

# Temperature measuring transducer - MCR-FL-TS-LP-I-EX - 2864587

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Measurement and control temperature transducers, resistance thermometers, thermocouples, resistance-type sensors, and voltage sensors. Replacement part: 2908660 MACX MCR-EX-TS-I-OLP.

## Your advantages

- Input for resistance thermometers, thermocouples, and linear mV signals, Ex ia IIC
- Configuration via software
- Can be installed in zone 1
- 2-way electrical isolation
- Output: 4 mA ... 20 mA/20 mA ... 4 mA
- Loop-powered
- 1-channel
- HART-compatible (MCR-FL-TS-LP-I-EX)



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 017918 907266
GTIN	4017918907266

## Technical data

### Dimensions

Width	12.5 mm
Height	99 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 55 °C
Degree of protection	IP20

### Input data

Configurable/programmable	Yes, programmable
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## Technical data

### Input data

Sensor types (RTD) that can be used	Pt, Ni (100, 500, 1000); min. measurement range 10 K
Sensor types that can be used (TC)	B, C, D, E, J, K, L, N, R, S, T, U; min. measurement range 50 K/500 K
Connection technology	2, 3, 4-wire
Input signal range	10 Ω ... 400 Ω (min. measurement range 10 Ω)
	10 Ω ... 2000 Ω (min. measurement range 100 Ω)
	-10 mV ... 100 mV (min. measurement range 5 mV)

### Output data

Signal output	Current output
Configurable/programmable	Yes
Current output signal	4 mA ... 20 mA
	20 mA ... 4 mA
Max. current output signal	≤ 23 mA
Output current with short-circuit	≤ 3.6 mA or ≥ 21 mA (adjustable, not for thermocouples)
Output current with wire break	≤ 3.6 mA or ≥ 21 mA (adjustable)
Output current range with overrange/underrange	3.8 mA ... 20.5 mA
Load/output load current output	≤ 520 Ω (At $U_V = 24\text{ V}$ ; $U_{\text{supply}} = 12\text{ V} / 0.023\text{ A}$ )
Configurable/programmable	no

### Power supply

Designation	Loop-powered
Supply voltage range	12 V DC ... 30 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
Torque	0.5 Nm ... 0.6 Nm
pluggable	no

### General

Step response (10-90%)	< 2 s
Switch-on delay	4 s
Configuration	With HART protocol
Standards/regulations	NAMUR recommendation NE 21
Housing material	Polyamide PA non-reinforced
Color	green
Line monitoring	NE 43

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## Technical data

### Safety data

Max. output voltage $U_o$	5 V DC
Max. output current $I_o$	5.9 mA
Max. output power $P_o$	7.2 mW
Max. ambient temperature	T4 = 85 °C, T5 = 70 °C, T6 = 55 °C
Group	IIA
Max. external inductivity $L_o$	100 mH
Max. external capacitance $C_o$	10 µF
Group	IIB
Max. external inductivity $L_o$	100 mH
Max. external capacitance $C_o$	10 µF
Group	IIC
Max. external inductivity $L_o$	100 mH
Max. external capacitance $C_o$	2 µF
Safety-related maximum voltage $U_m$	250 V

### Standards and Regulations

Standards/regulations	NAMUR recommendation NE 21
Conformance	CE-compliant
ATEX	# II 2(1) G Ex ia IIC T6
UL, USA/Canada	cULus
Group	IIA
	IIB
	IIC

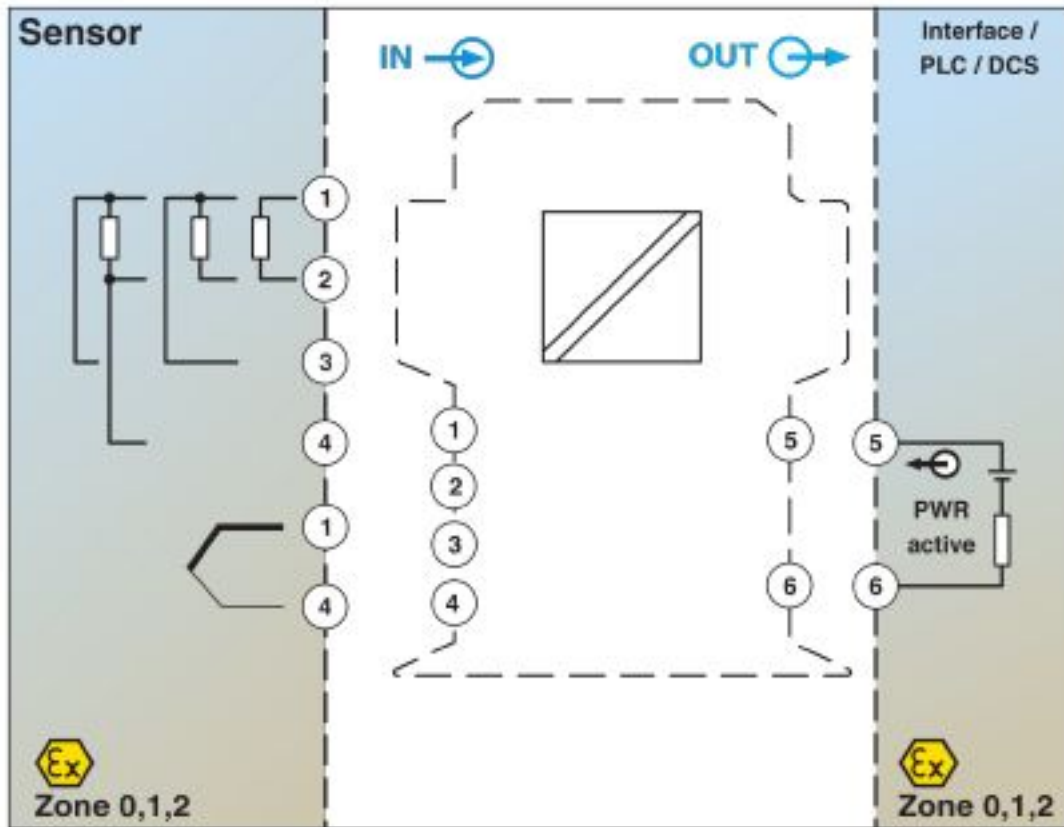
### Environmental Product Compliance

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

## Drawings

# Temperature measuring transducer - MCR-FL-TS-LP-I-EX - 2864587

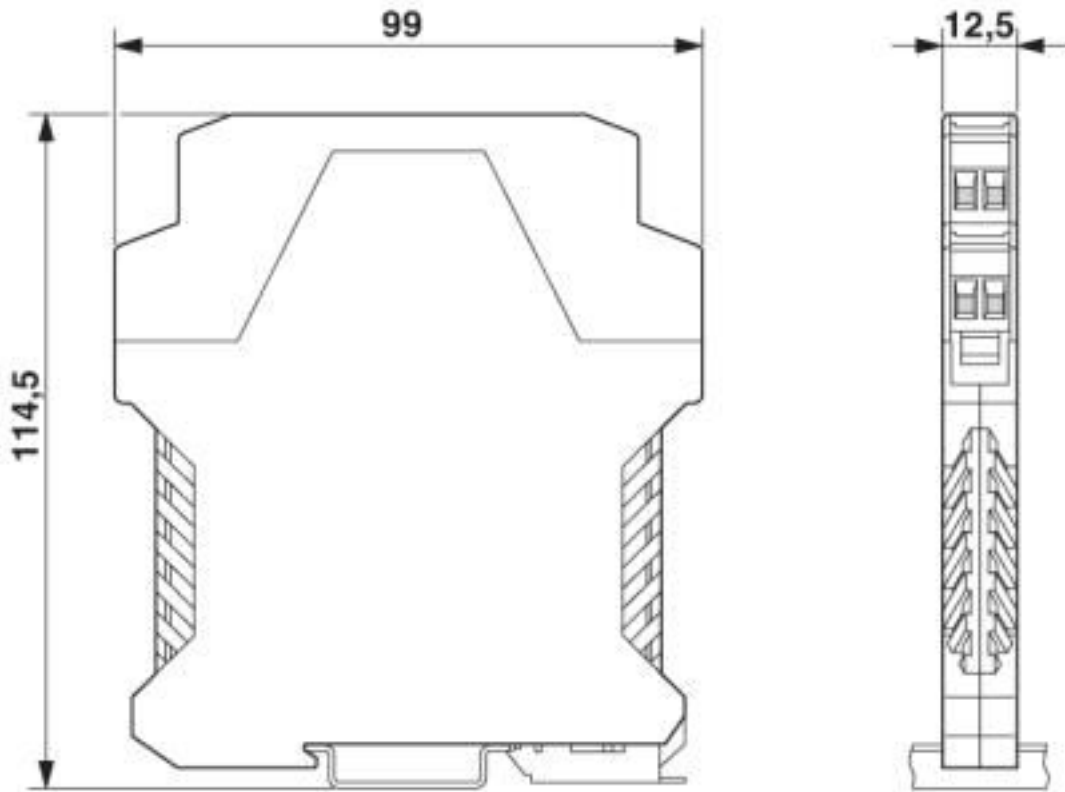
Block diagram



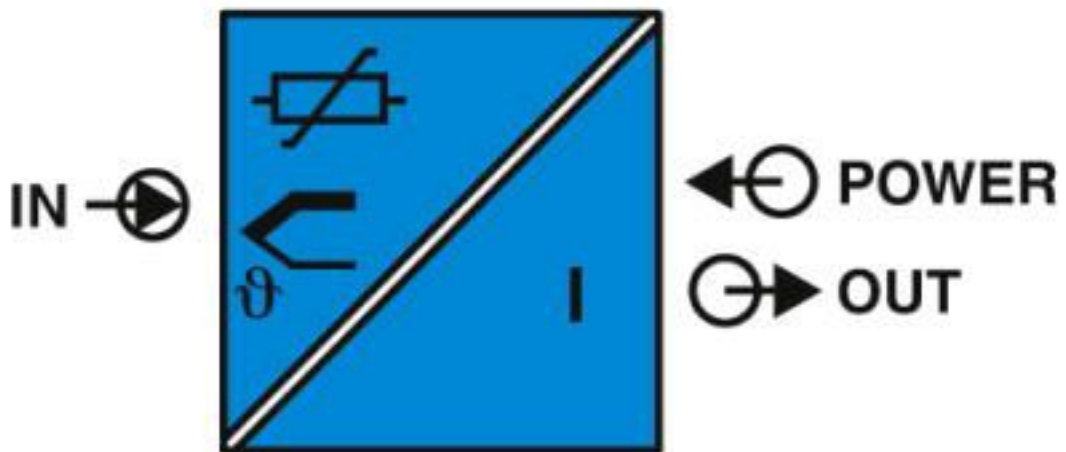
Block diagram MCR-FL-TS-LP-I-EX

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Dimensional drawing



Pictogram



## Classifications

eCl@ss

eCl@ss 10.0.1	27210129
eCl@ss 4.0	27200200
eCl@ss 4.1	27200200

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### Classifications

#### eCl@ss

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 19.0	41112105

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