

**Features**

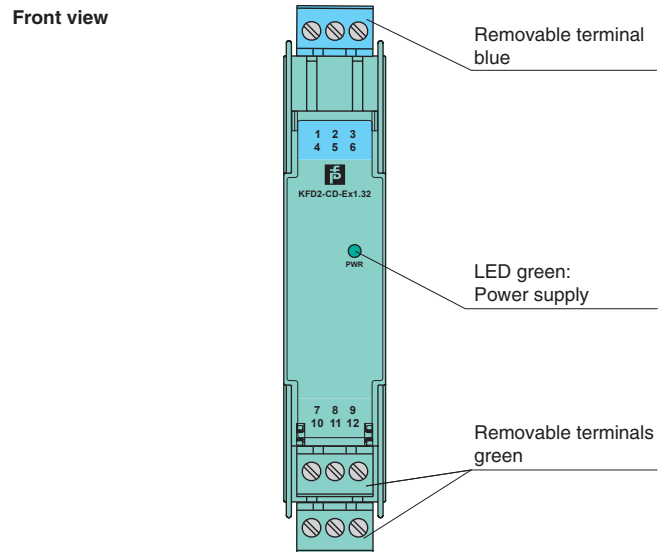
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current or voltage output
- Factory configured input/output
- Accuracy 0.1 %
- Up to SIL2 acc. to IEC 61508

**Function**

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

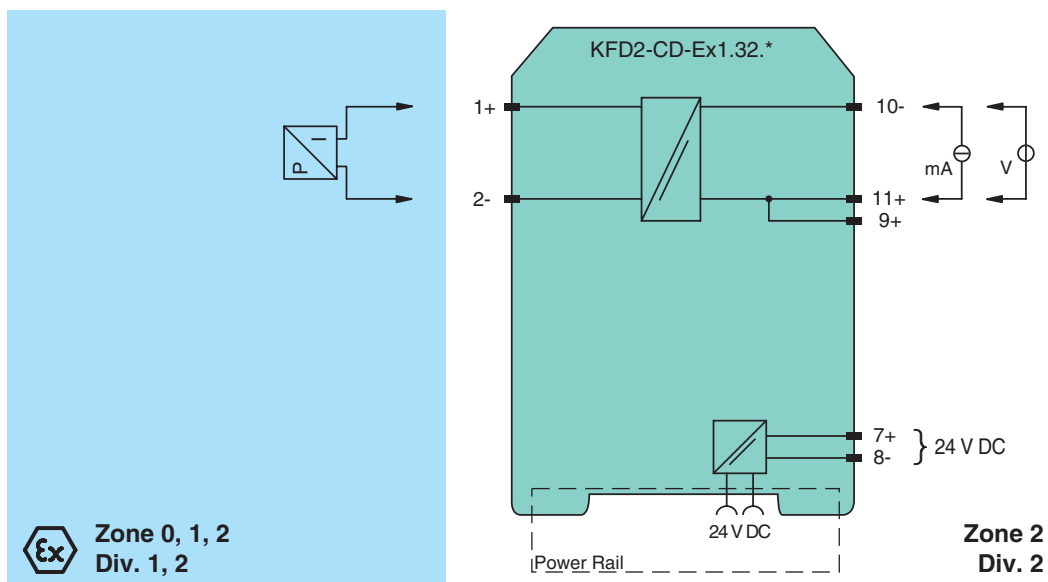
This barrier is designed to provide various inputs and outputs of voltage and current.

**Assembly**



**SIL2**

**Connection**



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

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<b>General specifications</b>	
Signal type	Analog output
<b>Supply</b>	
Connection	Power Rail or terminals 7+, 8-
Rated voltage	20 ... 35 V DC
Ripple	within the supply tolerance
Rated current	current output: ≤ 50 mA ; voltage output: ≤ 20 mA
Power loss	1.2 W
<b>Input</b>	
Connection	terminals 9+, 10-, 11+
Voltage drop	optional current input: approx. 4 V at 20 mA
Input current	≤ 100 μA up to 50 °C (122 °F) at 10 V
Limit	optional current input: Input current: approx. ≤40 mA optional voltage input: input voltage: 12 V DC
Transmission range	optional current input: 0 ... 20 mA/optional voltage input: 0 ... 10 V
<b>Output</b>	
Connection	terminals 1+, 2-
Current	optional current output: 0 ... 20 mA/optional voltage output: ≤ 20 mA
Load	optional current output: ≤ 850 Ω optional voltage output: output resistance ≤ 3 Ω
Voltage	optional current output: 17 V at 20 mA/optional voltage output: 0 ... 10 V
<b>Transfer characteristics</b>	
Deviation	
After calibration	≤ ± 0.1 % incl. non-linearity and hysteresis at 20 °C (68 °F)
Influence of ambient temperature	≤ ± 0.01 %/K
Rise time	< 10 ms
<b>Electrical isolation</b>	
Input/power supply	functional insulation, rated insulation voltage 50 V AC
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	BAS 02 ATEX 7203 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	⊕ II (1)GD, I (M1), [Ex ia] IIC, [Ex iaD], [Ex ia] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C) [circuit(s) in zone 0/1/2]
Voltage U <sub>o</sub>	25.2 V DC
Current I <sub>o</sub>	optional current output: 93 mA optional voltage output: 95 mA
Power P <sub>o</sub>	0.586 W
Supply	
Maximum safe voltage U <sub>m</sub>	250 V (Attention! The rated voltage can be lower.)
Input	
Maximum safe voltage U <sub>m</sub>	250 V (Attention! The rated voltage can be lower.)
Statement of conformity	
Group, category, type of protection, temperature class	⊕ II 3G Ex nA II T4
Electrical isolation	
Input/Output	safe galvanic isolation acc. to IEC 60079-11, voltage peak value 375 V
Output/power supply	safe galvanic isolation acc. to IEC 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-11:2012, EN 60079-15:2005
<b>International approvals</b>	
FM approval	
Control drawing	116-0129
UL approval	

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Control drawing	116-0173 (cULus)
CSA approval	
Control drawing	116-0132
IECEX approval	IECEX BAS 05.0041
Approved for	[Zone 0] [Ex ia] IIC, [Ex iaD], [Ex ia] I
<b>General information</b>	
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.

**Additional information**

**Input/output options, model number**

This barrier is designed to provide various inputs and outputs of voltage and current:

- **Current input option**  
A current limit circuit in series to terminal 9 protects the device from damage. The max. voltage drop at the input is DC 4 V, allowing for the connection of several KFD2-CD32-Ex1.32 repeaters due to the low voltage drop in order to maintain multiple galvanically isolated outputs (signal duplication).
- **Voltage input option**  
The signal is transmitted to terminals 9 and 10 across an amplifier and the DC/DC converter within the allowable voltage range. A voltage limiter circuit protects the amplifier from incorrect input switching and overvoltage, but will draw current through a 50 mA fuse during operation. The fuse can be changed only by the manufacturer.
- **Current output option**  
The open circuit voltage is DC 24 V within the allowable supply voltage range at terminals 1 and 2. The max. load that can be applied is 850 Ω.
- **Voltage output option**  
At least 20 mA is available within the allowable supply voltage range at terminals 1 and 2 which means that with 10 V output voltage, a load of at least 500 Ω must be connected.

Input	Output						Ordering example
	0 mA ... 20 mA	4 mA ... 20 mA	0 V ... 5 V	1 V ... 5 V	0 V ... 10 V	2 V ... 10 V	
0 mA ... 20 mA	0	2	–	9	12	–	Input 0 V ... 10 V, Output 4 mA ... 20 mA: is code number 8 <b>Type code:</b> KFD2-CD-Ex1.32.8
4 mA ... 20 mA	1	(0)	10	–	13	(12)	
0 V ... 5 V	3	5	(15)	–	–	–	
1 V ... 5 V	–	(3)	–	(15)	–	–	
0 V ... 10 V	6	8	21	–	15	–	
2 V ... 10 V	–	(6)	–	–	–	(15)	

For options enclosed in parantheses, the transfer range for a base type is only partially used, i. e. 4 mA ... 20 mA from the base type 0 mA ... 20 mA.

**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 100 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

**Power Rail UPR-03**

The Power Rail UPR-03 is a complete unit consisting of the electrical inset 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!*

Attention

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