



Voltage Repeater KFD2-VR-Ex1.18

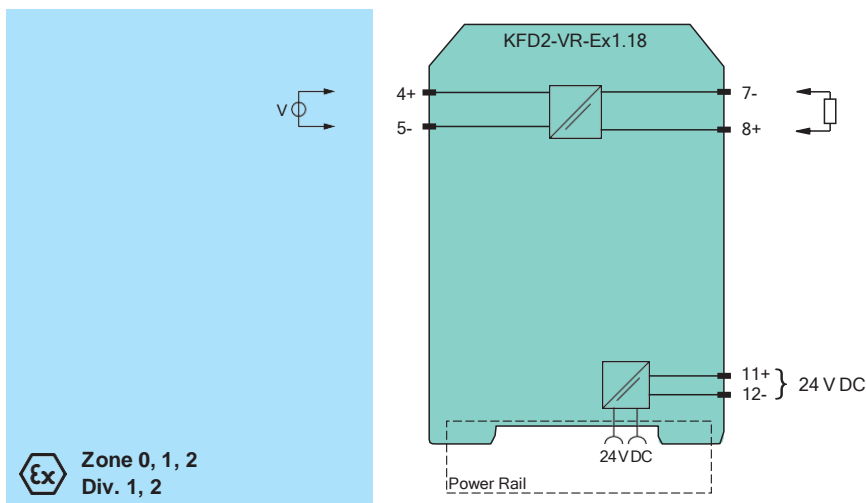
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Voltage input 0 V ... 12 V
- Voltage output 0 V ... 12 V



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. The device repeats 0 V ... 12 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 ... 12 V

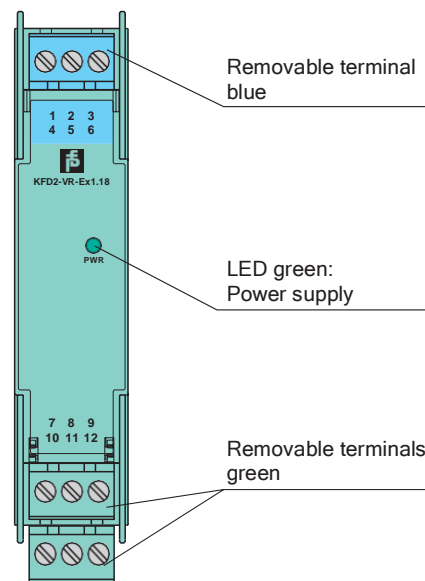
Offset voltage/current		< 2 mV / < 7 nA
Output		
Connection side		control side
Connection		terminals 7-, 8+
Voltage		0 ... 12 V
Output resistance		max. 20 Ω
Transfer characteristics		
Cut-off frequency		1.2 kHz (-3 dB)
Deviation		
After calibration		± 5 mV at 20 °C (68 °F)
Influence of ambient temperature		≤ 0.005 % of range per K
Rise time		≤ 0.4 ms
Galvanic isolation		
Output/power supply		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		
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		BAS 01 ATEX 7262
Marking		1 II (1)GD, I (M1) [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I (-20 °C ≤ T _{amb} ≤ 60 °C) , [circuit(s) in zone 0/1/2]
Voltage	U _o	18 V
Current	I _o	4.2 mA
Power	P _o	19 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.)
Certificate		
Marking		BASEEFA 10 ATEX 0079X
Marking		1 II 3G Ex ec IIC T4 Gc [device in zone 2]
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply		safe electrical isolation acc. to IEC/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 60079-7:2015+A1:2018
International approvals		
FM approval		
Control drawing		116-0129
UL approval		

Technical Data







Control drawing	116-0173 (cULus)
CSA approval	
Control drawing	116-0132
IECEX approval	
IECEX certificate	IECEX BAS 10.0040X
IECEX marking	Ex ec IIC T4 Gc
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