Signal converter - PI-EX-THC-I-NC - 2835600

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

Key commercial data

Packing unit	1 PCE
Weight per Piece (excluding packing)	98.0 GRM
Custom tariff number	85437090
Country of origin	United Kingdom

Technical data

Dimensions

Width	12.4 mm
Height	145 mm
Depth	147 mm

Ambient conditions

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

Input data

Input	Intrinsically safe
Configurable/programmable	Freely programmable, unconfigured
Sensor types that can be used (TC)	J, K, T, E, R, S, B, N
Input signal range	-75 mV ... 75 mV (minimum measuring range span 3 mV)
Input accuracy	±15 µV or ± 0.05% of the input value, if this result is greater, at 20°C

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Output data

Signal output	Current output
Current output signal	4 mA ... 20 mA (output accuracy: ± 11 µA)
Load/output load current output	< 600 Ω
Behavior in the event of a sensor error	upscale, downscale or off, LED flashes

Power supply

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

Connection data

Conductor cross section solid min.	0.2 mm²
Conductor cross section solid max.	2.5 mm²
Conductor cross section stranded min.	0.2 mm²
Conductor cross section stranded max.	2.5 mm²
Conductor cross section AWG/kcmil min.	24
Conductor cross section AWG/kcmil max	14
Tightening torque, min	0.5 Nm
Tightening torque max	0.6 Nm

General

No. of channels	1
Maximum transmission error	< 0.12 % (of end value 20 mA, at 20°C, -75 mV ... 75 mV input range)
Temperature coefficient, typical	± 0.003 % (of input value /°C)
Typical cold point errors	1.5 °C
Status display	Green LED, for power supply, flashes in the case of sensor defect
Inflammability class according to UL 94	V0
Housing material	PBT and polyamide PA non-reinforced
Color	green
Name	Input/output
Electrical isolation	250 V
Name	Input/power supply
Electrical isolation	250 V
Name	Output/supply
Electrical isolation	1.5 kV AC (50 Hz, 1 min., test voltage)
Conformance	CE-compliant
ATEX	# II (1) GD [EEx ia] IIC
UL, USA / Canada	"Intrinsically safe 'Entity'" Connection [AEx ia] IIC, [Ex ia] IIC

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Safety data

Max. output voltage U_o	1.1 V
Max. output current I_o	4 mA
Max. output power P_o	1 mW
Gas group	IIB
Max. external inductivity L_o	178.4 mH
Max. external capacity C_o	500 µF
Gas group	IIC
Max. external inductivity L_o	48.7 mH
Max. external capacity C_o	22 µF
Safety-related maximum voltage U_m	250 V AC

Classifications

eCl@ss

eCl@ss 4.0	27200206
eCl@ss 4.1	27200206
eCl@ss 5.0	27200206
eCl@ss 5.1	27200206
eCl@ss 6.0	27200206
eCl@ss 7.0	27200206
eCl@ss 8.0	27200206

ETIM

ETIM 2.0	EC001446
ETIM 3.0	EC001446
ETIM 4.0	EC001446
ETIM 5.0	EC001446

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008

Accessories

Additional products

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Accessories

Basic terminal block - PI-EX-TB - 2835901

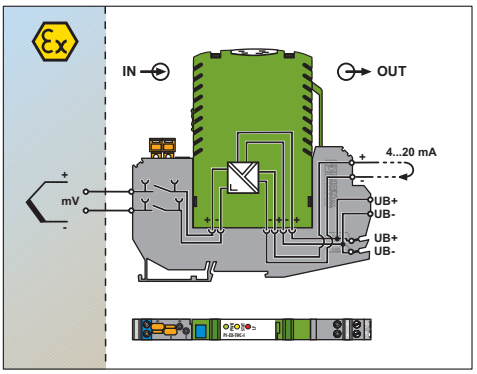
Ex base terminal block for intrinsically safe signals with knife disconnection and test connections

Surge protection device - TT-PI-EX-TB/T - 2858344

Intrinsically safe basic terminal block with isolating connector, test connections and surge protection, with additional temperature measurement of the input terminal block for cold junction compensation, for mounting on NS 35/7.5

Drawings

Block diagram



Dimensioned drawing