Resistance thermometer measuring transducer - 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, electrically isolated auxiliary power

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Your advantages

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

Commercial Data

Item number	2810337
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	C01
Product Key	CK1821
Catalog Page	Page 138 (C-7-2013)
Weight per Piece (including packing)	141.1 g
Weight per Piece (excluding packing)	140.4 g
Customs tariff number	85437090
Country of origin	DE

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2810337

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Technical Data

Notes

Utilization restriction

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

Product properties

Product type	Temperature transmitter

Electrical properties

Alignment span	± 5 %
Alignment zero	± 5 %
Limit frequency (3 dB)	30 Hz
Maximum power dissipation for nominal condition	1.76 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	60 mA

Input data

Signal:

Input signal	Temperature

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)
Sensor type:	-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

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Connection technology	2-, 3-, 4-conductor
Connection method	Pluggable screw connection

Output data
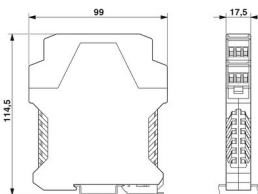
Signal:

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 solid	0.2 mm² ... 2.5 mm²
Conductor cross section flexible	0.2 mm² ... 2.5 mm²
Conductor cross section AWG	24 ... 14

Dimensions

Dimensional drawing	
Width	17.5 mm
Height	99 mm
Depth	114.5 mm

Material specifications

Housing material	Polyamide PA non-reinforced

Environmental and real-life conditions

Ambient conditions

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

Approval data

CE

Certificate	CE-compliant

UL, USA / Canada

Identification	UL 508 Recognized

Mounting

Mounting position	any

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Drawings

Circuit diagram
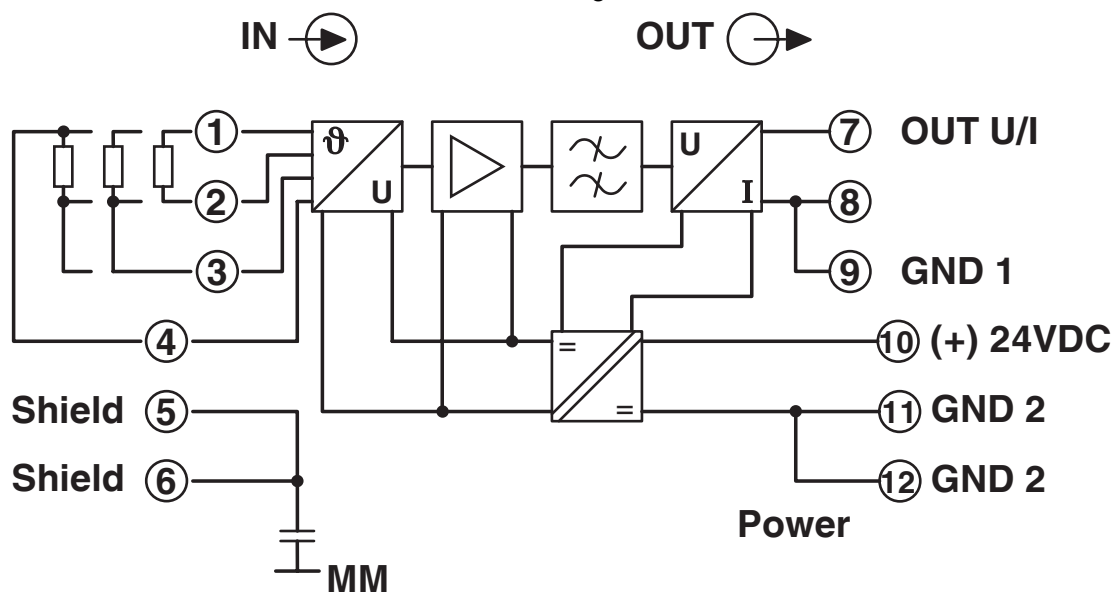
IN ▶

OUT ⟳▶

① ϑ / U → ⑦ OUT U/I

② U → ⑧

③ → ⑨ GND 1

④ → ⑩ (+) 24VDC

Shield ⑤ → ⑪ GND 2

Shield ⑥ → ⑫ GND 2

MM

Power

Dimensional drawing

99

17,5

114,5

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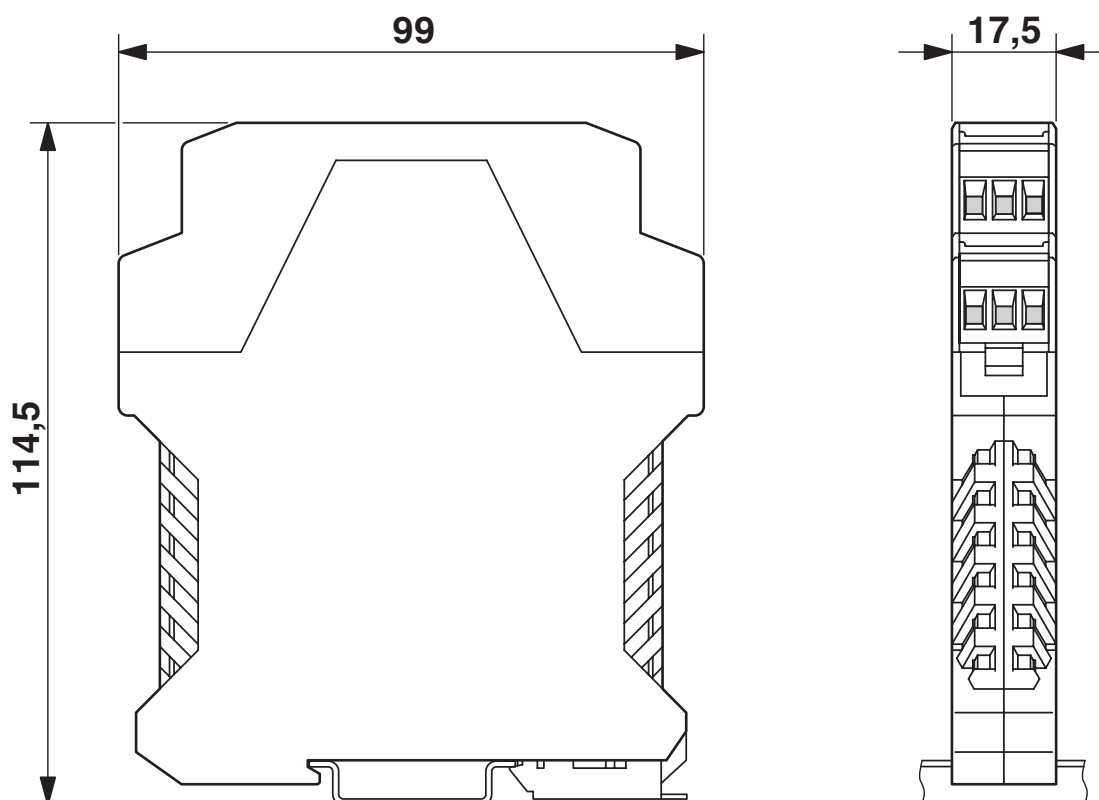
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Application drawing
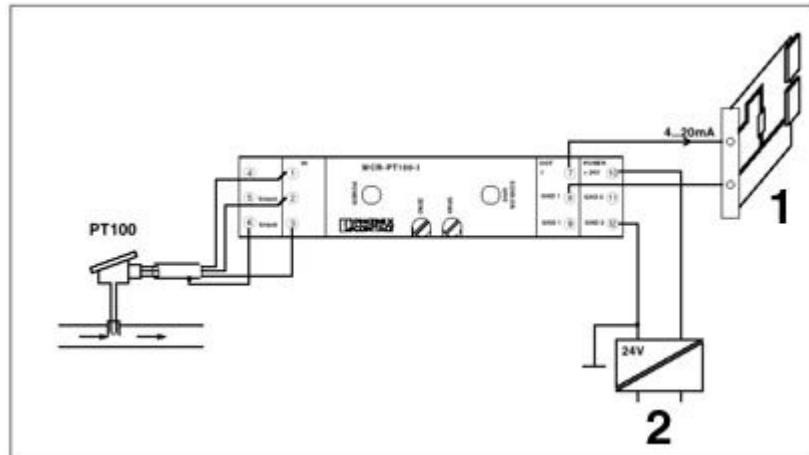
Application example: temperature measurement in 3-conductor technology

1 = controller

2 = mains voltage

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Classifications

ECLASS

ECLASS-9.0	27210129
ECLASS-10.0.1	27210129
ECLASS-11.0	27210129

Environmental Product Compliance

China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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