

**Features**

- 1-channel isolated barrier
- 115 V AC supply
- Dry contact or NAMUR inputs
- Relay contact output
- Line fault detection (LFD)
- Reversible mode of operation
- Up to SIL2 acc. to IEC 61508/IEC 61511

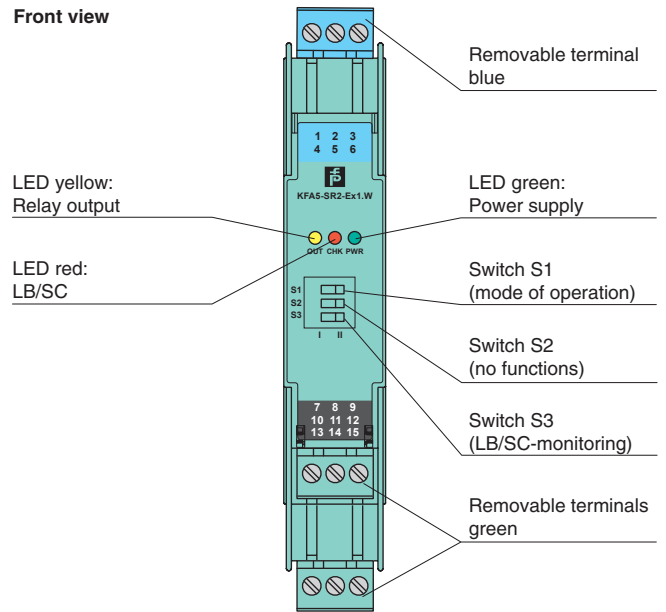
**Function**

This isolated barrier is used for intrinsic safety applications. It transfers digital signals (NAMUR sensors/mechanical contacts) from a hazardous area to a safe area.

The proximity sensor or switch controls a form C changeover relay contact for the safe area load. The barrier output changes state when the input signal changes state. The normal output state can be reversed using switch S1. Switch S3 is used to enable or disable line fault detection of the field circuit.

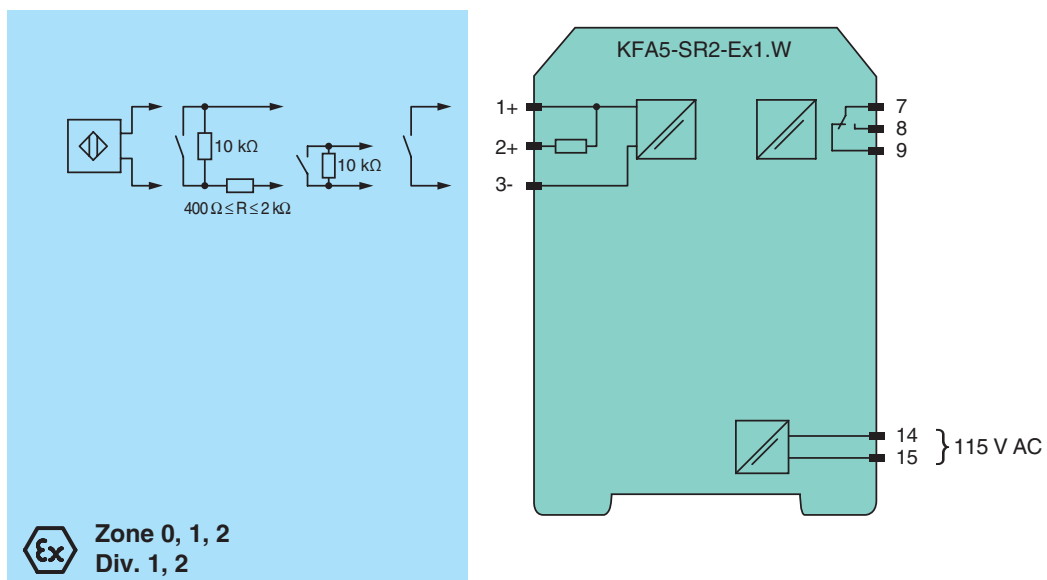
During an error condition, the relay reverts to its de-energized state and the LEDs indicate the fault according to NAMUR NE44.

**Assembly**




**SIL2**

**Connection**



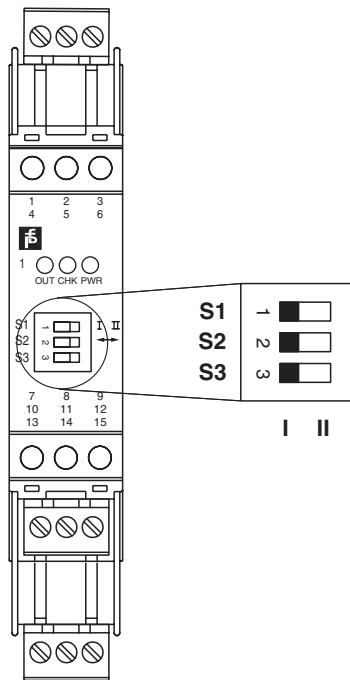
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<b>General specifications</b>		
Signal type		Digital Input
<b>Supply</b>		
Connection		terminals 14, 15
Rated voltage		103.5 ... 126 V AC , 45 ... 65 Hz
Power consumption		1 W
<b>Input</b>		
Connection		terminals 1+, 2+, 3-
Rated values		acc. to EN 60947-5-6 (NAMUR)
Open circuit voltage/short-circuit current		approx. 8 V DC / approx. 8 mA
Switching point/switching hysteresis		1.2 ... 2.1 mA / approx. 0.2 mA
Line fault detection		breakage $I \leq 0.1$ mA , short-circuit $I > 6$ mA
Pulse/Pause ratio		$\geq 20$ ms / $\geq 20$ ms
<b>Output</b>		
Connection		terminals 7, 8, 9
Output		signal, relay
Contact loading		253 V AC/2 A/cos $\phi > 0.7$ ; 126.5 V AC/4 A/cos $\phi > 0.7$ ; 40 V DC/2 A resistive load
Energized/De-energized delay		approx. 20 ms / approx. 20 ms
Mechanical life		$10^7$ switching cycles
<b>Transfer characteristics</b>		
Switching frequency		< 10 Hz
<b>Electrical isolation</b>		
Input/Output		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Input/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Low voltage		
Directive 2006/95/EC		EN 61010-1:2010
<b>Conformity</b>		
Electromagnetic compatibility		NE 21:2006
Protection degree		IEC 60529:2001
Input		EN 60947-5-6:2000
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Protection degree		IP20
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
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		PTB 00 ATEX 2081 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection		 II (1) G [Ex ia] IIC, II (1) D [Ex ia] IIIC
Input		[Ex ia] IIC, [Ex ia] IIIC
Voltage	U <sub>o</sub>	10.6 V
Current	I <sub>o</sub>	19.1 mA
Power	P <sub>o</sub>	51 mW (linear characteristic)
<b>Supply</b>		
Maximum safe voltage	U <sub>m</sub>	126.5 V AC (Attention! U <sub>m</sub> is no rated voltage.)
<b>Output</b>		
Contact loading		253 V AC/2 A/cos $\phi > 0.7$ ; 126.5 V AC/4 A/cos $\phi > 0.7$ ; 40 V DC/2 A resistive load
Maximum safe voltage	U <sub>m</sub>	253 V AC (Attention! The rated voltage can be lower.)
<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
<b>Directive conformity</b>		
Directive 94/9/EC		EN 60079-0:2009, EN 60079-11:2007 , EN 61241-11:2006
<b>International approvals</b>		
<b>FM approval</b>		
Control drawing		116-0035
<b>UL approval</b>		
Control drawing		116-0145
<b>CSA approval</b>		

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Control drawing	116-0047
IECEX approval	IECEX PTB 11.0031
Approved for	[Ex ia] IIC , [Ex ia] IIIC , [Ex ia] 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> .

**Configuration**



**Switch position**

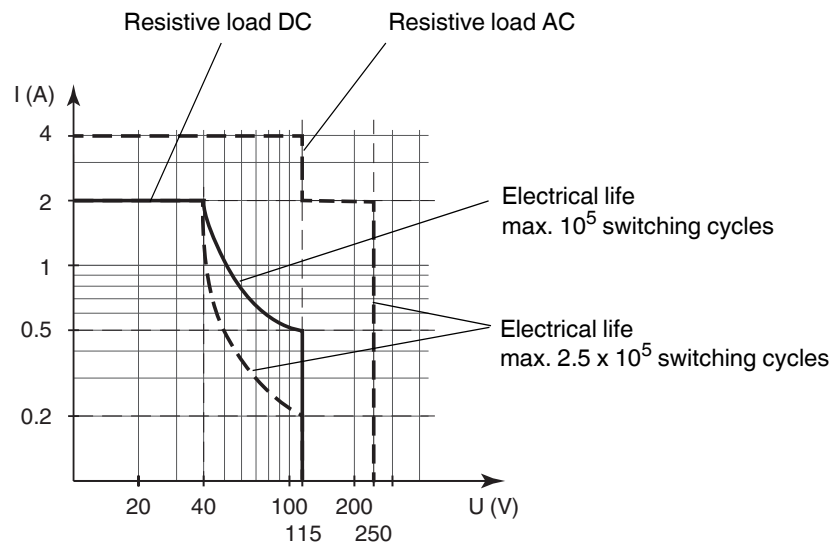
S	Function		Position
1	Mode of operation Output I (relay) energized	with high input current	I
		with low input current	II
2	no function		
3	Line fault detection	ON	I
		OFF	II

**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 and 3 in position I

**Maximum switching power of output contacts**



The maximum number of switching cycles is depending on the electrical load and may be higher when reduced currents and voltages are applied.