

Voltage Driver

KFD2-CD-Ex1.32-9

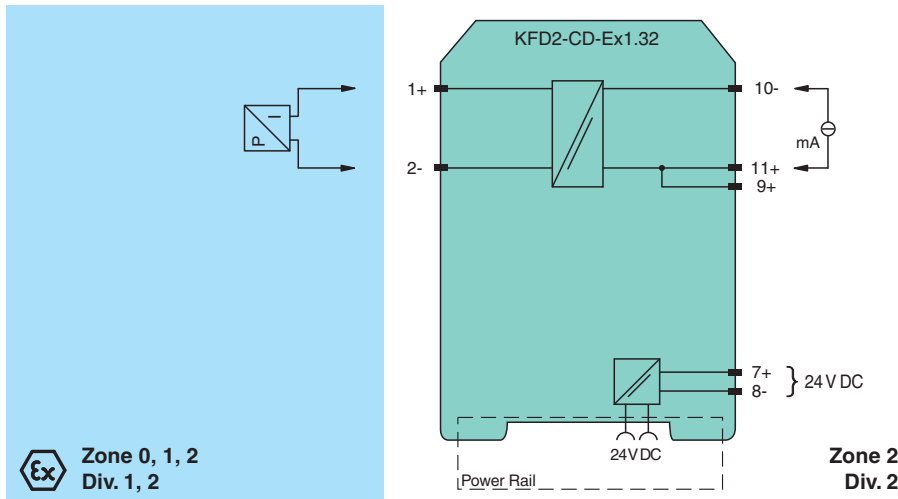
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current input 0 mA ... 20 mA
- Voltage output 1 V ... 5 V
- Accuracy 0.1 %



Function

This isolated barrier is used for intrinsic safety applications. The device drives I/P converters, electrical valves, and positioners in the hazardous area. The device has current input and voltage output. A current limit circuit in series to terminal 9 protects the device from damage. The maximum voltage drop at the input is 4 V DC, allowing for the connection of several devices due to the low voltage drop in order to maintain multiple galvanically isolated outputs (signal duplication). 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. The device is not SIL-rated, because the open circuit at the input does not output a safe state (4 mA or 1 V).

Connection



Technical Data

General specifications

Signal type	Analog output	
Supply		
Connection	Power Rail or terminals 7+, 8-	
Rated voltage	U_r	20 ... 35 V DC
Ripple	within the supply tolerance	
Rated current	I_r	max. 20 mA
Power dissipation	1.4 W	

Input

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Technical Data

Connection side		control side	
Connection		terminals 9+, 10-, 11+	
Voltage drop		approx. 4 V at 20 mA	
Input current		≤ 100 µA up to 50 °C (122 °F) at 10 V	
Limit		max. 40 mA	
Transmission range		0 ... 20 mA	
Output			
Connection side		field side	
Connection		terminals 1+, 2-	
Voltage		1 ... 5 V	
Current		max. 20 mA	
Load		output resistance: max. 3 Ω	
Transfer characteristics			
Accuracy		0.1 %	
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	
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			
Degree of protection		IEC 60529:2001	
Protection against electrical shock		UL 61010-1:2012	
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) (W x H x D) , 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 02 ATEX 7203 X	
Marking		⊕ II (1)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC , ⊕ I (M1) [Ex ia Ma] I	
Certificate		TÜV 99 ATEX 1499 X	
Marking		⊕ II 3G Ex nA II T4	
Directive conformity			
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010	
International approvals			
FM approval			
Control drawing		116-0440	
UL approval			
Control drawing		116-0441 (cULus)	
IECEx approval			
IECEx certificate		IECEx BAS 05.0041X IECEx CML 19.0051X	
IECEx marking		[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc	

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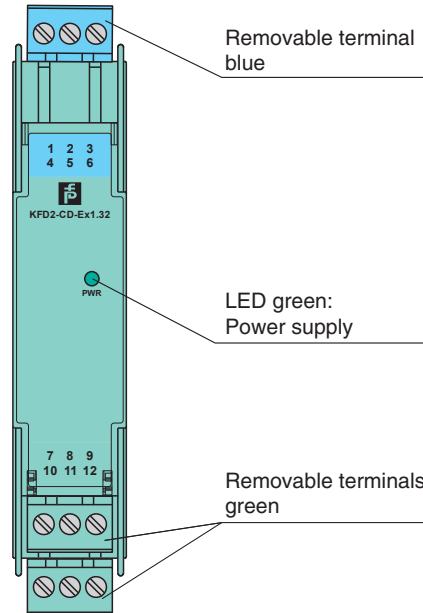
General information

Supplementary information







Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

Assembly



Front view



Matching System Components

	KFD2-EB2	Power Feed Module
	UPR-03	Universal Power Rail with end caps and cover, 3 conductors, length: 2 m
	UPR-03-M	Universal Power Rail with end caps and cover, 3 conductors, length: 1,6 m
	UPR-03-S	Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m
	K-DUCT-BU	Profile rail, wiring comb field side, blue
	K-DUCT-BU-UPR-03	Profile rail with UPR-03- * insert, 3 conductors, wiring comb field side, blue

Accessories


	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue

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Accessories

	KF-CP	Red coding pins, packaging unit: 20 x 6
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