

**Features**

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- SMART fire alarm input
- Current input 1 mA ... 20 mA

**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.

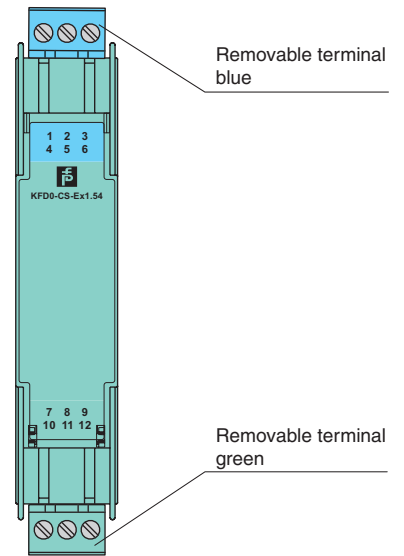
Digital signals may be superimposed (AC up to 6 V) on the analog values in the hazardous or safe area and are transferred bidirectionally.

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

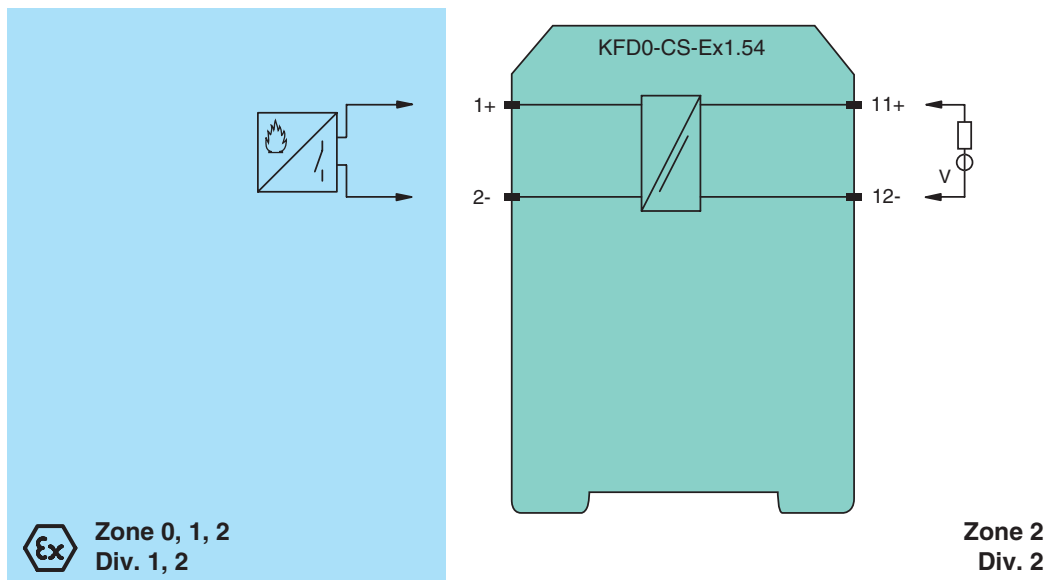
Since this isolator is loop-powered, use the technical data to verify that proper voltage is available to the field devices.

**Assembly**

Front view



**Connection**



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

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<b>General specifications</b>		
Signal type		Analog input
<b>Supply</b>		
Rated voltage	$U_n$	loop powered
Power loss		$< 0.2 \text{ W}$ for $U_{in} = 24 \text{ V}$ , $I_o = 20 \text{ mA}$
<b>Control circuit</b>		
Connection		terminals 11+, 12-
Voltage		$0 \dots 24 \text{ V}$ for $4 \text{ V} \leq U_e \leq 24 \text{ V}$ : $\geq U_e - (0.38 \times \text{current in mA}) - 0.5$
Current		$0 \dots 20 \text{ mA}$
<b>Field circuit</b>		
Connection		terminals 1+, 2-
Short-circuit current		$\leq 65 \text{ mA}$
<b>Transfer characteristics</b>		
Deviation		
After calibration		$\leq 3.5 \text{ mA}$ current loss at $20 \text{ mA}$ 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>Electrical isolation</b>		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value $375 \text{ V}$
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2013
<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		$-20 \dots 60 \text{ }^\circ\text{C}$ ( $-4 \dots 140 \text{ }^\circ\text{F}$ )
<b>Mechanical specifications</b>		
Degree of protection		IP20
Mass		approx. $100 \text{ g}$
Dimensions		$20 \times 107 \times 115 \text{ mm}$ ( $0.8 \times 4.2 \times 4.5 \text{ in}$ ), housing type B1
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		BAS 00 ATEX 7087, for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection		$\text{Ex}$ 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	$U_o$	$28 \text{ V}$
Current	$I_o$	$93 \text{ mA}$
Power	$P_o$	$653 \text{ mW}$
<b>Supply</b>		
Maximum safe voltage	$U_m$	$253 \text{ V}$ (Attention! The rated voltage can be lower.)
<b>Type of protection [Ex ia]</b>		
Statement of conformity		TÜV 99 ATEX 1499 X, observe statement of conformity
Group, category, type of protection, temperature class		$\text{Ex}$ II 3G Ex nA II T4 Gc [device in zone 2]
<b>Electrical isolation</b>		
Input/Output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value $375 \text{ V}$
<b>Directive conformity</b>		
Directive 94/9/EC		EN 60079-0:2012, EN 60079-11:2012, EN 60079-15:2010
<b>International approvals</b>		
<b>FM approval</b>		
Control drawing		116-0129 (cFMus)
<b>UL approval</b>		
Control drawing		116-0348 (cULus)
<b>IECEX approval</b>		
Approved for		[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I Ex nA II T4 Gc
<b>General information</b>		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

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