

Features

- 2-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 0 mA ... 40 mA
- I/P or transmitter power supply
- Accuracy 1 %
- Reverse polarity protection
- Up to SIL2 acc. to IEC 61508

Function

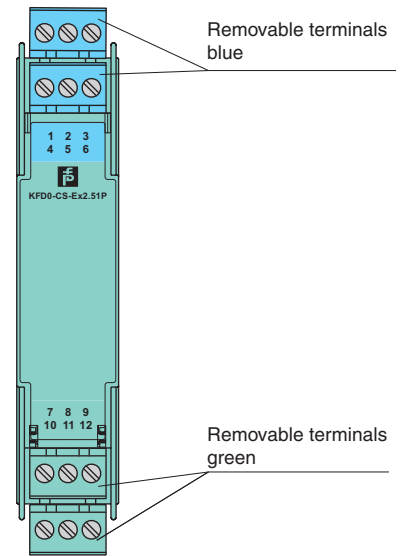
This isolated barrier is used for intrinsic safety applications. It transfers DC signals from fire alarms, smoke alarms, and temperature sensors in hazardous areas. It can also be used to control I/P converters, power solenoids, LEDs, and audible alarms.

Reverse polarity protection prevents damage to the isolator caused by faulty wiring.

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

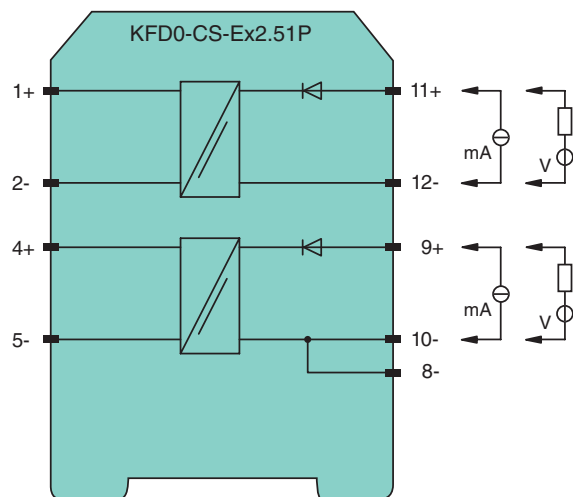
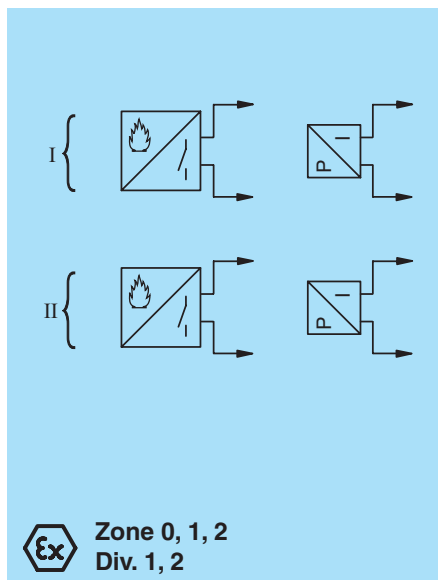
Assembly

Front view



SIL2

Connection



**Zone 2
Div. 2**

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

Pepperl+Fuchs Group
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General specifications	
Signal type	Analog output
Supply	
Rated voltage	loop powered
Control circuit	
Connection	terminals 12-, 11+; 8-, 10-, 9+
Voltage	4 ... 35 V DC
Current	0 ... 40 mA
Power loss	at 40 mA and $U_{in} < 22$ V: 700 mW per channel at 40 mA and $U_{in} > 22$ V: 1.2 W per channel
Field circuit	
Connection	terminals 1+, 2-; 4+, 5-
Voltage	for $4 \text{ V} < U_{in} < 24 \text{ V}$: $\geq U_{in} - (0.37 \times \text{current in mA}) - 1.0$ for $U_{in} > 24 \text{ V}$: $\geq 21 \text{ V} - (0.36 \times \text{current in mA})$
Short-circuit current	at $U_{in} > 24 \text{ V}$: $\leq 65 \text{ mA}$
Transfer current	$\leq 40 \text{ mA}$
Transfer characteristics	
Deviation	
After calibration	$\leq \pm 200 \mu\text{A}$; incl. calibration, linearity, hysteresis and load fluctuations at the output up to a load of 1 k Ω and current $\leq 20 \text{ mA}$ at 20 °C (68 °F)
Influence of ambient temperature	$\leq \pm 2 \mu\text{A/K}$ at $U_{in} \leq 20 \text{ V}$; $\leq \pm 5 \mu\text{A/K}$ at $U_{in} > 20 \text{ V}$
Rise time	$\leq 5 \text{ ms}$ at bounce from 4 ... 20 mA and $U_{in} < 24 \text{ V}$
Electrical isolation	
Field circuit/control circuit	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Electromagnetic compatibility	
Protection degree	NE 21:2006
Protection against electrical shock	UL 61010-1
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in) , housing type B1
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	
Group, category, type of protection	Ex II (1)G [Ex ia Ga] IIC, II (1)D [Ex ia Da] IIIC, I (M1) [Ex ia Ma] I (-20 °C $\leq T_{amb} \leq 60$ °C)
Voltage U_o	25.2 V
Current I_o	93 mA
Power P_o	585 mW
Control circuit	
Maximum safe voltage U_m	250 V _{eff} (Attention! The rated voltage can be lower.)
Field circuit	
Maximum safe voltage U_m	250 V _{eff} (Attention! The rated voltage can be lower.)
Statement of conformity	
Group, category, type of protection, temperature class	Ex II 3G Ex nA II T4 [device in zone 2]
Electrical isolation	
Field circuit/control circuit	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009, EN 60079-11:2007, EN60079-15:2005
International approvals	
FM approval	
Control drawing	116-0129
UL approval	
Control drawing	116-0173 (cULus)
IECEx approval	
Approved for	[Zone 0] [Ex ia] IIC, [Ex iaD], [Ex ia] I
General information	

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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 www.pepperl-fuchs.com.

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Application

The device is used for isolation of power loops for the control of positioner, I/P converters etc. A current source is connected to the safe area terminals.

The device is used for isolation of a current signal from fire detectors or similar sensors. In this case, a voltage source can be connected to the safe area terminals. A specific measurement current across a passive sensor can be measured in the safe area with a series resistor (min. 50 Ω). When a voltage supply is used, the measuring resistor can also provide current limitations.