

Resistance thermometer measuring transducer - MINI MCR-RTD-UI-NC - 2902849

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Configurable temperature transducer for the connection of 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Can be configured via DIP switches or, with extended functionality, using the software. Screw connection, standard configuration.

Product description

The configurable temperature transducer with 3-way isolation is suitable for the connection of resistance thermometers and remote resistance-type sensors with 2, 3, and 4-conductor connection technology. The measured values are converted into a linear current or voltage signal. The device can either be configured via DIP switches or, with extended functionality, via the S port using the software (FDT/DTM). The measuring transducer supports fault monitoring.



Key commercial data

| | |
|----------------------|---|
| Packing unit | 1 PCE |
| GTIN |  4 046356 689205 |
| Custom tariff number | 85437090 |
| Country of origin | GERMANY |

Technical data

Note:

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

Dimensions

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

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Technical data

Ambient conditions

| | |
|---|------------------|
| Ambient temperature (operation) | -20 °C ... 65 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Degree of protection | IP20 |

Input data

| | |
|-------------------------------------|--|
| Configurable/programmable | Yes |
| Sensor types (RTD) that can be used | Pt, Ni, Cu sensors |
| Linear resistance measuring range | 0 Ω ... 4000 Ω (Minimum measuring span: 10% of the selected measuring range) |
| Sensor input current | approx. 200 μA |
| Temperature measuring range | -200 °C ... 850 °C (Range depending on the sensor type) |
| Connection method | 2, 3, 4-wire |

Output data

| | |
|---------------------------------|------------------|
| Configurable/programmable | Yes |
| Voltage output signal | 0 V ... 10 V |
| | 10 V ... 0 V |
| | 0 V ... 5 V |
| | 1 V ... 5 V |
| Current output signal | 0 mA ... 20 mA |
| | 4 mA ... 20 mA |
| | 20 mA ... 0 mA |
| | 20 mA ... 4 mA |
| Max. output voltage | approx. 12.3 V |
| Max. output current | 24.6 mA |
| Load/output load voltage output | 10 kΩ |
| Load/output load current output | 500 Ω (at 20 mA) |

Power supply

| | |
|-----------------------------|---|
| Supply voltage range | 9.6 V DC ... 30 V DC (The T connector (ME 6,2 TBUS-2 1,5/5-ST-3,81 GN, Order No. 2869728) can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715)) |
| Typical current consumption | < 27 mA (at 24 V DC) |
| Power consumption | ≤ 700 mW (at I _{OUT} = 20 mA, 9.6 V DC, load 500 Ω) |

Connection data

| | |
|------------------------------------|---------------------|
| Connection method | Screw connection |
| Conductor cross section solid min. | 0.2 mm ² |
| Conductor cross section solid max. | 2.5 mm ² |

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Connection data

| | |
|--|---------------------|
| Conductor cross section stranded min. | 0.2 mm ² |
| Conductor cross section stranded max. | 2.5 mm ² |
| Conductor cross section AWG/kcmil min. | 26 |
| Conductor cross section AWG/kcmil max | 12 |
| Stripping length | 12 mm |
| Screw thread | M3 |

General

| | |
|-----------------------------------|--|
| Maximum temperature coefficient | 0.01 %/K |
| Status display | LED red |
| Protective circuit | Transient protection |
| Electrical isolation | Basic insulation according to EN 61010 |
| Surge voltage category | II |
| Pollution degree | 2 |
| Rated insulation voltage | 50 V AC/DC |
| Test voltage, input/output/supply | 1.5 kV (50 Hz, 1 min.) |
| Electromagnetic compatibility | Conformance with EMC Directive 2004/108/EC |
| Noise emission | EN 61000-6-4 |
| Noise immunity | EN 61000-6-2 When being exposed to interference, there may be minimal deviations. |
| Color | green |
| Housing material | PBT |
| Mounting position | Any |
| Assembly instructions | The T connector can be used to bridge the supply voltage. It can be snapped onto a 35 mm DIN rail according to EN 60715. |
| Conformance | CE-compliant |
| ATEX | # II 3 G Ex nA IIC T4 Gc X |
| UL, USA / Canada | 508 listed |
| | Class I, Div. 2, Groups A, B, C, D T5 applied for |
| GL | GL applied for |

EMC data

| | |
|--|--------------------------|
| Name | Electromagnetic RF field |
| Standards/regulations | EN 61000-4-3 |
| Typical deviation from the measuring range final value | 0.04 % |
| Name | Fast transients (burst) |
| Standards/regulations | EN 61000-4-4 |
| Typical deviation from the measuring range final value | 0.1 % |

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Technical data

EMC data

| | |
|--|-------------------------|
| Name | Conducted interferences |
| Standards/regulations | EN 61000-4-6 |
| Typical deviation from the measuring range final value | 0.02 % |

Classifications

ETIM

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

UNSPSC

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

eCl@ss

| | |
|------------|----------|
| eCl@ss 4.0 | 27200206 |
| eCl@ss 4.1 | 27200206 |
| eCl@ss 5.0 | 27200206 |
| eCl@ss 5.1 | 27200206 |
| eCl@ss 6.0 | 27200206 |
| eCl@ss 7.0 | 27200206 |
| eCl@ss 8.0 | 27200206 |

Approvals

Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

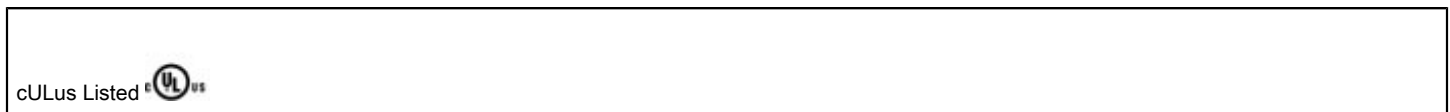
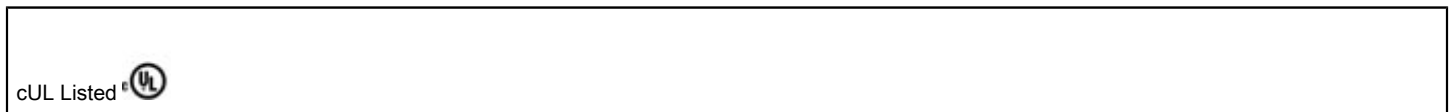
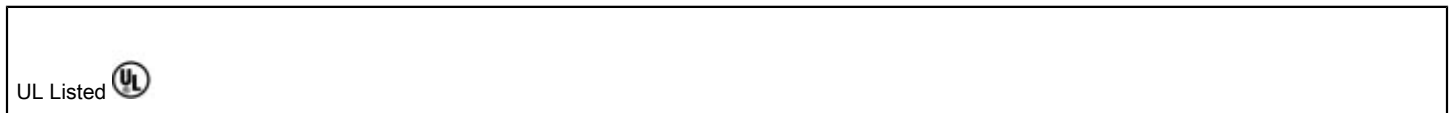
Ex Approvals

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Approvals

Approvals submitted

Approval details



Accessories

Accessories

Cable/conductor

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software.

Power terminal block - MINI MCR-SL-PTB-FM - 2902958



The MINI MCR-SL-PTB-FM(-SP) power terminal block is used to supply the supply voltage to the T-connector. The FM power terminal block offers the additional function of monitoring in combination with the fault monitoring module. Screw connection.

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Accessories

Power terminal block - MINI MCR-SL-PTB-FM-SP - 2902959



The MINI MCR-SL-PTB-FM(-SP) power terminal block is used to supply the supply voltage to the T-connector. The FM power terminal block offers the additional function of monitoring in combination with the fault monitoring module. Spring-cage connection.

Monitoring module - MINI MCR-SL-FM-RC-NC - 2902961



The fault monitoring module is used to evaluate and report group errors from the fault monitoring system and to monitor the supply voltages. The error is reported via an N/O contact. Screw connection, standard configuration.

Monitoring module - MINI MCR-SL-FM-RC-SP-NC - 2902962



The fault monitoring module is used to evaluate and report group errors from the fault monitoring system and to monitor the supply voltages. The error is reported via an N/O contact. Spring-cage connection, standard configuration.

Electronic housing - ME 6,2 TBUS-2 1,5/5-ST-3,81 GN - 2869728



DIN rail connector for DIN rail mounting. Universal for T-BUS housing. Gold-plated contacts, 5-pos.

Power supply unit - MINI-SYS-PS-100-240AC/24DC/1.5 - 2866983



DIN rail power supply unit, primary-switched mode, slim design, output: 24 V DC / 1.5 A

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Accessories

System adapter - MINI MCR-SL-V8-FLK 16-A - 2811268



Eight MINI analog signal converters with screw connection method can be connected to a control system using a system adapter and system cabling with a minimum of wiring and very low error risk.

Multiplexer - MINI MCR-SL-MUX-V8-FLK 16 - 2811815



MINI analog multiplexer, generates one analog output from 8 analog input signals, for MINI analog module with screw connection.

Transparent cover - MINI MCR DKL - 2308111



Fold up transparent cover for MINI MCR modules with additional labeling option using insert strips and flat Zack marker strip 6.2 mm

Marking label - MINI MCR-DKL-LABEL - 2810272

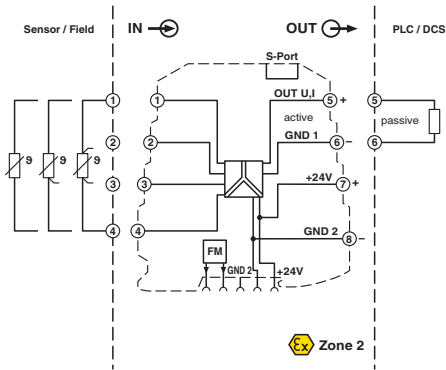


Label for extended marking of MINI MCR modules in connection with the MINI MCR-DKL

Drawings

Resistance thermometer measuring transducer - MINI MCR-RTD-UI-NC - 2902849

Block diagram



Pictogram

