

**Features**

- 2-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current input 0 mA ... 20 mA
- Current output 0 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.

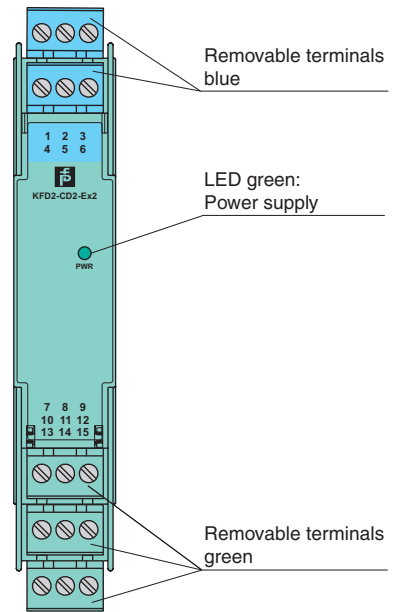
It drives a 4 mA ... 20 mA signal from the safe area to I/P converters, electrical valves, and positioners located in the hazardous area.

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+ and 10-, 11+) is lower than 2.5 V equivalent to an input resistance of 125 Ω at 20 mA.

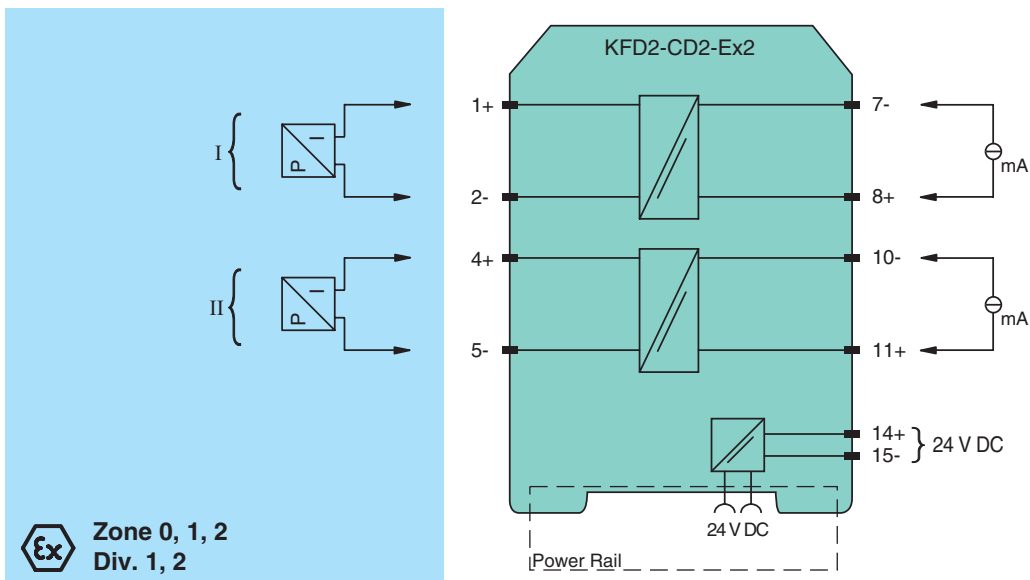
**Assembly**

Front view



**SIL 2**

**Connection**



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

Pepperl+Fuchs Group  
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<b>General specifications</b>		
Signal type		Analog output
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)		SIL 2
<b>Supply</b>		
Connection		Power Rail or terminals 14+, 15-
Rated voltage	$U_r$	20 ... 35 V DC
Ripple		within the supply tolerance
Power dissipation		1.4 W
Power consumption		1.8 W at 20 mA
<b>Input</b>		
Connection side		control side
Connection		terminals 7-, 8+; 10-, 11+
Voltage drop		approx. 2.5 V or internal resistance 125 $\Omega$ at 20 mA
Input resistance		$\leq 2.5$ V, equivalent to 125 $\Omega$ at 20 mA
Ripple		50 $\mu A_{rms}$
Current		4 ... 20 mA limited to approx. 25 mA
<b>Output</b>		
Connection side		field side
Connection		terminals 1+, 2-; 4+, 5-
Current		4 ... 20 mA
Load		0 ... 700 $\Omega$
Voltage		$\geq 14$ V at 20 mA
<b>Transfer characteristics</b>		
Accuracy		0.05 %
Deviation		
After calibration		at 20 °C (68 °F): $\leq 10$ $\mu A$ incl. non-linearity, calibration, hysteresis, supply and load changes
Influence of ambient temperature		$\leq 1$ $\mu A/K$
Rise time		$< 100$ $\mu s$ , 10 ... 90 % step change
<b>Galvanic isolation</b>		
Input/power supply		functional insulation, rated insulation voltage 50 V AC
Input/input		functional insulation, rated insulation voltage 50 V AC
<b>Indicators/settings</b>		
Display elements		LED
Labeling		space for labeling at the front
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
<b>Conformity</b>		
Electromagnetic compatibility		NE 21:2011
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1:2004
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>		
EU-Type Examination Certificate		BAS 00 ATEX 7240
Marking		II (1)G [Ex ia Ga] IIC ,  II (1)D [Ex ia Da] IIIC ,  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		TÜV 99 ATEX 1499 X
Marking		II 3G Ex nA II T4 [device in zone 2]
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

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<b>Directive conformity</b>	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>	
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
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

**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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