

# Voltage Driver

## KFD2-CD-Ex1.32-15

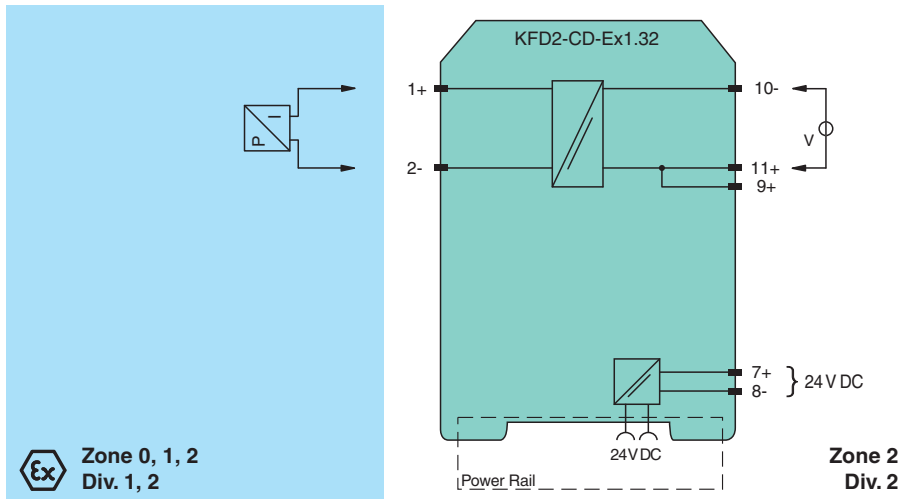
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 10 V
- Voltage output 0 V ... 10 V
- Accuracy 0.1 %
- Up to SIL 2 acc. to IEC/EN 61508



### 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 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



### Technical Data

<b>General specifications</b>	
Signal type	Analog output
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 2
<b>Supply</b>	
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

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## Technical Data

Power dissipation	1.4 W
<b>Input</b>	
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
<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>	
Deviation	at 20 °C (68 °F), 0 ... 10 V < 0.1 % of full scale, incl. non-linearity and hysteresis
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 IEC 60079-0:2018+AC:2020 , 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
IECEX marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc

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**Technical Data**

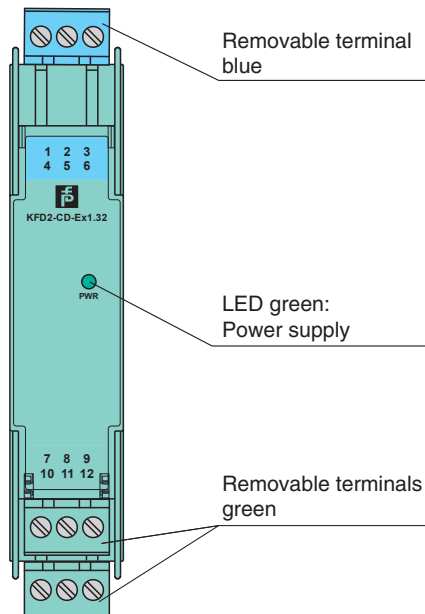
**General information**

Supplementary information







Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

**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
	<b>KF-ST-5BU</b>	Terminal block for KF modules, 3-pin screw terminal, blue

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**Accessories**

	<b>KF-CP</b>	Red coding pins, packaging unit: 20 x 6
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