

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 Ω
Open-circuit voltage	20 V

Connection data

Stripping length	8 mm
Screw thread	M3
Conductor cross-section rigid	0.2 mm ² ... 2.5 mm ²
Conductor cross-section flexible	0.2 mm ² ... 2.5 mm ²
Conductor cross-section AWG	24 ... 14
Tightening torque	0.5 Nm ... 0.6 Nm

Ex data

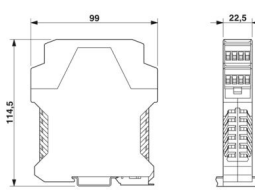
Safety data

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 μ F
IIC: Max. external inductivity L_o / Max. external capacitance C_o	50 mH / 2 μ 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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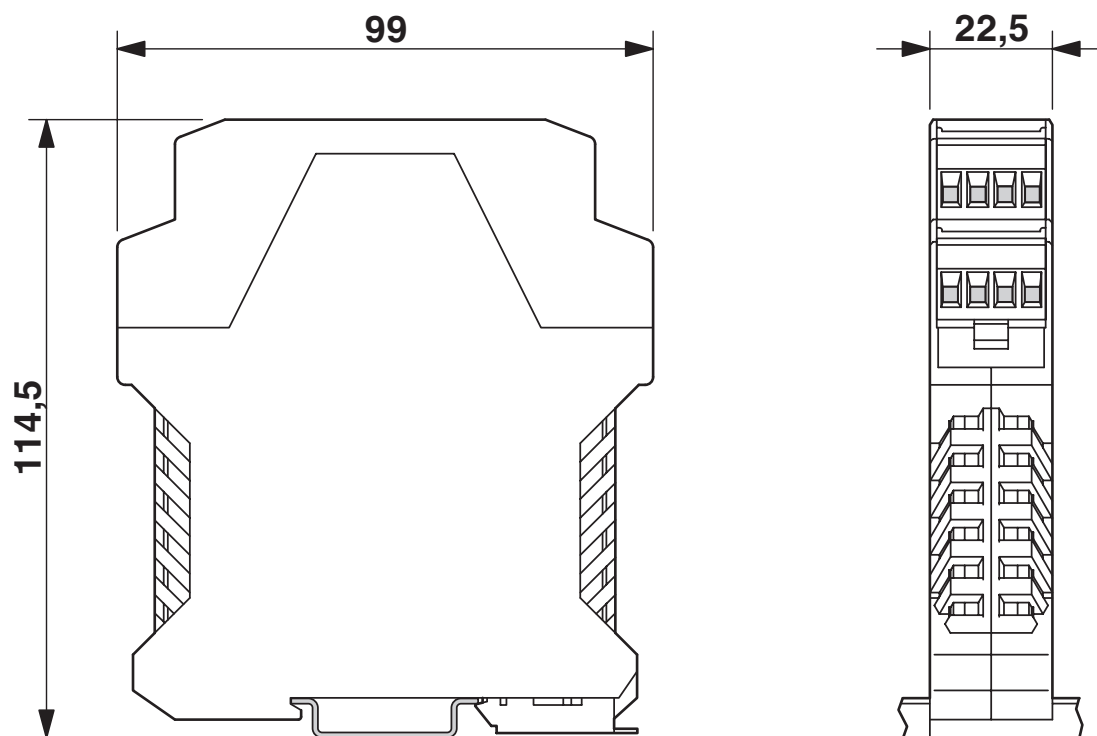
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Drawings

Dimensional drawing

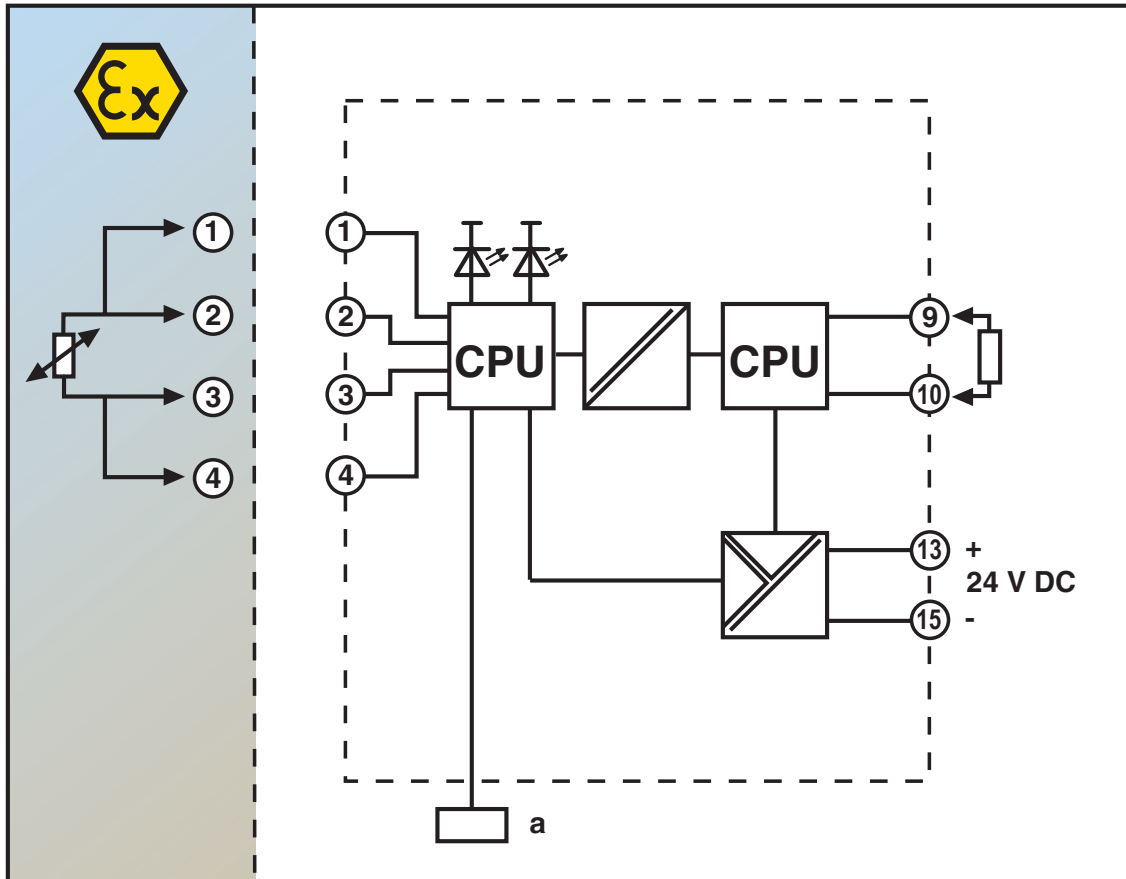


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Block diagram



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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