

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

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>)



Freely programmable temperature transducer with analog output and 1 limit value relay, order configuration, resistance thermometer in 2-, 3-, or 4-wire technology, thermocouples, galvanic isolation, wide-range power supply, screw connection, SIL

Why buy this product

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



Key Commercial Data

Packing unit	1 pc
Sales Key	J1 - MSR Technology
Note	Made to Order (non-returnable)

Configuration

Safety Integrity Level	SIL off [NONE]
Sensortyp	PT1000 IEC 751 [PT1000]
Anschlusstechnik	4-Leiter [4]
Kaltstellenkompensation	Abgeschaltet [0]
Messbereich Anfang	-20.00
Messbereich Ende	115.00
Messeinheit	Celsius [C]
Ausgangssignal	4...20 mA [OUT02]

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

Werkskalibrierzertifikat	Kein Werkskalibrierzertifikat [NONE]
--------------------------	--------------------------------------

Technical data

Note

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

Dimensions

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Maximum altitude	≤ 2000 m
Permissible humidity (operation)	typ. 5 % ... 95 % (non-condensing)
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	0 mA ... 20 mA ±10 V (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	1 PDT
Contact material	AgSnO ₂ , hard gold-plated
Maximum switching voltage	30 V AC (30 V DC)
Maximum inrush current	0.5 A (30 V AC)
	1 A (30 V DC)

Power supply

Supply voltage range	24 V ... 230 V AC/DC (-20 %/+10 %, 50/60 Hz)
Power consumption	< 1.5 W

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

Technical data

Connection data

Conductor cross section solid min.	0.2 mm ²
Conductor cross section solid max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section AWG min.	24
Conductor cross section AWG max.	14
Stripping length	7 mm
Screw thread	M3
Connection method	Screw connection

General

Maximum temperature coefficient	0.01 %/K
Flammability rating according to UL 94	V0
Pollution degree	2
Overvoltage category	II
Electromagnetic compatibility	Conformance with EMC Directive 2004/108/EC
Housing material	PA 66-FR
Color	green
Designation	Input/output/power supply
Electrical isolation	300 V _{rms} (Rated insulation voltage (overvoltage category II; pollution degree 2, safe isolation as per EN 61010-1))
	2.5 kV (50 Hz, 1 min., test voltage)
Designation	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Input/power supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	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
UL, USA / Canada	UL 508 Listed
	Class I, Div. 2, Groups A, B, C, D T6
	Class I, Zone 2, Group IIC T6
Functional Safety (SIL)	SIL 2

Classifications

eCl@ss

eCl@ss 4.0	27210107
eCl@ss 4.1	27210107

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

Classifications

eCl@ss

eCl@ss 5.0	27210107
eCl@ss 5.1	27210107
eCl@ss 6.0	27210107
eCl@ss 7.0	27210107
eCl@ss 8.0	27371503

ETIM

ETIM 3.0	EC001446
ETIM 4.0	EC002653
ETIM 5.0	EC002568

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Approvals

Approvals

Approvals

Functional Safety / UL Listed / cUL Listed / GL / EAC / cULus Listed

Ex Approvals

IECEX / ATEX / UL Listed / cUL Listed / cULus Listed

Approvals submitted

Approval details

Functional Safety

UL Listed

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

Approvals

cUL Listed 

GL

EAC

cULus Listed 

Accessories

Accessories

Plug

Plug - MACX MCR-I20 - 2905680



Connection terminal block for current signals, +20 mA ... -20 mA, for safe switching of limit values, in combination with MACX ...-T-UI... temperature transducers.

Plug - MACX MCR-CJC - 2924993



Plug for cold junction compensation for thermocouples, for safe switching of limit values, in combination with MACX ...-T-UI... temperature transducers.

Programming adapter

Programming adapter - IFS-USB-PROG-ADAPTER - 2811271



Programming adapter with USB interface, for programming with software. The USB driver is included in the software solutions for the products to be programmed, such as measuring transducers or motor managers.

Drawings

Temperature measuring transducer - MACX MCR-T-UI-UP-C - 2811873

Block diagram

