

# MCR-PT100-I - Resistance thermometer measuring transducer

2810353

<https://www.phoenixcontact.com/gb/products/2810353>

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The figure shows version MCR-PT100-I-DC

MCR temperature transducer, for Pt 100, 2-, 3-, 4-conductor technology; input: 0 ... 100°C, 0 ... 150°C, 0 ... 200°C, 0 ... 300°C, -50 ... +50°C, -50 ... 100°C, -50 ... 150°C, -50 ... 250°C, output signal: 0(4) ... 20 mA

## Your advantages

- Temperature range can be set via DIP switches
- With electrically isolated supply voltage as an option
- ZERO/SPAN adjustment
- Wire-break detection

## Commercial data

Item number	2810353
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to order (non-returnable)
Product key	DK1XXX
Weight per piece (including packing)	139 g
Weight per piece (excluding packing)	138.4 g
Country of origin	DE

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## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Electrical properties

Alignment span	± 5 %
Alignment zero	± 5 %
Limit frequency (3 dB)	30 Hz
Maximum power dissipation for nominal condition	900 mW
Test voltage power supply/signal	750 V AC (50 Hz, 60 s)
Step response (10-90%)	11 ms
Maximum temperature coefficient	≤ 0.02 %/K
Maximum transmission error	≤ 0.4 % (of final value)

#### Supply

Supply voltage range	20 V DC ... 30 V DC
Max. current consumption	45 mA

### Input data

#### Signal

Input signal	Temperature
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#### Measurement

Configurable/programmable	Yes
Sensor types (RTD) that can be used	Pt 100 (IEC 60751/EN 60751)
Temperature measuring range	0 °C ... 300 °C (0 ... 100/150/200/300) -50 °C ... 250 °C (-50 ... 50/100/150/250)
Temperature measuring range: Pt 100	-50 °C ... 50 °C (fixed setting) -50 °C ... 100 °C (fixed setting) -50 °C ... 150 °C (fixed setting) -50 °C ... 250 °C (fixed setting) 0 °C ... 100 °C (fixed setting) 0 °C ... 150 °C (fixed setting) 0 °C ... 200 °C (fixed setting) 0 °C ... 300 °C (fixed setting)
Sensor input current	approx. 1 mA
Connection technology	2-, 3-, 4-conductor
Connection method	Pluggable screw connection

### Output data

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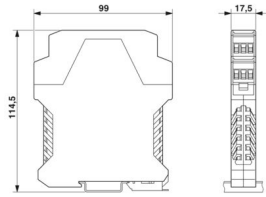
Signal: Current output

Current output signal	4 mA ... 20 mA
	0 mA ... 20 mA
Max. current output signal	30 mA
Output current with wire break	> 22 mA
Load/output load current output	≤ 500 Ω

## Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	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 ... 14

## Dimensions

Dimensional drawing	
Width	17.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color	green (RAL 6021)
Housing material	Polyamide PA non-reinforced

## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 65 °C

## Approvals

CE

Certificate	CE-compliant
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UL, USA/Canada

Identification	UL 508 Recognized
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## Mounting

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Mounting position	any
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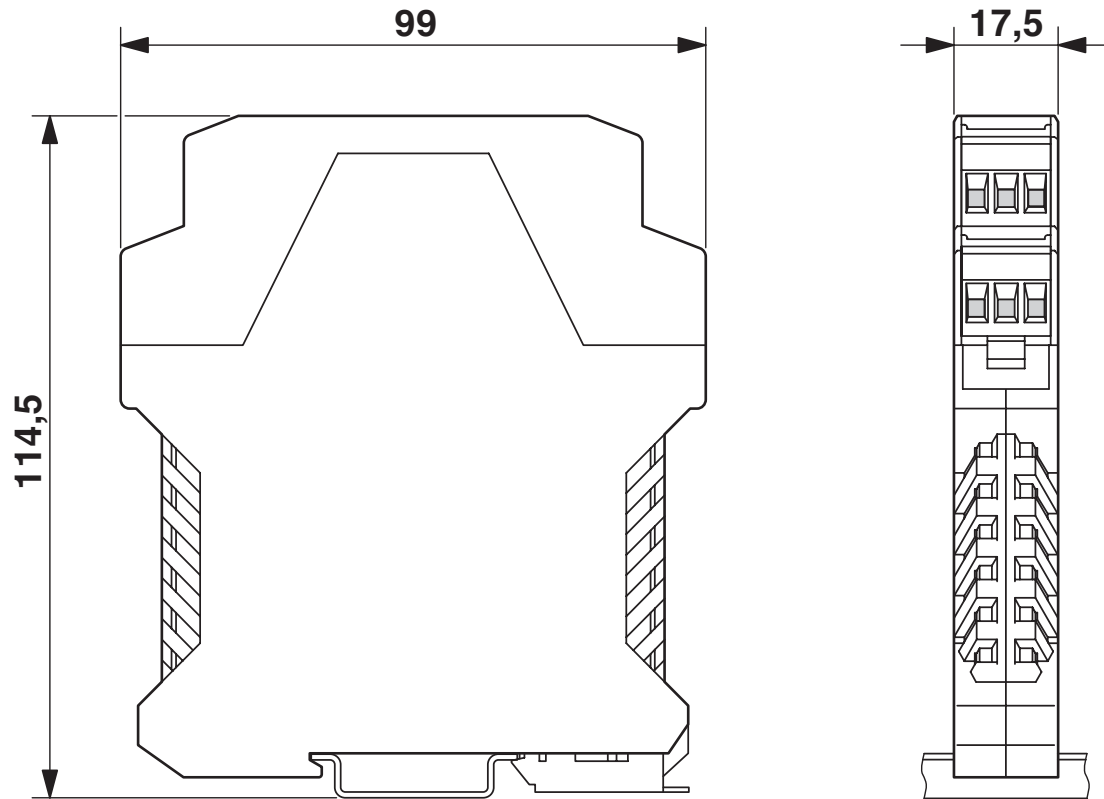
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## Drawings

Dimensional drawing

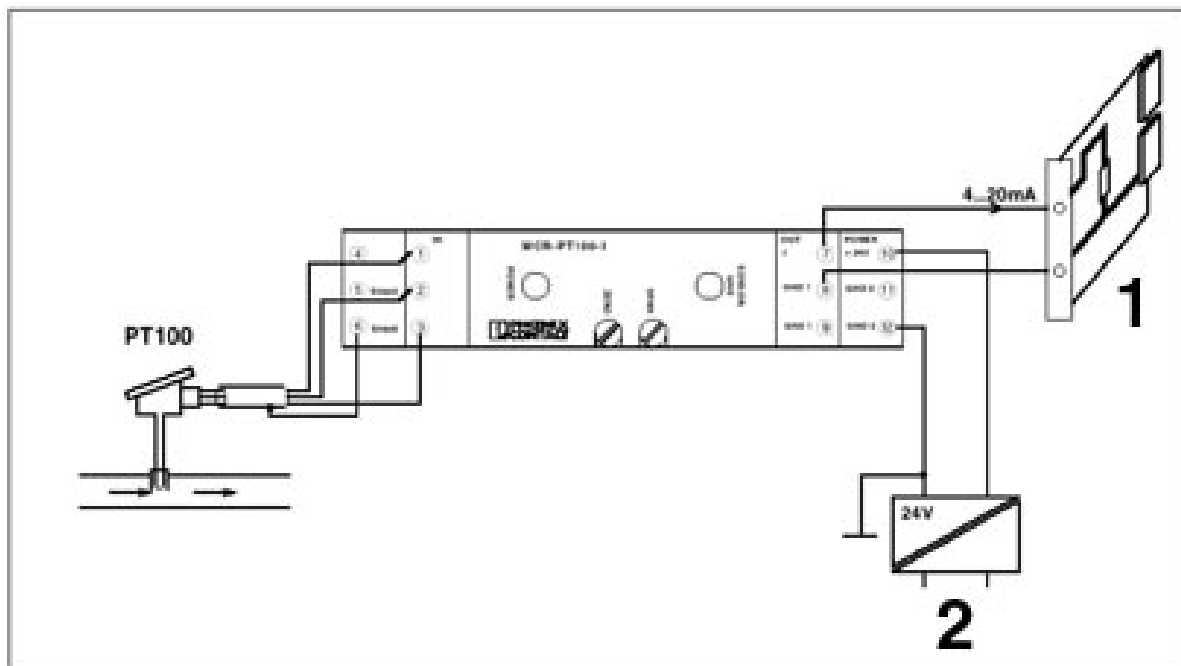


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## Application drawing



Application example: temperature measurement in 3-conductor technology

1 = controller

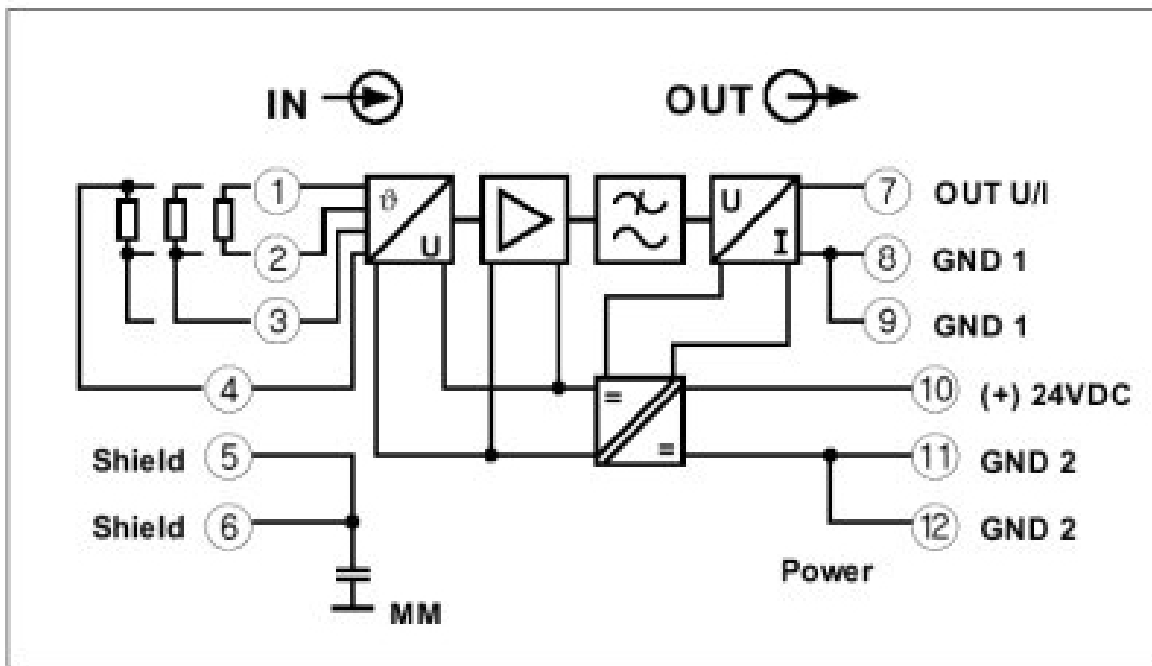
2 = mains voltage

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Circuit diagram



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## 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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