

# 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
Weight per Piece (excluding packing)	110.910 g
Custom tariff number	85437090
Country of origin	Germany

## 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

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## Technical data

### 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 $\Omega$ to 400 $\Omega$ and from 10 $\Omega$ to 2000 $\Omega$ ; minimum measurement range 10 $\Omega$ /100 $\Omega$
Connection technology	2, 3, 4-wire

### 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	$\leq 3.6$ mA or $\geq 21$ mA (adjustable)
Output current with short-circuit	$\leq 3.6$ mA or $\geq 21$ mA (adjustable, not for thermocouples)
Output current range with overrange/underrange	$\leq 20.5$ mA / $\geq 3.8$ mA (linear increase/decrease)
Load/output load current output	max ( $V_{\text{supply}} - 12$ 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 <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

### 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	$\pm 0.1$ $\Omega$ (10...400 $\Omega$ ), $\pm 1.5$ $\Omega$ (10...2000 $\Omega$ )
Transmission error voltage sensor	$\pm 20$ $\mu$ V (-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

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## Technical data

### General

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
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

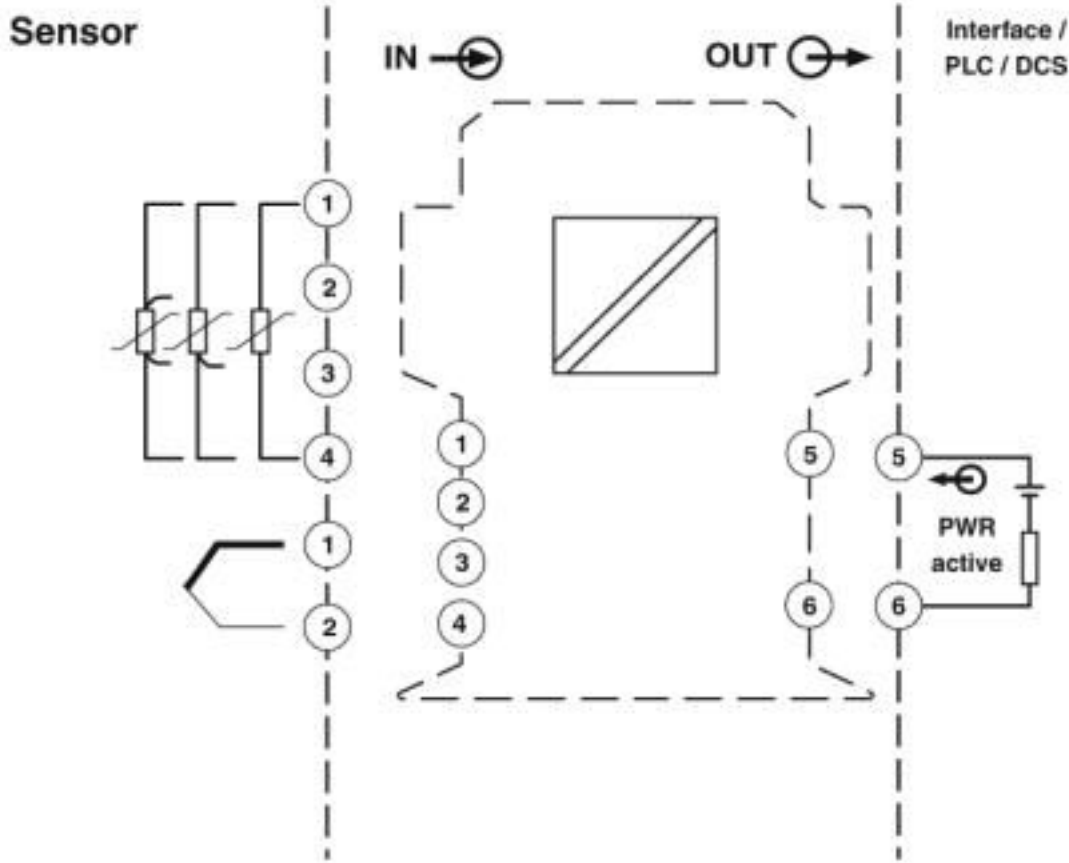
### Environmental Product Compliance

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

## Drawings

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

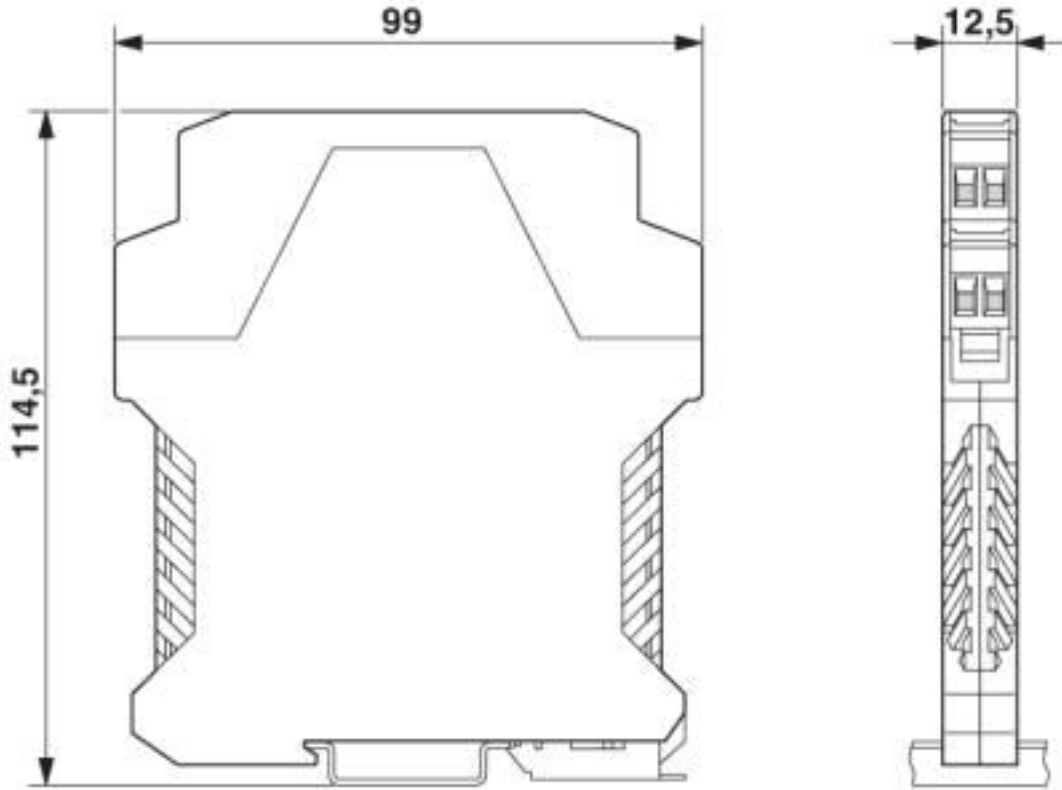
Block diagram



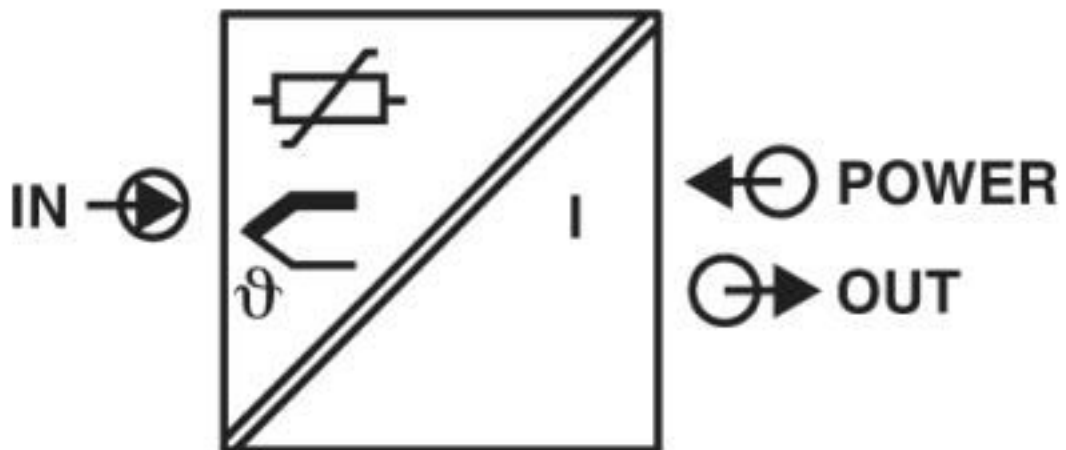
Block diagram MCR-FL-T-LP-I

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Dimensional drawing

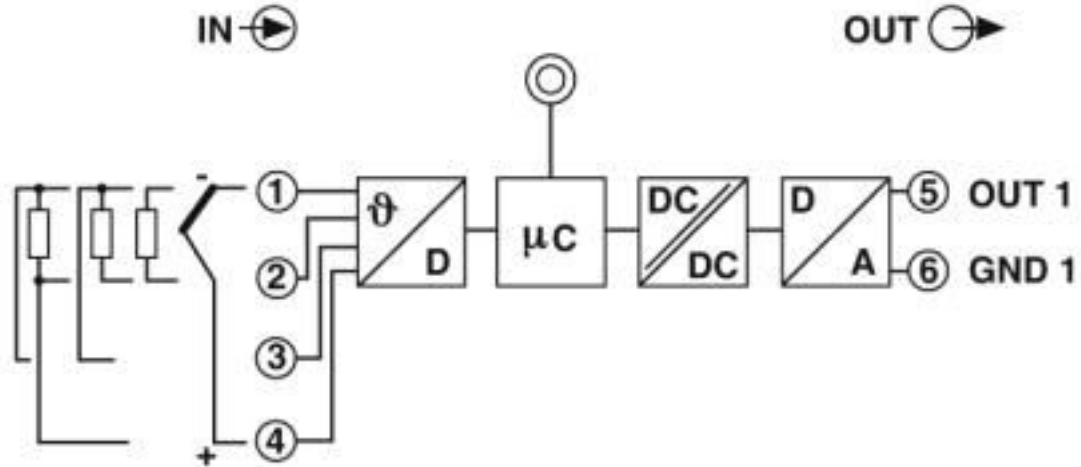


Pictogram



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Circuit diagram



## Classifications

### eCl@ss

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

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## Classifications

### UNSPSC

UNSPSC 18.0	41112105
UNSPSC 19.0	41112105
UNSPSC 20.0	41112105
UNSPSC 21.0	41112105

## Accessories

### Accessories

#### 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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Adapter cable - MCR-PAC-T - 2864590



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