

# PI-EX-ME-RTD-I - Signal converter



2835794

<https://www.phoenixcontact.com/us/products/2835794>

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Intrinsically safe temperature transducers for resistance thermometers, configured.  
Configuration software can be downloaded free of cost from the Download area.

## Commercial data

Item number	2835794
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C430
Product key	DK1XXX
GTIN	4017918901936
Weight per piece (including packing)	181.7 g
Weight per piece (excluding packing)	181.7 g
Customs tariff number	85438995
Country of origin	DE

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## Technical data

### Product properties

Product type	Temperature transmitter
Application	Temperature
No. of channels	1

### Electrical properties

Line monitoring	NE 43
Test voltage output/power supply	0.5 kV
Test voltage input/output	2.5 kV
Test voltage input/power supply	2.5 kV
Step response (10-90%)	< 150 ms ... 350 ms depending on the measuring mode
Maximum temperature coefficient	< 0.01 %/K

### Electrical isolation Input/output/power supply

Electrical isolation	375 V (Peak value, in acc. with EN 50020)
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### Supply

Supply voltage range	20.4 V DC ... 30 V DC
Power consumption	< 1.5 W

### Input data

#### Signal

Description of the input	intrinsically safe
Configurable/programmable	Yes, preconfigured
Available input sources	Resistance temperature detectors in 2-, 3- or 4-conductor technology

#### Control

Open-circuit voltage	20 V
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#### Measurement

Description of the input	intrinsically safe
Configurable/programmable	Freely programmable, configured
Sensor types (RTD) that can be used	2, 3 or 4-conductor Pt 100 sensors and resistance-type sensors
Measuring Range	see table for sensor types and measuring ranges
Temperature measuring range	-200 °C ... 850 °C (Range depending on the sensor type)
Temperature measuring range: Pt 100	-200 °C ... 850 °C
Max. permissible overall conductor resistance	50 Ω (Per cable)
Sensor input current	200 μA

### Output data

#### Signal

Output description	Current output
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Current output signal	4 mA ... 20 mA
Output current with short-circuit	25 mA
Load/output load current output	< 750 $\Omega$
Open-circuit voltage	20 V

## Connection data

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
Tightening torque	0.5 Nm ... 0.6 Nm

## Ex data

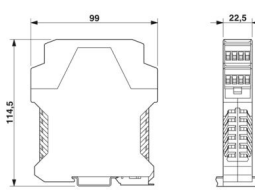
### Safety data

Max. output voltage $U_o$	2.7 V
Max. output current $I_o$	11 mA
Max. output power $P_o$	21 mW
Safety-related maximum voltage $U_m$	250 V
IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	50 mH / 30 $\mu$ F
IIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	50 mH / 2 $\mu$ F

## Signaling

Status display	Green LED (supply)
	LED red (line monitoring)

## Dimensions

Dimensional drawing	
Width	22.5 mm
Height	99 mm
Depth	114.5 mm

## Material specifications

Color	green (RAL 6021)
Flammability rating according to UL 94	V0
Housing material	Polyamide PA non-reinforced

## Environmental and real-life conditions

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## Ambient conditions

Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-25 °C ... 85 °C
Permissible humidity (operation)	≤ 75 % (annual average)
	≤ 95 % (30 days/year, non-condensing)

## Approvals

### CE

Certificate	CE-compliant
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### ATEX

Identification	⊕ II (1)GD
	[EEx ia] IIC
Certificate	TÜV 01 ATEX 1750

### UL, USA/Canada

Identification	cULus
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## Standards and regulations

### Standards

Standards/regulations	NAMUR recommendation NE 21
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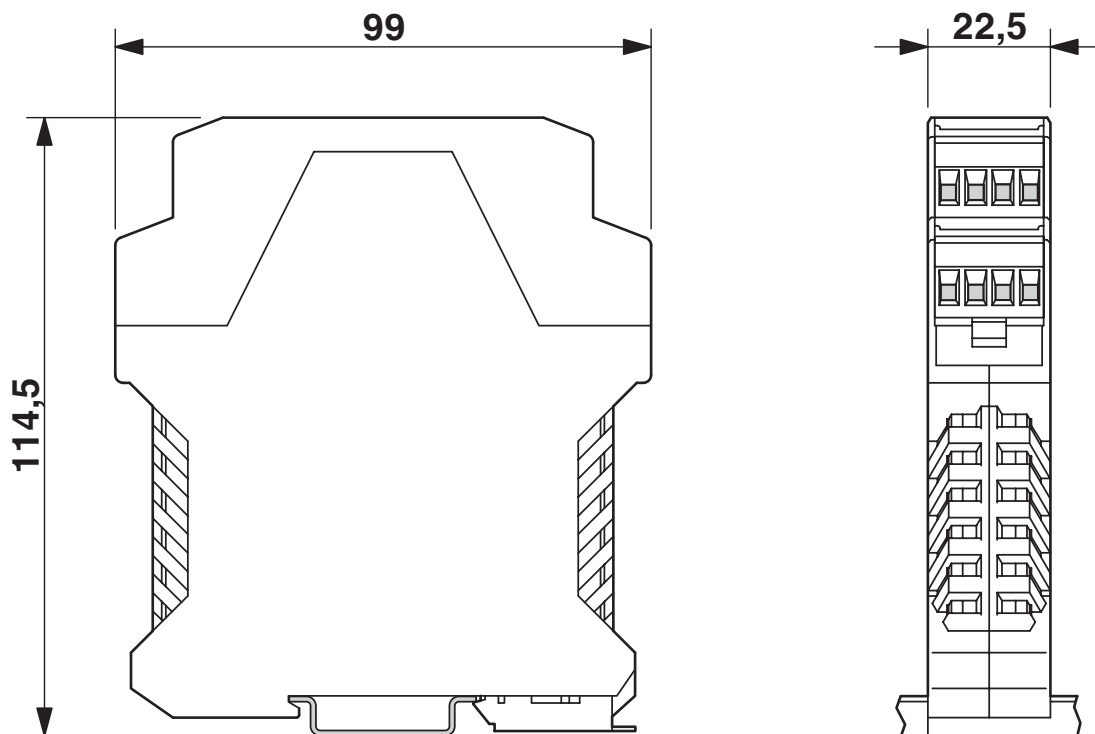
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## Drawings

Dimensional drawing

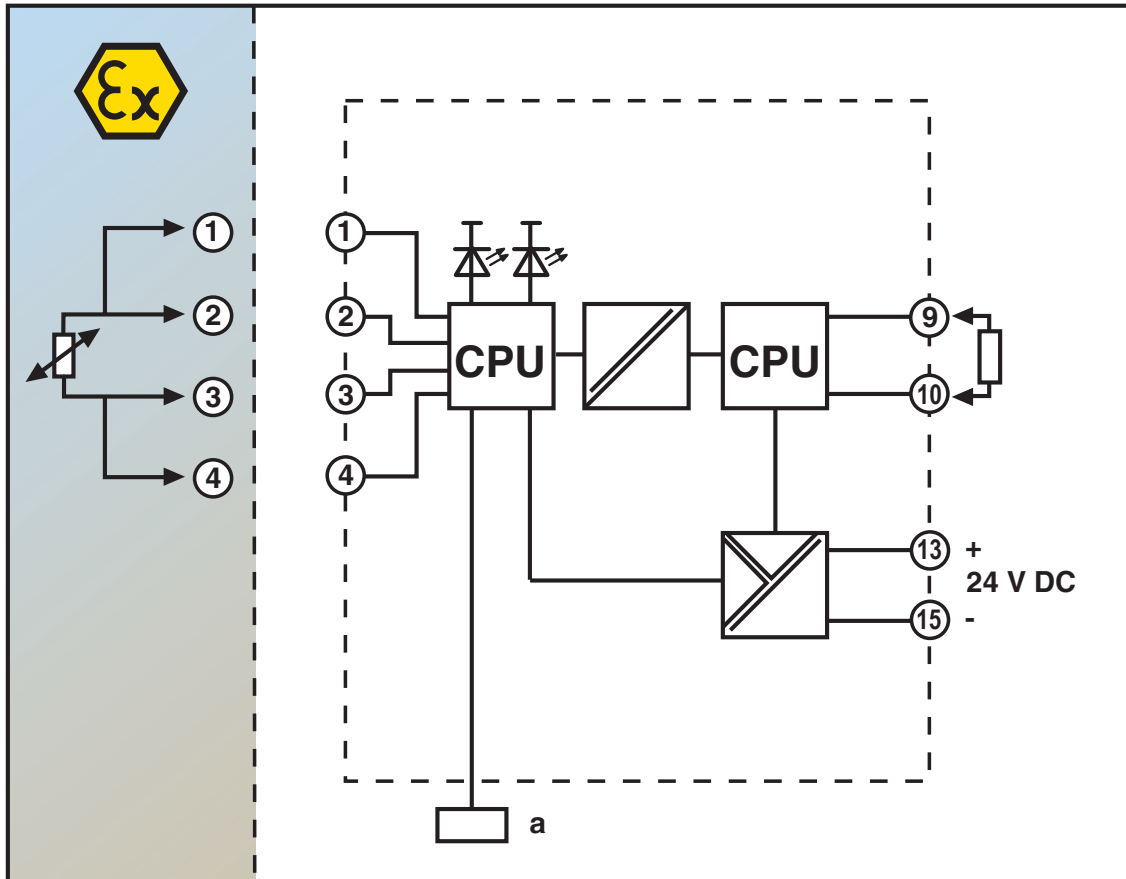


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Block diagram



Block diagram PI-EX-ME-RTD-I

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## Environmental product compliance

EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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