

Voltage Driver

KFD2-CD-Ex1.32-10

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current input 4 mA ... 20 mA
- 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.

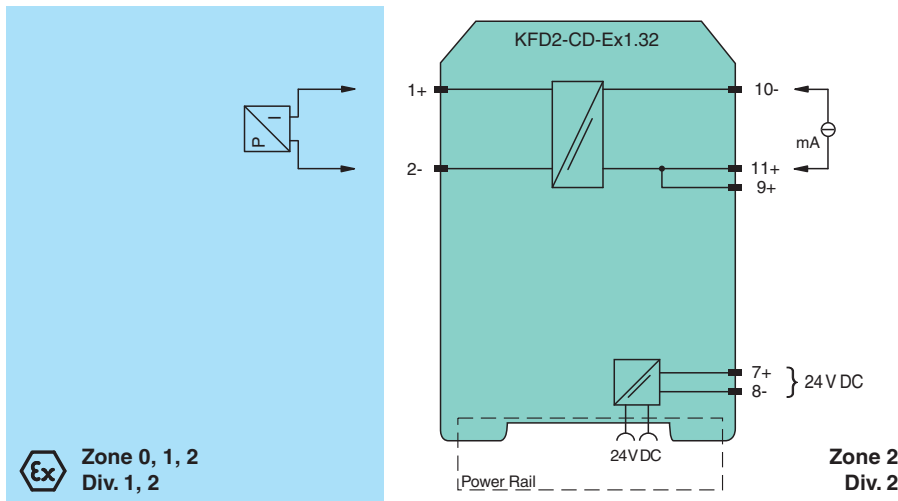
The device drives I/P converters, electrical valves, and positioners in the hazardous area.

The device has 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.

Connection



Ex Zone 0, 1, 2
Div. 1, 2

Zone 2
Div. 2

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

Power dissipation 1.4 W

Release date: 2021-12-16 Date of issue: 2021-12-16 Filename: 295002_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

PF PEPPERL+FUCHS

Technical Data

Input	
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	4 ... 20 mA
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

Release date: 2021-12-16 Date of issue: 2021-12-16 Filename: 295002_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.comUSA: +1 330 486 0002
pa-info@us.pepperl-fuchs.comGermany: +49 621 776 2222
pa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

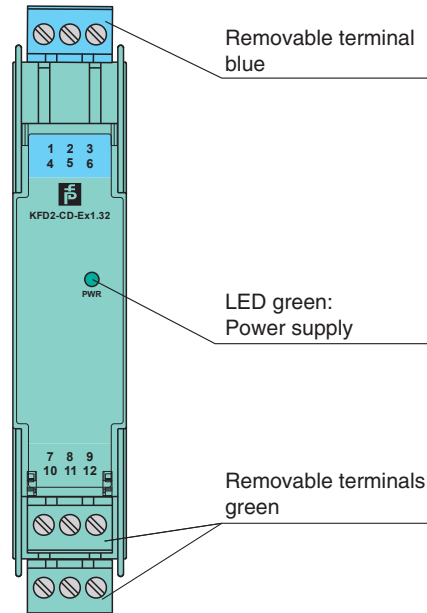
PEPPERL+FUCHS

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
---	------------------	--

Release date: 2021-12-16 Date of issue: 2021-12-16 Filename: 295002_eng.pdf

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

Accessories

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