

## Repeater KFD0-CS-Ex1.52

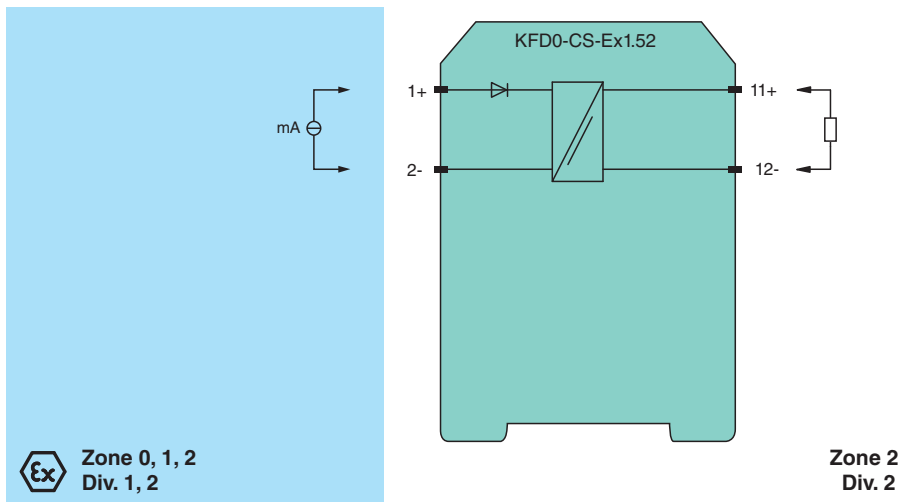
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 4 mA ... 20 mA
- Accuracy 0.1 %
- Entity parameter  $I_o/I_{sc} = 0$  mA



### Function

This isolated barrier is used for intrinsic safety applications. It is loop-powered and repeats a 4 mA ... 20 mA signal from a current source inside a hazardous area to the safe area (It does not provide power for transmitters inside the hazardous area.). The 25.2 V, 0 mA entity parameters make it easy to design intrinsically safe systems.

### Connection



### Technical Data

General specifications	
Signal type	Analog input
Supply	
Rated voltage	$U_r$ loop powered
Power dissipation	75 mW
Power consumption	500 mW
Control circuit	
Connection	terminals 11+, 12-
Voltage	4 ... 24 V DC for $4 \text{ V} < U_{in} < 24 \text{ V}$ : $0.97 \times U_{in} - (85 \times \text{current in A}) - 1.3$
Current	4 ... 20 mA
Field circuit	
Connection	terminals 1+, 2-

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

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## Technical Data

Transmission range		current: 4 ... 24 mA voltage: 4 ... 24 V DC
<b>Transfer characteristics</b>		
Accuracy		0.1 %
Deviation		
After calibration		± 20 µA incl. calibration, linearity, hysteresis and load fluctuations at 20 °C (68 °F), $U_{in} \leq 20$ V +20 µA/-50 µA incl. calibration, linearity, hysteresis and load fluctuations at 20 °C (68 °F), $20$ V < $U_{in}$ < 24 V
Influence of ambient temperature		± 1 µA/K (0 ... 50 °C (32 ... 122 °F)), $U_{in} \leq 12$ V ± 2 µA/K (0 ... 60 °C (32 ... 140 °F)), $U_{in} \leq 18$ V ± 5 µA/K (-20 ... 60 °C (-4 ... 140 °F)), $U_{in} \leq 24$ V
Rise time		≤ 10 ms at 4 ... 20 mA and 250 Ω load
<b>Galvanic isolation</b>		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Indicators/settings</b>		
Labeling		space for labeling at the front
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
<b>Conformity</b>		
Electromagnetic compatibility		NE 21:2011
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1:2012
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 100 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) (W x H x D) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>		
EU-type examination certificate		BASEEFA 03 ATEX 0141
Marking		⊕ II (1)GD, I (M1) [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I (-20 °C ≤ T <sub>amb</sub> ≤ 60 °C) , [circuit(s) in zone 0/1/2]
Voltage	$U_o$	25.2 V DC
Current	$I_o$	0 mA
<b>Output</b>		
Maximum safe voltage	$U_m$	253 V <sub>eff</sub> (Attention! The rated voltage can be lower.)
Certificate		TÜV 99 ATEX 1499 X
Marking		⊕ II 3G Ex nA II T4 [device in zone 2]
<b>Galvanic isolation</b>		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>		
<b>FM approval</b>		
Control drawing		116-0129
<b>UL approval</b>		
Control drawing		116-0173 (cULus)
<b>IECEx approval</b>		
IECEx certificate		IECEx BAS 08.0059
IECEx marking		[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I
<b>General information</b>		

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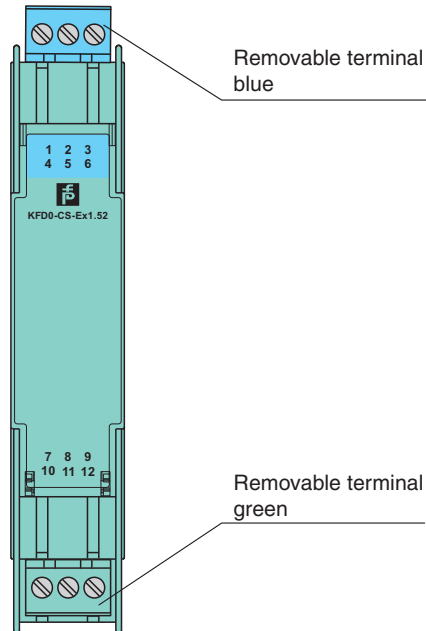
## Technical Data

Supplementary information


Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## Assembly




Front view



## Matching System Components

	<b>K-DUCT-BU</b>	Profile rail, wiring comb field side, blue
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## Accessories

	<b>KF-ST-5GN</b>	Terminal block for KF modules, 3-pin screw terminal, green
	<b>KF-ST-5BU</b>	Terminal block for KF modules, 3-pin screw terminal, blue
	<b>KF-CP</b>	Red coding pins, packaging unit: 20 x 6

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