MCR-SL-PT100-UI-DC-ZF-NC - Resistance thermometer measuring transducer

2864286

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

Product description

The narrow, 6.2 mm wide MINI MCR-SL-PT100-UI... is a configurable, 3-way isolated temperature transducer. It is suitable for connecting Pt 100 resistance thermometers in accordance with IEC 60751 in 2-, 3-, and 4-conductor connection technology.
Electrically isolated 0 ... 20 mA, 4 ... 20 mA, 0 ... 10 V, 0 ... 5 V, 1 ... 5 V, 10 ... 0 V, 20 ... 0 mA, or 20 ... 4 mA standard analog signals are available on the output side.
The DIP switches, which can be accessed on the side of the housing, are used to configure the following parameters:
- Connection technology
- Temperature range to be measured
- Output signal
- Type of error evaluation

Power (19.2 V DC to 30 V DC) can either be supplied via the connection terminal blocks of the modules or in conjunction with the DIN rail connector.

Your advantages

- Power supply possible via the foot element (TBUS)
- For 2-, 3-, 4-conductor Pt 100 sensors in accordance with IEC 60751
- Error indication via diagnostic LED and analog signal
- Temperature measuring range of -150°C to +850°C
- Input and output signals can be configured via DIP switches
- 3-way isolation
- Pt 100 signals to create standard signals
- Highly-compact temperature transducer for electrical isolation, conversion, amplification, and filtering of

Commercial data

Item number	2864286
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C403
Product key	DK1135
GTIN	4017918974824
Weight per piece (including packing)	91.3 g
Weight per piece (excluding packing)	67.5 g

Customs tariff number	85437090
Country of origin	DE

Technical data

Product properties

Product type	Temperature transmitter
Product family	MINI Analog
No. of channels	1

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%)	< 160 ms
Maximum temperature coefficient	< 0.02 %/K
Transmission error in the set measuring range	((100 K / set measurement range [K]) + 0.1)%
Transmission error in the full measuring range	≤ 0,2 %

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

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Temperature measuring range	min. 50 K
Temperature measuring range: Pt 100	-150 °C ... 850 °C (configurable)
Sensor input current	1 mA (constant)
Max. permissible overall conductor resistance	10 Ω (Per cable)
Connection technology	2-, 3-, 4-conductor

Output data

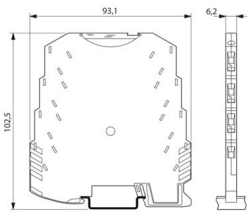
Signal

Number of outputs	1
Configurable/programmable	Yes, unconfigured
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
	20 mA ... 0 mA
	20 mA ... 4 mA
	4 mA ... 20 mA
Max. current output signal	23 mA
Short-circuit current	approx. 10 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	< 500 Ω (at 20 mA)
Ripple	< 20 mV_{PP} (at 500 Ω)
	< 20 mV_{PP} (at 500 Ω)

Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross-section rigid	0.2 mm² ... 2.5 mm²
Conductor cross-section flexible	0.2 mm² ... 2.5 mm²
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)

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

Approvals

CE

Certificate	CE-compliant

ATEX

Identification	Ⓔx 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 %

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

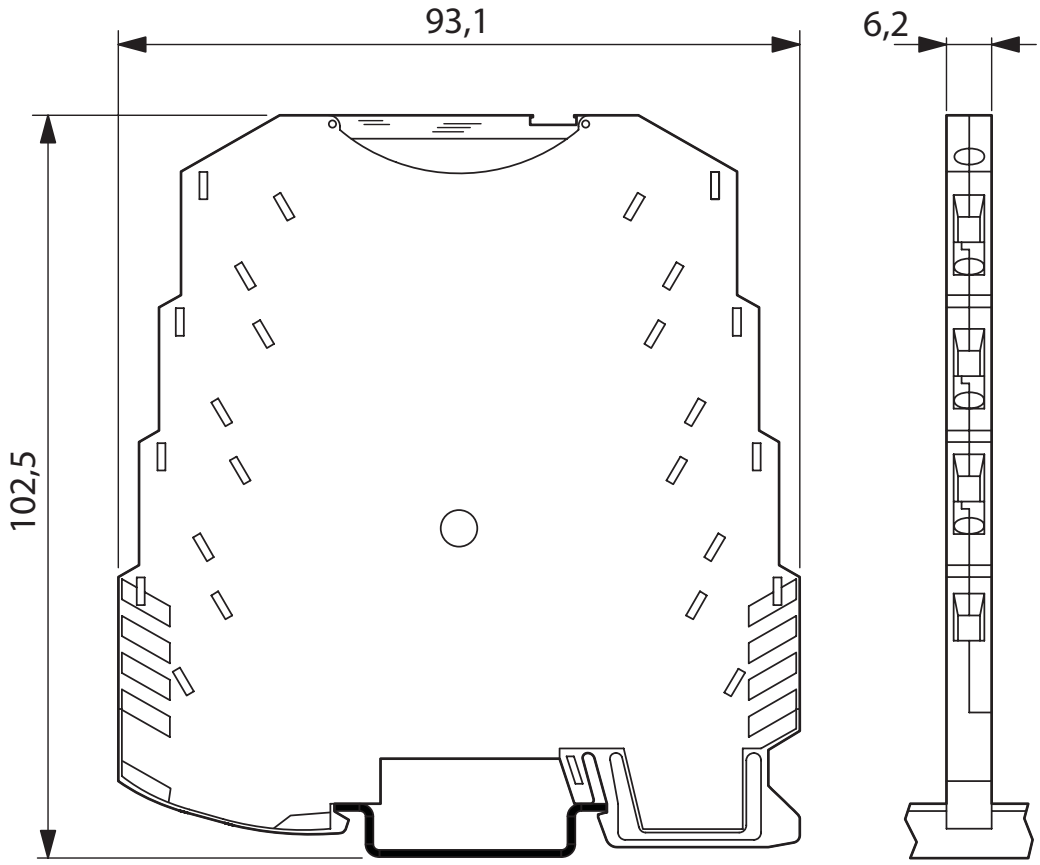
Electrical isolation	Basic insulation in accordance with EN 61010

Mounting

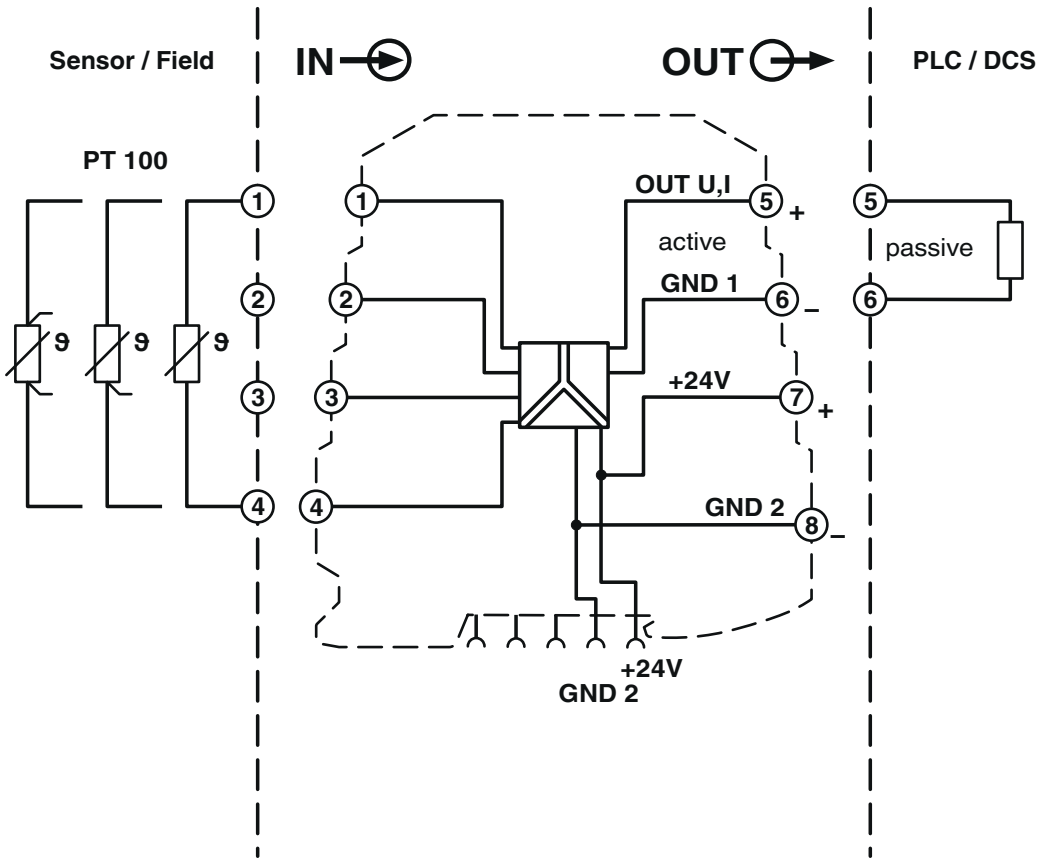
Mounting type	DIN rail mounting
Assembly note	The DIN rail connector can be used for bridging the supply voltage. It can be snapped onto a 35 mm EN 60715 DIN rail.
Mounting position	any

Drawings

Dimensional drawing



Block 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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