross-section rigid | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section flexible | 0.2 mm ² ... 2.5 mm ² |
| Conductor cross-section AWG | 24 ... 14 |

Dimensions

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

Material specifications

| | |
|------------------|-----------------------------|
| Color | green (RAL 6021) |
| Housing material | Polyamide PA non-reinforced |

Environmental and real-life conditions

Ambient conditions

| | |
|---------------------------------|------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 65 °C |

Approvals

CE

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

UL, USA/Canada

| | |
|----------------|-------------------|
| Identification | UL 508 Recognized |
|----------------|-------------------|

Mounting

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

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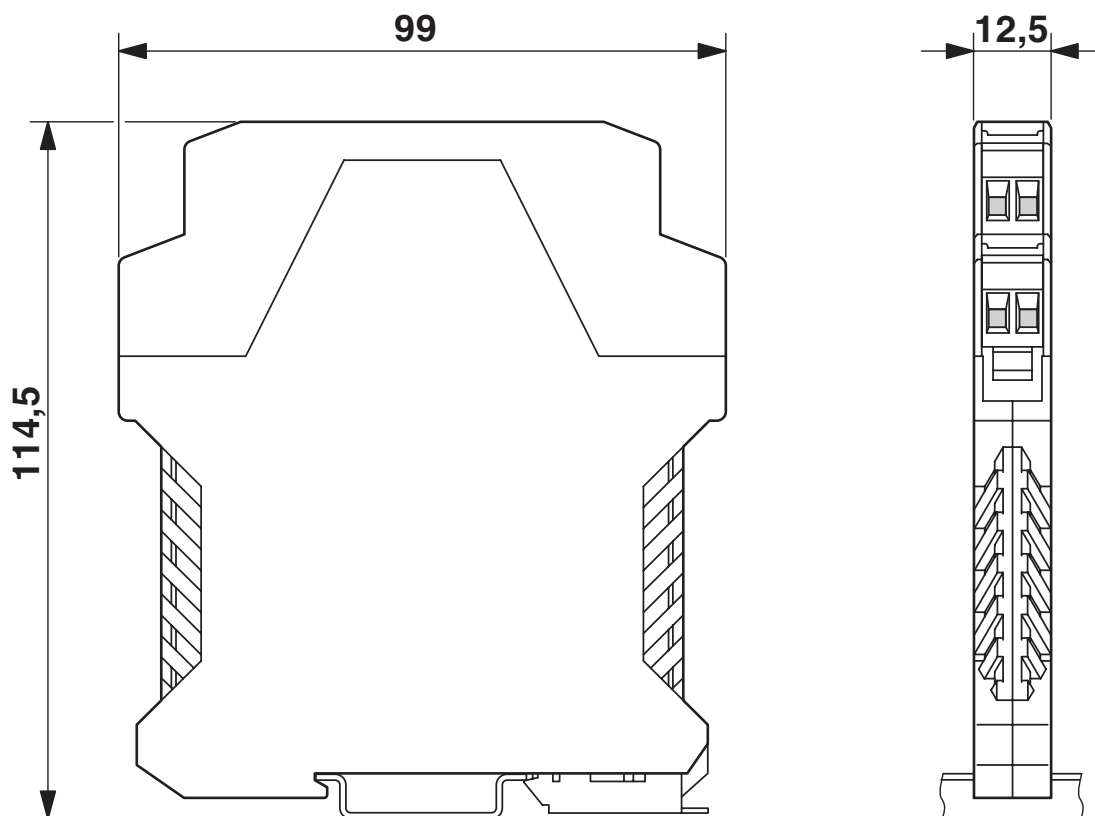
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Drawings

Dimensional drawing

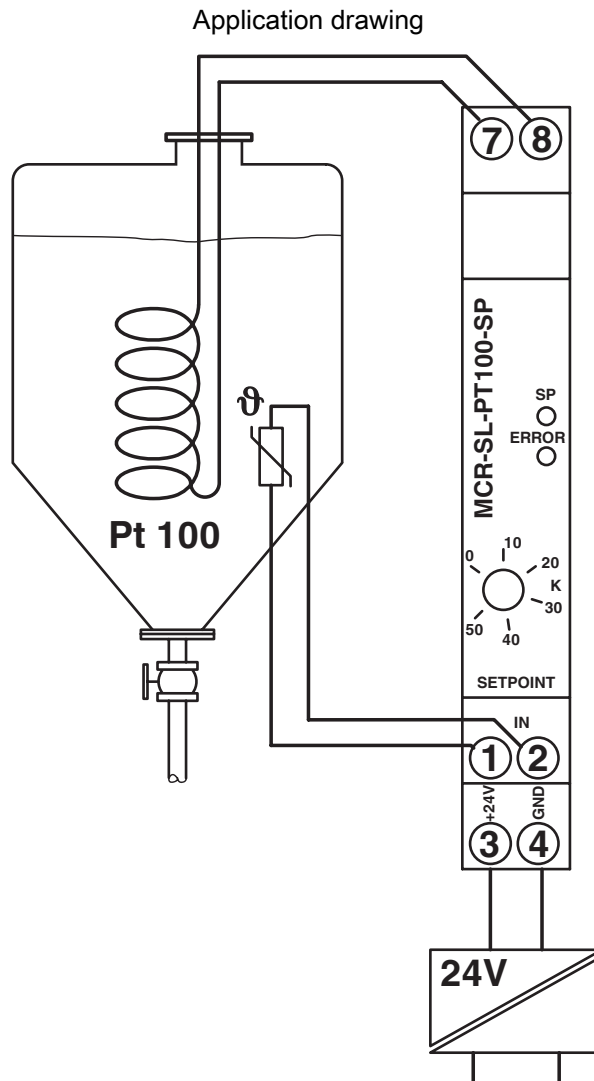


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Application example - Temperature control of a heated medium
1 = mains voltage

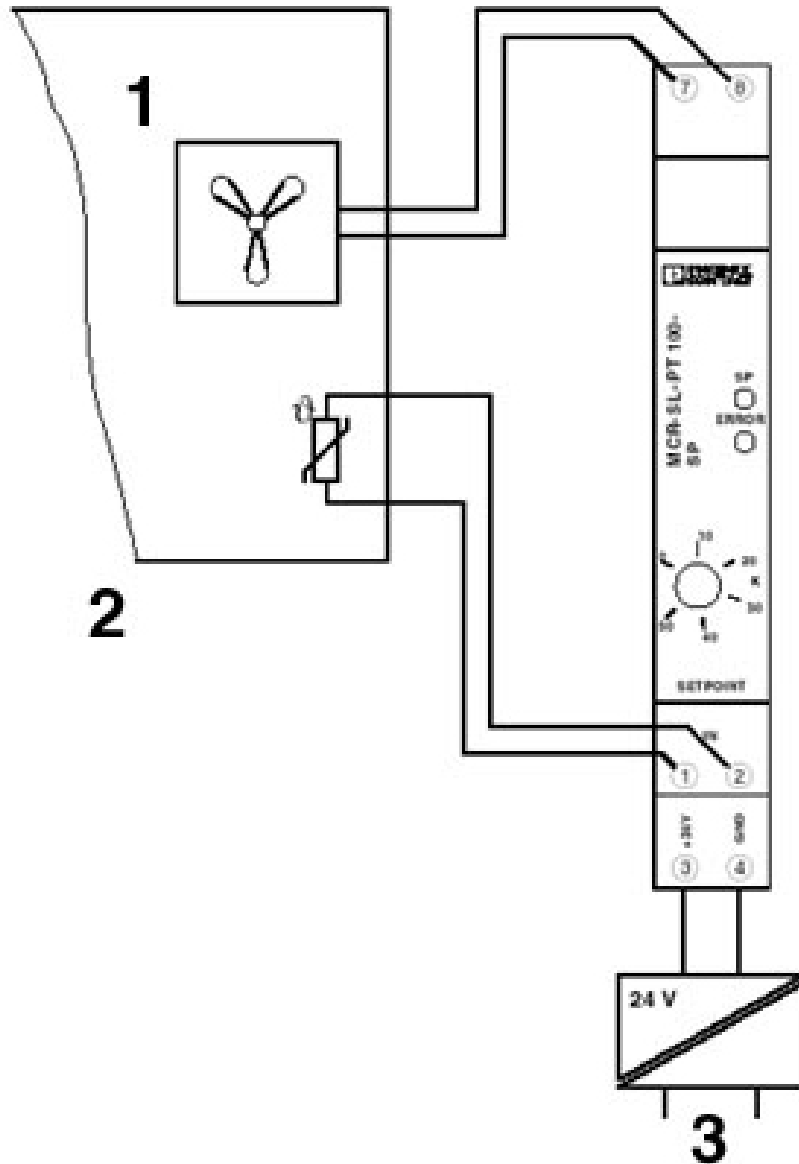
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Application drawing



Application example - Temperature control with connection of a fan

1 = fan

2 = control cabinet/room

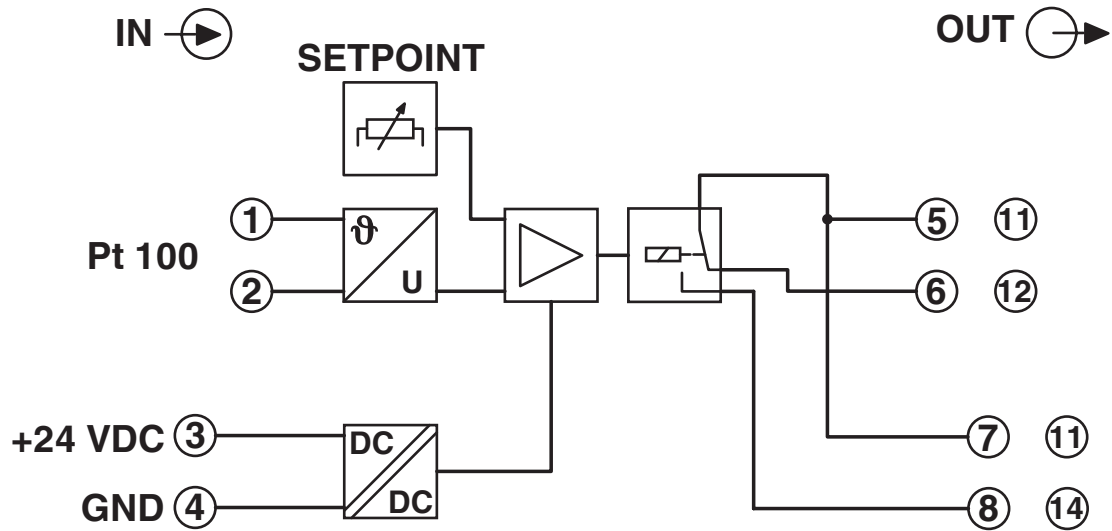
3 = mains voltage

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Circuit diagram



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. |

EU REACH SVHC

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

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