

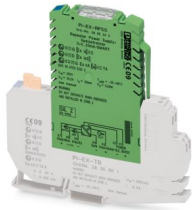
# PI-EX-RPSS - Repeater power supply



2865243

<https://www.phoenixcontact.com/us/products/2865243>

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Ex i analog input: repeater power supply, HART-transparent. Supplies intrinsically safe 2-conductor measuring transducers installed in the Ex area and transmits the 4 mA ... 20 mA signal to a load in the safe area. 3-way electrical isolation (input/output/supply).

## Commercial data

Item number	2865243
Packing unit	1 pc
Sales key	C430
Product key	DK1XXX
GTIN	4046356164290
Weight per piece (including packing)	102.7 g
Weight per piece (excluding packing)	97.3 g
Customs tariff number	85437090
Country of origin	DE

## Technical data

### Product properties

Product type	Signal conditioner
No. of channels	1

### Insulation characteristics

Overvoltage category	II
Pollution degree	2

### Electrical properties

Electrical isolation	3-way isolation
Electrical isolation between input and output	yes
Maximum power dissipation for nominal condition	< 1.1 W (24 V DC / 20 mA) < 0.9 W (24 V DC / 20 mA)
Step response (10-90%)	< 600 $\mu$ s (for 4 mA ... 20 mA step)
Maximum temperature coefficient	< 0.01 %/K
Maximum transmission error	< 0.1 % (of final value)
Transmission error, typical	< 0.05 % (of final value)

### Electrical isolation Input/output/power supply

Rated insulation voltage	300 V <sub>rms</sub>
Test voltage	2.5 kV AC (50 Hz, 60 s)
Insulation	Safe isolation in accordance with IEC/EN 61010-1

### Electrical isolation Input/output

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

Electrical isolation	375 V (Peak value in accordance with IEC/EN 60079-11)
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### Supply

Supply voltage range	19.2 V DC ... 30 V DC
Max. current consumption	< 60 mA (at 24 V DC)
Power dissipation	< 1.1 W (at 24 V DC / 20 mA)

## Input data

### Signal: Current

Description of the input	intrinsically safe
Current input signal	4 mA ... 20 mA
Transmitter supply voltage	> 16 V (at 20 mA) > 15.3 V (at 22.5 mA)

## Output data

### Signal: Current

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Current output signal	4 mA ... 20 mA (active)
	4 mA ... 20 mA (14 ... 26 V ext. source voltage)
Load/output load current output	< 600 $\Omega$ (at 20 mA)
	< 525 $\Omega$ (at 22.5 mA)
Output ripple	< 20 mV <sub>rms</sub>
Output behavior in the event of an error	0 mA (Cable break in the input)
	$\geq$ 24 mA (Cable short-circuit in the input)

## Ex data

### Safety data

Max. output voltage $U_o$	25.2 V
Max. output current $I_o$	93 mA
Max. output power $P_o$	590 mW
Safety-related maximum voltage $U_m$	253 V AC
IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	4 mH / 820 nF
IIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	2 mH / 107 nF

## Interfaces

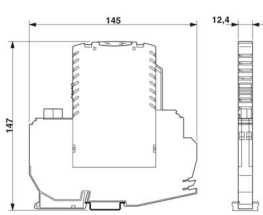
### Data communication (bypass)

HART function	Yes
Protocols supported	HART-transparent

## Signaling

Status display	LED supply voltage, PWR (green)
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## Dimensions

Dimensional drawing	
Width	12.4 mm
Height	79 mm
Depth	118.4 mm

## Material specifications

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

## Environmental and real-life conditions

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## Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-20 °C ... 60 °C
Ambient temperature (storage/transport)	-40 °C ... 80 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)

## Approvals

### CE

Certificate	CE-compliant
Note	and EN 61326

### ATEX

Identification	⊕ II (1) G [Ex ia Ga] IIC
	⊕ II (1) D [Ex ia Da] IIIC
	⊕ II 3 (1) G Ex nA [ia Ga] IIC T4 Gc

### Safety Integrity Level (SIL, IEC 61508)

Identification	2
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### EAC Ex

Identification	ERC [Ex ia Ga] IIC
Certificate	RU C-DE.AB72.B.00097/19

## Standards and regulations

Electrical isolation	3-way isolation
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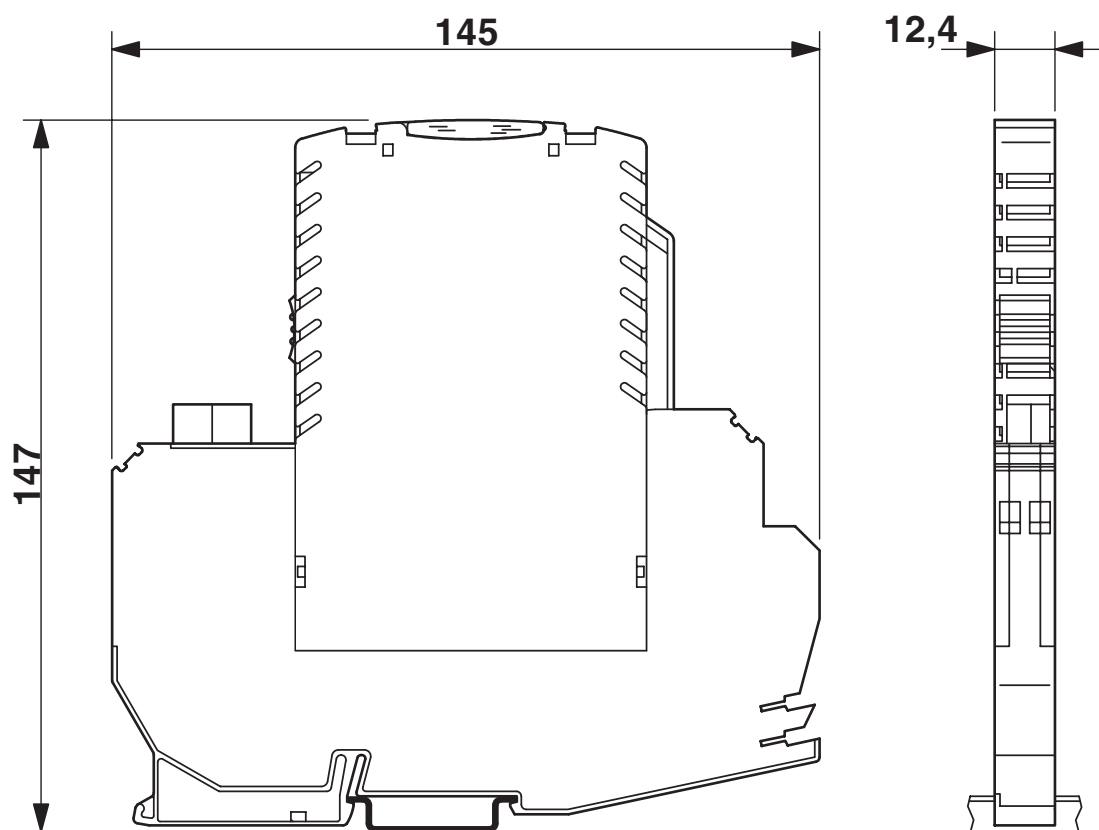
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## Drawings

Dimensional drawing

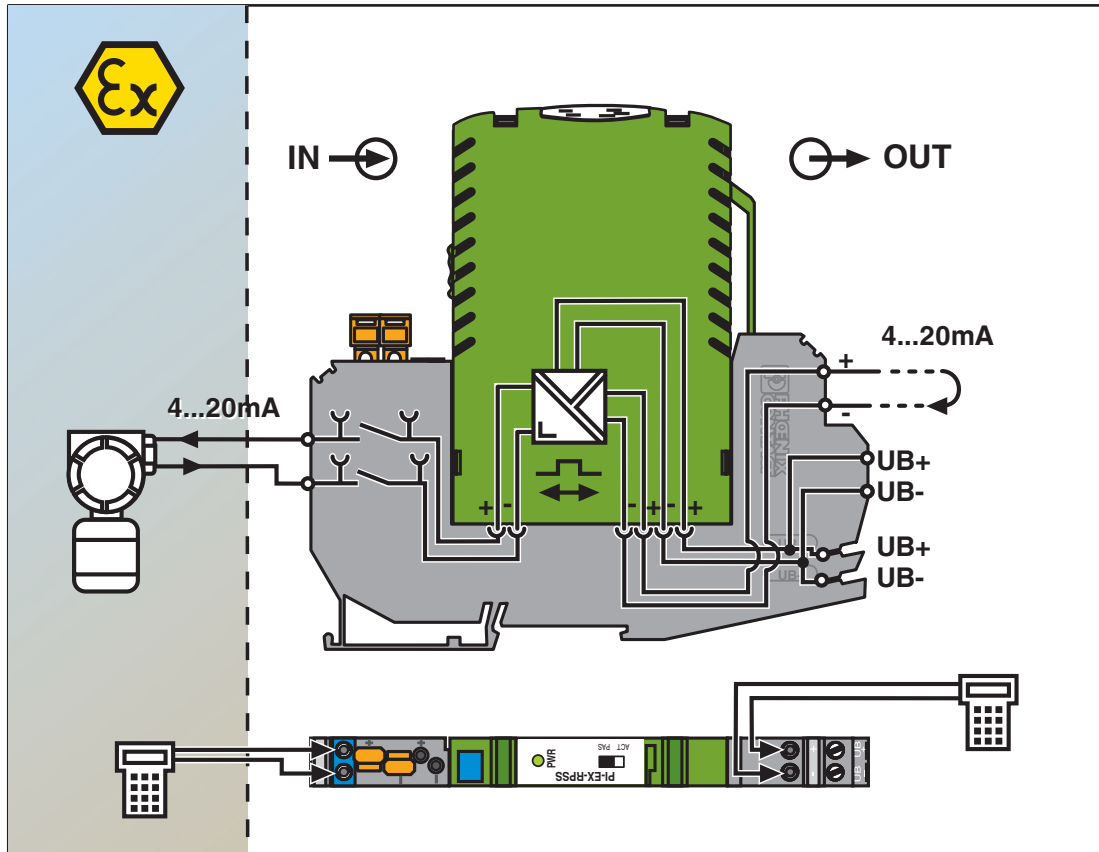


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Block diagram



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## Classifications

### UNSPSC

UNSPSC 21.0	39121000
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(c), 7(a), 7(c)-I

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
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