

MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



MCR temperature transducer, configurable, for Pt 100 temperature sensors, with spring-cage connection, not configured. Replacement part: 2902052 MINI MCR-2-RTD-UI-PT.

Your advantages

- Power supply possible via the foot element (TBUS)
- Optimized temperature measuring range of -50°C to $+200^{\circ}\text{C}$ for increased accuracy
- For 2-, 3-, 4-conductor Pt 100 sensors in accordance with IEC 60751
- Error indication via diagnostic LED and analog signal
- Input and output signals can be configured via DIP switches
- Highly-compact temperature transducer for electrical isolation, conversion, amplification, and filtering of Pt 100 signals to create standard signals
- 3-way isolation

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2864202 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | C403 |
| Product key | DK1135 |
| GTIN | 4046356046466 |
| Weight per piece (including packing) | 91.7 g |
| Weight per piece (excluding packing) | 59.9 g |
| Customs tariff number | 85437090 |
| Country of origin | DE |

MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

Technical data

Product properties

| | |
|----------------|-------------------------|
| Product type | Temperature transmitter |
| Product family | MINI Analog |

Insulation characteristics

| | |
|----------------------|----|
| Overvoltage category | II |
| Pollution degree | 2 |

Electrical properties

| | |
|---|---|
| Rated insulation voltage | 50 V AC/DC |
| Electrical isolation | Basic insulation in accordance with EN 61010 |
| Maximum power dissipation for nominal condition | 235.5 mW |
| Test voltage, input/output/supply | 1.5 kV AC (50 Hz, 60 s) |
| Protective circuit | Transient protection |
| Step response (0–99%) | < 200 ms |
| Maximum temperature coefficient | < 0.02 %/K |
| Transmission error in the set measuring range | $((50 \text{ K} / \Delta \text{ Temp}) + 0.05)\%$ |
| Transmission error in the full measuring range | $\leq 0.25 \%$ |

Supply

| | |
|--------------------------|---|
| Nominal supply voltage | 24 V DC |
| Supply voltage range | 19.2 V DC ... 30 V DC (The DIN rail connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, item no. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail in accordance with EN 60715) |
| Max. current consumption | < 21 mA (at 24 V DC) |
| Power consumption | < 500 mW |

Input data

Signal

| | |
|------------------|-------------|
| Number of inputs | 1 |
| Input signal | Temperature |

Measurement

| | |
|---|----------------------------------|
| Sensor types (RTD) that can be used | Pt 100 (IEC 60751/EN 60751) |
| Temperature measuring range | -50 °C ... 200 °C |
| Temperature measuring range | min. 50 K |
| Temperature measuring range: PT100 | -50 °C ... 200 °C (configurable) |
| Sensor input current | 1 mA (constant) |
| Max. permissible overall conductor resistance | 10 Ω (Per cable) |
| Connection technology | 2-, 3-, 4-conductor |

MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer

2864202

<https://www.phoenixcontact.com/us/products/2864202>

Output data

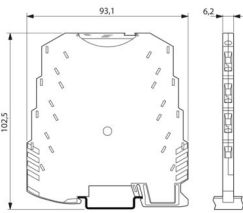
Signal

| | |
|---------------------------------|---|
| Number of outputs | 1 |
| Configurable/programmable | Yes |
| Voltage output signal | 0 V ... 10 V 10 V ... 0 V 0 V ... 5 V 1 V ... 5 V |
| Max. voltage output signal | approx. 12.5 V |
| Open-circuit voltage | approx. 12.5 V |
| Current output signal | 0 mA ... 20 mA 4 mA ... 20 mA 20 mA ... 0 mA 20 mA ... 4 mA |
| Max. current output signal | 23 mA |
| Short-circuit current | approx. 10 mA |
| Load/output load voltage output | > 10 k Ω |
| Load/output load current output | < 500 Ω (at 20 mA) |
| Ripple | < 20 mV _{PP} (at 500 Ω) < 20 mV _{PP} (at 10 k Ω) |

Connection data

| | |
|----------------------------------|---|
| Connection method | Spring-cage connection |
| Stripping length | 8 mm |
| 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 ... 12 |

Dimensions

| | |
|---------------------|--|
| Dimensional drawing |  |
| Width | 6.2 mm |
| Height | 93.1 mm |
| Depth | 102.5 mm |

Material specifications

| | |
|-------|------------------|
| Color | green (RAL 6021) |
|-------|------------------|

MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

| | |
|--|-------------|
| Housing material | PBT |
| Fire protection for rail vehicles (DIN EN 45545-2) R22 | HL 1 - HL 2 |
| Fire protection for rail vehicles (DIN EN 45545-2) R23 | HL 1 - HL 2 |
| Fire protection for rail vehicles (DIN EN 45545-2) R24 | HL 1 - HL 2 |

Environmental and real-life conditions

Ambient conditions

| | |
|---|--------------------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 65 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 10 % ... 95 % (non-condensing) |

Approvals

CE

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

ATEX

| | |
|----------------|----------------------------|
| Identification | ⊕ II 3 G Ex nA IIC T4 Gc X |
|----------------|----------------------------|

UL, USA/Canada

| | |
|----------------|---------------------------------------|
| Identification | UL 508 Recognized |
| | Class I, Div. 2, Groups A, B, C, D T5 |

GL

| | |
|----------------|------------|
| Identification | GL EMC 2 D |
|----------------|------------|

EMC data

| | |
|-------------------------------|--|
| Electromagnetic compatibility | Conformance with EMC directive |
| Noise immunity | EN 61000-6-2 |
| Note | When being exposed to interference, there may be minimal deviations. |

Noise emission

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

Electrostatic discharge

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

Electrostatic discharge

| | |
|----------|---|
| Comments | Safety measures must be taken to prevent electrostatic discharge. |
|----------|---|

Electromagnetic HF field

| | |
|--|--------------------------|
| Designation | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |
| Typical deviation from the measuring range final value | 10 % |

MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

Fast transients (burst)

| | |
|--|-------------------------|
| Designation | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |
| Typical deviation from the measuring range final value | 10 % |

Surge current load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Surge current load (surge)

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

Conducted interference

| | |
|--|-------------------------|
| Designation | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |
| Typical deviation from the measuring range final value | 10 % |

Standards and regulations

| | |
|----------------------|--|
| Electrical isolation | Basic insulation in accordance with EN 61010 |
|----------------------|--|

Mounting

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

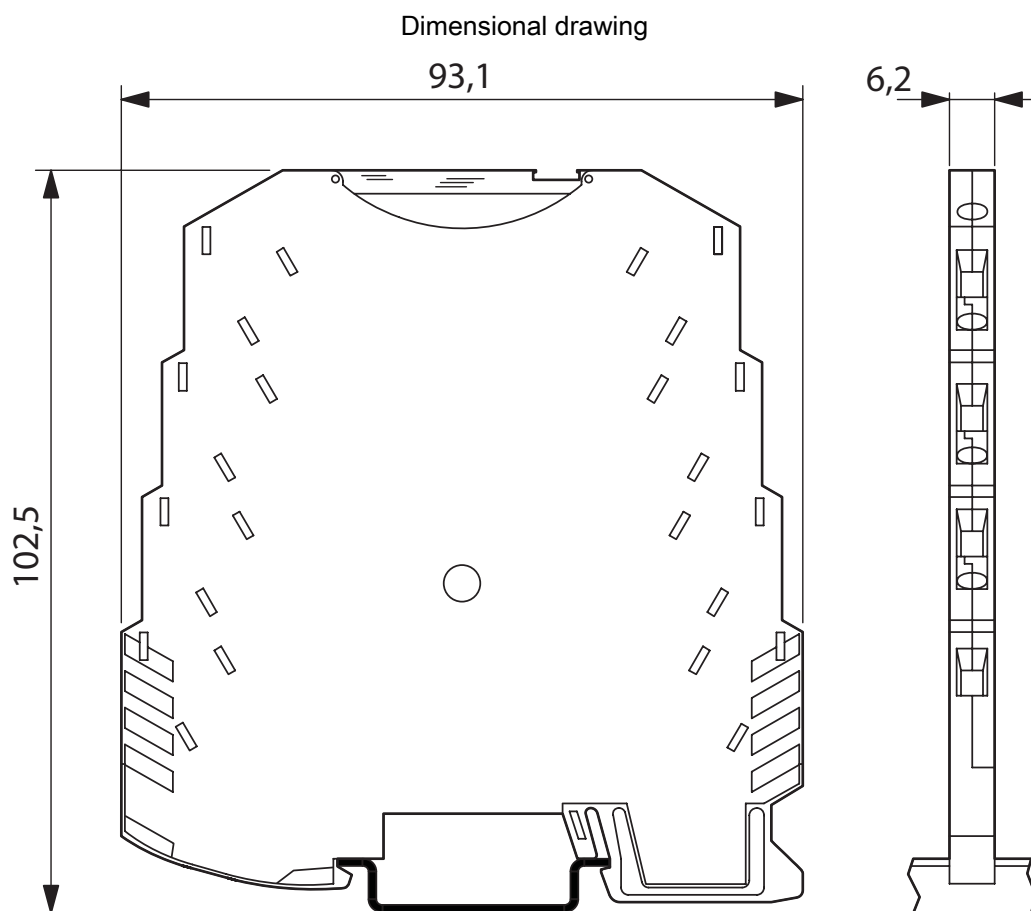
MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

Drawings

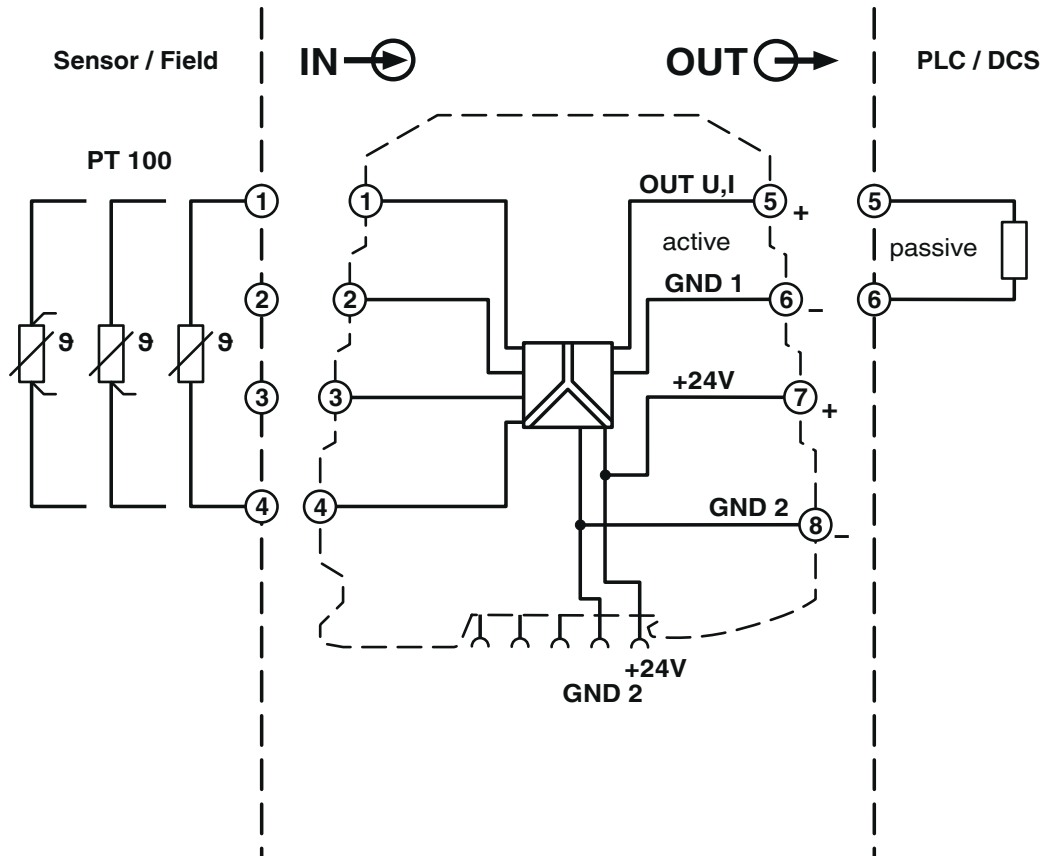


MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer

2864202

<https://www.phoenixcontact.com/us/products/2864202>

Block diagram



MINI MCR-SL-PT100-UI-200-SP-NC - Temperature measuring transducer



2864202

<https://www.phoenixcontact.com/us/products/2864202>

Environmental product compliance

EU RoHS

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

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.) | Lead(CAS: 7439-92-1) |
|-------------------------------------|----------------------|

Phoenix Contact 2026 © - all rights reserved
<https://www.phoenixcontact.com>

Phoenix Contact USA
586 Fulling Mill Road
Middletown, PA 17057, United States
(+717) 944-1300
info@phoenixcon.com