

Features

- 2-channel isolated barrier
- 115 V AC supply
- Dry contact or NAMUR inputs
- Isolated passive transistor output, non-polarized
- Line fault detection (LFD)
- Reversible mode of operation
- Up to SIL2 acc. to IEC 61508

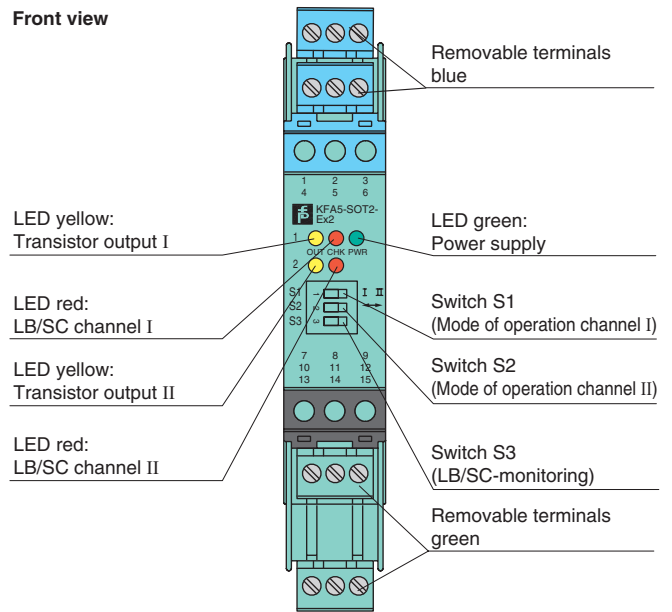
Function

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.

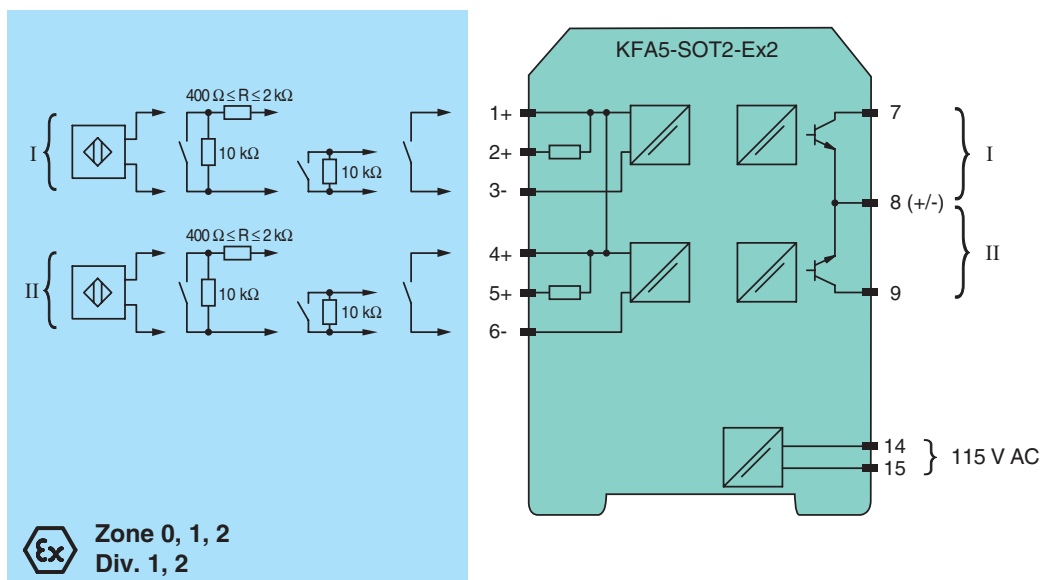
Each proximity sensor or switch controls a passive transistor output for the safe area load. The normal output state can be reversed using switch S1 for channel I and switch S2 for channel II. Switch S3 enables or disables line fault detection of the field circuit.

During an error condition, the transistors revert to their de-energized state and LEDs indicate the fault according to NAMUR NE44.

Assembly



Connection

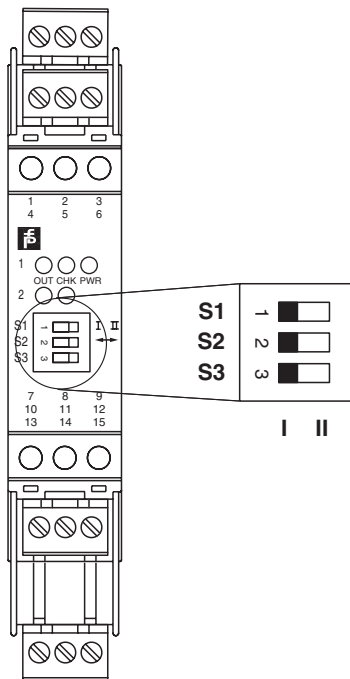


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General specifications	
Signal type	Digital input
Supply	
Connection	terminals 14, 15
Rated voltage	103.5 ... 126.5 V AC
Power loss	1 W
Power consumption	≤ 1.5 W
Input	
Connection	terminals 1+, 2+, 3-; 4+, 5+, 6-
Rated values	acc. to EN 60947-5-6 (NAMUR), see system description for electrical data
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
Lead monitoring	breakage I ≤ 0.1 mA , short-circuit I > 6 mA
Output	
Connection	output I: terminals 7, 8 ; output II: terminals 8, 9
Signal level	1-signal: (external voltage) - 2.5 V max. for 10 mA or 3 V max. for 100 mA (100 mA, short-circuit proof) 0-signal: switched off (off-state current ≤ 10 µA)
Output I, II	signal ; electronic output, passive
Transfer characteristics	
Switching frequency	≤ 5 kHz
Electrical isolation	
Output/power supply	reinforced insulation acc. to IEC 61140, rated insulation voltage 300 V _{rms}
Output/output	not available
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EEC	EN 61326, EN 50081-2
Conformity	
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Protection against electric shock	IEC 61140
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
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
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	PTB 98 ATEX 2164 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input	EEx ia IIC
Voltage U _o	10.5 V
Current I _o	13 mA
Power P _o	34 mW (linear characteristic)
Supply	
Safety maximum voltage U _m	253 V AC (Attention! U _m is no rated voltage.)
Output	
Safety maximum voltage U _m	253 V AC (Attention! The rated voltage can be lower.)
Electrical isolation	
Input/input	not available
Input/output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 50014, EN 50020
International approvals	
FM approval	
Control drawing	116-0035
UL approval	
Control drawing	116-0145
CSA approval	
Control drawing	116-0047
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .

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Configuration



Switch position

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	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