

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

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Ex i output signal conditioner, HART-compatible. 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 pc
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)

### Input data

Signal input	Current input
Current input signal	4 mA ... 20 mA

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## Technical data

### Input data

	0 mA ... 20 mA
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### 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 $800 \Omega$ )

### 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)

### 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)
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 IEC/EN 60079-11)
Designation	Input/power supply
	Output/supply
Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)

### 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

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## Technical data

### Safety data

Max. external inductivity $L_o$	15 mH
Max. external capacitance $C_o$	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 capacitance $C_o$	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 capacitance $C_o$	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 capacitance $C_o$	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
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

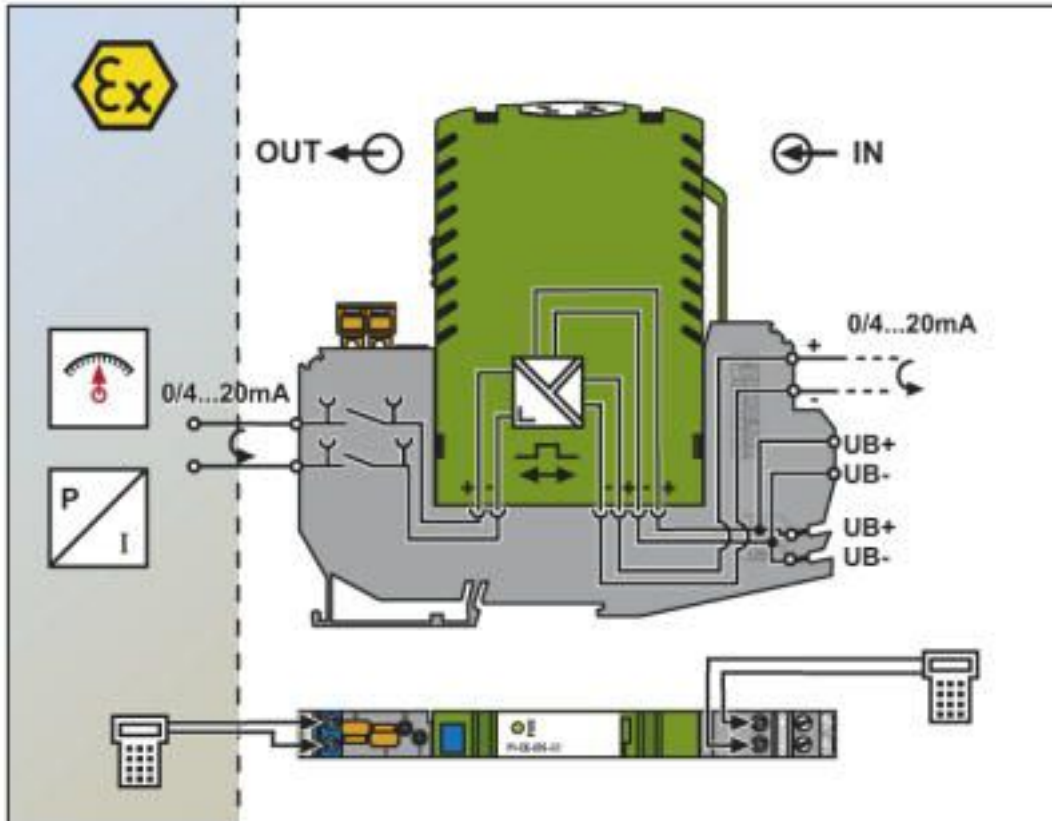
### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

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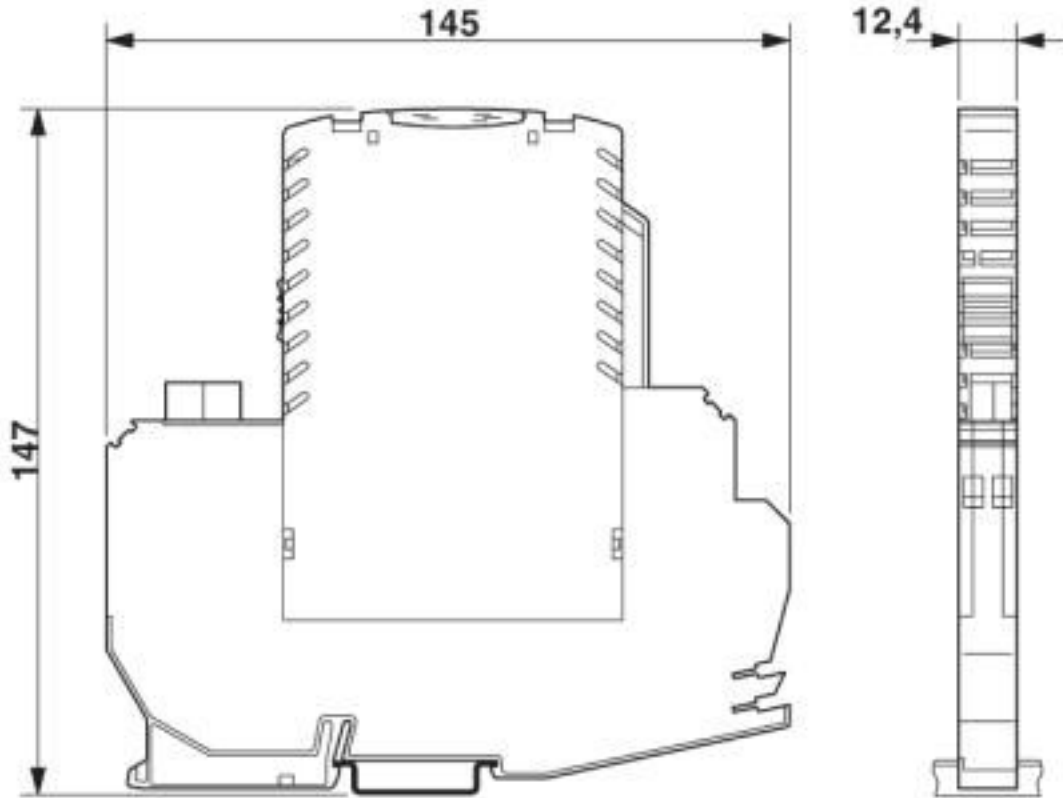
## Drawings

Block diagram



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Dimensional drawing



## Classifications

eCl@ss

eCl@ss 4.0	27210100
eCl@ss 4.1	27210100
eCl@ss 5.0	27210100
eCl@ss 5.1	27210100
eCl@ss 6.0	27210100
eCl@ss 7.0	27210120
eCl@ss 8.0	27210120
eCl@ss 9.0	27210120

ETIM

ETIM 4.0	EC002653
ETIM 5.0	EC002653
ETIM 6.0	EC002653
ETIM 7.0	EC002653

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## Classifications

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	39121008
UNSPSC 18.0	39121008
UNSPSC 19.0	39121008
UNSPSC 20.0	39121008
UNSPSC 21.0	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

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)