Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI-PT - 2902052

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Configurable temperature transducer with plug-in connection technology for connecting 2, 3, and 4-conductor resistance thermometers and resistance-type sensors. Configurable via DIP switch or software. push-in connection technology, standard configuration

Product description

Configurable, 3-way isolated temperature transducer with plug-in connection technology. The device 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 and freely configurable current or voltage signal. You can optionally configure the device using DIP switches or with enhanced functionality via the S port using the standard ANALOG-CONF software via FDT/DTM or without further accessories using the MINI Analog Pro Smartphone app. The measuring transducer supports fault monitoring and NFC communication.

Key commercial data

Packing unit	1 pc
Weight per Piece (excluding packing)	60.0 GRM
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	110.5 mm
Depth	120.5 mm

Ambient conditions

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Ambient conditions

Ambient temperature (operation)	-40 °C ... 70 °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 (Bereich abhängig vom Sensortyp, Bereich frei einstellbar über Software oder in Stufen mittels DIP-Schalter)
Connection method	2, 3, 4-wire

Output data

Number of inputs	1
Configurable/programmable	Yes
Voltage output signal	0 V ... 5 V (via DIP switch)
	1 V ... 5 V (via DIP switch)
	0 V ... 10 V (via DIP switch)
	10 V ... 0 V (via DIP switch)
	0 V ... 10.5 V (Can be set via software)
Current output signal	0 mA ... 20 mA (via DIP switch)
	4 mA ... 20 mA (via DIP switch)
	20 mA ... 0 mA (via DIP switch)
	20 mA ... 4 mA (via DIP switch)
	0 mA ... 21 mA (Can be set via software)
Max. output voltage	approx. 12.3 V
Max. output current	24.6 mA
Short-circuit current	< 31.5 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	≤ 600 Ω (at 20 mA)

Power supply

Supply voltage range	9.6 V DC ... 30 V DC (The DIN rail bus 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	32 mA (at 24 V DC)
	63 mA (at 12 V DC)

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Power supply

Power consumption	≤ 850 mW (at I_{OUT} = 20 mA, 9.6 V DC, 600 Ω load)

Connection data

Connection method	Push-in connection
Single conductor/terminal point, solid, with ferrule, min.	0.14 mm²
Single conductor/terminal point, solid, with ferrule, max.	2.5 mm²
Single conductor/terminal point, solid, without ferrule, min.	0.14 mm²
Single conductor/terminal point, solid, without ferrule, max.	2.5 mm²
Conductor cross section stranded min.	0.14 mm²
Conductor cross section stranded max.	2.5 mm²
Min. AWG conductor cross section, stranded	24
Max. AWG conductor cross section, stranded	12
Stripping length	10 mm

General

Maximum temperature coefficient	0.01 %/K
Protective circuit	Transient protection
Electrical isolation	Reinforced insulation in accordance with IEC 61010-1
Surge voltage category	II
Pollution degree	2
Rated insulation voltage	300 V
Test voltage, input/output/supply	3 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.
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	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T6
	Class I, Zone 2, Group IIC T6
GL	GL applied for

EMC data

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EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
Typical deviation from the measuring range final value	0.06 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	0.1 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	0.07 %

Classifications

eCl@ss

eCl@ss 4.0	27210120
eCl@ss 4.1	27210120
eCl@ss 5.0	27210120
eCl@ss 5.1	27210120
eCl@ss 6.0	27210120
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120

ETIM

ETIM 3.0	EC001485
ETIM 4.0	EC001485
ETIM 5.0	EC002653

UNSPSC

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

Approvals

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Approvals

Approvals

UL Listed / cUL Listed / cULus Listed

Ex Approvals

ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

UL Listed

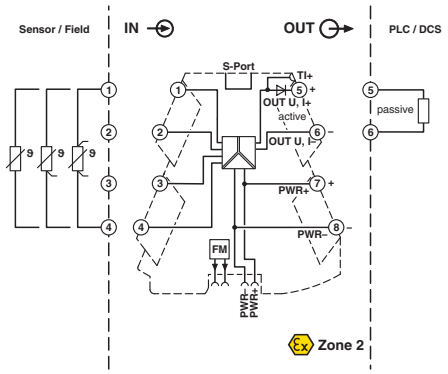
cUL Listed

cULus Listed

Drawings

Resistance thermometer measuring transducer - MINI MCR-2-RTD-UI-PT - 2902052

Block diagram



Pictogram