

PI-EX-ME-THC-I - Signal converter



2835707

<https://www.phoenixcontact.com/us/products/2835707>

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Intrinsically safe temperature transducers for thermocouples and mV sources, configured.
Configuration software can be downloaded free of cost from the Download area.

Commercial data

Item number	2835707
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	C430
Product key	DK1XXX
GTIN	4017918902490
Weight per piece (including packing)	182.9 g
Weight per piece (excluding packing)	142.08 g
Customs tariff number	85438995
Country of origin	DE

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Technical data

Product properties

Product type	Temperature transmitter
Application	Temperature

Electrical properties

Cold point error, max.	± 1 K
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 ... 600 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	Thermocouple sensors

Control

Open-circuit voltage	25.2 V
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Measurement

Description of the input	intrinsically safe
Configurable/programmable	Freely programmable, configured
Sensor types that can be used (TC)	thermocouples, types: J, K, T, E, R, S, B, N, L, U, mV input
Measuring Range	see table for sensor types and measuring ranges
Temperature measuring range: Thermoelement Typ J	-210 °C ... 1200 °C
Temperature measuring range: Thermoelement Typ K	-200 °C ... 1370 °C
Temperature measuring range: Thermoelement Typ T	-270 °C ... 400 °C
Temperature measuring range: Thermoelement Typ E	-270 °C ... 1000 °C
Temperature measuring range: Thermoelement Typ R	-50 °C ... 1769 °C
Temperature measuring range: Thermoelement Typ S	0 °C ... 1700 °C
Temperature measuring range: Thermoelement Typ B	50 °C ... 1800 °C
Temperature measuring range: Thermoelement Typ N	-200 °C ... 1300 °C
Temperature measuring range: Thermoelement Typ L	-200 °C ... 900 °C

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Temperature measuring range: Thermoelement Typ U	-200 °C ... 600 °C
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Output data

Signal

Output description	Current output
Current output signal	4 mA ... 20 mA
Output current with short-circuit	30 mA
Load/output load current output	< 750 Ω
Open-circuit voltage	25.2 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

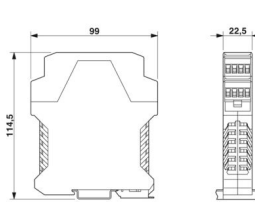
Safety data

Max. output voltage U_o	1.8 V
Max. output current I_o	22 mA
Max. output power P_o	32 mW
Safety-related maximum voltage U_m	250 V
IIB: Max. external inductivity L_o / Max. external capacitance C_o	50 mH / 49 μF
IIC: Max. external inductivity L_o / Max. external capacitance C_o	50 mH / 2 μF

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

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

Environmental and real-life conditions

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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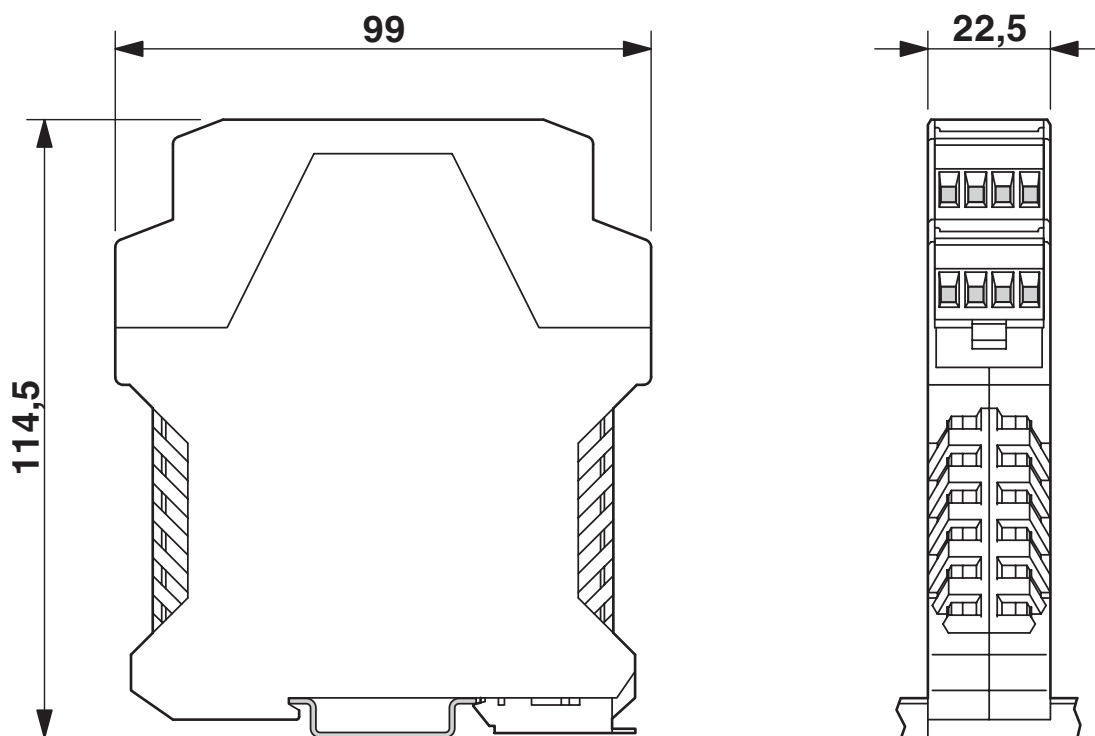
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Drawings

Dimensional drawing

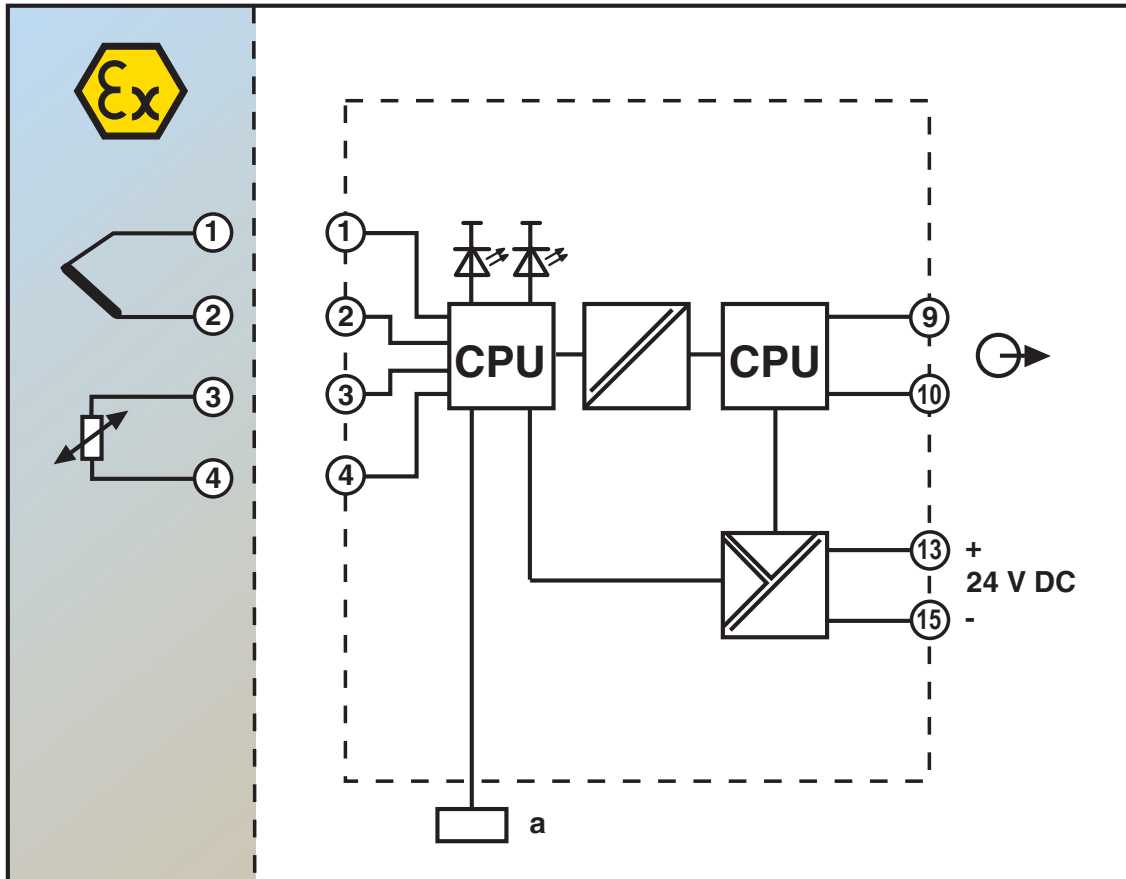


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Block diagram



Block diagram PI-EX-ME-THC-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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