

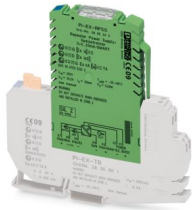
PI-EX-RPSS - Repeater power supply



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

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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 μ 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 _{rms}
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 Ω (at 20 mA)
	< 525 Ω (at 22.5 mA)
Output ripple	< 20 mV _{rms}
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

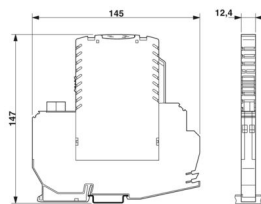
Data communication (bypass)

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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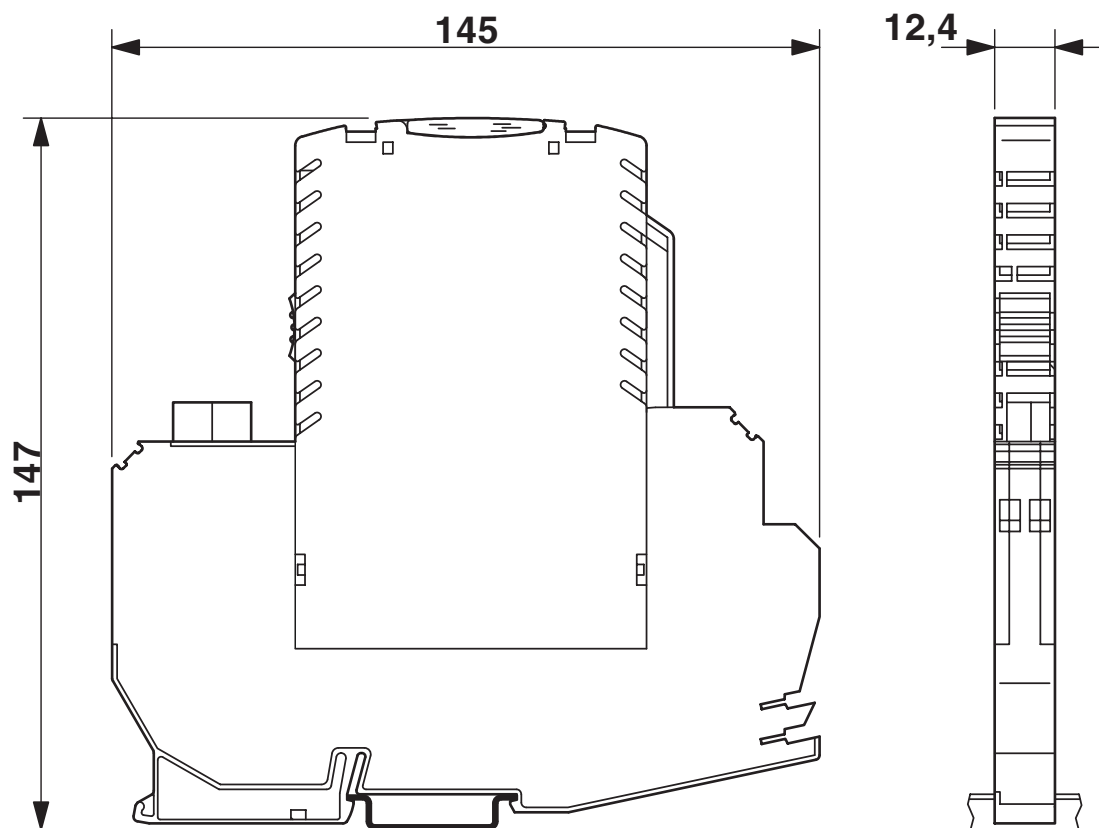
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Drawings

Dimensional drawing

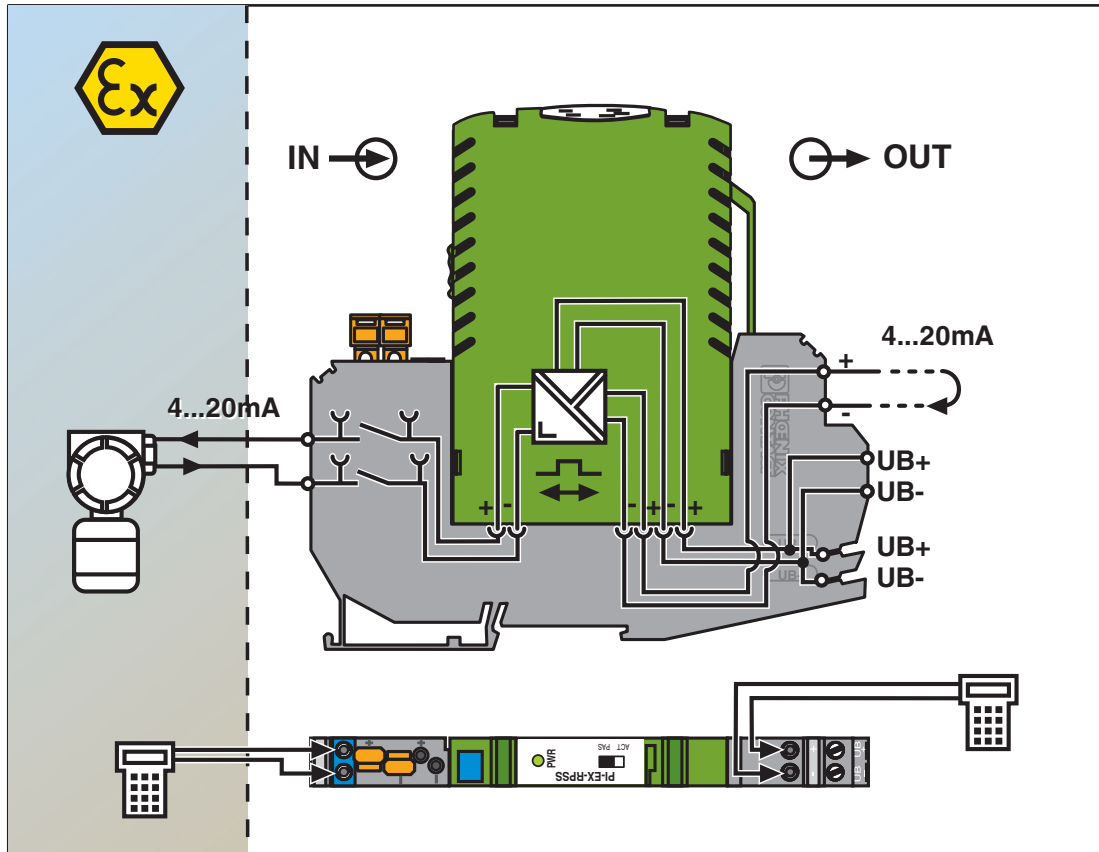


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Block diagram



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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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