

RS 232 Repeater

KFD2-FF-Ex2.RS232

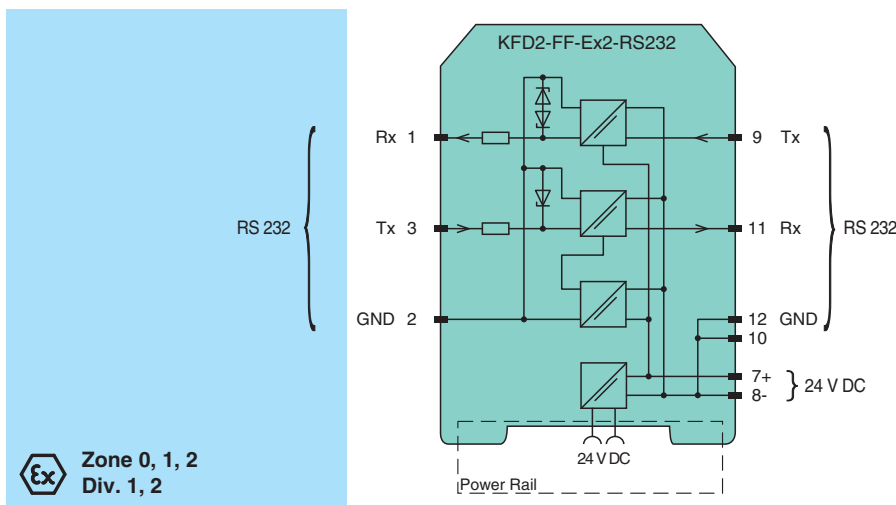
- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- RS 232 input/output



Function

This isolated barrier is used for intrinsic safety applications. It is a repeater for the bi-directional transfer of RS 232 signals. The input and output circuits are intrinsically safe and designed to transmit and receive RS 232 signals between the safe area and the hazardous area. This barrier accepts input signals in the $\pm 3 \text{ V} \dots \pm 15 \text{ V}$ range providing a nominal $\pm 10 \text{ V}$ output that is independent of the input voltage. The maximum rate of data exchange is 20 kBits per second.

Connection



Ex Zone 0, 1, 2
Div. 1, 2

Technical Data

General specifications	
Signal type	Analog input
Supply	
Connection	Power Rail or terminals 7+, 8-
Rated voltage	U_r 19 ... 30 V DC
Rated current	I_r approx. 40 mA
Power consumption	approx. 1.5 W
Control circuit	
Interface	RS 232
Input	
Connection	terminal 9

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

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Technical Data

Signal		logic 0: +3 ... +15 V logic 1: -3 ... -15 V
Output		
Connection		terminal 11
Signal		logic 0: +9 ... +12 V logic 1: -9 ... -12 V
Field circuit		
Interface		RS 232
Input		
Connection		terminals 2, 3
Signal		logic 0: +3 ... +15 V logic 1: -3 ... -15 V
Output		
Connection		terminals 1, 2
Signal		logic 0: +9 ... +12 V logic 1: -9 ... -12 V
Short-circuit current		max. 40 mA per channel
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
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 110 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 0116
Marking		⊕ II (1)G [Ex ia Ga] IIC , ⊕ II (1)D [Ex ia Da] IIIC , ⊕ I (M1) [Ex ia Ma] I (-40 °C ≤ T _{amb} ≤ 60 °C)
Equipment		terminals 1, 2, 3
Input		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
Voltage	U _o	19.9 V
Current	I _o	75 mA
Power	P _o	0.2 W
Internal capacitance	C _i	0 F
Internal inductance	L _i	0 H
Supply		
Maximum safe voltage	U _m	250 V _{rms} on terminals 7, 9 and 11; 0 V on terminals 8, 10 and 12 and on Power Rail connector (Attention! The rated voltage can be lower.)
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012
International approvals		
UL approval		
Control drawing		116-0173 (cULus)
IECEx approval		
IECEx certificate		IECEx BAS 05.0001
IECEx marking		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I

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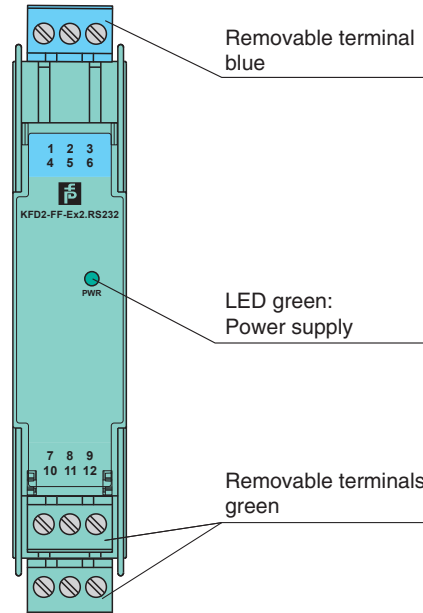
General information

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
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