

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.

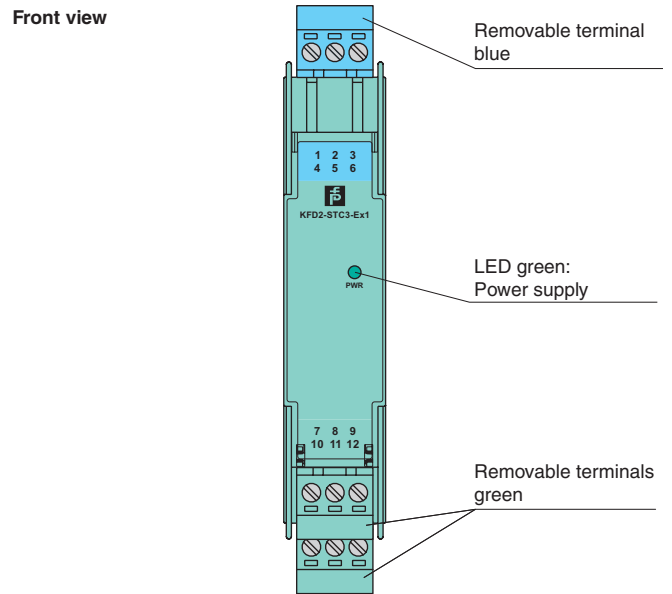
Sockets for the connection of a HART communicator are integrated into the terminals of the device.

Application

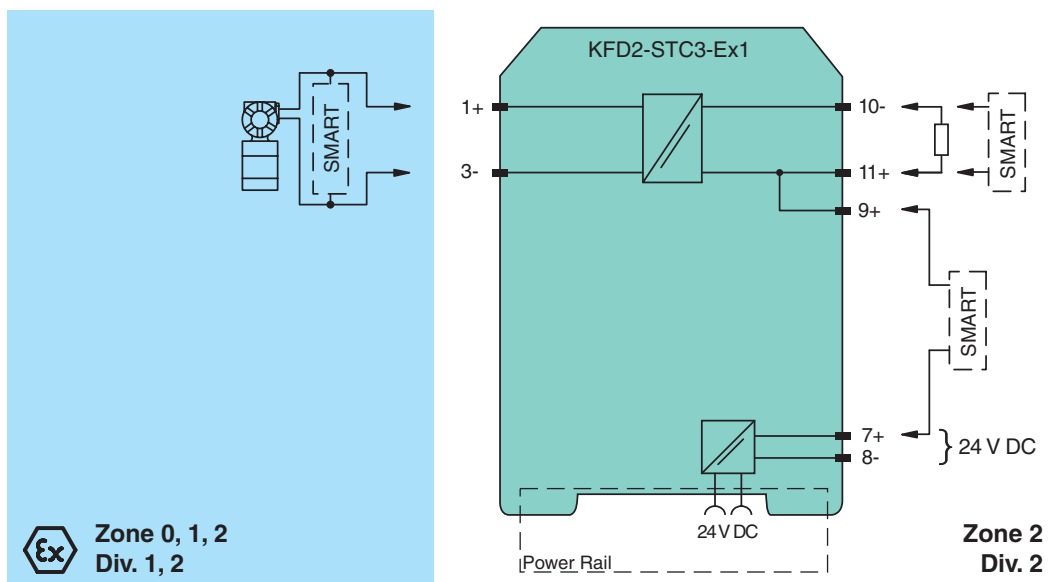
The device supports the following SMART protocols:

- 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 μA 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 μs
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		⊕ II (1)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC , ⊕ 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.)
Type of protection [Ex ia]		
Certificate		BASEEFA 09 ATEX 0218X
Marking		⊕ 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 certificate	IECEX BAS 06.0088 IECEX BAS 09.0102X
IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex nA IIC 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	
Optional accessories	- power feed module KFD2-EB2(.R4A.B)(.SP) - universal power rail UPR-03(-M)(-S) - profile rail K-DUCT-BU(-UPR-03)

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