

# MACX PL-T-UIREL-UP - Temperature measuring transducer



2904901

<https://www.phoenixcontact.com/us/products/2904901>

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Freely programmable temperature transducer with analog output and 3 limit value relays, standard configuration, resistance thermometer in 2-, 3-, or 4-conductor technology, thermocouples, screw connection, PLd. Replacement part: 2811378 MACX MCR-T-UIREL-UP.

## Commercial data

Item number	2904901
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C401
Product key	DK1115
GTIN	4046356898768
Weight per piece (including packing)	310.6 g
Weight per piece (excluding packing)	310.6 g
Customs tariff number	85437090
Country of origin	DE

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## Technical data

### Product properties

Product type	Temperature transmitter
Insulation characteristics	
Overvoltage category	II
Pollution degree	2

### Electrical properties

Electrical isolation	4-way, between input/output/power supply/switching output
Maximum temperature coefficient	0.01 %/K
Maximum transmission error	0.1 % (e.g. for Pt 100, 300 K span, 4 ... 20 mA)

#### Electrical isolation Input/output/power supply

Rated insulation voltage	300 V <sub>rms</sub>
Test voltage	2.5 kV AC (50 Hz, 60 s)
Insulation	Safe isolation in accordance with IEC/EN 61010-1

#### Electrical isolation Input/output

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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#### Electrical isolation Input/power supply

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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#### Electrical isolation Input/switching output

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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### Supply

Supply voltage range	24 V ... 230 V AC/DC (-20 % ... +10 %, 50 Hz ... 60 Hz)
Power consumption	< 2.4 W

## Input data

### Signal

Number of inputs	1
Input signal	Temperature
	Resistor
	Voltage

### Measurement

Sensor types (RTD) that can be used	Pt, Ni, Cu sensors: 2, 3, 4-wire
Sensor types that can be used (TC)	B, E, J, K, N, R, S, T, L, U, CA, DA, A1G, A2G, A3G, MG, LG
Temperature measuring range	-200 °C ... 850 °C
Linear resistance measuring range	0 Ω ... 50 kΩ
Potentiometer resistance range	0 Ω ... 50 kΩ
Linear mV signal range	-1000 mV ... 1000 mV

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## Output data

### Switching: Relay

Output description	1 SIL/PL
Configurable/programmable	Yes
Contact switching type	2 changeover contacts
Contact material	AgSnO <sub>2</sub> , hard gold-plated
Maximum switching voltage	250 V AC (250 V DC)
Maximum inrush current	2 A (250 V AC)
	2 A (28 V DC)
	0.2 A (120 V DC)

### Signal

Number of outputs	1
Configurable/programmable	Yes
Current output signal	4 mA ... 20 mA (in the case of SIL; further free configuration without SIL)
Max. current output signal	22 mA
Load/output load current output	≤ 600 Ω (at 20 mA)
Behavior in the event of a sensor error	according to NE 43 or freely configurable

## Connection data

Connection method	Screw connection
Screw thread	M3
Conductor cross section rigid	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

## Dimensions

Width	35 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color	yellow (RAL 1018)
Flammability rating according to UL 94	V0 (Housing)
Housing material	PA 6.6-FR

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Altitude	≤ 2000 m
Permissible humidity (operation)	typ. 5 % ... 95 % (non-condensing)

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## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	II 3 G Ex nA nC ic IIC T4 Gc X
Certificate	IBExU 10 ATEX B001 X

### IECEX

Identification	Ex nA nC ic IIC T4 Gc X
Certificate	IECEX IBE 10.0011 X

### UL, USA/Canada

Identification	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T6
	Class I, Zone 2, Group IIC T6

### Shipbuilding approval

Identification	C, EMC2
Certificate	DNV GL 11 564-14HH

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

Identification	2
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### Performance Level (ISO 13849)

Identification	d
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## EMC data

Electromagnetic compatibility	Conformance with EMC directive
Noise immunity	EN 61000-6-2
Note	When being exposed to interference, there may be minimal deviations.

## Standards and regulations

Electrical isolation	4-way, between input/output/power supply/switching output
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## Mounting

Mounting type	DIN rail mounting
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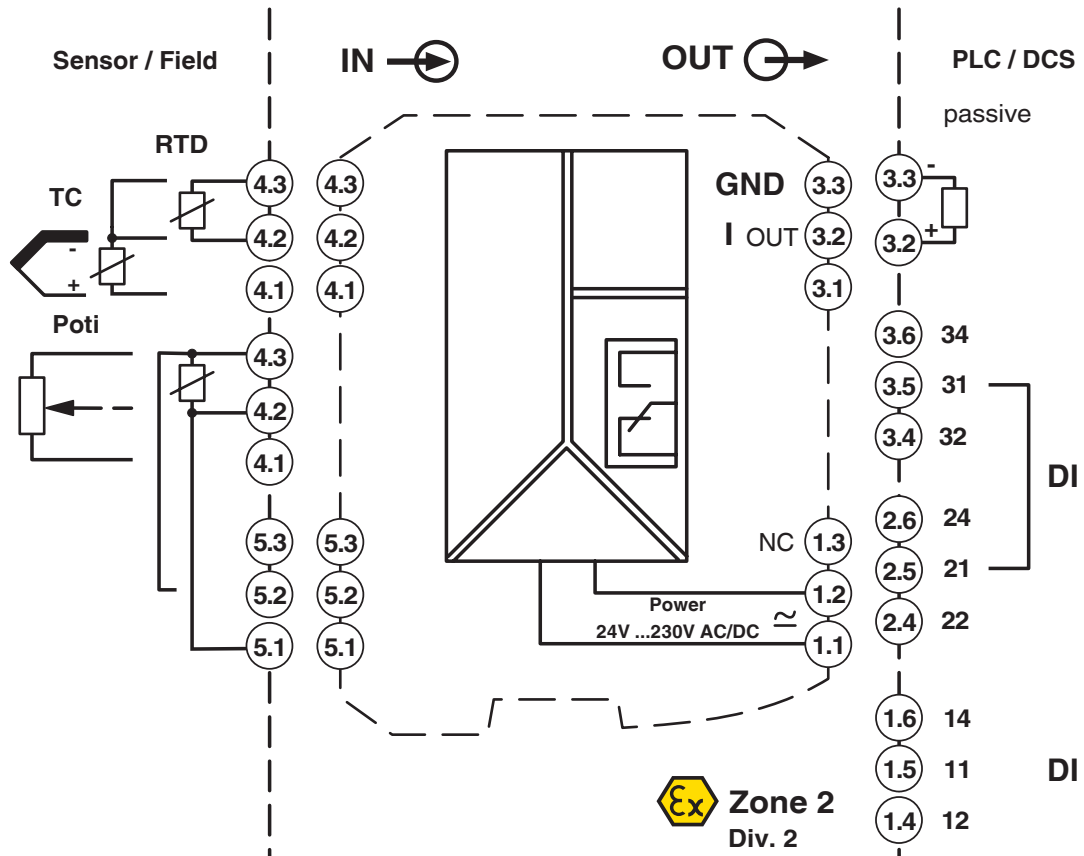
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## Drawings

Block diagram



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## Environmental product compliance

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.)	No substance above 0.1 wt%

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