

# Resistance thermometer measuring transducer - MINI MCR-SL-PT100-UI-SP-NC - 2864286

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

## Product Description

The 6.2 mm wide MINI MCR-SL-PT100-UI... is a configurable 3-way isolated temperature measuring transducer. It is suitable for the connection of Pt 100 resistance thermometers according to IEC 60751 in 2, 3 and 4-wire connection methods.

On the output side, the analog standard signals 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 are available, electrically isolated.

The DIP switches are accessible on the side of the housing and allow the following parameters to be configured:

- Connection method
- Temperature range to be measured
- Output signal as well
- Fault evaluation type


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

## Your advantages

- ✓ Power supply possible via the foot element (TBUS)
- ✓ For 2, 3 or 4-wire Pt 100 sensors according to 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



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 974824
GTIN	4017918974824

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## Technical data

### Dimensions

Width	6.2 mm
Height	93.1 mm
Depth	102.5 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

### Input data

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Sensor input current	1 mA (constant)
Connection technology	2, 3, 4-wire

### Output data

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
Current output signal	0 mA ... 20 mA
	20 mA ... 0 mA
	20 mA ... 4 mA
	4 mA ... 20 mA
Max. output voltage	approx. 12.5 V
Max. output current	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 <sub>PP</sub> (at 500 Ω)
	< 20 mV <sub>PP</sub> (at 500 Ω)

### Power supply

Nominal supply voltage	24 V DC
Supply voltage range	19.2 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))

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## Technical data

### Power supply

Max. current consumption	< 21 mA (at 24 V DC)
Power consumption	< 500 mW

### Connection data

Connection method	Spring-cage connection
Stripping length	8 mm
Conductor cross section solid	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 12

### General

No. of channels	1
Transmission error in the set measuring range	((100 K / set measurement range [K]) + 0.1)%
Transmission error in the full measuring range	≤ 0,2 %
Maximum temperature coefficient	< 0.02 %/K
Protective circuit	Transient protection
Electrical isolation	Basic insulation according to EN 61010
Overvoltage category	II
Degree of pollution	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
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	UL 508 Recognized
	Class I, Div. 2, Groups A, B, C, D T5
GL	GL EMC 2 D
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

### EMC data

Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3

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## Technical data

### EMC data

Typical deviation from the measuring range final value	10 %
Designation	Fast transients (burst)
Standards/regulations	EN 61000-4-4
Typical deviation from the measuring range final value	10 %
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Typical deviation from the measuring range final value	10 %

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC directive
Noise emission	EN 61000-6-4
Connection in acc. with standard	CUL
Standards/regulations	EN 61000-4-2
Designation	Electromagnetic RF field
Standards/regulations	EN 61000-4-3
	EN 61000-4-4
	EN 61000-4-5
Designation	Conducted interferences
Standards/regulations	EN 61000-4-6
Electrical isolation	Basic insulation according to EN 61010
Conformance	CE-compliant
ATEX	# II 3 G Ex nA IIC T4 Gc X
UL, USA/Canada	UL 508 Recognized
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Fire protection for rail vehicles (DIN EN 45545-2) R24	HL 1 - HL 2

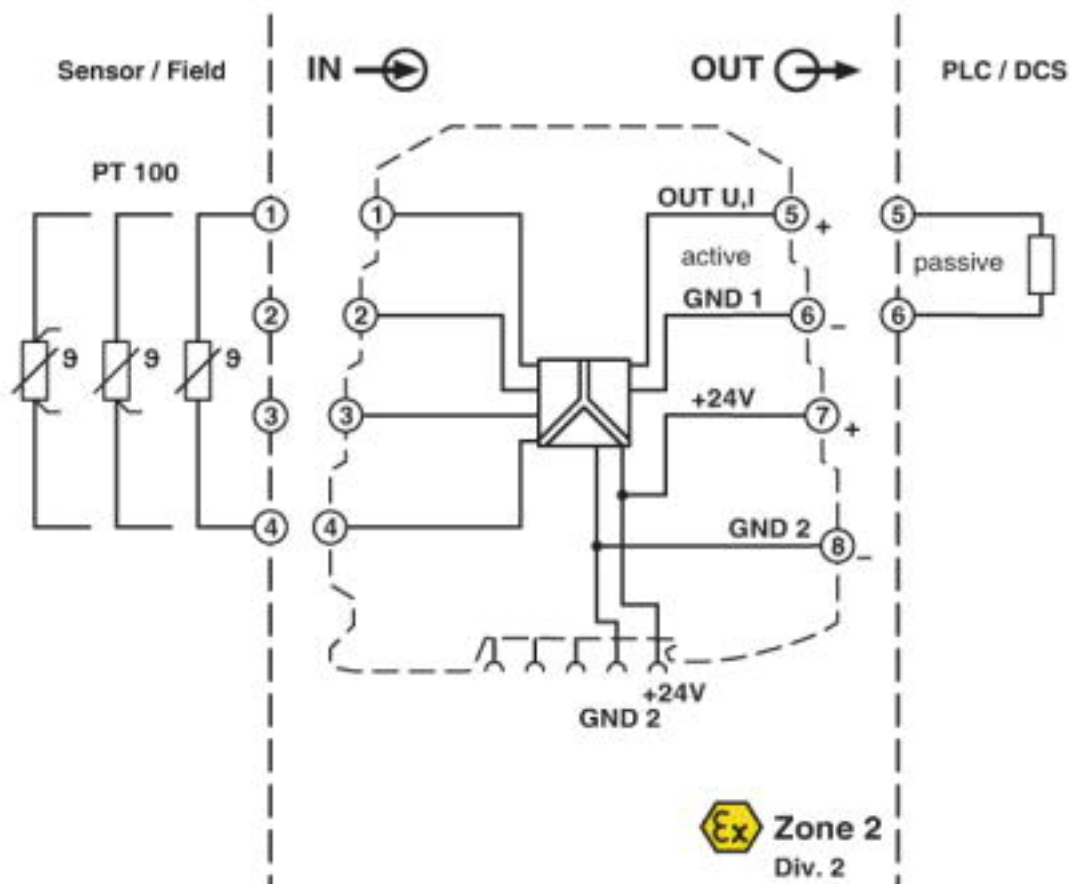
### Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

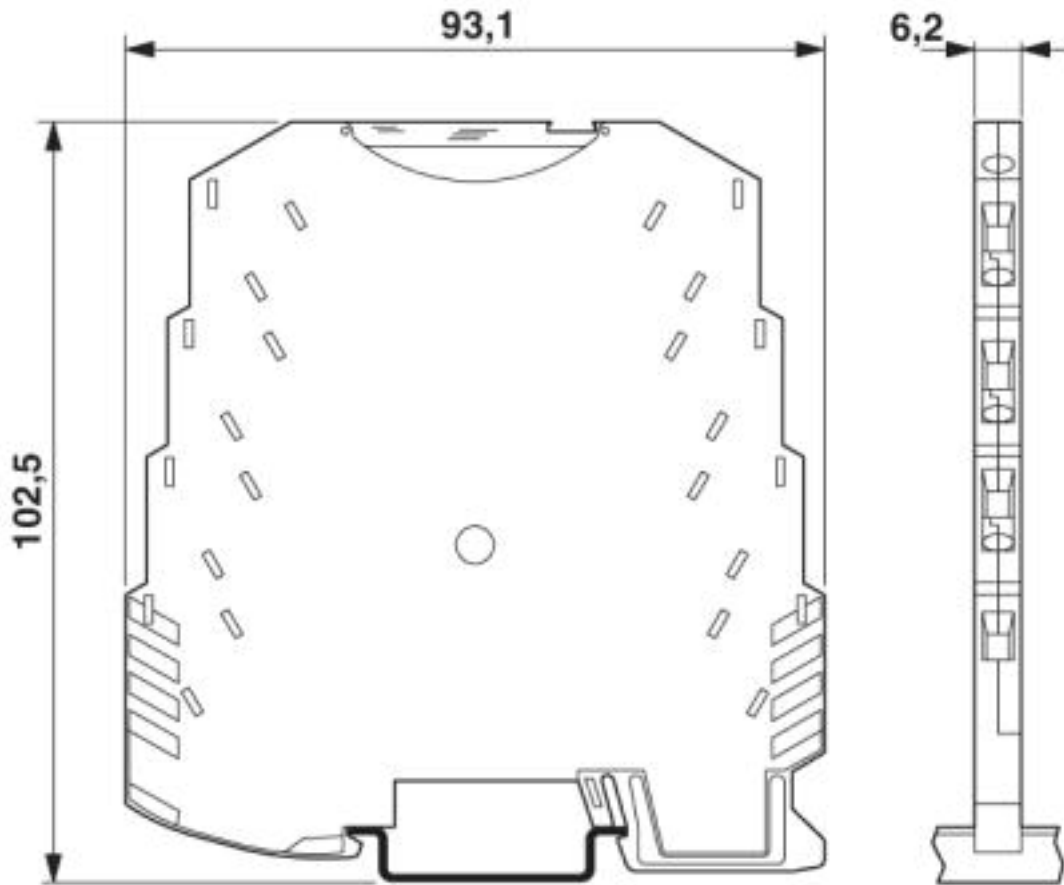
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Block diagram



# Resistance thermometer measuring transducer - MINI MCR-SL-PT100-UI-SP-NC - 2864286

Dimensional drawing



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