

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 STK
GTIN	 4 017918 934149
GTIN	4017918934149
Weight per Piece (excluding packing)	106.800 g
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
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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 % (non-condensing)

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Technical data

Input data

Signal input	Current input
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	$\leq 800 \Omega$
Output ripple (current)	$< 50 \mu A_{PP}$ (For 800 Ω)

Power supply

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

Connection data

Connection method	Screw connection
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General

No. of channels	1
Maximum transmission error	$\leq 0.1 \%$ (Of end value (at 20°C))
Maximum temperature coefficient	$< 0.01 \%/K$
Step response (10-90%)	$< 140 \mu s$
Status display	Green LED (supply voltage, PWR)
Flammability rating according to UL 94	V0
Standards/regulations	NAMUR recommendation NE 21
Housing material	PBT and polyamide PA non-reinforced
Color	green
Designation	Input/output
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Designation	Input/power supply
Electrical isolation	1.5 kV (50 Hz, 1 min., test voltage)
Designation	Output/supply
Electrical isolation	375 V (Peak value in accordance with EN 60079-11)
Conformance	CE-compliant
ATEX	# II (1) GD [EEEx ia] IIC

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Technical data

General

	# II 3 G Ex nA II T4 X
UL, USA/Canada	UL applied for

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
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
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
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
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.

Standards and Regulations

Standards/regulations	NAMUR recommendation NE 21
Flammability rating according to UL 94	V0

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Technical data

Standards and Regulations

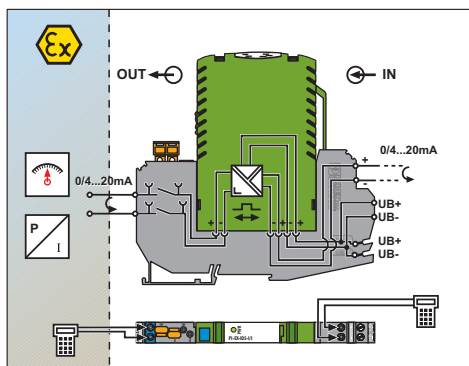
Conformance	CE-compliant
ATEX	# II (1) GD [EEx ia] IIC
	# II 3 G Ex nA II T4 X
UL, USA/Canada	UL applied for
Group	IIB
	IIB
	IIC
	IIC

Environmental Product Compliance

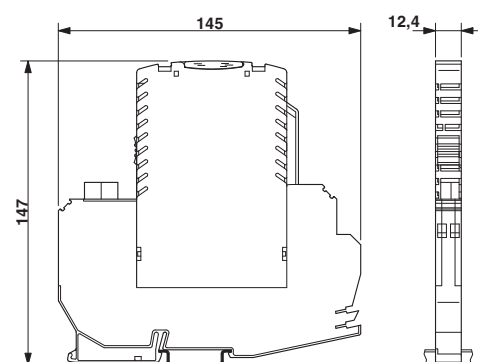
China RoHS	Environmentally Friendly Use Period = 50
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

Block diagram



Dimensional drawing



Classifications

eCl@ss

eCl@ss 4.0	27210120
eCl@ss 4.1	27210120
eCl@ss 5.0	27210120
eCl@ss 5.1	27210120
eCl@ss 6.0	27210120
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

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Classifications

ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653
ETIM 6.0	EC002653

UNSPSC

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

Approvals

Approvals

Approvals

EAC

Ex Approvals

ATEX / EAC Ex

Approval details

EAC		EAC-Zulassung
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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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Accessories

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

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



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