

Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- 2-wire SMART transmitter
- Output 4 mA ... 20 mA
- SMART capable up to 40 kHz (-1dB)
- Suitable for Honeywell DE protocol
- Terminals with test points

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 analog signal to the safe area as an isolated current source.

Digital signals up to 40 kHz may be superimposed on the analog values in the hazardous or safe area and are transferred bi-directionally.

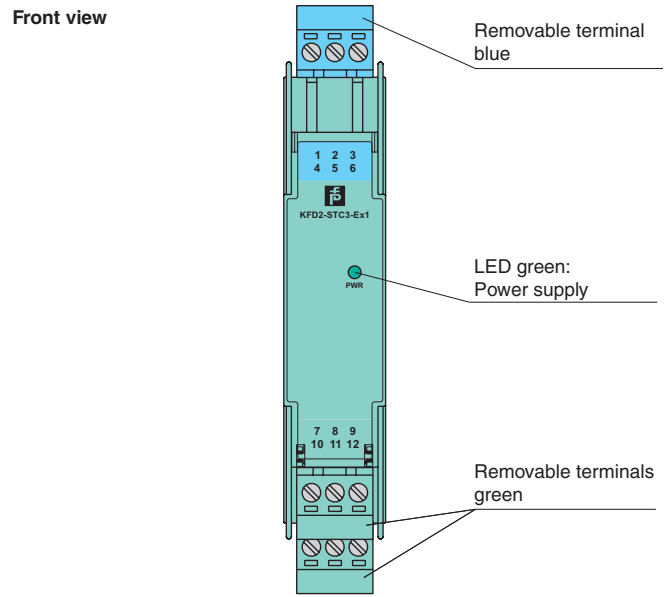
Sockets for the connection of a HART communicator are integrated into the terminals of the device.

Application

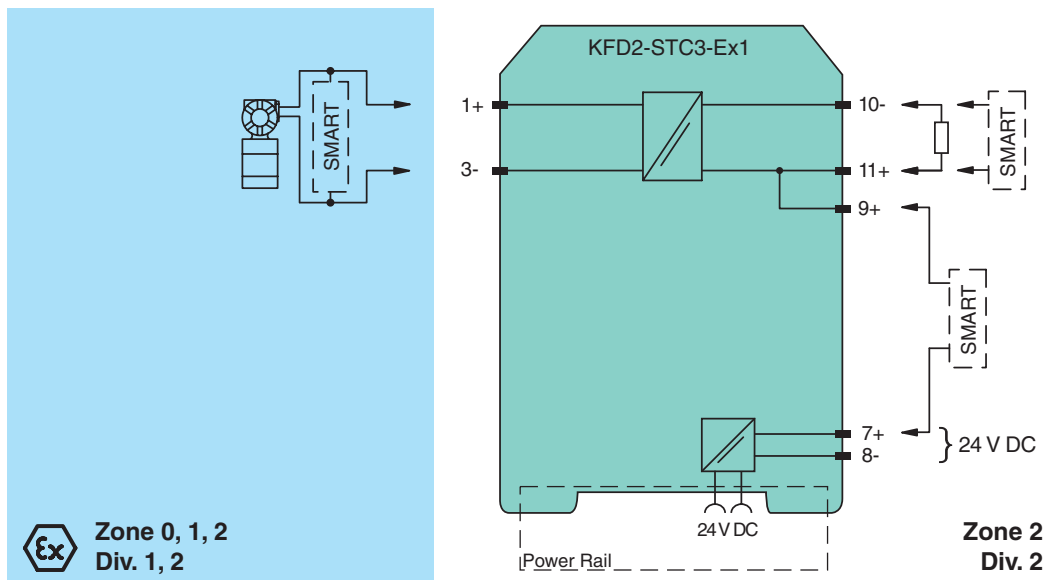
The device supports the following SMART protocols:

- HART
- BRAIN
- Honeywell DE

Assembly



Connection



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

General specifications		
Signal type		Analog input
Supply		
Connection		Power Rail or terminals 7+, 8-
Rated voltage	U_r	20 ... 35 V DC
Ripple		within the supply tolerance
Power dissipation		≤ 1.6 W
Power consumption		≤ 2 W
Input		
Connection side		field side
Connection		terminals 1+, 3-
Input signal		4 ... 20 mA
Available voltage		approx. 17 V at 4 ... 20 mA
Output		
Connection side		control side
Connection		terminals 9+, 10-, 11+
Output signal		4 ... 20 mA , max. load 1000 Ω , for HART ≥ 230 Ω , Honeywell DE 230 ... 280 Ω (transmitter and communicator dependent)
Ripple		≤ 0.05 % of output signal range
Transfer characteristics		
Deviation		≤ 0.05 % of output signal range (current output), ≤ 10 μ A at 20 °C (68 °F)
Influence of ambient temperature		≤ 20 ppm/K
Frequency range		field side into the control side: bandwidth with 1 mA _{pp} signal 0 ... 40 kHz (-1 dB); 0 ... 50 kHz (-6 dB) safe area to hazardous area: bandwidth with 250 mV _{pp} signal 2 Hz ... 40 kHz (-1 dB); 1 Hz ... 50 kHz (-6 dB)
Rise time		10 μ s
Galvanic isolation		
Output/power supply		functional insulation, rated insulation voltage 50 V AC
Indicators/settings		
Display elements		LED
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2006
Degree of protection		IEC 60529:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 150 g
Dimensions		20 x 115 x 115 mm (0.8 x 4.5 x 4.5 inch) , housing type B1
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		BAS 01 ATEX 7369
Marking		Ex II (1)G [Ex ia Ga] IIC , Ex II (1)D [Ex ia Da] IIIC , Ex I (M1) [Ex ia Ma] I
Input		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
Voltage	U_o	25.2 V DC
Current	I_o	93 mA
Power	P_o	587 mW
Supply		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage can be lower.)
Certificate		
Marking		Ex II 3G Ex nA II T4 Gc [device in zone 2]
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
UL approval		
Control drawing		116-0173 (cULus)

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IECEX approval	IECEX BAS 06.0088 IECEX BAS 09.0102X
Approved for	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I Ex nA II T4 Gc
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Accessories

Power feed module KFD2-EB2

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 150 individual devices depending on the power consumption of the devices. Collective error messages received from the Power Rail activate a galvanically-isolated mechanical contact.

Power Rail UPR-03

The Power Rail UPR-03 is a complete unit consisting of the electrical insert and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

Profile Rail K-DUCT with Power Rail

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!

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