Features

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 9 V
- Voltage output 0 V ... 9 V

Function

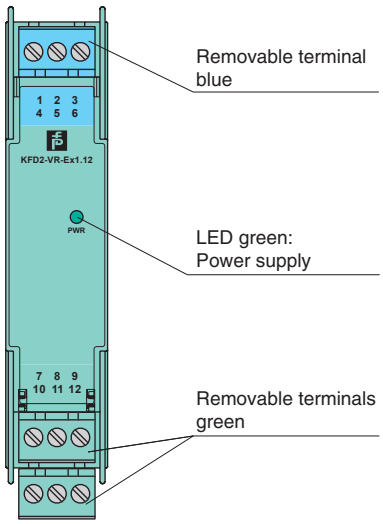
This isolated barrier is used for intrinsic safety applications. It transfers voltage signals from hazardous areas to safe areas.

The input voltage of the terminals 4 and 5 is transferred to the terminals 7 and 8. The terminals 4 and 8 have the same polarity.

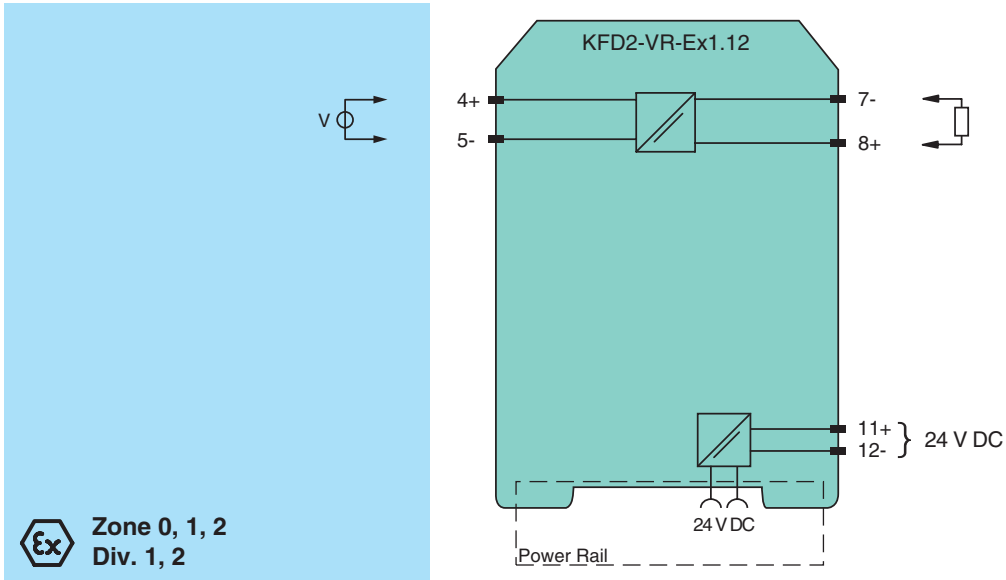
It repeats 0 V ... 9 V signals from strain gauges, transducers, and inductive motion sensors with signal frequencies up to 1.2 kHz.

Assembly

Front view



Connection



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General specifications		
Signal type		Analog input
Supply		
Connection		Power Rail or terminals 11+, 12-
Rated voltage	U_n	20 ... 35 V DC
Ripple		within the supply tolerance
Rated current	I_n	< 20 mA
Input		
Connection		terminals 4+, 5-
Input resistance		≥ 10 MΩ
Transmission range		0 ... 9 V
Offset voltage/current		< 2 mV / < 7 nA
Output		
Connection		terminals 7-, 8+
Voltage		0 ... 9 V
Output resistance		≤ 20 Ω
Transfer characteristics		
Deviation		
After calibration		± 5 mV at 20 °C (68 °F)
Influence of ambient temperature		≤ 0.005 % of range per K
Bandwidth		1.2 kHz (-3 dB)
Rise time		≤ 0.4 ms
Electrical isolation		
Output/power supply		Basic insulation according to DIN EN 50178, rated insulation voltage of AC 50 V
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Conformity		
Insulation coordination		EN 50178
Electromagnetic compatibility		NE 21
Degree of protection		IEC 60529
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		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		
EC-Type Examination Certificate		DMT 01 ATEX E 133 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⟨Ex⟩ I (M1) [Ex ia] I
Voltage	U_o	12 V
Current	I_o	2.8 mA
Power	P_o	8.4 mW
Supply		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage is lower.)
Output		
Maximum safe voltage	U_m	250 V (Attention! The rated voltage is lower.)
Electrical isolation		
Input/Output		safe galvanic isolation acc. to EN 60079-11, voltage peak value 375 V
Input/power supply		safe galvanic isolation acc. to EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 60079-0:2006, EN 60079-11:2007, EN 50303:2000
General information		
Supplementary information		EC-Type Examination Certificate, 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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