

PI-EX-RTD-I - Signal converter



2835066

<https://www.phoenixcontact.com/us/products/2835066>

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Ex i resistance thermometer input: Converts signals of Pt 100 resistance thermometers installed in the Ex zone and transfers a 4 mA ... 20 mA signal to a load in the safe zone. Freely programmable. Galvanic 3-way isolation.

Commercial data

Item number	2835066
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	CK3821
Catalog page	Page 383 (IF-2007)
Weight per piece (including packing)	107.5 g
Weight per piece (excluding packing)	107.5 g
Customs tariff number	85437090
Country of origin	GB

Technical data

Notes

Order information:	The electronics module is plugged into a basic terminal block.
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Product properties

Product type	Temperature transmitter
Application	Temperature
No. of channels	1

Electrical properties

Maximum transmission error	< 0.1 % (of end value 20 mA, at 0 Ω ... 400 Ω input range, 20°C)
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Electrical isolation Input/output

Electrical isolation	250 V
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Electrical isolation Input/power supply

Electrical isolation	250 V
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Electrical isolation Output/supply

Test voltage	1.5 kV AC (50 Hz, 60 s)
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Supply

Supply voltage range	20 V DC ... 35 V DC
Max. current consumption	64 mA (24 V DC / 20 mA)
Power dissipation	1.5 W (24 V DC / 20 mA)

Input data

Measurement

Description of the input	Intrinsically safe
Configurable/programmable	Freely programmable, configured
Sensor types (RTD) that can be used	2 or 3-conductor Pt 100 sensors as well as resistance-type sensors
Temperature measuring range	-200 °C ... 850 °C (Range depending on the sensor type)
Sensor type:	-200 °C ... 850 °C
Connection technology	2-, 3-conductor
Linear resistance measuring range	0 Ω ... 400 Ω (Minimum measuring range 10 Ω)
Measuring accuracy	±80 mΩ

Output data

Signal

Output description	Current output
Current output signal	4 mA ... 20 mA
Load/output load current output	≤ 600 Ω
Behavior in the event of a sensor error	upscale, downscale or off, LED flashes

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Measuring accuracy	$\pm 11 \mu\text{A}$
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Connection data

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

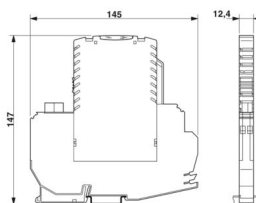
Safety data

Max. output voltage U_o	6.6 V
Max. output current I_o	27 mA
Max. output power P_o	50 mW
Safety-related maximum voltage U_m	250 V AC
IIB: Max. external inductivity L_o / Max. external capacitance C_o	178.4 mH / 500 μF
IIC: Max. external inductivity L_o / Max. external capacitance C_o	48.7 mH / 22 μF

Signaling

Status display	Green LED, for power supply, flashes in the case of sensor defect
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Dimensions

Dimensional drawing	
Width	12.4 mm
Height	145 mm
Depth	147 mm

Material specifications

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

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 55 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C

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Approvals

CE	
Certificate	CE-compliant
ATEX	
Identification	II (1) GD [EEEx ia] IIC
UL, USA/Canada	
Identification	cULus

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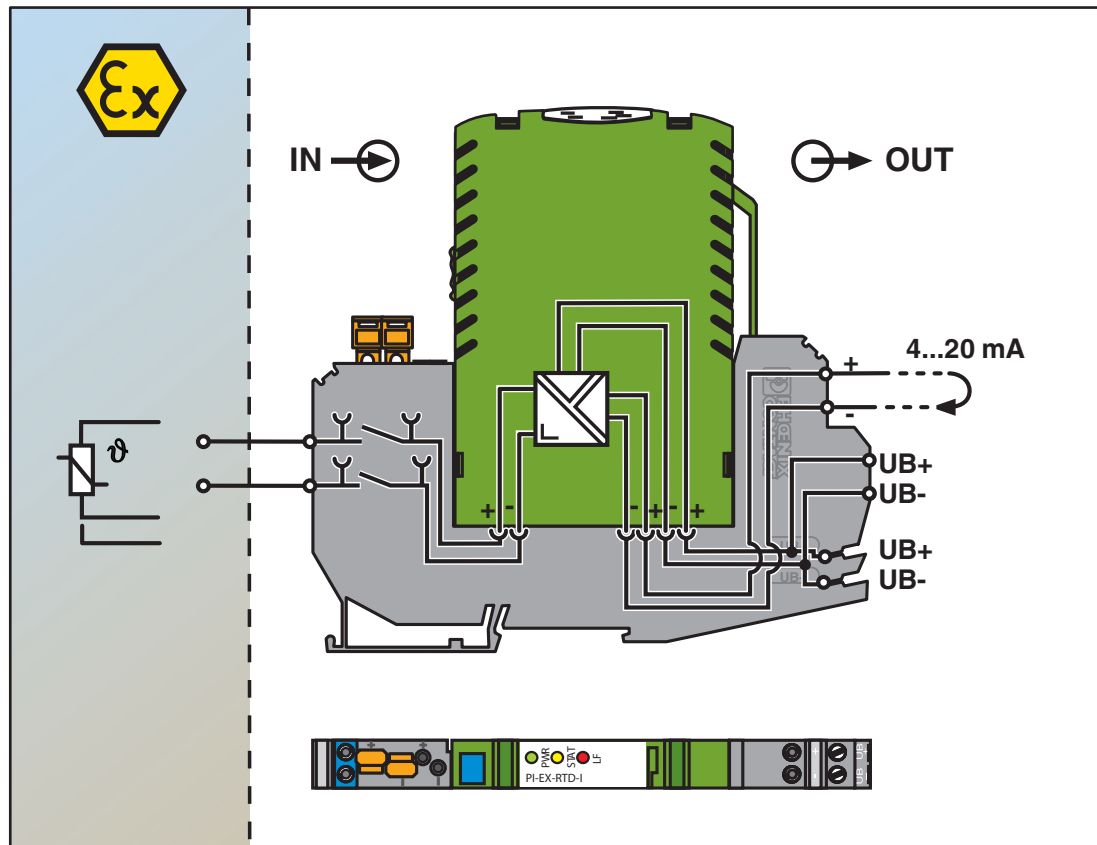
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Drawings

Block diagram



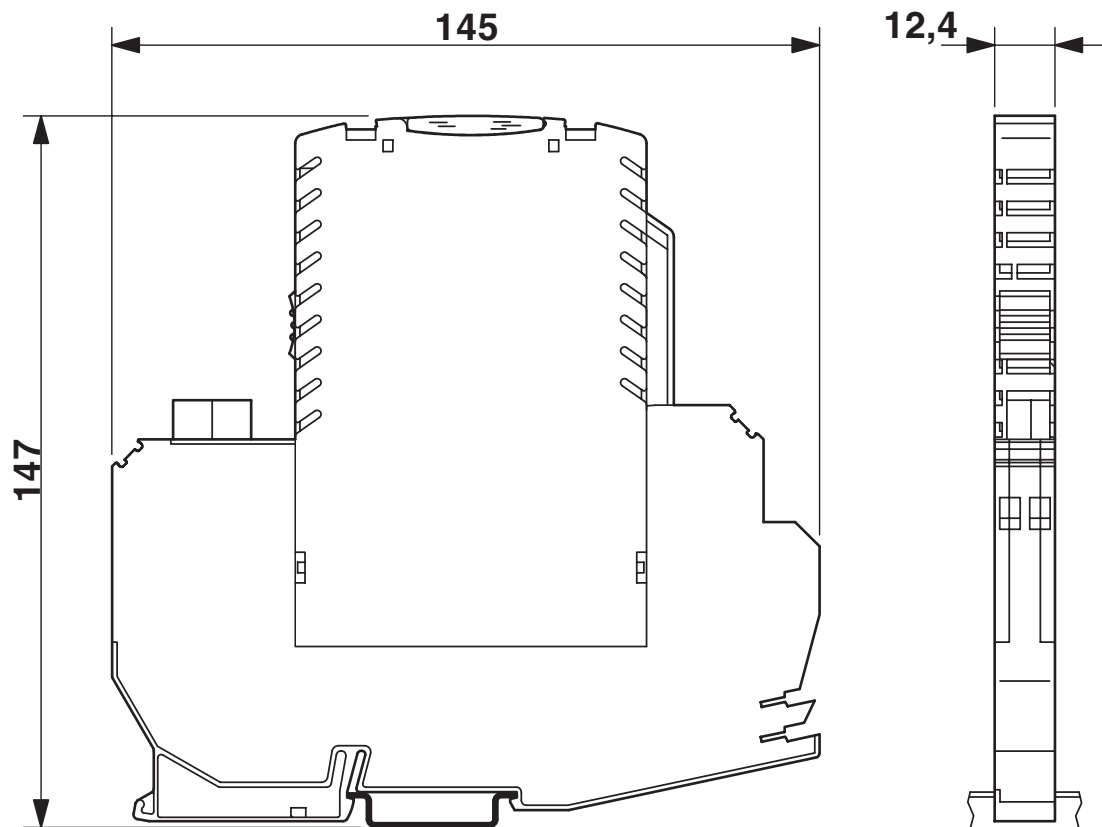
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Dimensional drawing



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Classifications

ECLASS

ECLASS-11.0	27210129
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Accessories

TT-PI-EX-TB - Surge protection device

2858386

<https://www.phoenixcontact.com/us/products/2858386>



Intrinsically safe basic terminal block with isolating plugs, test pick-offs, and surge protection, for mounting on NS 35/7,5

PI-EX-ES-1/3 - Basic terminal block

2835325

<https://www.phoenixcontact.com/us/products/2835325>



Ex basic terminal block, with three terminal points to the field level (Ex area)

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