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Signal isolator - PI-EX-IDS-I/I - 2835613

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Ex-i output signal conditioner, HART-capable. Isolates and sends intrinsically safe 0/4-20 mA signals to a load (I/P converters, control valves, displays) in Ex areas. Galvanic 3-way isolation (input / output / supply). Line fault detection.

Key commercial data

Packing unit	1 PCE
Weight per Piece (excluding packing)	106.8 GRM
Custom tariff number	85437090
Country of origin	Germany

Technical data

Note:

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area

Dimensions

Width	12.4 mm
Height	145 mm
Depth	147 mm

Ambient conditions

Ambient temperature (operation)	-20 °C ... 55 °C (see data sheet)
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Permissible humidity (operation)	5 % ... 95 % (no condensation)
Degree of protection	IP20

Input data

Signal input	Current input

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Technical data

Input data

Current input signal	4 mA ... 20 mA
	0 mA ... 20 mA
Input resistance current input	5.4 V (at 20 mA)
Input current range	0 mA ... 22 mA

Output data

Signal output	Intrinsically safe
Current output signal	4 mA ... 20 mA
	0 mA ... 20 mA
Load/output load current output	≤ 800 Ω
Output ripple (current)	< 50 μA_{PP} (For 800 Ω)

Power supply

Supply voltage range	20 V DC ... 35 V DC
Max. current consumption	< 15 mA (At 24 V DC / 0 mA)
Power consumption	max. 1.2 W (At 24 V DC / 20 mA)

General

No. of channels	1
Maximum transmission error	≤ 0.1 % (Of end value (at 20°C))
Maximum temperature coefficient	< 0.01 %/K
Step response (10-90%)	< 140 µs
Status display	Green LED (supply voltage, PWR)
Inflammability class according to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	PBT and polyamide PA non-reinforced
Color	green
Name	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Name	Input/power supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Name	Output/supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Conformance	CE-compliant
ATEX	# II (1) GD [EEx ia] IIC
	# II 3 G Ex nA II T4 X
UL, USA / Canada	UL applied for

Data communication (bypass)

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Technical data

Data communication (bypass)

HART function	Yes
Protocols supported	HART

Safety data

Max. inductance L_i	0.1 mH
Max. capacitance C_i	5 nF
Max. output voltage U_o	27.7 V
Max. output current I_o	92 mA
Max. output power P_o	638 mW
Gas group	IIB
Max. external inductivity L_o	15 mH
Max. external capacity C_o	658 nF
Additional text	The maximum values should be used either solely as concentrated capacitance values or solely as concentrated inductance values, or as cable reactance values
Gas group	IIB
Max. external inductivity L_o	1.9 mH
Max. external capacity C_o	295 nF
Additional text	The maximum values should also be used as concentrated capacitance values and concentrated inductance values.
Safety-related maximum voltage U_m	250 V AC
Gas group	IIC
Max. external inductivity L_o	1.2 mH
Max. external capacity C_o	80 nF
Additional text	The maximum values should be used either solely as concentrated capacitance values or solely as concentrated inductance values, or as cable reactance values
Gas group	IIC
Max. external inductivity L_o	0.4 mH
Max. external capacity C_o	64 nF
Additional text	The maximum values should also be used as concentrated capacitance values and concentrated inductance values.

Classifications

eCl@ss

eCl@ss 4.0	27210121
eCl@ss 4.1	27210121
eCl@ss 5.0	27210121

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Classifications

eCl@ss

eCl@ss 5.1	27210121
eCl@ss 6.0	27210121
eCl@ss 7.0	27210121
eCl@ss 8.0	27210121

ETIM

ETIM 2.0	EC001431
ETIM 3.0	EC001596
ETIM 4.0	EC001596
ETIM 5.0	EC001596

UNSPSC

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

Accessories

Additional products

Basic terminal block - PI-EX-TB - 2835901

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

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Surge protection device - TT-PI-EX-TB - 2858386

Intrinsically safe basic terminal block with isolating connector, test connections and surge protection, for mounting on NS 35/7.5

Signal isolator - PI-EX-IDS-I/I - 2835613

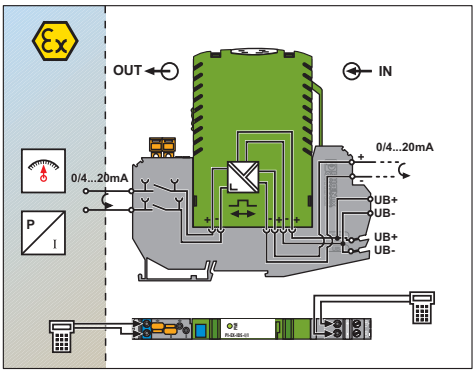
Accessories

Basic terminal block - PI-EX-ES-1/3 - 2835325

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

Drawings

Block diagram



Dimensioned drawing