

Voltage Repeater KFD2-VR-Ex1.12

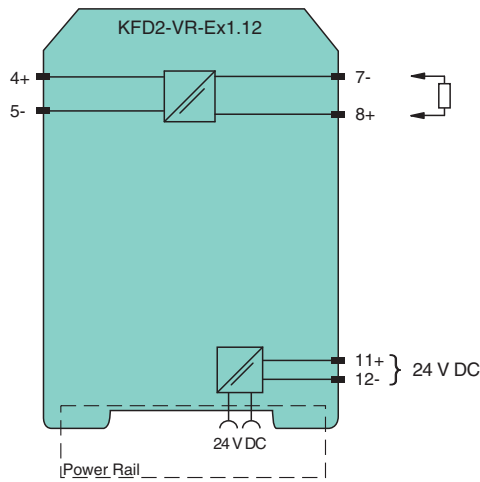
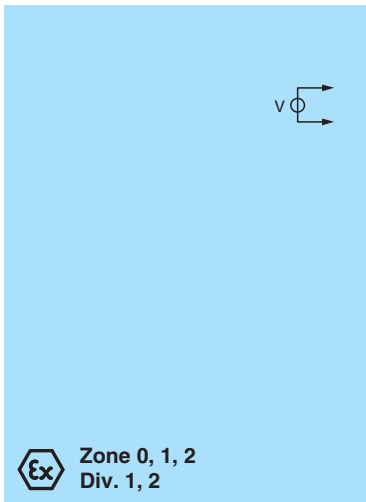
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 9 V
- Voltage output 0 V ... 9 V



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.

Connection



Technical Data

General specifications

Signal type	Analog input	
Supply		
Connection	Power Rail or terminals 11+, 12-	
Rated voltage	U_r	20 ... 35 V DC
Ripple	within the supply tolerance	
Rated current	I_r	< 20 mA
Input		
Connection side	field side	
Connection	terminals 4+, 5-	
Input resistance	min. 10 M Ω	
Transmission range	0 ... 9 V	

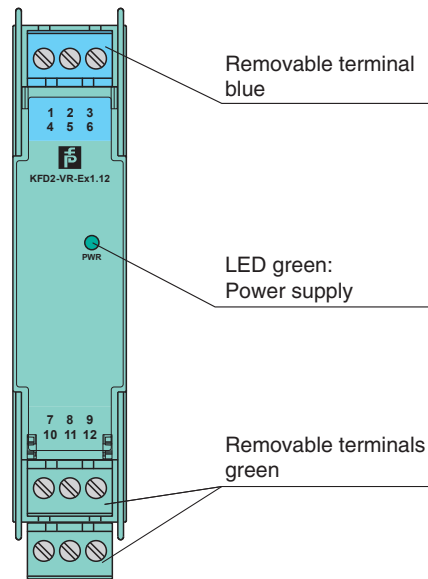
Release date: 2021-11-25 Date of issue: 2021-11-25 Filename: 116955_eng.pdf

Technical Data







Offset voltage/current		< 2 mV / < 7 nA
Output		
Connection side		control side
Connection		terminals 7-, 8+
Voltage		0 ... 9 V
Output resistance		≤ 20 Ω
Transfer characteristics		
Cut-off frequency		1.2 kHz (-3 dB)
Deviation		
After calibration		± 5 mV at 20 °C (68 °F)
Influence of ambient temperature		≤ 0.005 % of range per K
Rise time		≤ 0.4 ms
Galvanic isolation		
Output/power supply		Basic insulation according to DIN EN 50178, rated insulation voltage of AC 50 V
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		
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
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		DMT 01 ATEX E 133
Marking		Ⓢ 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.)
Galvanic 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 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 50303:2000
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



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
	KF-CP	Red coding pins, packaging unit: 20 x 6