

# Voltage Driver

## KFD2-CD-Ex1.32-12

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Current input 0 mA ... 20 mA
- Voltage output 0 V ... 10 V
- Accuracy 0.1 %
- Up to SIL 2 acc. to IEC/EN 61508



### Function

This isolated barrier is used for intrinsic safety applications.

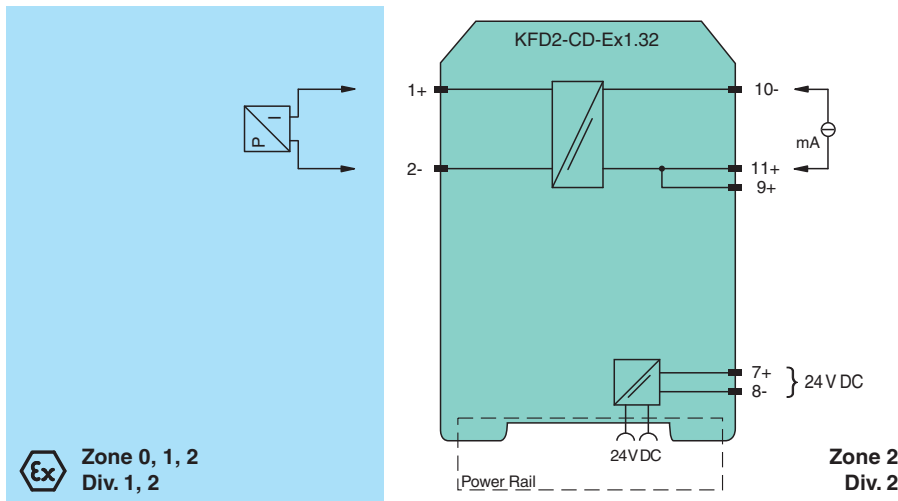
The device drives I/P converters, electrical valves, and positioners in the hazardous area.

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



### 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

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

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## Technical Data

<b>Input</b>	
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
<b>Output</b>	
Connection side	field side
Connection	terminals 1+, 2-
Voltage	0 ... 10 V
Current	max. 20 mA
Load	output resistance: max. 3 Ω
<b>Transfer characteristics</b>	
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
<b>Galvanic isolation</b>	
Input/power supply	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>	
Degree of protection	IEC 60529:2001
Protection against electrical shock	UL 61010-1:2012
<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. 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
<b>Data for application in connection with hazardous areas</b>	
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
<b>International approvals</b>	
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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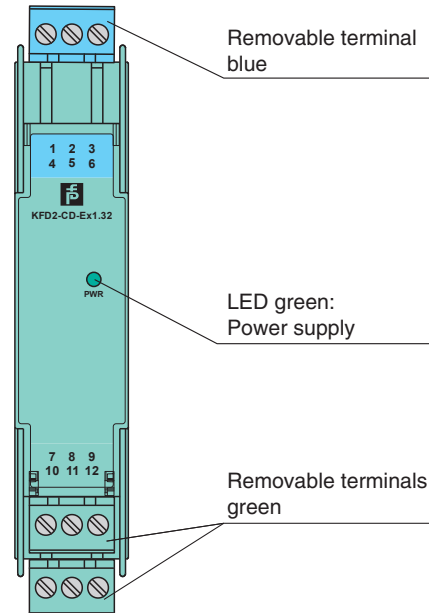
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## Technical Data







IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
<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> .

## Assembly


### Front view



## Matching System Components

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



## Accessories

	<b>KF-ST-5GN</b>	Terminal block for KF modules, 3-pin screw terminal, green
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**Accessories**

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