

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

2810515

<https://www.phoenixcontact.com/us/products/2810515>

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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..10 V

## Commercial data

Item number	2810515
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK1XXX
Weight per piece (including packing)	140.01 g
Weight per piece (excluding packing)	139 g
Customs tariff number	85437090
Country of origin	DE

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## 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	20 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

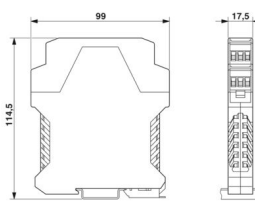
Signal: Voltage output

Configurable/programmable	Yes
Voltage output signal	0 V ... 10 V
Max. voltage output signal	15 V
Output voltage with wire break	> 11 V
Load/output load voltage output	≥ 10 kΩ

## 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

CE

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Certificate	CE-compliant
UL, USA/Canada	
Identification	cULus

## Mounting

Mounting position	any
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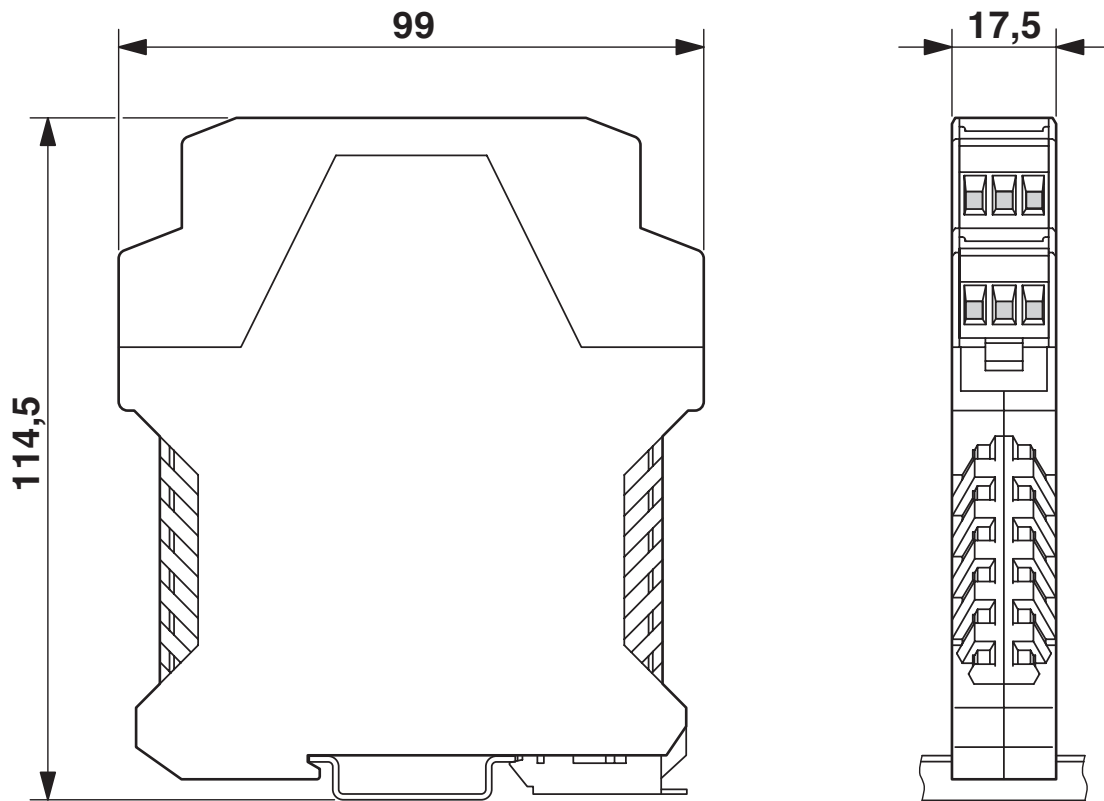
# MCR-TE-JK-U-E - Thermocouple measuring transducer

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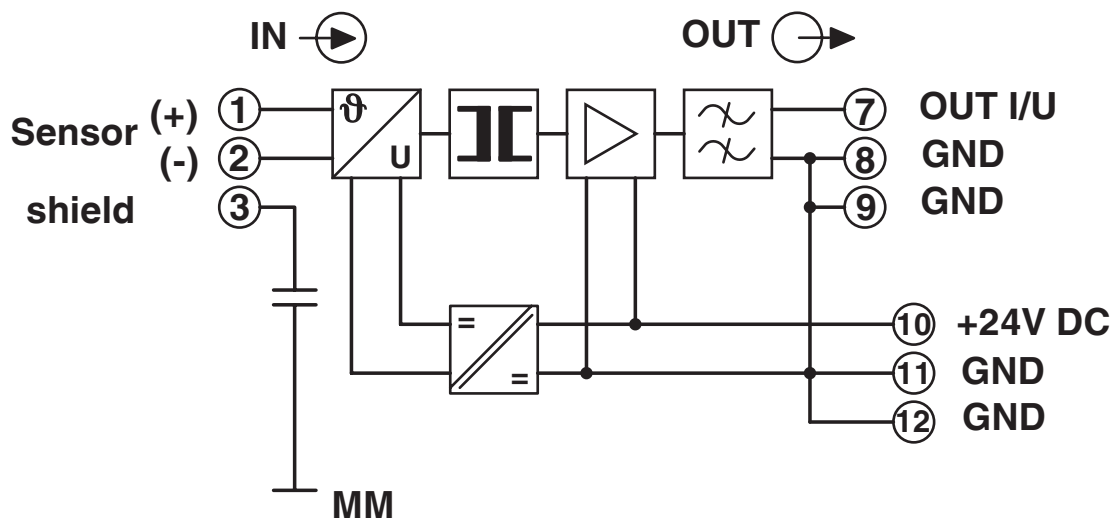
<https://www.phoenixcontact.com/us/products/2810515>

## Drawings

Dimensional drawing



Circuit 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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Phoenix Contact USA  
586 Fulling Mill Road  
Middletown, PA 17057, United States  
(+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)