Features

- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Current output 0 mA ... 20 mA
- Accuracy 0.1 %
- Up to SIL2 acc. to IEC 61508

Function

This signal conditioner provides the isolation for non-intrinsically safe applications.

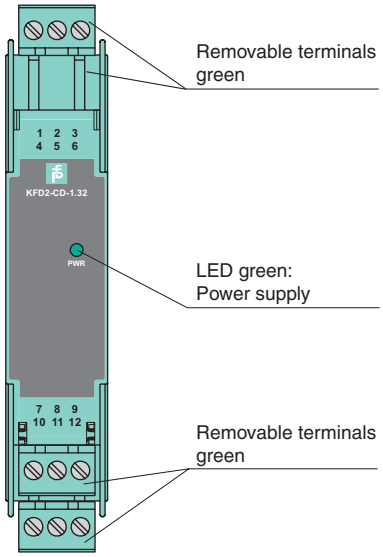
The device drives a current signal from the control side to I/P converters, electrical valves and positioners.

The max. voltage drop at the input is 4 V DC, allowing for the connection of several KFD2-CD-1.32 repeaters due to the low voltage drop in order to maintain multiple galvanically isolated outputs (signal duplication).

The open circuit voltage is 24 V DC within the allowable supply voltage range. The maximum load that can be applied is 850 Ω.

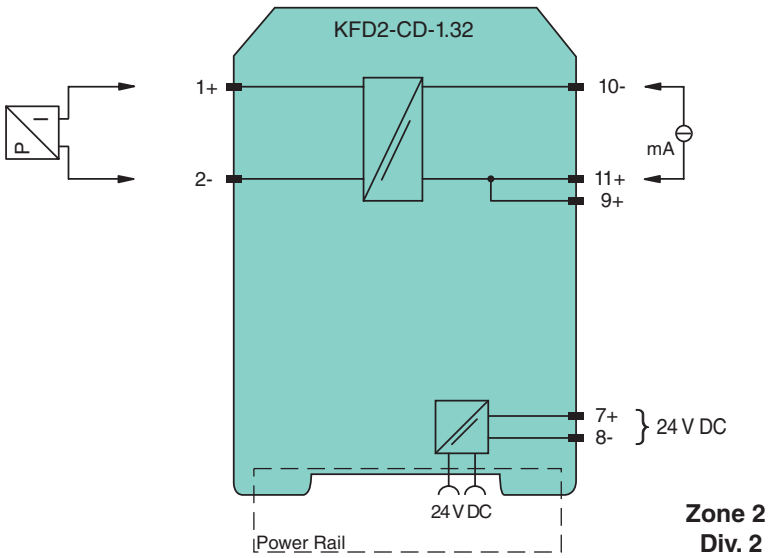
Assembly

Front view



CE SIL2

Connection



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General specifications	
Signal type	Analog output
Supply	
Connection	Power Rail or terminals 7+, 8-
Rated voltage	20 ... 35 V DC
Ripple	within the supply tolerance
Rated current	≤ 50 mA
Power loss	1.2 W
Input	
Connection	terminals 9+, 10-, 11+
Voltage drop	approx. 4 V at 20 mA
Limit	Input current: approx. ≤40 mA ; input voltage: ≤ 35 V
Transmission range	0 ... 20 mA
Voltage	≤ 4 V at 20 mA
Output	
Connection	terminals 1+, 2-
Current	0 ... 20 mA
Load	≤ 850 Ω
Voltage	17 V at 20 mA
Transfer characteristics	
Deviation	
After calibration	≤ ± 0.1 % incl. non-linearity and hysteresis at 20 °C (68 °F)
Influence of ambient temperature	≤ ± 0.01 %
Rise time	< 10 ms
Electrical isolation	
Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply	functional insulation, rated insulation voltage 50 V AC
Output/power supply	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
Data for application in connection with Ex-areas	
Statement of conformity	TÜV 99 ATEX 1499 X , observe statement of conformity
Group, category, type of protection, temperature class	⟨Ex⟩ II 3G Ex nA II T4 [device in zone 2]
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-15:2005
General information	
Supplementary information	Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

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Accessories

Power feed module KFD2-EB2

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 100 individual devices depending on the power consumption of the devices. A galvanically isolated mechanical contact uses the Power Rail to transmit collective error messages.

Power Rail UPR-03

The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

Profile Rail K-DUCT with Power Rail

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



Attention

Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!

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