

# Temperature measuring transducer - MCR-T-UI-E-NC - 2814126

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MCR-T module, programmable temperature measuring transducer, unconfigured, for thermocouple sensors and resistance thermometers, with 2, 3, or 4-wire system, with electrical isolation between input/output and input/auxiliary power

## Why buy this product

- ✓ Freely programmable via MCR/PI-CONF-WIN
- ✓ With transistor switching output
- ✓ Measure differential temperatures
- ✓ Inverse output signal ranges as an option
- ✓ For resistance thermometers and thermocouples



## Key commercial data

Packing unit	1 pc
GTIN	 4 017918 139445
Weight per Piece (excluding packing)	124.7 g
Custom tariff number	85437090
Country of origin	Germany

## Technical data

### Note:

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

Width	17.5 mm
Height	99 mm
Depth	114.5 mm

### Ambient conditions

Ambient temperature (operation)	-20 °C ... 65 °C
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## Technical data

### Input data

Configurable/programmable	Yes, unconfigured
Sensor types (RTD) that can be used	Pt, Ni, Cu sensors
Sensor types that can be used (TC)	U, T, L, J, E, K, N, S, R, B, C, W, HK
Linear resistance measuring range	0 Ω ... 8000 Ω (freely adjustable, min. measuring range 100 Ω)
Sensor input current	250 μA (resistance thermometer)
Temperature measuring range	(Depending on sensor type used)
Connection method	2, 3, 4-wire
Protective circuit	Transient protection
	Surge protection 30 V DC
Connection method	Pluggable screw connection

### Output data

Output name	Current output
Configurable/programmable	Yes, unconfigured
Voltage output signal	0 V ... 5 V
	0 V ... 10 V
	-5 V ... 5 V
	-10 V ... 10 V
	10 V ... 0 V
	5 V ... 0 V
	10 V ... -10 V
	5 V ... -5 V
	1 V ... 5 V
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
	20 mA ... 0 mA
	20 mA ... 4 mA
Max. output voltage	± 12 V
Max. output current	24 mA
Output voltage range with wire break	-12 V ... 12 V
Output current range with wire break	0 A ... 24 mA
Output voltage range with overrange/underrange	-12 V ... 12 V
Output current range with overrange/underrange	0 A ... 24 mA
Load/output load voltage output	≥ 10 kΩ
Load/output load current output	≤ 500 Ω
Protective circuit	Transient protection
D/A resolution	± 12 bit

### Switching output

Output name	Transistor output, pnp
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## Technical data

### Switching output

Output description	Can carry a load of 100 mA, switches supply voltage (not protected against short-circuit); locked in case of order-specific configuration, otherwise freely programmable through MCR/PI-CONF-WIN
Output voltage range	18 V DC ... 30 V DC (switches supply voltage, not short-circuit resistant)
Continuous load current	100 mA

### Power supply

Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	≤ 60 mA
Typical current consumption	40 mA

### Connection data

Connection method	Pluggable screw connection
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max.	14
Conductor cross section stranded min.	0.2 mm <sup>2</sup>
Conductor cross section stranded max.	2.5 mm <sup>2</sup>
Stripping length	8 mm
Screw thread	M3

### General

Maximum transmission error	≤ 0.1 % (of maximum range, ±6 mV or ±12 µA at output)
Maximum temperature coefficient	≤ 0.01 %/K
Temperature coefficient, typical	0.005 %/K
Cold point error, max.	≤ 3 K
Typical cold point errors	1.5 K
Test voltage input/output	1 kV (50 Hz, 1 min.)
Test voltage input/power supply	1 kV (50 Hz, 1 min.)
Color	green
Housing material	Polyamide PA non-reinforced
Mounting position	any
Conformance	CE-compliant
UL, USA / Canada	Class I, Div. 2, Groups A, B, C, D or non-hazardous locations
GL	Germanischer Lloyd

## Classifications

### eCl@ss

eCl@ss 4.0	27200206
eCl@ss 4.1	27200206
eCl@ss 5.0	27200206

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## Classifications

### eCl@ss

eCl@ss 5.1	27200206
eCl@ss 6.0	27200206
eCl@ss 7.0	27200206
eCl@ss 8.0	27200206

### ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC001446

### UNSPSC

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

## Approvals

### Approvals

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#### Approvals

UL Recognized / cUL Recognized / GOST / GL / cULus Recognized

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#### Ex Approvals

UL Listed / cUL Listed / cULus Listed

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#### Approvals submitted

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### Approval details

UL Recognized
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cUL Recognized
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## Approvals

GOST

GL

cULus Recognized

## Accessories

### Accessories

#### Arrester test system

Conductor - CM-KBL-RS232/USB - 2881078



Connecting cable D-9-SUB to USB, with adapter D-9-SUB to D-25-SUB.

## Configuration and diagnostics

Configuration software - MCR/PI-CONF-WIN - 2814799



PI/MCR configuration software for programming PI-EX-RTD..., PI-EX-TC..., MCR-T..., MCR-PSP..., MCR-f..., and MCR-S... modules. This software is available to download free of charge at - phoenixcontact.com.

## Programming adapter

Adapter cable - MCR-TTL-RS232-E - 2814388

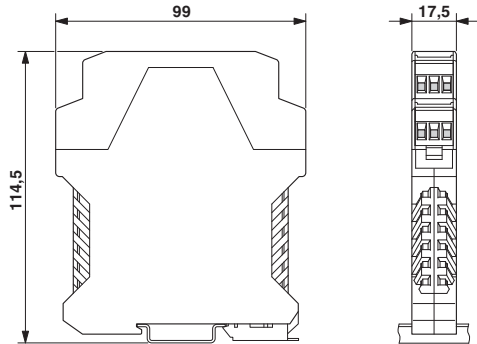


Software adapter cable (Stereo jack connector/D-SUB 25-pos.), 1.2 m length, for programming MCR-T..., MCR-S... and MCR-f... modules

## Drawings

# Temperature measuring transducer - MCR-T-UI-E-NC - 2814126

Dimensioned drawing



Circuit diagram

