

Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current input 4 mA ... 20 mA
- Current output 4 mA ... 20 mA
- Current output up to 700 Ω load
- I/P and valve positioners
- Accuracy 0.05 %
- Up to SIL 2 acc. to IEC 61508

Function

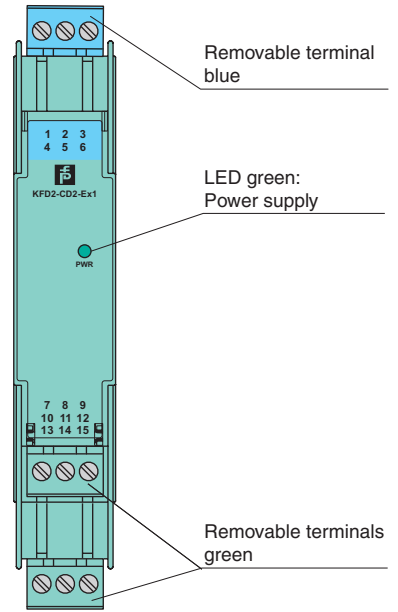
This isolated barrier is used for intrinsic safety applications. It drives a 4 mA ... 20 mA signal from the safe area to I/P converters, electrical valves, and positioners located in the hazardous area.

An open or high resistance field circuit presents a similar resistance to the control side to allow line fault detection by control system.

The voltage drop at the current input (terminals 7-, 8+) is lower than 2.5 V equivalent to an input resistance of 125 Ω at 20 mA.

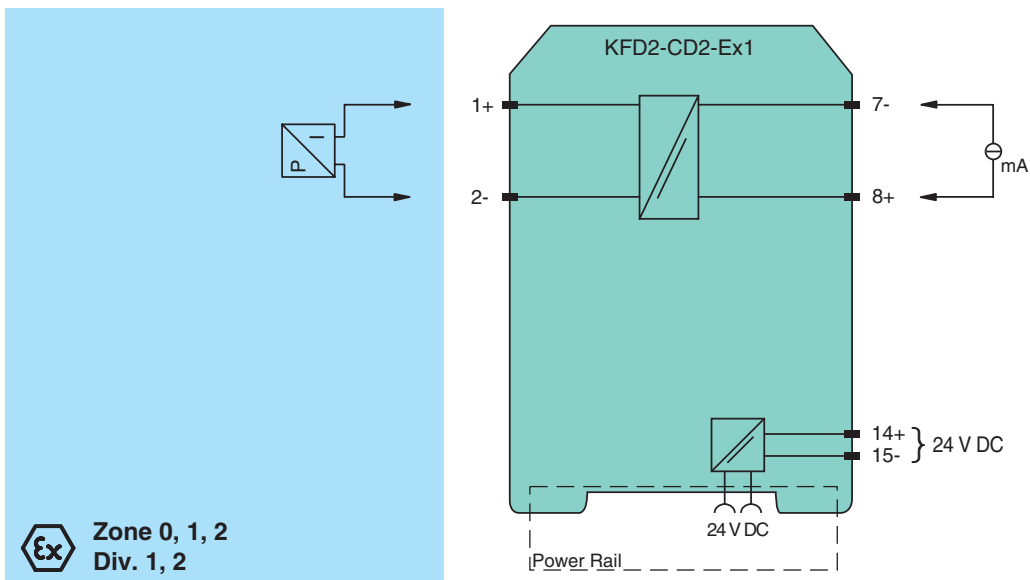
Assembly

Front view



SIL 2

Connection



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

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General specifications		
Signal type		Analog output
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 2
Supply		
Connection		Power Rail or terminals 14+, 15-
Rated voltage	U_r	20 ... 35 V DC
Ripple		within the supply tolerance
Power dissipation		0.8 W
Power consumption		1 W at 20 mA
Input		
Connection side		control side
Connection		terminals 7-, 8+
Voltage drop		approx. 2.5 V or internal resistance 125 Ω at 20 mA
Input resistance		≤ 2.5 V, equivalent to 125 Ω at 20 mA
Ripple		50 μA_{rms}
Current		4 ... 20 mA limited to approx. 24 mA
Output		
Connection side		field side
Connection		terminals 1+, 2-
Current		4 ... 20 mA
Load		0 ... 700 Ω
Voltage		≥ 14 V at 20 mA
Transfer characteristics		
Accuracy		0.05 %
Deviation		
After calibration		at 20 °C (68 °F): ≤ 10 μA incl. non-linearity, calibration, hysteresis, supply and load changes
Influence of ambient temperature		≤ 1 $\mu A/K$
Rise time		< 100 μs , 10 ... 90 % step change
Galvanic isolation		
Input/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 21:2011
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1:2004
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 100 g
Dimensions		20 x 107 x 115 mm (0.8 x 4.2 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 00 ATEX 7240
Marking		Ex II (1)G [Ex ia Ga] IIC , Ex II (1)D [Ex ia Da] IIIC , Ex I (M1) [Ex ia Ma] I
Output		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
Voltage	U_o	25.2 V
Current	I_o	93 mA
Power	P_o	585 mW
Supply		
Maximum safe voltage	U_m	250 V rms (Attention! The rated voltage can be lower.)
Certificate		
Marking		Ex II 3G Ex nA II T4
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Output/power supply		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		

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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)
IECEX approval	IECEX BAS 04.0014
Approved for	[Zone 0] [Ex ia] IIC, [Ex iaD], [Ex ia] I
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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