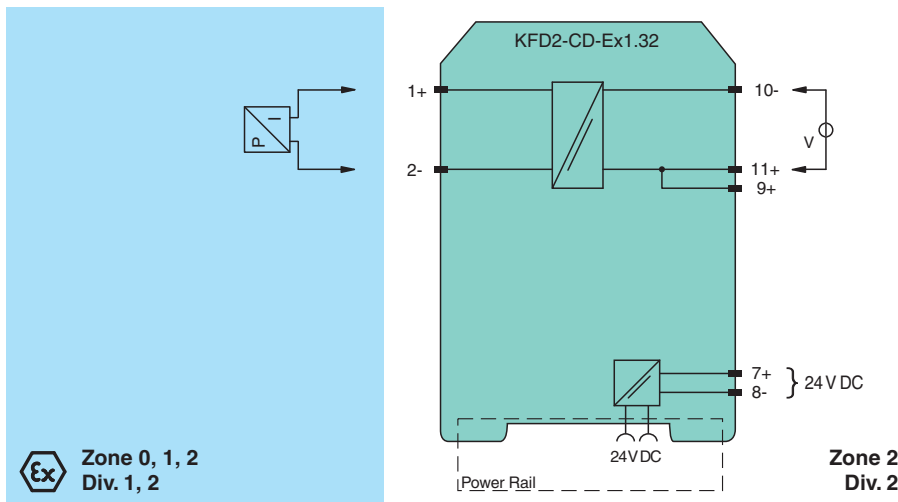# Current Driver

KFD2-CD-Ex1.32-5

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 5 V
- Current output 4 mA ... 20 mA
- 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 voltage input and current 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.
The open circuit voltage is 24 V DC within the allowable supply voltage range at terminals 1 and 2. The maximum load that can be applied is 850 Ω.
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. 50 mA
Power dissipation		1.4 W

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

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Technical Data

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 ... 5 V

Output

Connection side	field side
Connection	terminals 1+, 2-
Voltage	17 V at 20 mA
Current	4 ... 20 mA
Load	max. 850 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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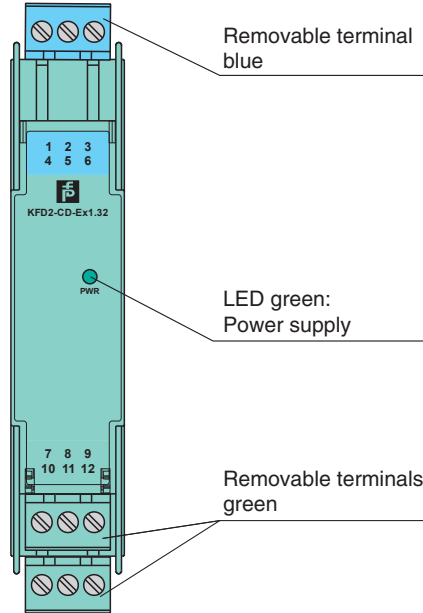
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Technical Data

General information

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

Assembly

Front view

Removable terminal blue

LED green: Power supply

Removable terminals green

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

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

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