

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

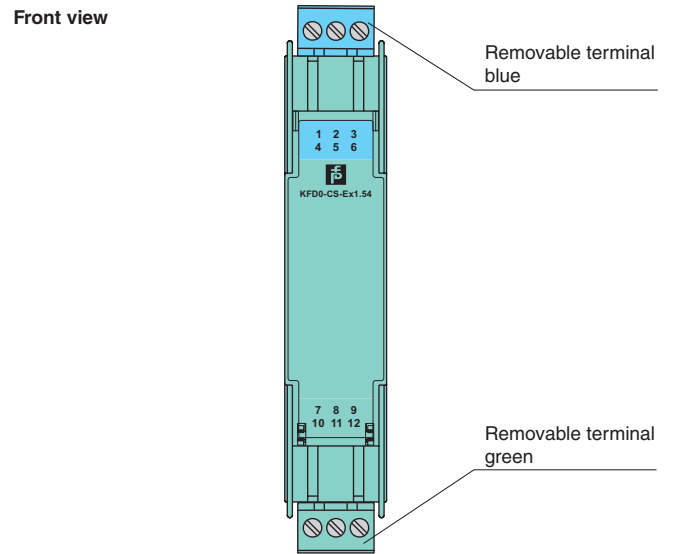
This isolated barrier is used for intrinsic safety applications. It provides control and signal transfer for SMART compatible fire and smoke alarm transmitters inside hazardous areas.

Digital signals may be superimposed (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 μ s, the current in the hazardous area must be bigger than 1 mA.

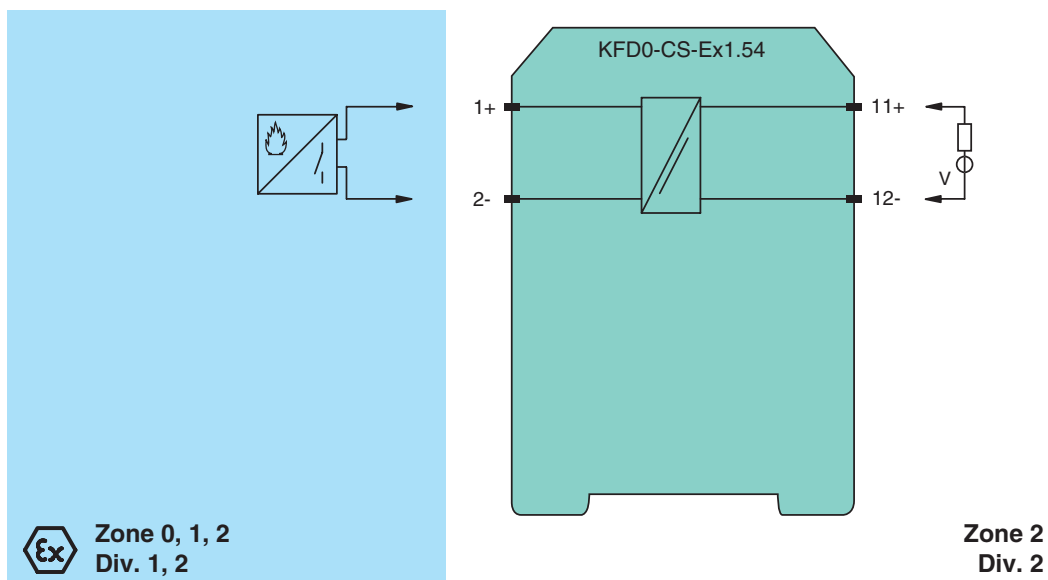
Since this isolator is loop-powered, use the technical data to verify that proper voltage is available to the field devices.

Assembly



SIL 3

Connection



Release date 2018-03-26 15:16 Date of issue 2018-03-26 207802_eng.xml

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

General specifications		
Signal type		Analog input
Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Supply		
Rated voltage	U_r	loop powered
Power dissipation		$< 0.2 \text{ W}$ for $U_{in} = 24 \text{ V}$, $I_o = 20 \text{ mA}$
Control circuit		
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
Field circuit		
Connection		terminals 1+, 2-
Short-circuit current		$\leq 65 \text{ mA}$
Transmission range		voltage: 4 ... 20 V DC/0 ... 6 V _{pp} AC current: 1 ... 20 mA
Transfer characteristics		
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 $\geq 1 \text{ mA}$)
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		
Degree of protection		NE 21:2006
Protection against electrical shock		IEC 60529:2001
Protection against electrical shock		UL 61010-1
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
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
Data for application in connection with hazardous areas		
EU-Type Examination Certificate		
Marking		BAS 00 ATEX 7087
Voltage	U_o	$\text{Ⓧ} \text{ II (1)GD, I (M1) [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I (-20 °C} \leq T_{amb} \leq 60 \text{ °C) [circuit(s) in zone 0/1/2]}$
Current	I_o	28 V
Power	P_o	93 mA
Supply		653 mW
Maximum safe voltage	U_m	253 V (Attention! The rated voltage can be lower.)
Type of protection [Ex ia]		
Certificate		
Marking		TÜV 99 ATEX 1499 X
Galvanic isolation		$\text{Ⓧ} \text{ II 3G Ex nA II T4 Gc [device in zone 2]}$
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
International approvals		
FM approval		
Control drawing		116-0129 (cFMus)
UL approval		
Control drawing		116-0348 (cULus)
IECEx approval		
Approved for		IECEx BAS 08.0079 IECEx BAS 10.0007X [Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I Ex nA II T4 Gc
General information		

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