

Voltage Driver

KFD2-CD-Ex1.32-21

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 10 V
- Voltage output 0 V ... 5 V
- Accuracy 0.1 %
- Up to SIL 2 acc. to IEC/EN 61508



Function

This isolated barrier is used for intrinsic safety applications.

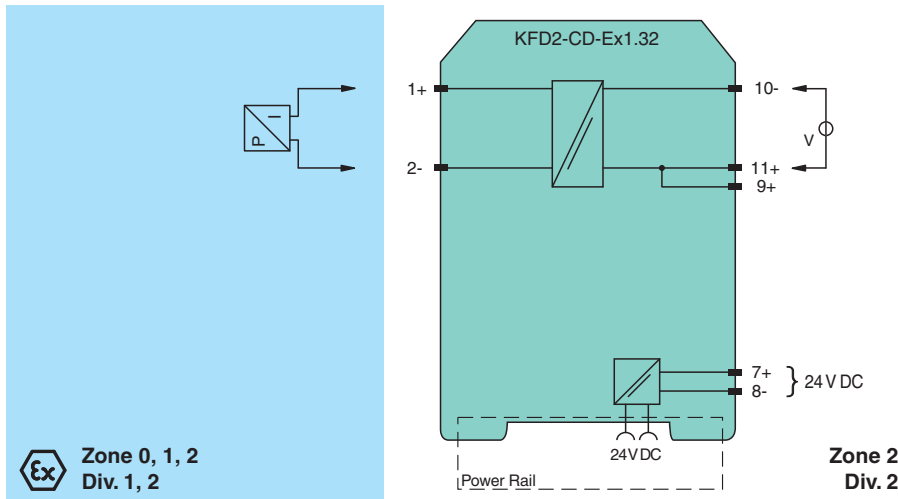
The device drives I/P converters, electrical valves, and positioners in the hazardous area.

The device has voltage input and voltage output.

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.

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.

Connection



Release date: 2021-12-16 Date of issue: 2021-12-16 Filename: 295073_eng.pdf

Technical Data

General specifications

Signal type Analog output

Functional safety related parameters

Safety Integrity Level (SIL) SIL 2

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

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

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Technical Data

Power dissipation	1.4 W
Input	
Connection side	control side
Connection	terminals 9+, 10-, 11+
Input current	≤ 100 μA up to 50 °C (122 °F) at 10 V
Limit	max. 12 V DC
Transmission range	0 ... 10 V
Output	
Connection side	field side
Connection	terminals 1+, 2-
Voltage	0 ... 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

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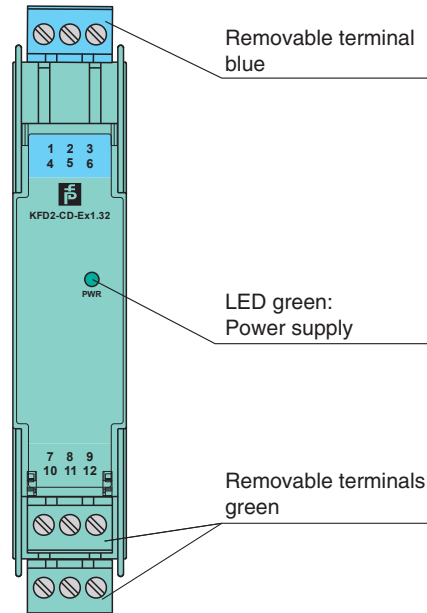
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Technical Data







IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec 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 .

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
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Accessories

	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue
	KF-CP	Red coding pins, packaging unit: 20 x 6