

Temperature measuring transducer - MACX MCR-T-UIREL-UP-SP - 2811828

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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-wire technology, thermocouples, galvanic isolation, wide-range power supply, spring-cage connection, SIL

Product Features

- ✔ Cold junction compensation with separate plug
- ✔ Configuration via software (FDT/DTM) or IFS-OP-UNIT operator interface and display unit
- ✔ Installation in zone 2, protection type "n" (EN 60079-15) permitted
- ✔ Up to SIL 2 according to EN 61508
- ✔ Plug-in screw or spring-cage connection technology (Push-in technology)
- ✔ Three limit value relays, can be used in combination as a safe limit value relay
- ✔ Programming during operation and also voltage-free using IFS-USB-PROG-ADAPTER programming adapter
- ✔ Input for resistance thermometers, thermocouples, resistance-type sensors, potentiometers, and mV sources
- ✔ Measure differential temperatures
- ✔ Freely programmable input and output
- ✔ Inverse output signal ranges as an option



Key commercial data

package_quantity	1
GTIN	4046356579483

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	35 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
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Ambient conditions

Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	typ. 5 % ... 95 % (no condensation)
Noise immunity	EN 61000-6-2 When being exposed to interference, there may be minimal deviations.

Input data

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	-250 °C ... 2500 °C (Range depending on the sensor type)
Input signal range	0 Ω ... 50 kΩ
Potentiometer resistance range	0 Ω ... 50 kΩ
Input signal range	-1000 mV ... 1000 mV

Output data

Max. voltage output signal	± 11 V
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 voltage output	≥ 10 kΩ
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
Output name	Relay output
Contact type	3 PDTs
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	250 V AC (250 V DC)
Maximum inrush current	2 A (250 V AC)
Maximum inrush current	2 A (28 V DC)

Power supply

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

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	1.5 mm ²
Conductor cross section stranded min.	0.2 mm ²
Conductor cross section stranded max.	1.5 mm ²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	16
Stripping length	8 mm
Connection method	Spring-cage conn.

General

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General

Maximum transmission error	0.1 % (e.g. for Pt 100, 300 K span, 4 ... 20 mA)
Maximum temperature coefficient	0.01 %/K
Inflammability class according to UL 94	V0
Pollution degree	2
Surge voltage category	II
Housing material	PA 66-FR
Color	green
Name	Input/output/power supply
Electrical isolation	300 V _{rms} (Rated insulation voltage (surge voltage category II; pollution degree 2, safe isolation as per EN 61010-1))
Electrical isolation	2.5 kV (50 Hz, 1 min., test voltage)
Name	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Name	Input/power supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Name	Input/switching output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Conformance	CE-compliant
ATEX	# II 3 G Ex nA nC ic IIC T4 Gc X
IECEX	Ex nA nC ic IIC T4 Gc X
Functional safety (SIL)	SIL 2

classifications

eCl@ss

eCl@ss 4.0	27210121
eCl@ss 4.1	27210121
eCl@ss 5.0	27210121
eCl@ss 5.1	27210121
eCl@ss 6.0	27210121
eCl@ss 7.0	27210121
eCl@ss 8.0	27210121

ETIM

ETIM 3.0	EC001446
ETIM 4.0	EC002653
ETIM 5.0	EC002653

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008

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classifications

UNSPSC

UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

approvals

IECEX / ATEX / Functional Safety / UL Listed / cUL Listed / cULus Listed /

Approval details

IECEX

ATEX

Functional Safety

UL Listed

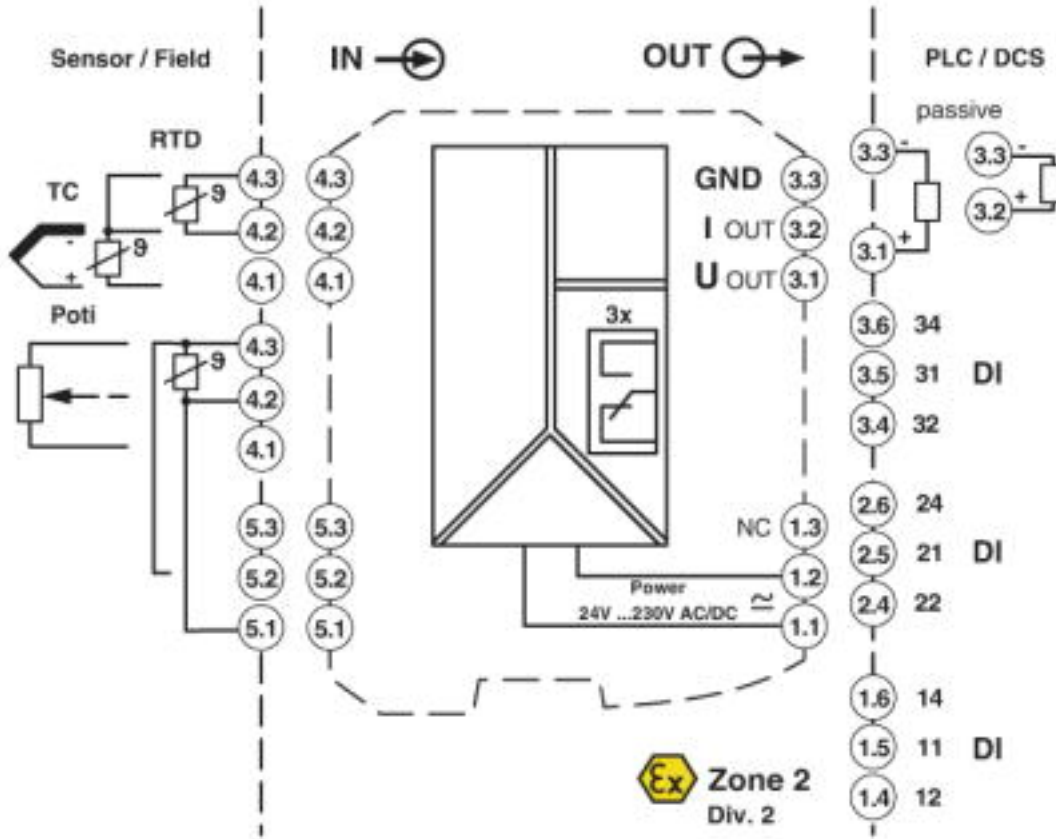
cUL Listed

cULus Listed

Drawings

Temperature measuring transducer - MACX MCR-T-UIREL-UP-SP - 2811828

Block diagram



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