

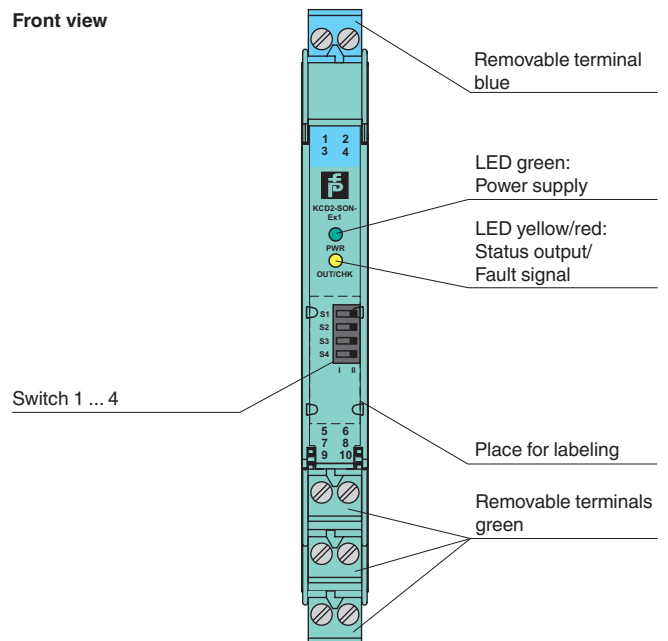
**Features**

- 1-channel isolated barrier
- 24 V DC supply (Power Rail)
- Dry contact or NAMUR input
- 2 passive transistor outputs (resistive acc. to EN 60947-5-6)
- Line fault transparency (LFT)
- Housing width 12.5 mm
- Up to SIL2 acc. to IEC 61508

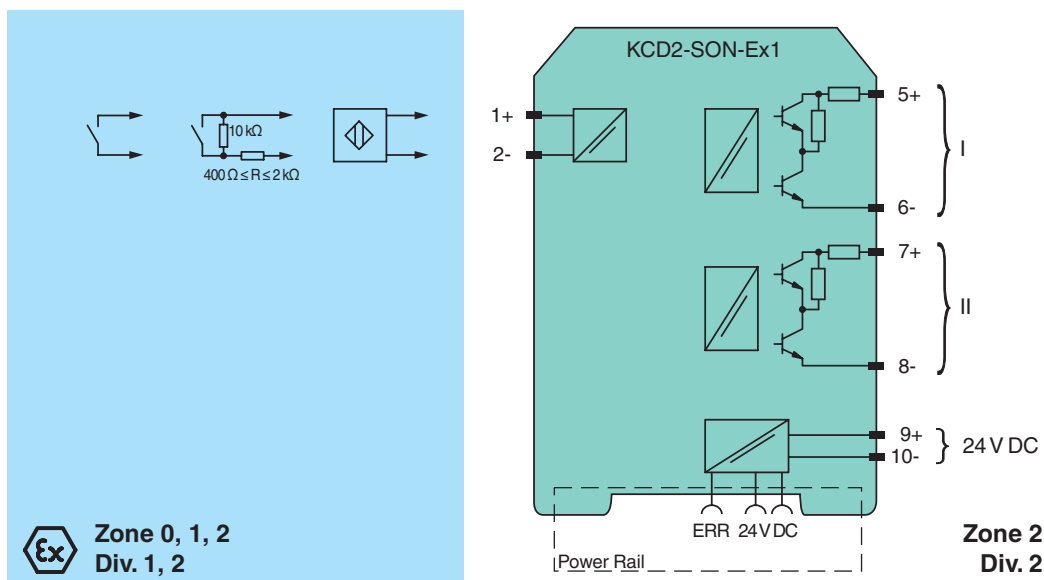
**Function**

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. The input controls two passive transistor outputs with a resistive output characteristic (acc. to EN60947-5-6). The outputs have three defined states: 1-Signal = 1.8 kΩ, 0-Signal = 14 kΩ and fault > 100 kΩ. This output characteristic offers line fault transparency on the signal lines. 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	$I_n$	18 ... 14 mA
Power loss		≤ 500 mW
<b>Input</b>		
Connection		terminals 1+, 2-
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		output I: terminals 5, 6 ; output II: terminals 7, 8
Rated voltage	$U_n$	8 V DC
Response time		≤ 200 μs
Output I, II		signal or error message, passive transistor output (resistive) 0-signal: 14 kΩ ± 10 % 1-signal: 1.8 kΩ ± 10 % fault: > 100 kΩ
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		⊕ II 3G Ex nA IIC T4 Gc
<b>Electrical isolation</b>		
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

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

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<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>UL approval</b>	
Control drawing	116-0374 (cULus)
<b>IECEX approval</b>	
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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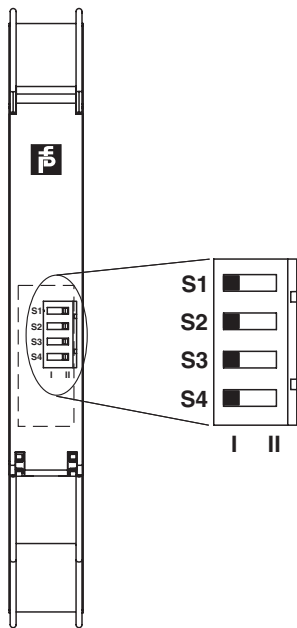
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**Configuration**



**Switch settings**

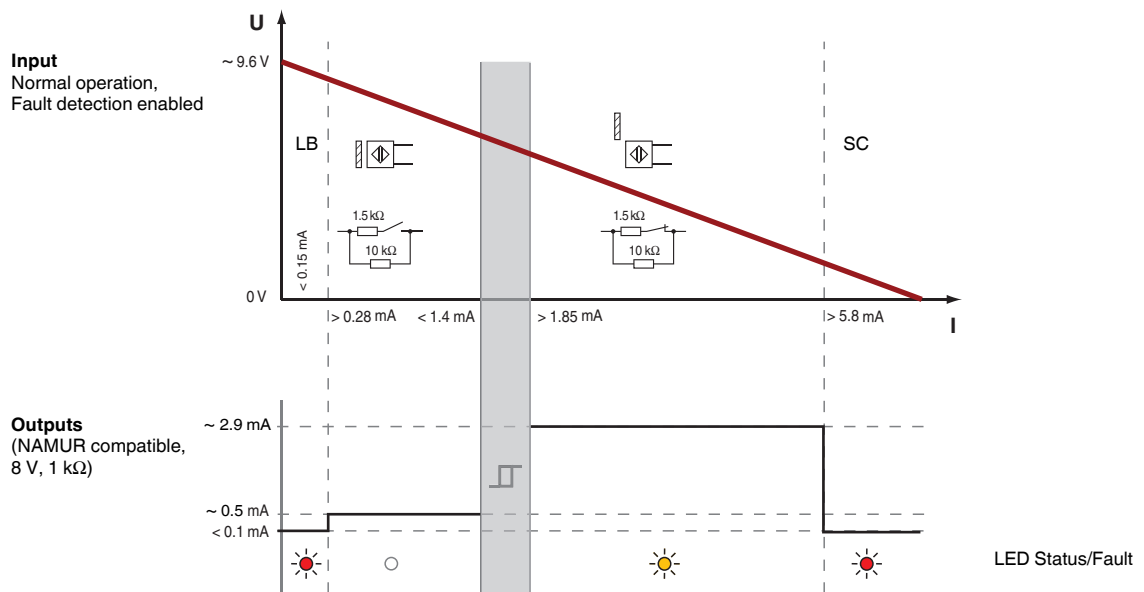
S	Function	Position	
1	Mode of operation output I, II (active)	with high input current	I
		with low input current	II
2	no function		
3	Line fault detection of the input	ON	I
		OFF	II
4	no function		

**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

**Trip points**



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## 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!*