

Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

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MCR temperature measuring transducer: programmable, loop-powered, for resistance thermometers, thermocouples, resistance-type sensors and voltage sensors.

Your advantages

- ✓ Freely programmable via MCR/PI-CONF-WIN
- ✓ Two-wire transmitter for resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors

Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 899820
GTIN	4017918899820

Technical data

Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-40 °C ... 85 °C
Degree of protection	IP20
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21

Input data

Configurable/programmable	Yes, programmable
Sensor types (RTD) that can be used	Pt, Ni (100, 500, 1000); minimum measurement range 10 K
Sensor types that can be used (TC)	B, C, D, E, J, K, L, N, R, S, T, U; minimum measurement range 50 K/500 K
Linear resistance measuring range	Resistance-type sensor from 10 Ω to 400 Ω and from 10 Ω to 2000 Ω; minimum measurement range 10 Ω/100 Ω

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Technical data

Input data

Connection technology	2, 3, 4-wire
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Output data

Output name	Current output
Number of outputs	1
Configurable/programmable	Yes
Current output signal	4 mA ... 20 mA
	20 mA ... 4 mA
Output current with wire break	≤ 3.6 mA or ≥ 21 mA (adjustable)
Output current with short-circuit	≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples)
Output current range with overrange/underrange	≤ 20.5 mA / ≥ 3.8 mA (linear increase/decrease)
Load/output load current output	max ($V_{\text{supply}} - 12 \text{ V}$) / 0.023 A (current output)

Power supply

Designation	Loop-powered
Supply voltage range	12 V DC ... 35 V DC
Max. current consumption	< 3.5 mA

Connection data

Connection method	Screw connection
Stripping length	8 mm
Screw thread	M3
Conductor cross section solid	0.2 mm ² ... 2.5 mm ²
Conductor cross section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross section AWG	24 ... 14

General

Transmission error resistance thermometer	0.2 K (Pt 100, Ni 100), 0.5 K (Pt 500, Ni 500), 0.3 K (Pt 1000, Ni 1000)
Transmission error thermocouples	typ. 0.5 K (K, J, T, E, L, U), 1.0 K (N, C, D), 2.0 K (S, B, R)
Transmission error resistance-type sensor	± 0.1 Ω (10...400 Ω), ± 1.5 Ω (10...2000 Ω)
Transmission error voltage sensor	± 20 μV (-10...100 mV)
Step response (10-90%)	< 2 s
Switch-on delay	4 s
Test voltage input/output	2 kV (50 Hz, 1 min.)
Noise emission	EN 61326-1 (IEC 61326) and NAMUR NE 21
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21
Color	green
Housing material	Polyamide PA non-reinforced
Mounting position	any
Configuration	Using MCR-PI-CONF-WIN configuration software package

Standards and Regulations

Noise emission	EN 61326-1 (IEC 61326) and NAMUR NE 21
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Technical data

Standards and Regulations

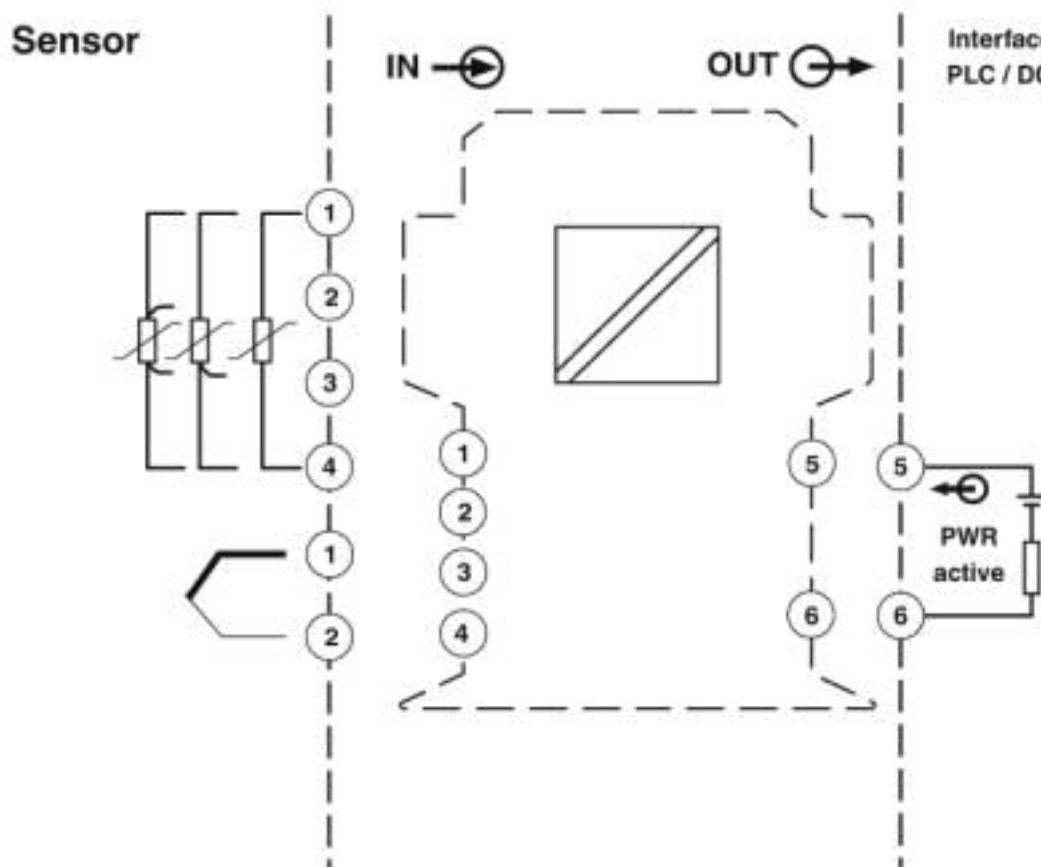
Noise immunity	EN 61326-1 (IEC 61326) and NAMUR NE 21
Connection in acc. with standard	CUL
Conformance	CE-compliant
UL, USA/Canada	Class I, Div. 2, Groups A, B, C, D

Environmental Product Compliance

China RoHS	Environmentally friendly use period: unlimited = EFUP-e
	No hazardous substances above threshold values

Drawings

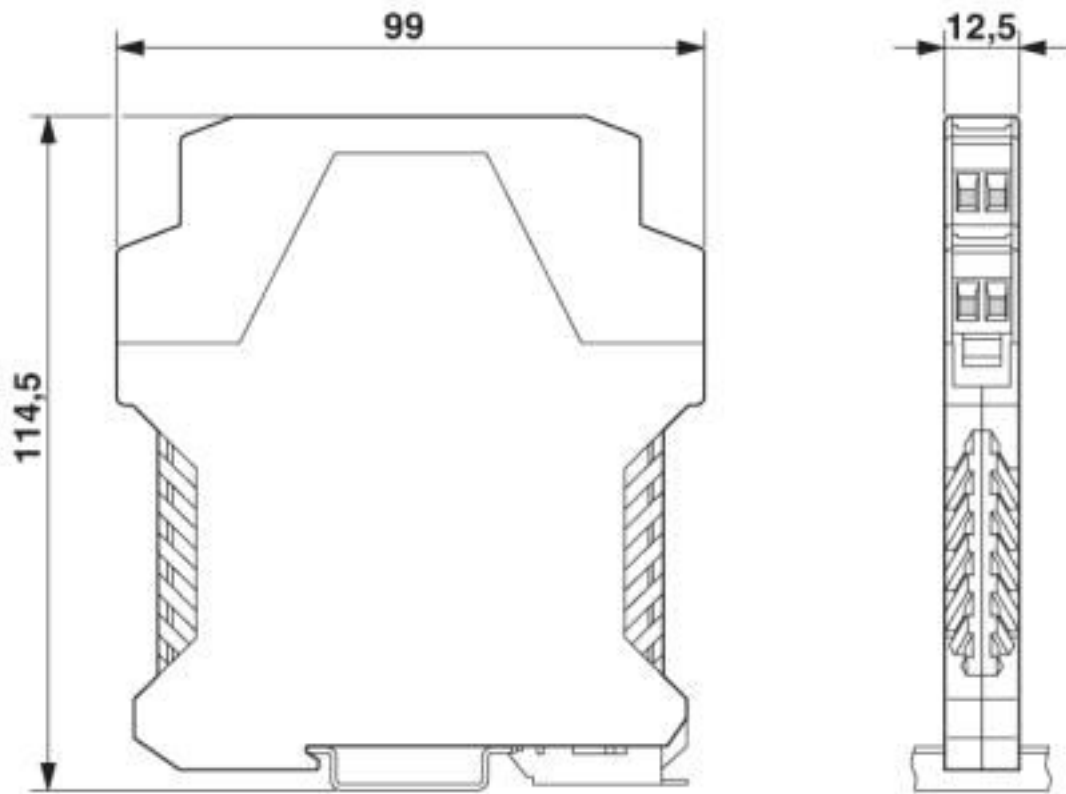
Block diagram



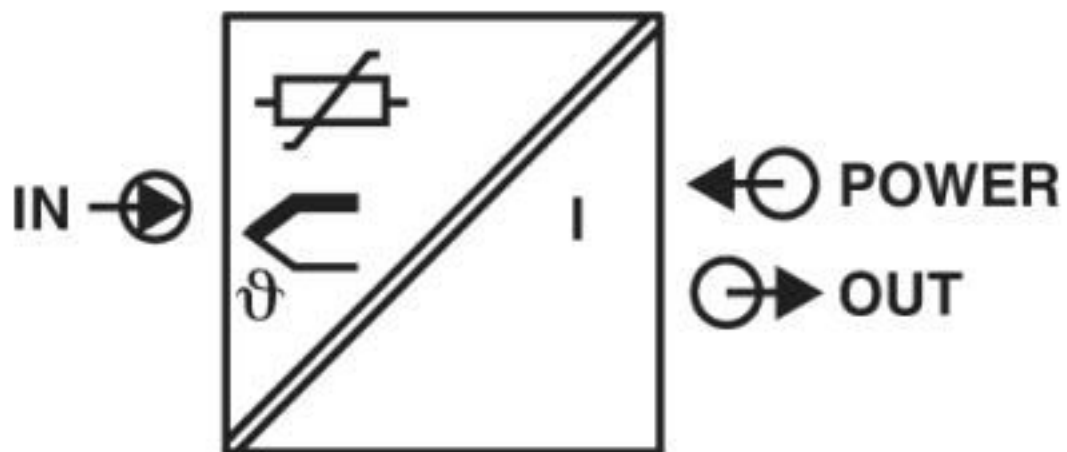
Block diagram MCR-FL-T-LP-I

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Dimensional drawing

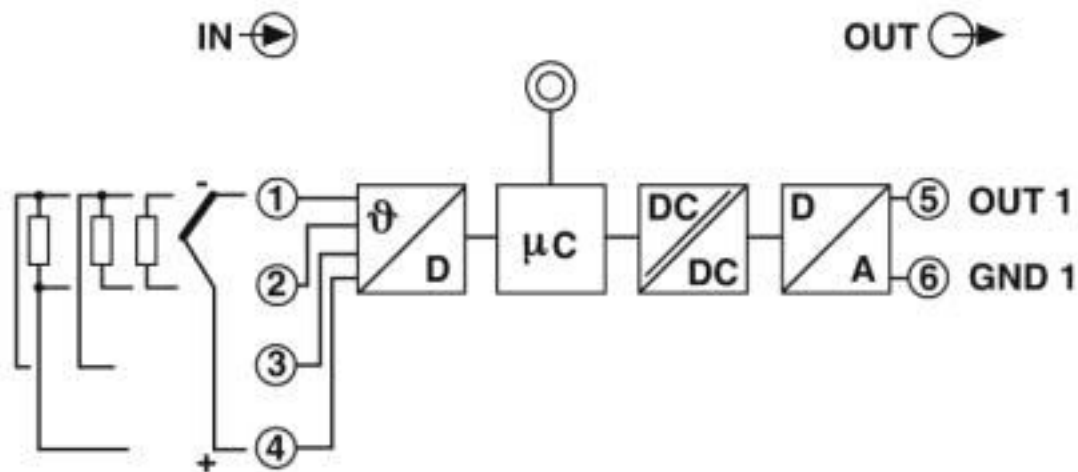


Pictogram



Temperature measuring transducer - MCR-FL-T-LP-I - 2864561

Circuit diagram



Classifications

eCl@ss

eCl@ss 10.0.1	27210129
eCl@ss 4.0	27200200
eCl@ss 4.1	27200200
eCl@ss 5.0	27200200
eCl@ss 5.1	27200200
eCl@ss 6.0	27200200
eCl@ss 7.0	27200206
eCl@ss 8.0	27200206
eCl@ss 9.0	27210129

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC001446
ETIM 6.0	EC002919
ETIM 7.0	EC002919

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	41112105
UNSPSC 18.0	41112105
UNSPSC 19.0	41112105

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Classifications

UNSPSC

UNSPSC 20.0	41112105
UNSPSC 21.0	41112105

Accessories

Accessories

Adapter cable

Adapter cable - MCR-PAC-T - 2864590



Software adapter cable, 2.4 m for programming MCR-...-LP-...- and MCR-...-HT-... modules

Programming adapter

Programming adapter - MCR-PAC-T-USB - 2309000

Programming adapter with USB and T port interface, 2.4 m for programming FA MCR-..., MCR-...-LP-..., and MCR-...-HT-... modules



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