

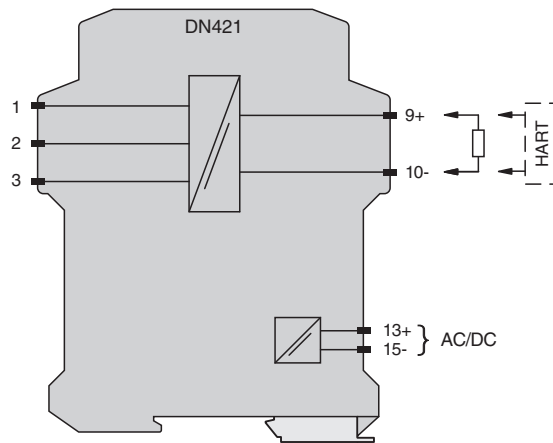
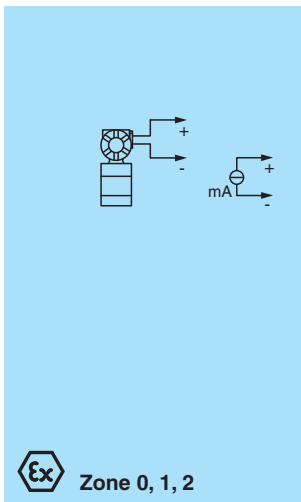
SMART Transmitter Power Supply

DN421

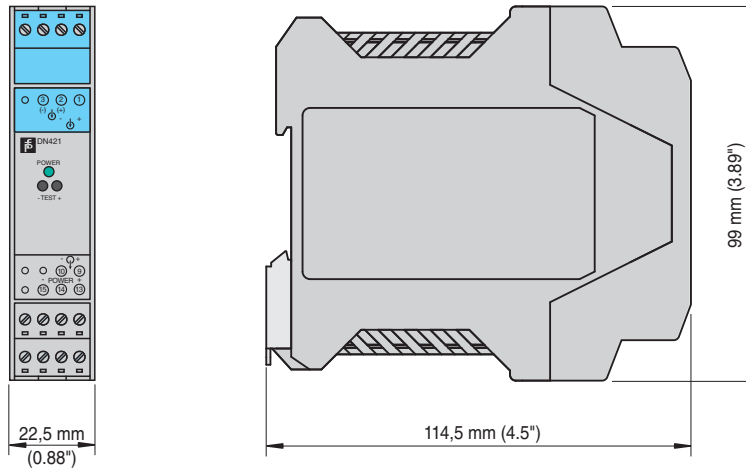
- 1-channel isolated barrier
- 24 V AC/DC supply
- 2-wire SMART transmitter
- Output 4 mA ... 20 mA
- Low Ex i values
- Suitable for Hartmann and Braun transmitter



Connection



Dimensions



Technical Data

Supply		
Connection		terminals 13+ (L), 15- (N) , 14 (PE)
Rated voltage	U_r	20 ... 30 V DC or 20 ... 26.4 V AC
Ripple		within the supply tolerance
Power consumption		2.2 W / 3.1 VA
Input		
Connection		terminals 1, 2, 3
Input signal		4 ... 20 mA terminals 2+, 3-
Available voltage		≥ 15.5 V at 20 mA terminals 1+, 2-
Output		
Connection		terminals 9+, 10-
Load		0 ... 750 Ω
Output signal		4 ... 20 mA (overload > 25 mA)
Ripple		max. 100 μ A _{rms}
Transfer characteristics		
Deviation		at 20 °C (68 °F), 0/4 ... 20 mA ≤ 20 μ A incl. calibration, linearity, hysteresis, loads and fluctuations of supply voltage
Influence of ambient temperature		2 μ A/K
Frequency range		0.8 ... 15 kHz (-3 dB)
Rise time		22 ms
Settling time		200 μ s
Galvanic isolation		
Output/power supply		functional insulation acc. to EN 50178, rated insulation voltage 50 V AC
Directive conformity		
Electromagnetic compatibility		
Directive 89/336/EEC		EN 61326
Conformity		
Degree of protection		IEC 60529
Ambient conditions		

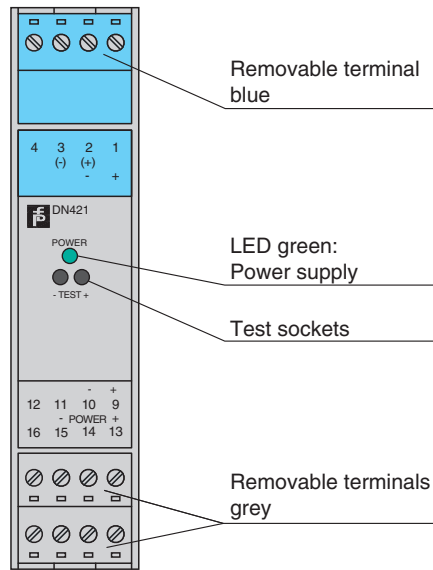
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Technical Data

Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Mass		approx. 175 g
Dimensions		22.5 x 99 x 114.5 mm (0.89 x 3.89 x 4.5 inch)
Data for application in connection with hazardous areas		
EU-type examination certificate		TÜV 05 ATEX 2758
Marking		Ⓜ II (2)GD [Ex ib] IIC (-20 °C ≤ T _{amb} ≤ 60 °C)
Input		Ex ib IIC
Supply		
Maximum safe voltage	U _m	250 V (Attention! The rated voltage can be lower.)
Equipment		terminals 1+, 2-
Voltage	U _o	19.6 V
Current	I _o	30.4 mA
Power	P _o	596 mW
Equipment		terminals 2-, 3
Voltage	U _i	30 V
Current	I _i	100 mA
Voltage	U _o	5 V
Current	I _o	52 mA
Power	P _o	64 mW
Output		
Maximum safe voltage	U _m	250 V (Attention! The rated voltage can be lower.)
Galvanic isolation		
Input/Output		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 50014, EN 50020
General information		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Function

This isolated barrier is used for intrinsic safety applications. It provides a 2-wire SMART transmitter with power in a hazardous area and transfers the signal to the safe area. It is designed to provide higher output voltage to the transmitter in the hazardous area.

Digital signals may be superimposed on the analog values in the hazardous or safe area and are transferred bi-directionally.

Application

The device supports the following SMART protocols:

- HART