

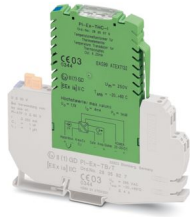
PI-EX-THC-I-NC - Signal converter



2835600

<https://www.phoenixcontact.com/us/products/2835600>

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Ex i thermocouple with mV input: converts signals from thermocouples installed in the Ex area and mV sources and transmits a 4 - 20 mA signal to a load in a safe area. Freely programmable. 3-way electrical isolation. Standard configuration.

Commercial data

Item number	2835600
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DK1XXX
GTIN	4017918890056
Weight per piece (including packing)	102.3 g
Weight per piece (excluding packing)	80 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

Typical cold point errors	1.5 °C
Temperature coefficient, typical	± 0.003 % (of input value /°C)
Maximum transmission error	< 0.12 % (of end value 20 mA, at 20°C, -75 mV ... 75 mV input range)

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, unconfigured
Sensor types that can be used (TC)	J, K, T, E, R, S, B, N
Temperature measuring range: Thermoelement Typ J	-210 °C ... 1200 °C
Temperature measuring range: Thermoelement Typ K	-200 °C ... 1372 °C
Temperature measuring range: Thermoelement Typ T	-200 °C ... 400 °C
Temperature measuring range: Thermoelement Typ E	-226 °C ... 1000 °C
Temperature measuring range: Thermoelement Typ R	-50 °C ... 1768 °C
Temperature measuring range: Thermoelement Typ S	-50 °C ... 1768 °C
Temperature measuring range: Thermoelement Typ B	500 °C ... 1820 °C
Temperature measuring range: Thermoelement Typ N	-200 °C ... 1300 °C
Linear mV signal range	-75 mV ... 75 mV (minimum measuring range span 3 mV)
Measuring accuracy	±15 µV or ± 0.05% of the input value, if this result is greater, at

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20°C

Output data

Signal

Output description	Current output
Current output signal	4 mA ... 20 mA (Output accuracy: $\pm 11 \mu\text{A}$)
Load/output load current output	< 600 Ω
Behavior in the event of a sensor error	upscale, downscale or off, LED flashes

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

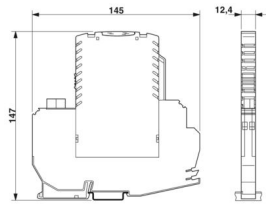
Safety data

Max. output voltage U_o	1.1 V
Max. output current I_o	4 mA
Max. output power P_o	1 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

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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

Approvals

CE

Certificate	CE-compliant
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ATEX

Identification	⊕ II (1) GD [Ex ia] IIC
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UL, USA/Canada

Identification	"Intrinsically safe 'Entity'" Connection [AEx ia] IIC, [Ex ia] IIC
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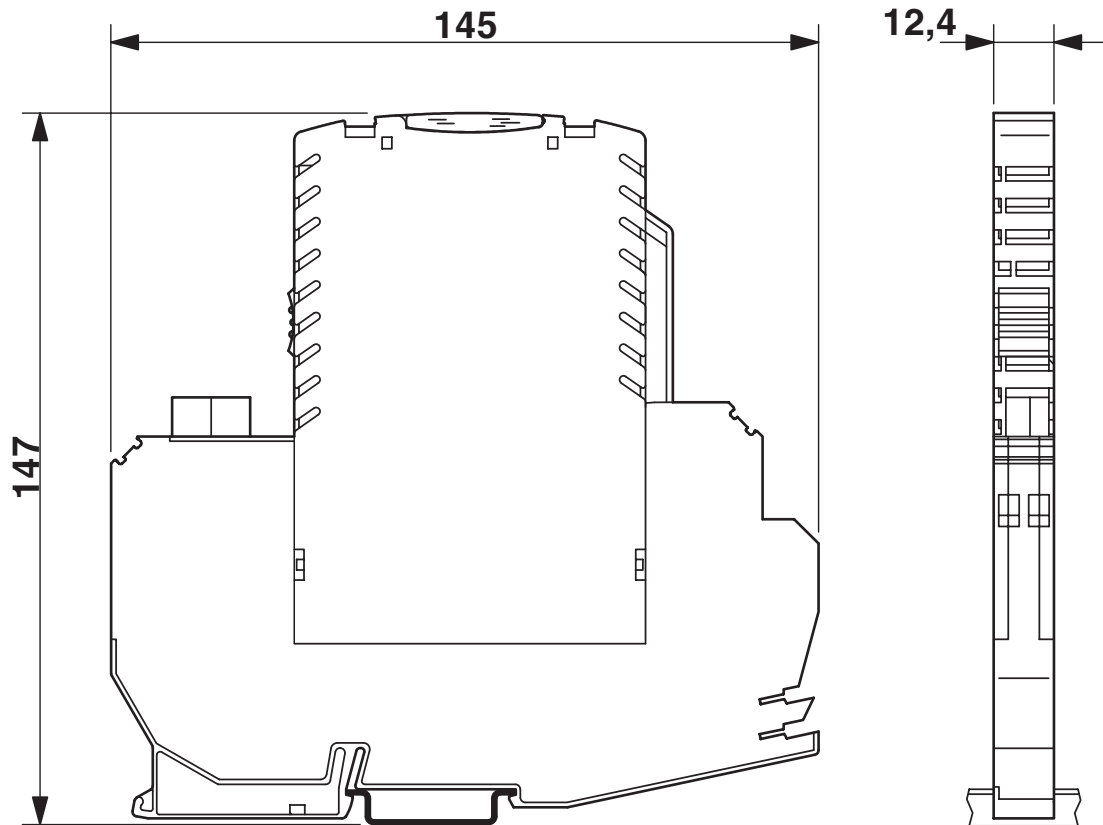
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Drawings

Dimensional drawing

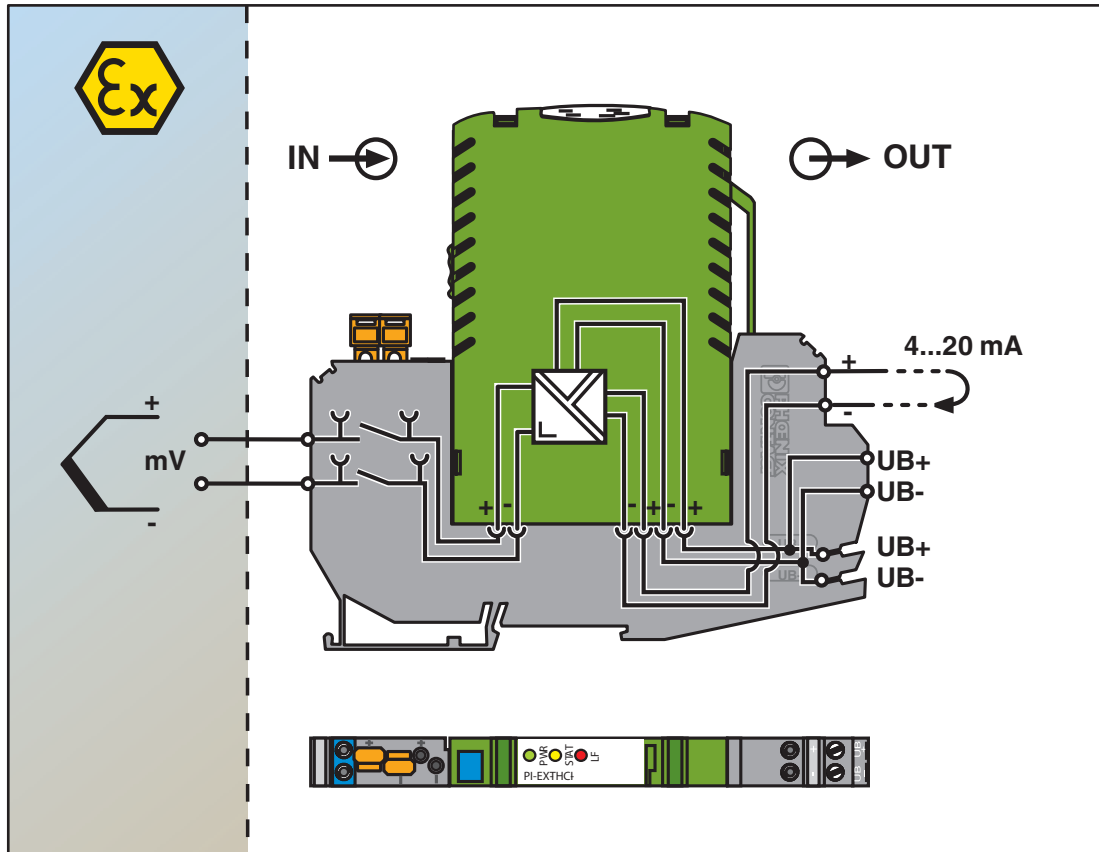


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Block diagram



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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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