



Switch Amplifier KFA6-SR2-Ex2.W.IR

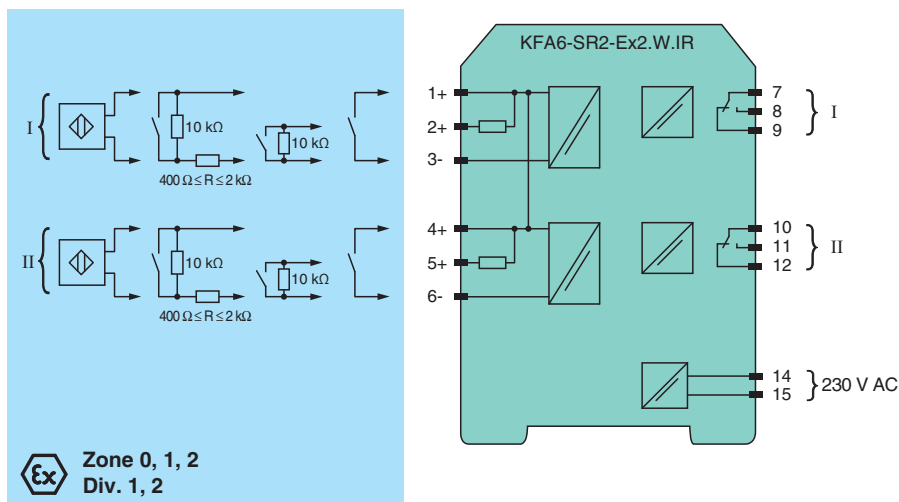
- 2-channel isolated barrier
- 230 V AC supply
- Dry contact or NAMUR inputs
- Latching relay contact output
- Line fault detection (LFD)



Function

This isolated barrier is used for intrinsic safety applications.
The device is used for level control, pump control and other switching applications.
The device transfers digital signals from NAMUR sensors or dry contacts from the hazardous area to the non-hazardous area.
The device is easily configured by the use of DIP switches.
A fault is signaled by LEDs.

Connection



Technical Data

General specifications

Signal type	Digital Input
Supply	
Connection	terminals 14, 15
Rated voltage	U_r 207 ... 253 V AC, 45 ... 65 Hz
Power consumption	max. 1.5 W
Input	
Connection side	field side
Connection	terminals 1+, 2+, 3-; 4+, 5+, 6-
Rated values	acc. to EN 60947-5-6 (NAMUR)
Open circuit voltage/short-circuit current	approx. 8 V DC / approx. 8 mA

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

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Technical Data

Line fault detection	breakage I ≤ 0.1 mA , short-circuit I > 6 mA	
Pulse/Pause ratio		min. 10 ms / min. 10 ms
Output		
Connection side		control side
Connection		output I: terminals 7, 8, 9 ; output II: terminals 10, 11, 12
Output I, II		signal ; relay
Contact loading		253 V AC/2 A/cos φ > 0.7; 126.5 V AC/4 A/cos φ > 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
Transfer characteristics		
Switching frequency		≤ 10 Hz
Galvanic isolation		
Input/Output		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Input/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Output/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Output/Output		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Indicators/settings		
Display elements		LEDs
Labeling		space for labeling at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Low voltage		
Directive 2014/35/EU		EN 61010-1:2010
Conformity		
Electromagnetic compatibility		NE 21:2006
Degree of protection		IEC 60529:2001
Input		EN 60947-5-6:2000
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) (W x H x D) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-type examination certificate		PTB 00 ATEX 2081
Marking		Ⓔ 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	10.6 V
Current	I _o	19.1 mA
Power	P _o	51 mW (linear characteristic)
Supply		
Maximum safe voltage	U _m	253 V AC (Attention! U _m is no rated voltage.)
Output		
Contact loading		253 V AC/2 A/cos φ > 0.7; 126.5 V AC/4 A/cos φ > 0.7; 40 V DC/2 A resistive load
Maximum safe voltage	U _m	253 V AC (Attention! The rated voltage can be lower.)
Galvanic isolation		
Input/input		not available
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

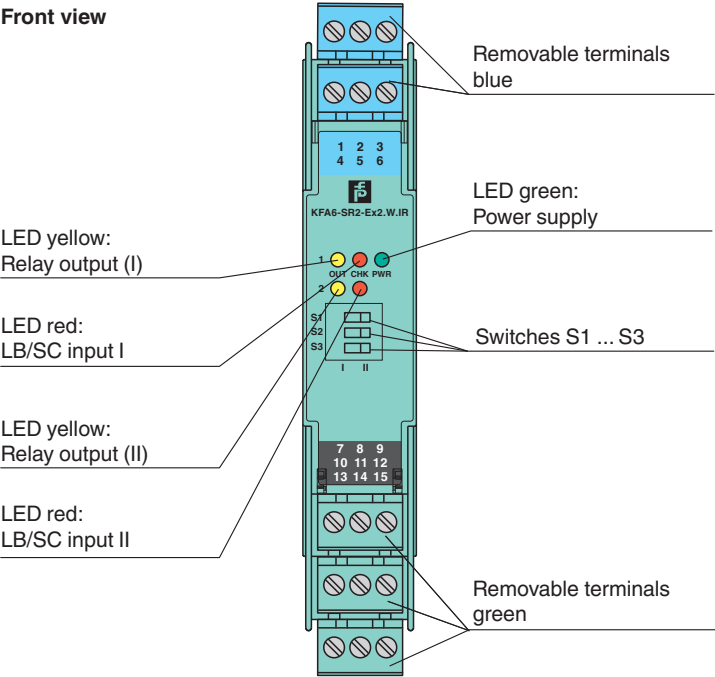
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Technical Data

Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012
International approvals		
FM approval		
Control drawing		116-0035
UL approval		
Control drawing		116-0145
CSA approval		
Control drawing		116-0047
IECEEx approval		
IECEEx certificate		IECEEx PTB 11.0031
IECEEx marking		[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I
General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



Matching System Components

	K-DUCT-BU	Profile rail, wiring comb field side, blue
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Accessories

	F-NR3-Ex1	NAMUR Resistor Network
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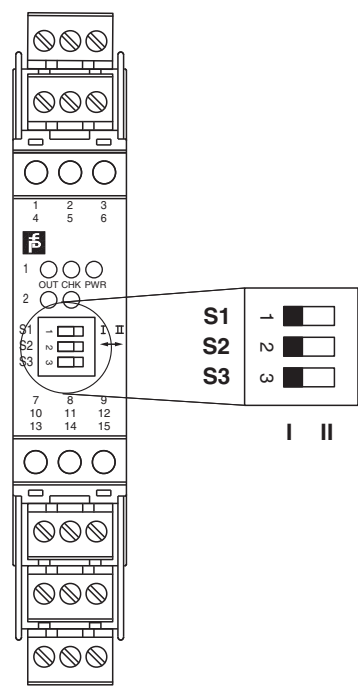
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Accessories

	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue
	KF-CP	Red coding pins, packaging unit: 20 x 6

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Configuration



Switch position

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

Operating states

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 setting: switch 1, 2 and 3 in position I

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