

Repeater

KFD0-CS-Ex1.52

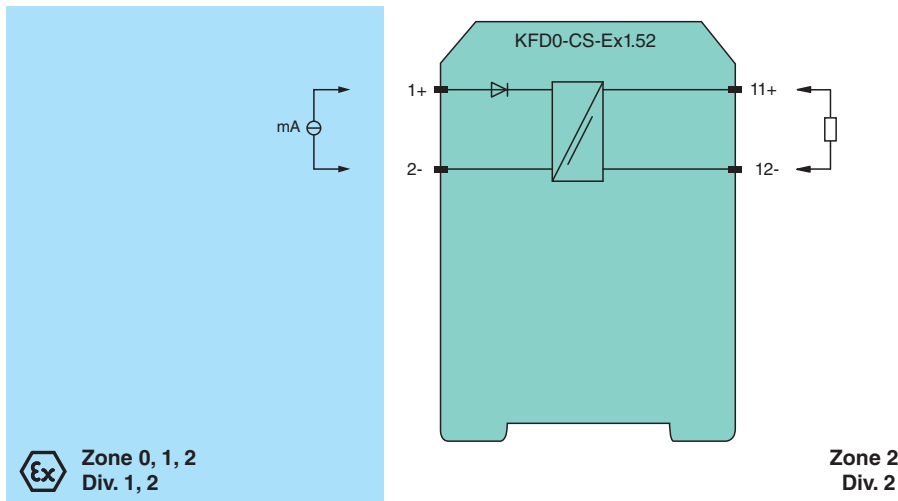
- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 4 mA ... 20 mA
- Accuracy 0.1 %
- Entity parameter $I_o/I_{sc} = 0$ mA



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

Release date: 2023-01-31 Date of issue: 2023-01-31 Filename: 183892_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

PF PEPPERL+FUCHS

Technical Data

Transmission range		current: 4 ... 24 mA voltage: 4 ... 24 V DC
Transfer characteristics		
Accuracy		0.1 %
Deviation		
After calibration		$\pm 20 \mu\text{A}$ incl. calibration, linearity, hysteresis and load fluctuations at $20 \text{ }^\circ\text{C}$ ($68 \text{ }^\circ\text{F}$), $U_{in} \leq 20 \text{ V}$ $+20 \mu\text{A}/-50 \mu\text{A}$ incl. calibration, linearity, hysteresis and load fluctuations at $20 \text{ }^\circ\text{C}$ ($68 \text{ }^\circ\text{F}$), $20 \text{ V} < U_{in} < 24 \text{ V}$
Influence of ambient temperature		$\pm 1 \mu\text{A}/\text{K}$ ($0 \dots 50 \text{ }^\circ\text{C}$ ($32 \dots 122 \text{ }^\circ\text{F}$)), $U_{in} \leq 12 \text{ V}$ $\pm 2 \mu\text{A}/\text{K}$ ($0 \dots 60 \text{ }^\circ\text{C}$ ($32 \dots 140 \text{ }^\circ\text{F}$)), $U_{in} \leq 18 \text{ V}$ $\pm 5 \mu\text{A}/\text{K}$ ($-20 \dots 60 \text{ }^\circ\text{C}$ ($-4 \dots 140 \text{ }^\circ\text{F}$)), $U_{in} \leq 24 \text{ V}$
Rise time		$\leq 10 \text{ ms}$ at 4 ... 20 mA and 250 Ω load
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Indicators/settings		
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 21:2011
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1:2012
Ambient conditions		
Ambient temperature		$-20 \dots 60 \text{ }^\circ\text{C}$ ($-4 \dots 140 \text{ }^\circ\text{F}$)
Mechanical specifications		
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
Data for application in connection with hazardous areas		
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 ($-20 \text{ }^\circ\text{C} \leq T_{amb} \leq 60 \text{ }^\circ\text{C}$) , [circuit(s) in zone 0/1/2]
Voltage	U_o	25.2 V DC
Current	I_o	0 mA
Output		
Maximum safe voltage	U_m	253 V _{eff} (Attention! The rated voltage can be lower.)
Certificate		TÜV 99 ATEX 1499 X
Marking		Ⓜ II 3G Ex nA II T4 [device in zone 2]
Galvanic isolation		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
FM approval		
Control drawing		116-0129
UL approval		
Control drawing		116-0173 (cULus)
IECEx approval		
IECEx certificate		IECEx BAS 08.0059
IECEx marking		[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I
General information		

Release date: 2023-01-31 Date of issue: 2023-01-31 Filename: 183892_eng.pdf

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

Pepperl+Fuchs Group
www.pepperl-fuchs.comUSA: +1 330 486 0002
pa-info@us.pepperl-fuchs.comGermany: +49 621 776 2222
pa-info@de.pepperl-fuchs.comSingapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

PEPPERL+FUCHS

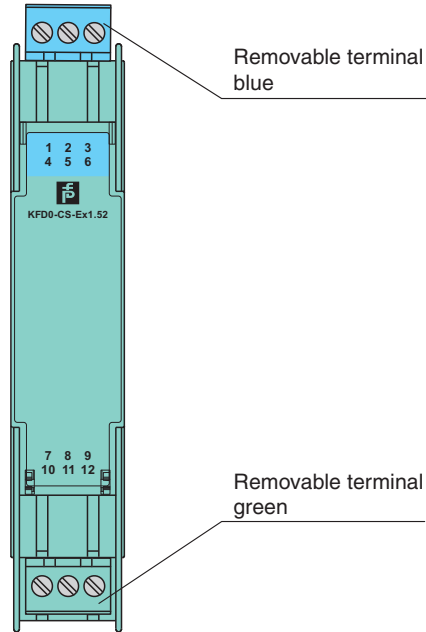
Technical Data

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

	K-DUCT-BU	Profile rail, 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

Release date: 2023-01-31 Date of issue: 2023-01-31 Filename: 183892_eng.pdf