

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

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 documentation. Our general terms of use for downloads are valid.



Output loop-powered temperature transducer for transmitting up to 2 sensor signals from RTD and TC sensors, as well as from resistance and voltage sensors via 4 mA ... 20 mA. HART, Signal conditioners with SIL functional safety, Standard configuration, Safety Integrity Level (SIL, IEC 61508): 2, Systematic Capability: 3, Push-in connection

## Commercial data

Item number	2908664
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	C401
Product key	DK1243
GTIN	4055626355443
Weight per piece (including packing)	198 g
Weight per piece (excluding packing)	169 g
Customs tariff number	85437090
Country of origin	DE

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

## Technical data

### Product properties

Product type	Temperature transmitter
Product family	Field Analog
No. of channels	2
Configuration	Software
	HART

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### System properties

#### Functionality

Configuration	Software
	HART

### Electrical properties

Electrical isolation between input and output	yes
Step response (0–99%)	0.8 s (TC)

#### Electrical isolation Input/output

Test voltage	2 kV AC (50 Hz, 60 s)
--------------	-----------------------

#### Supply

Supply voltage range	loop-powered, no external supply necessary
	12 V DC ... 42 V DC (Standard)
	12 V DC ... 32 V DC (SIL active)

### Input data

#### Signal

Input signal	Temperature
--------------	-------------

#### Measurement

Number of inputs	2
Input voltage range	-20 mV ... 100 mV (Minimum measuring span: 5 mV)
Sensor types (RTD) that can be used	Pt, Ni, Cu sensors: 2, 3, 4-wire
Sensor types that can be used (TC)	A, B, C, D, E, J, K, L, N, R, S, T, U
Temperature measuring range	-250 °C ... 2500 °C (Range depending on the sensor type)
	-200 °C ... 850 °C (Pt 100)
Temperature measuring range	> 10 K (RTD)
	> 50 K (TC)

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer





2908664

<https://www.phoenixcontact.com/us/products/2908664>

Linear resistance measuring range	10 Ω ... 2000 Ω (Minimum measuring span: 10 Ω)
-----------------------------------	--

## Output data

Signal: Current

Configurable/programmable	no
Current output signal	4 mA ... 20 mA 20 mA ... 4 mA
Max. current output signal	23 mA
Load	(U <sub>L</sub> - 11 V) / 0,023 A
HART coding	FSK ± 0.5 mA
HART version	7
Transmission speed	1200 Baud
Mains frequency filter	50/60 Hz
Communication resistance	≥ 250 Ω
Switch-on delay	≈  s (HART) ≈  s (Measured value)

## Connection data

Connection method	Push-in connection
Stripping length	8 mm
Conductor cross-section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross-section AWG	24 ... 16

## Ex data

Ex installation (EPL)	Gc Div. 2
-----------------------	--------------

## Interfaces

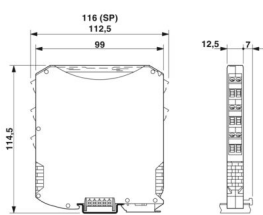
Data communication (bypass)

Protocols supported	HART
---------------------	------

## Signaling

Status display	LED (red)
----------------	-----------

## Dimensions

Dimensional drawing	
---------------------	--

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

Width	12.5 mm
Height	116 mm
Depth	113.7 mm
Depth NS 35/7,5	114.5 mm (Snapped onto DIN rail NS 35/7,5 in accordance with EN 60715)

## Material specifications

Color	gray (RAL 7042)
-------	-----------------

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C -40 °C ... 70 °C (SIL active)
Ambient temperature (storage/transport)	-40 °C ... 100 °C
Altitude	≤ 4000 m (Above sea level)
Climatic class	B2
Permissible humidity (operation)	5 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
-------------	--------------

### ATEX

Identification	⊕ II 3G Ex nA IIC T6...T4 Gc
----------------	------------------------------

### UL, USA/Canada

Identification	UL 61010 Recognized
----------------	---------------------

### FM

Identification	NI, Class I, Div. 2, Groups A, B, C, D
----------------	--

### CSA

Identification	NI / Class I / Div. 2 / ABCD T6/T5/T4
----------------	---------------------------------------

### Shipbuilding approval

Certificate	DNV GL TAA00002GX
-------------	-------------------

### Safety Integrity Level (SIL, IEC 61508)

Identification	2
----------------	---

### Systematic Capability

Identification	3
----------------	---

### Shipbuilding data

Temperature	D
-------------	---

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

Humidity	B
Vibration	A
EMC	B
Enclosure	A

## Mounting

Mounting type	DIN rail mounting
---------------	-------------------

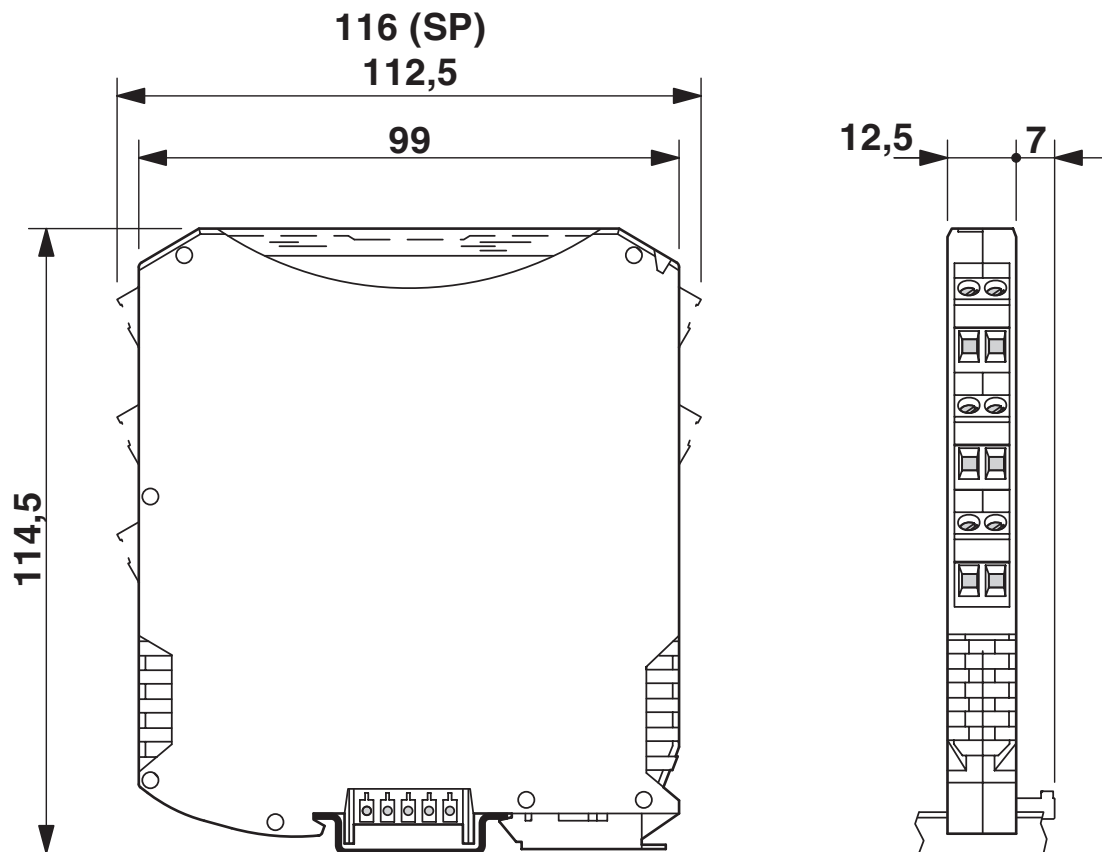
# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer

2908664

<https://www.phoenixcontact.com/us/products/2908664>

## Drawings

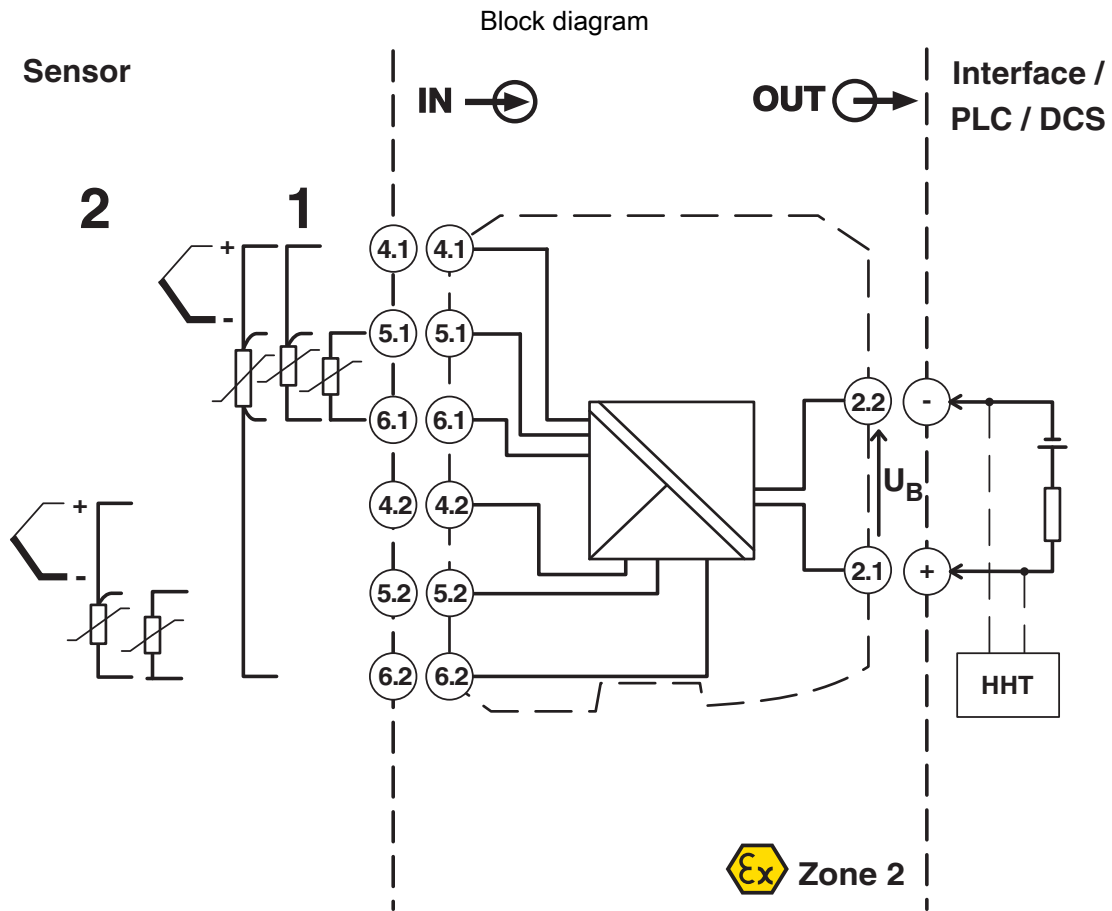
Dimensional drawing



# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer

2908664

<https://www.phoenixcontact.com/us/products/2908664>



# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2908664>



**cUL Recognized**  
Approval ID: FILE E 198586



**UL Recognized**  
Approval ID: FILE E 198586



**EAC**  
Approval ID: RU\*DE.\*08.B.01608/19



**DNV GL**  
Approval ID: TAA00002GX



**Functional Safety**  
Approval ID: Z10 029429 0021

**DNV**

Approval ID: TAA00002GX



**CSA**  
Approval ID: 70107976



**FM approved**  
Approval ID: FM17US0110X

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

## Classifications

### ECLASS

ECLASS-13.0	27210129
ECLASS-15.0	27210129

### ETIM

ETIM 10.0	EC002919
-----------	----------

### UNSPSC

UNSPSC 21.0	41112100
-------------	----------

# MACX MCR-TS-I-OLP-SP - Temperature measuring transducer



2908664

<https://www.phoenixcontact.com/us/products/2908664>

## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
-------------------------------------	----------------------

Phoenix Contact 2026 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)