

**Features**

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Current input/output 4 mA ... 20 mA
- I/P or transmitter power supply
- Accuracy 0.1 %
- Reverse polarity protection
- Up to SIL2 acc. to IEC 61508

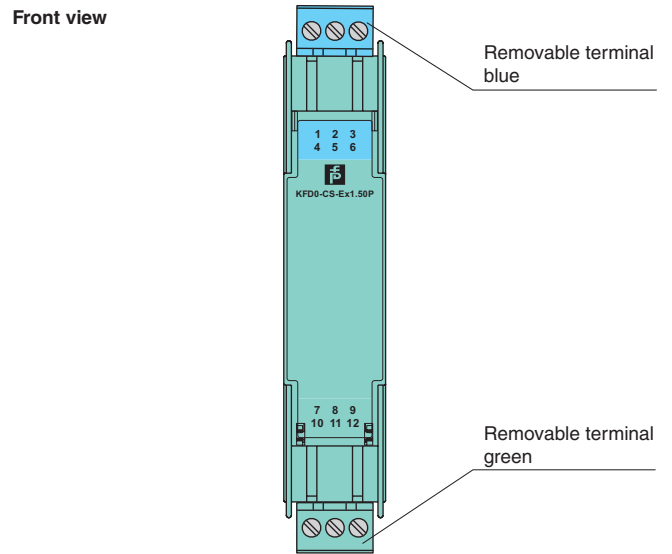
**Function**

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.

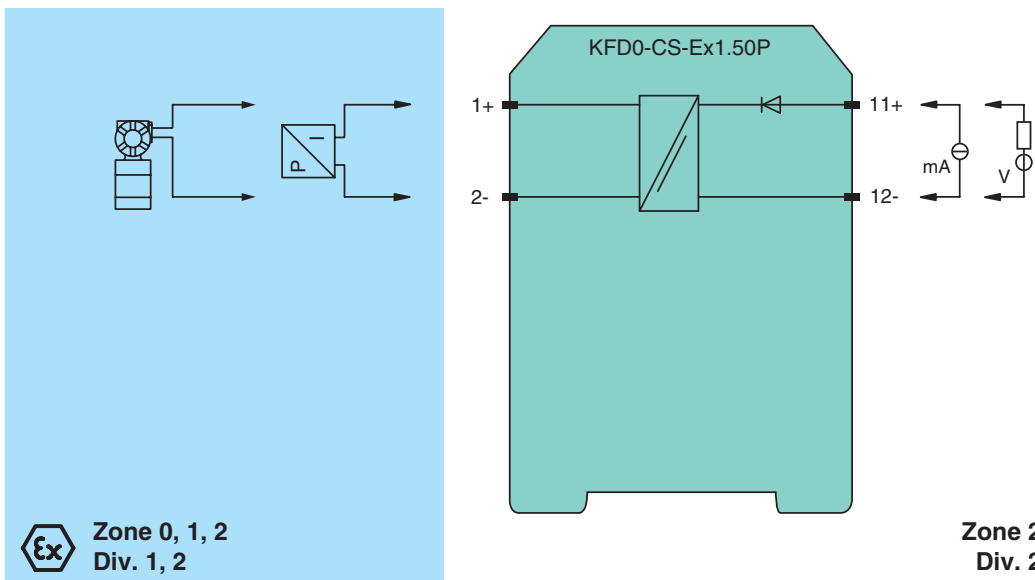
Reverse polarity protection prevents damage to the isolator caused by faulty wiring.

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

**Assembly**



**Connection**



Release date 2009-05-28 17:44 Date of issue 2009-05-28 072143\_ENG.xml

<b>General specifications</b>	
Signal type	analogue output
<b>Supply</b>	
Rated voltage	loop powered
<b>Safe circuit</b>	
Connection	terminals 12-, 11+
Voltage	5 ... 35 V DC
Current	4 ... 20 mA
Power loss	at 20 mA and $U_{in} < 24.3$ V: < 250 mW per channel at 20 mA and $U_{in} > 24.3$ V: < 500 mW per channel
<b>Field circuit</b>	
Connection	terminals 1+, 2-
Output voltage	for $5$ V < $U_{in} < 24.3$ V: $\geq 0.9 \times U_{in} - (0.37 \times \text{current in mA}) - 1.0$ for $U_{in} > 24.3$ V: $\geq 21$ V - (0.36 x current in mA)
Short-circuit current	at $U_{in} > 24.3$ V : $\leq 65$ mA
Transfer current	$\leq 40$ mA
<b>Transfer characteristics</b>	
Deviation	
After calibration	$\leq \pm 20$ $\mu$ A; incl. calibration, linearity, hysteresis and load fluctuations at the output up to a load of 1 k $\Omega$ at 20 $^{\circ}$ C (293 K)
Rise time	$\leq 5$ ms at 4 ... 20 mA step and $U_{in} < 24$ V
<b>Electrical isolation</b>	
Field circuit/safe circuit	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 $^{\circ}$ C (253 ... 333 K)
<b>Mechanical specifications</b>	
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
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	
Group, category, type of protection	BAS 98 ATEX 7343 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Voltage $U_o$	$\text{Ex}$ II (1)GD [EEx ia] IIC (-20 $^{\circ}$ C $\leq T_{amb} \leq 60$ $^{\circ}$ C) 25.2 V
Current $I_o$	93 mA
Power $P_o$	585 mW
Safe circuit	
Safety maximum voltage $U_m$	250 V $_{eff}$ (Attention! The rated voltage can be lower.)
Field circuit	
Safety maximum voltage $U_m$	250 V $_{eff}$ (Attention! The rated voltage can be lower.)
Statement of conformity	
Group, category, type of protection, temperature classification	$\text{Ex}$ II 3G Ex nA II T4 [device in zone 2]
Electrical isolation	
Field circuit/safe circuit	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 50014, EN 50020, EN 50021, EN 60079-0, EN 60079-15
<b>International approvals</b>	
FM approval	
Control drawing	116-0129
UL approval	
Control drawing	116-0173 (cULus)
CSA approval	
Control drawing	116-0132
<b>General information</b>	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration 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> .

Release date 2009-05-28 17:44 Date of issue 2009-05-28 072143\_ENG.xml

## 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  $\Omega$ ). When a voltage supply is used, the measuring resistor can also provide current limitations.