

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

Please be informed that the data shown in this PDF Document is generated from our Online Catalog. Please find the complete data in the user's documentation. Our General Terms of Use for Downloads are valid (<http://phoenixcontact.com/download>)



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	
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
---------------------------	-------------------

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

## 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

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

## 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 $\mu$ F
Group	IIB
Max. external inductivity $L_o$	100 mH
Max. external capacitance $C_o$	10 $\mu$ F
Group	IIC
Max. external inductivity $L_o$	100 mH
Max. external capacitance $C_o$	2 $\mu$ F
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

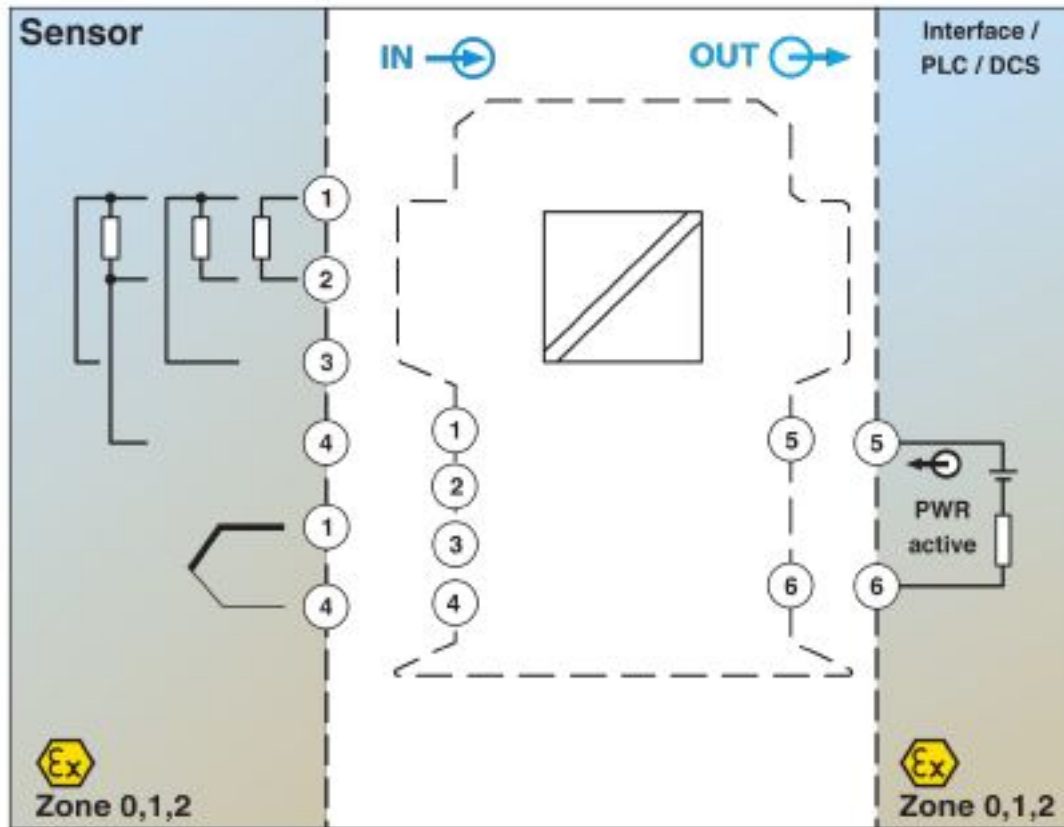
### Environmental Product Compliance

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

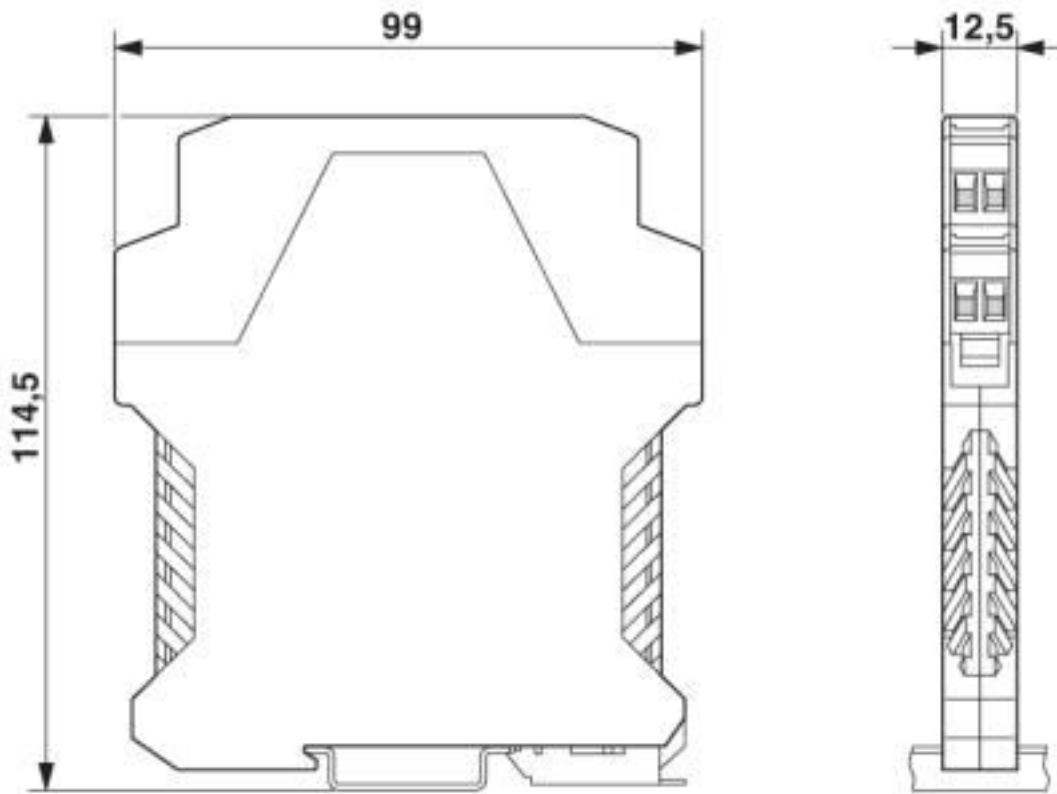
Block diagram



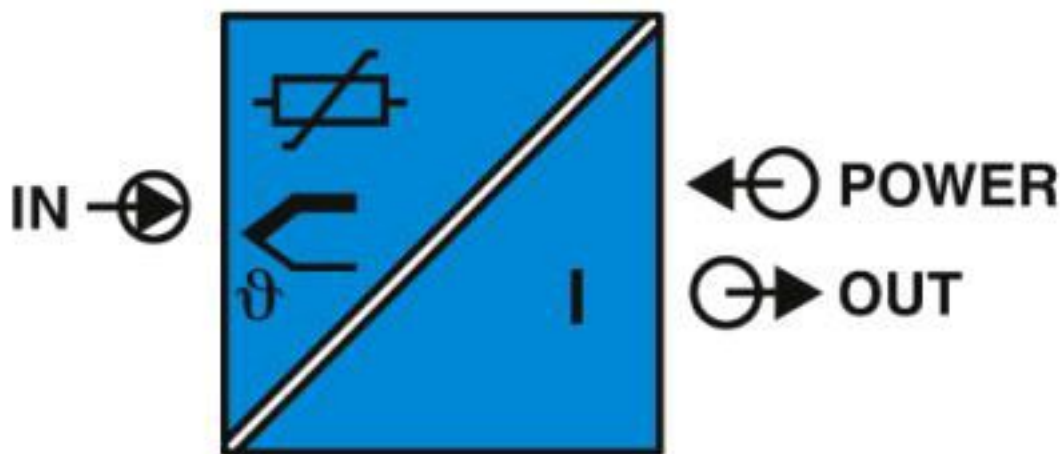
Block diagram MCR-FL-TS-LP-I-EX

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

Dimensional drawing



Pictogram



## Classifications

eCl@ss

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

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

### 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

Phoenix Contact 2020 © - all rights reserved  
<http://www.phoenixcontact.com>

PHOENIX CONTACT GmbH & Co. KG  
Flachsmarktstr. 8  
32825 Blomberg  
Germany  
Tel. +49 5235 300  
Fax +49 5235 3 41200  
<http://www.phoenixcontact.com>

## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [Temperature Sensor Modules](#) category:*

*Click to view products by [Phoenix Contact](#) manufacturer:*

Other Similar products are found below :

[084Z6042](#) [TX4L-14S](#) [084Z6041](#) [QP99](#) [CP82](#) [CP99](#) [R38-LAOO](#) [R38-LARR](#) [72-11304023-0150.0050](#) [72-11304027-0150.0050](#) [72-23304003-0150.0050.GGP](#) [72-23904001-0300.0040.TM](#) [72-34904001-0300.0040.TM](#) [TEM 73 A](#) [AT403-414-1000](#) [AT403-614-1000](#) [AT-503-1141-000](#) [AT-503-1161-000](#) [AT-503-6140-000](#) [AT-603-1141-000](#) [AT603-414-1000](#) [ATR121-AD](#) [ATR121-B](#) [TPMC-5](#) [TPMC-8W](#) [K39-HCRR](#) [K39T-HCRR](#) [K49-HCRR](#) [K49P-HCRR](#) [K85-HERR](#) [KR1-LCRR-D](#) [LHI968](#) [ZAD-1V2-24](#) [ZAD-ECO-V2](#) [RO](#) [E5CB-Q1P](#) [100-240AC](#) [E5CB-R1TC](#) [100-240AC](#) [E5CSV-R1T-500](#) [100-240AC](#) [E5CSV-R1TD-500](#) [24AC/DC](#) [RT-4 SONDA](#) [DS18S20](#) [RTM-01](#) [RTM-02](#) [RTM-30](#) [RTM-30/S](#) [72-11301001-0300.0045.PP](#) [72-11301002-0300.0045.SS](#) [72-23304001-0150.0100.GGP](#) [CP82C](#) [STZ-02](#) [TPMC-7W](#)