

**Features**

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- SMART fire alarm input
- Current input 1 mA ... 20 mA
- Up to SIL 3 acc. to IEC 61508

**Function**

This isolated barrier is used for intrinsic safety applications. It provides control and signal transfer for SMART compatible fire and smoke alarm transmitters inside hazardous areas.

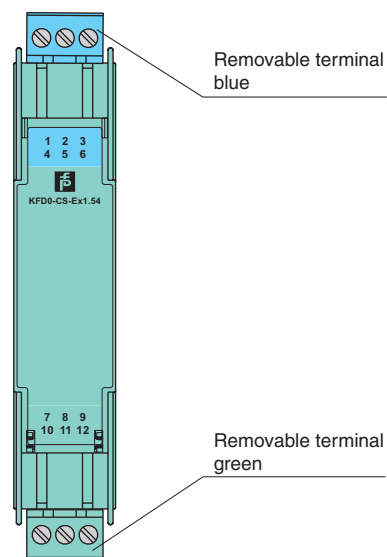
Digital signals may be superimposed on the analog values in the hazardous or safe area and are transferred bidirectionally.

The fall time of the digital signal must be less than 50 µs, the current in the hazardous area must be bigger than 1 mA.

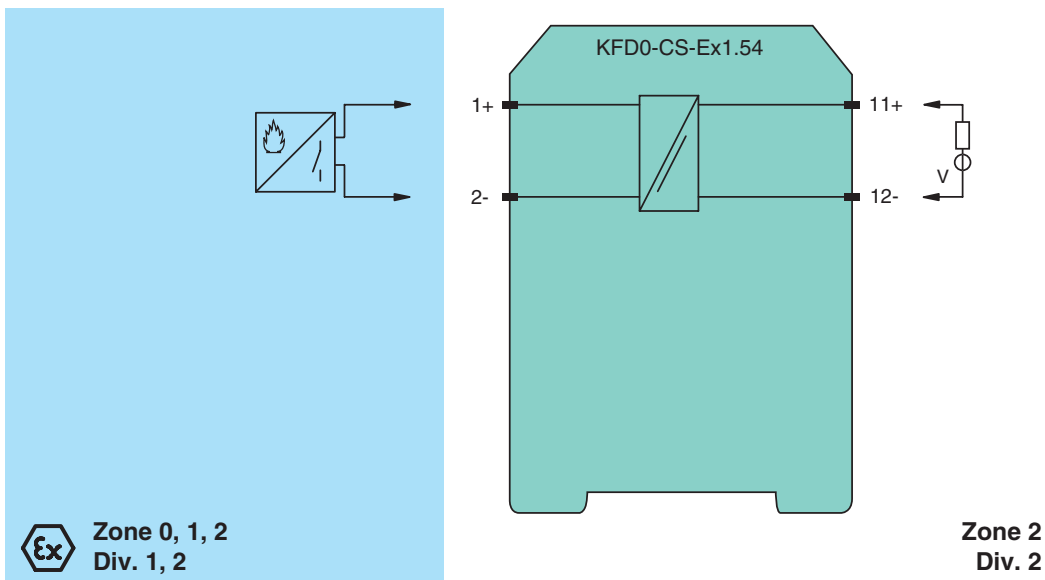
Since this isolator is loop-powered, use the technical data to verify that proper voltage is available to the field devices.

**Assembly**

Front view



**Connection**



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

<b>General specifications</b>		
Signal type		Analog input
<b>Functional safety related parameters</b>		
Safety Integrity Level (SIL)		SIL 3
<b>Supply</b>		
Rated voltage	$U_r$	loop powered
Power dissipation		$< 0.2 \text{ W}$ for $U_{in} = 24 \text{ V}$ , $I_o = 20 \text{ mA}$
<b>Control circuit</b>		
Connection		terminals 11+, 12-
Voltage		0 ... 24 V for $4 \text{ V} \leq U_e \leq 24 \text{ V}$ : $\geq U_e - (0.41 \times \text{input current in mA}) - 0.5$
Current		0 ... 20 mA
<b>Field circuit</b>		
Connection		terminals 1+, 2-
Short-circuit current		$\leq 65 \text{ mA}$
Transmission range		voltage: 4 ... 20 V DC/0 ... 6 V <sub>pp</sub> AC current: 1 ... 20 mA
<b>Transfer characteristics</b>		
Deviation		
After calibration		$\leq 3.5 \text{ mA}$ current loss at 20 mA load current
Influence of ambient temperature		$\pm 20 \mu\text{A} / \text{K}$
Rise time/fall time		$\leq 50 \mu\text{s}$ (load current $\geq 1 \text{ mA}$ )
<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 21:2006
Degree of protection		IEC 60529:2001
Protection against electrical shock		UL 61010-1
<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 107 x 115 mm (0.8 x 4.2 x 4.5 inch) , housing type B1
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		BAS 00 ATEX 7087
Marking		$\text{Ex}$ II (1)GD, I (M1) [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C) [circuit(s) in zone 0/1/2]
Voltage	$U_o$	28 V
Current	$I_o$	93 mA
Power	$P_o$	653 mW
Supply		
Maximum safe voltage	$U_m$	253 V (Attention! The rated voltage can be lower.)
Type of protection [Ex ia]		
Certificate		TÜV 99 ATEX 1499 X
Marking		$\text{Ex}$ II 3G Ex nA II T4 Gc [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 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>		
FM approval		
Control drawing		116-0129 (cFMus)
UL approval		
Control drawing		116-0348 (cULus)
IECEX approval		
IECEX certificate		IECEX BAS 08.0079 IECEX BAS 10.0007X

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IECEx marking	[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex nA II T4 Gc
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .



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