

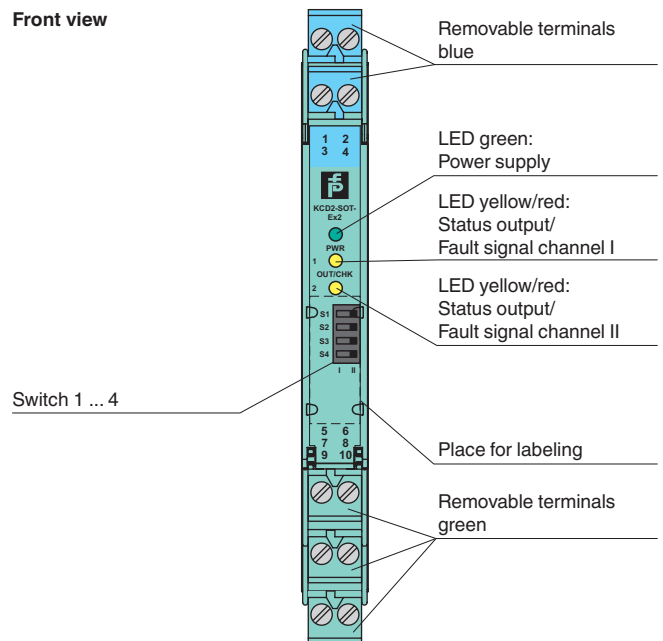
**Features**

- 2-channel isolated barrier
- 24 V DC supply (Power Rail)
- Dry contact or NAMUR inputs
- 2 passive transistor outputs
- Reversible mode of operation
- Line fault detection (LFD)
- Housing width 12.5 mm
- Up to SIL2 acc. to IEC 61508

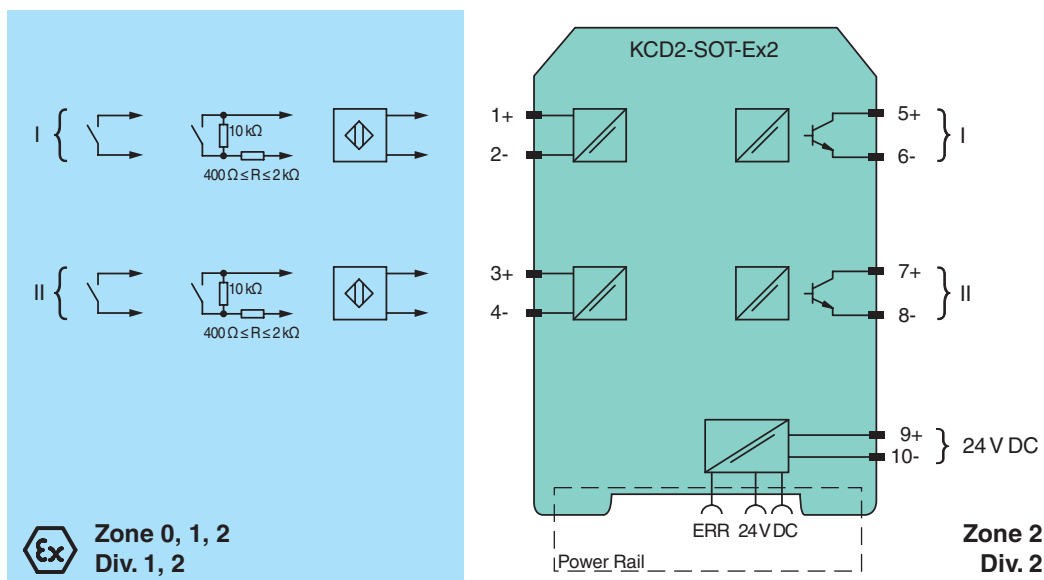
**Function**

This isolated barrier is used for intrinsic safety applications. The device transfers digital signals (NAMUR sensors or dry contacts) from a hazardous area to a safe area. Each input controls a passive transistor output. Via switches the mode of operation can be reversed and the line fault detection can be switched off. A fault is signaled by LEDs acc. to NAMUR NE44 and a separate collective error message output.

**Assembly**



**Connection**



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

<b>General specifications</b>		
Signal type		Digital Input
<b>Supply</b>		
Connection		Power Rail or terminals 9+, 10-
Rated voltage	$U_n$	19 ... 30 V DC
Ripple		≤ 10 %
Rated current	$I_n$	30 ... 20 mA
Power loss		≤ 800 mW including maximum power dissipation in the output
<b>Input</b>		
Connection		terminals 1+, 2-; 3+, 4-
Rated values		acc. to EN 60947-5-6 (NAMUR)
Open circuit voltage/short-circuit current		approx. 10 V DC / approx. 8 mA
Switching point/switching hysteresis		1.2 ... 2.1 mA / approx. 0.2 mA
Line fault detection		breakage I ≤ 0.1 mA , short-circuit I ≥ 6.5 mA
Pulse/Pause ratio		≥ 100 μs / ≥ 100 μs
<b>Output</b>		
Connection		terminals 5, 6; 7, 8
Rated voltage	$U_n$	30 V DC
Rated current	$I_n$	50 mA
Response time		≤ 200 μs
Signal level		1-signal: (external voltage) - 3 V max. for 50 mA 0-signal: blocked output (off-state current ≤ 10 μA)
Output I		signal ; Transistor
Output II		signal ; Transistor
Collective error message		Power Rail
<b>Transfer characteristics</b>		
Switching frequency		≤ 5 kHz
<b>Electrical isolation</b>		
Input/Output		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V <sub>eff</sub>
Input/power supply		reinforced insulation acc. to EN 50178, rated insulation voltage 300 V <sub>eff</sub>
Output/power supply		basic insulation according to EN 50178, rated insulation voltage 50 V <sub>eff</sub>
Output/Output		basic insulation according to EN 50178, rated insulation voltage 50 V <sub>eff</sub>
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2013 (industrial locations)
<b>Conformity</b>		
Electromagnetic compatibility		NE 21:2011
Degree of protection		IEC 60529:2001
Protection against electrical shock		IEC 61010-1:2010
Input		EN 60947-5-6:2000
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Mass		approx. 100 g
Dimensions		12.5 x 114 x 119 mm (0.5 x 4.5 x 4.7 in) , housing type A2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with Ex-areas</b>		
EC-Type Examination Certificate		BASEEFA 13 ATEX 0080
Group, category, type of protection		⊕ II (1)G [Ex ia Ga] IIC ⊕ II (1)D [Ex ia Da] IIIC ⊕ I (M1) [Ex ia Ma] I
Input		Ex ia
Voltage	$U_o$	10.5 V
Current	$I_o$	17.1 mA
Power	$P_o$	45 mW (linear characteristic)
<b>Supply</b>		
Maximum safe voltage	$U_m$	253 V AC (Attention! $U_m$ is no rated voltage.)
<b>Output</b>		
Maximum safe voltage	$U_m$	253 V AC (Attention! The rated voltage can be lower.)
<b>Statement of conformity</b>		
Group, category, type of protection, temperature class		PF 13 CERT 2760 X ⊕ II 3G Ex nA IIC T4 Gc
Electrical isolation		

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Input/Output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010
<b>International approvals</b>	
UL approval	
Control drawing	116-0374 (cULus)
IECEX approval	IECEX BAS 13.0046
Approved for	[Ex ia Ga] IIC, [Ex ia Da] IIIC, [Ex ia Ma] I
<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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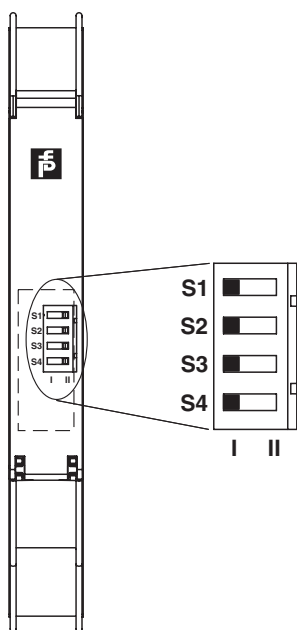
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**Configuration**



**Switch settings**

S	Function		Position
1	Mode of operation output I (active)	with high input current	I
		with low input current	II
2	Mode of operation output II (active)	with high input current	I
		with low input current	II
3	Line fault detection of the input I	ON	I
		OFF	II
4	Line fault detection of the input II	ON	I
		OFF	II

**Operating status**

Control circuit	Input signal
Initiator high impedance/contact opened	low input current
Initiator low impedance/contact closed	high input current
Lead breakage, lead short-circuit	Line fault

Factory settings: switch 1, 2, 3 and 4 in position I

**Accessories**

**Power feed module KFD2-EB2**

The power feed module is used to supply the devices with 24 V DC via the Power Rail. The fuse-protected power feed module can supply up to 150 individual devices depending on the power consumption of the devices. Collective error messages received from the Power Rail activate a galvanically-isolated mechanical contact.

**Power Rail UPR-03**

The Power Rail UPR-03 is a complete unit consisting of the electrical insert and an aluminium profile rail 35 mm x 15 mm. To make electrical contact, the devices are simply engaged.

**Profile Rail K-DUCT with Power Rail**

The profile rail K-DUCT is an aluminum profile rail with Power Rail insert and two integral cable ducts for system and field cables. Due to this assembly no additional cable guides are necessary.



*Power Rail and Profile Rail must not be fed via the device terminals of the individual devices!*