

# MCR-TE-JK-I-E - Thermocouple measuring transducer



2810528

<https://www.phoenixcontact.com/us/products/2810528>

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MCR temperature measuring transducer, for thermocouples type J, K input: 0 - 400°C, 0 - 800°C, 0 - 1000°C, 0 - 1200°C, input electrically isolated, output signal 0(4)...20 mA

The figure shows version MCR-TE-JK-U-E

## Commercial data

Item number	2810528
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK1XXX
Weight per piece (including packing)	139.5 g
Weight per piece (excluding packing)	138.4 g
Customs tariff number	85437090
Country of origin	DE

## Technical data

### Notes

#### Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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### Product properties

Product type	Temperature transmitter
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### Electrical properties

Alignment span	± 5 % (of final value)
Alignment zero	± (60 K)
Limit frequency (3 dB)	30 Hz
Typical cold point errors	± 2.5 K
Cold point error, max.	± 4 K
Test voltage input/output	1.5 kV AC (50 Hz, 60 s)
Test voltage input/power supply	1.5 kV AC (50 Hz, 60 s)
Step response (10-90%)	~ 11 ms
Maximum temperature coefficient	< 0.02 %/K
Maximum transmission error	≤ 1.2 % (of end value, for type K)
	< 2 % (of end value, for type J, 0 °C ... 400°C and 0 °C ... 800°C)
	< 2.5 % (of end value, for type J, 0 °C ... 1000°C and 0 °C ... 1200°C)

### Supply

Supply voltage range	18 V DC ... 30 V DC
Max. current consumption	50 mA

### Input data

#### Signal

Input signal	Temperature
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#### Measurement

Configurable/programmable	Yes
Sensor types that can be used (TC)	J, K
Temperature measuring range	0 °C ... 400 °C
	0 °C ... 800 °C
	0 °C ... 1000 °C
	0 °C ... 1200 °C
Temperature measuring range: Thermoelement Typ J	0 °C ... 400 °C (fixed setting)
	0 °C ... 800 °C (fixed setting)
	0 °C ... 1000 °C (fixed setting)
	0 °C ... 1200 °C (fixed setting)

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Temperature measuring range: Thermoelement Typ K	0 °C ... 400 °C (fixed setting)
	0 °C ... 800 °C (fixed setting)
	0 °C ... 1000 °C (fixed setting)
	0 °C ... 1200 °C (fixed setting)

## Output data

Signal: Current output

Configurable/programmable	Yes
Current output signal	0 mA ... 20 mA
	4 mA ... 20 mA
Max. current output signal	30 mA
Output current with wire break	> 22 mA
Load/output load current output	≤ 500 Ω

## Connection data

Connection method	Pluggable screw connection
Stripping length	8 mm
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

Dimensional drawing	
Width	17.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color	green (RAL 6021)
Housing material	Polyamide PA non-reinforced

## Environmental and real-life conditions

Ambient conditions

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

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## CE

Certificate	CE-compliant
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## UL, USA/Canada

Identification	cULus
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## Mounting

Mounting position	any
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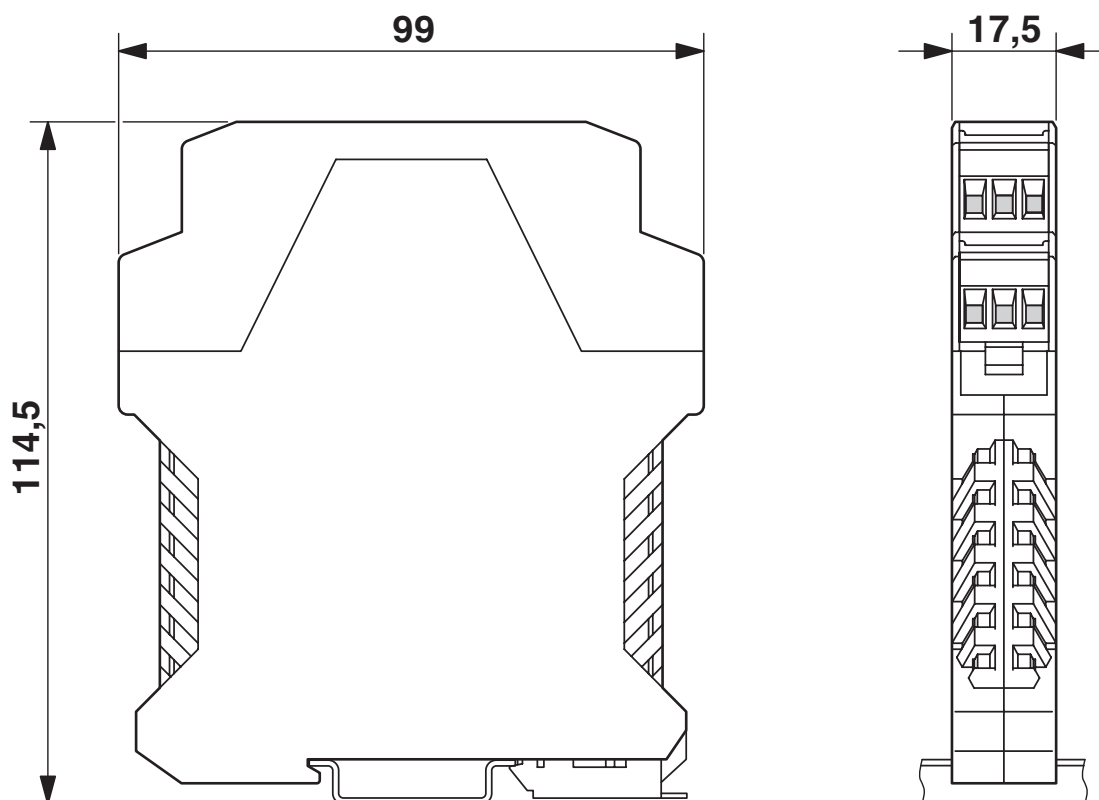


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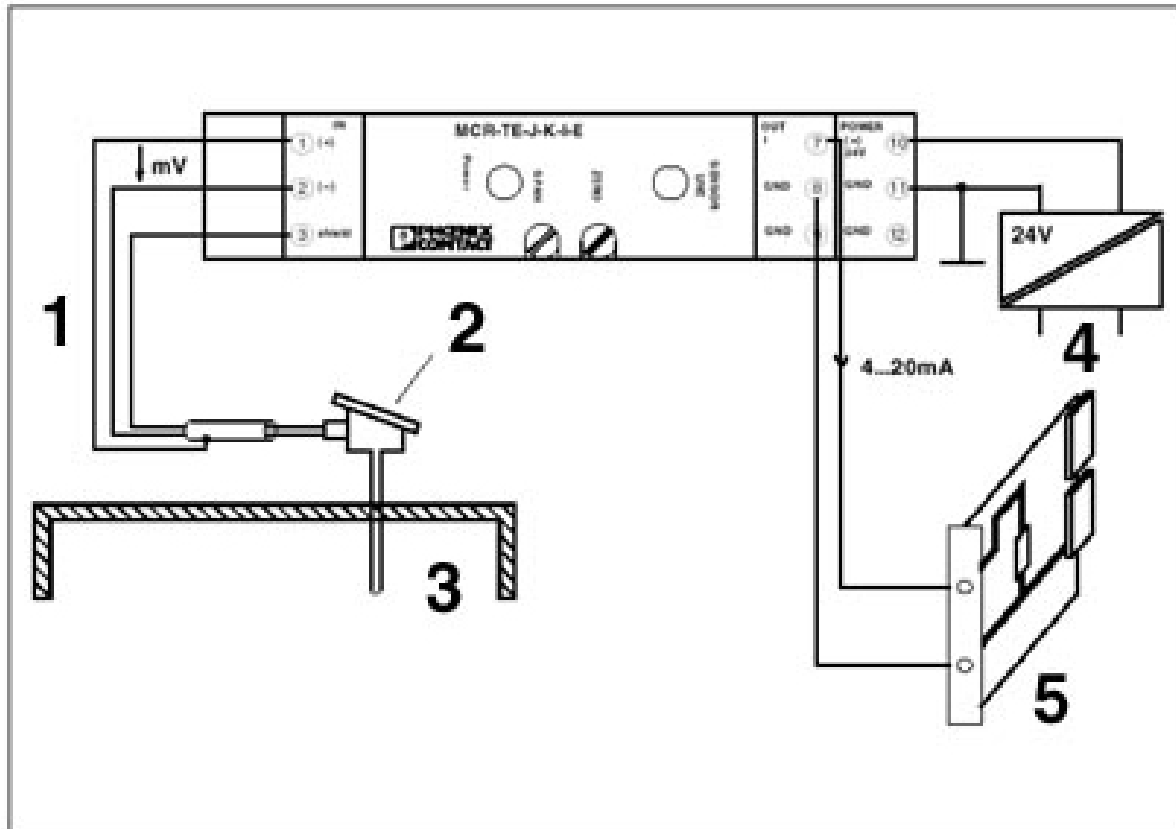
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## Drawings

Dimensional drawing



## Application drawing



Application example: Temperature measurement of a climatic chamber

- 1 = shielded conductor
- 2 = thermocouple
- 3 = climatic chamber
- 4 = mains voltage
- 5 = control

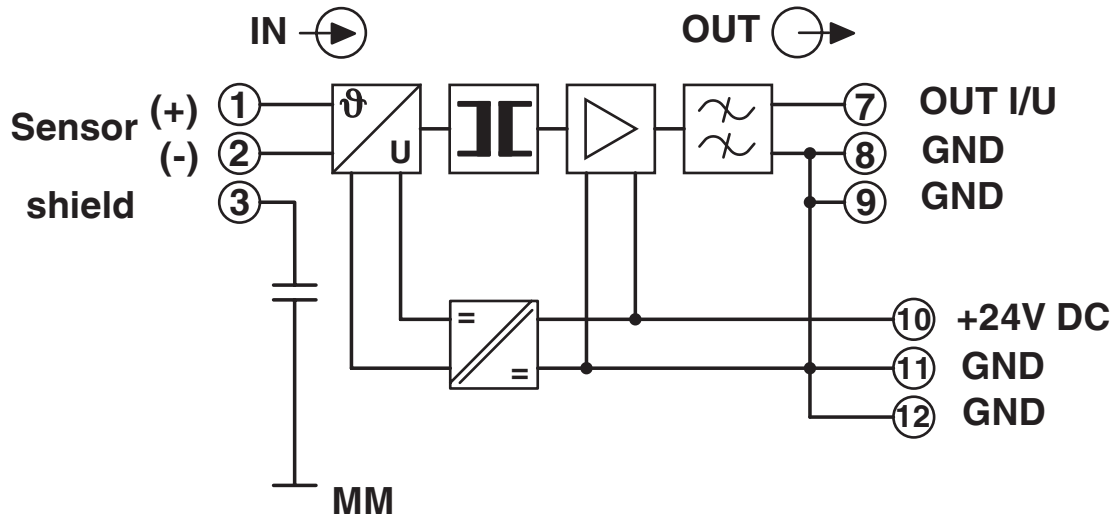
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Circuit diagram



## 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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