

Features

- 2-channel signal conditioner
- 24 V DC supply (Power Rail)
- Dry contact or NAMUR inputs
- Usable as signal splitter (1 input and 2 outputs)
- 2 x 2 relay contact outputs with AND logic
- Line fault detection (LFD)
- Reversible mode of operation
- Up to SIL 2 acc. to IEC 61508/IEC 61511

Function

This signal conditioner provides the galvanic isolation between field circuits and control circuits.

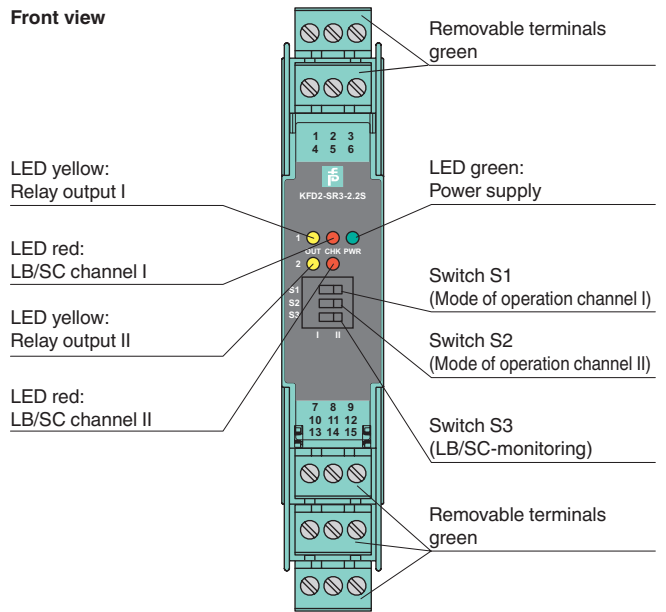
The device transfers digital signals (NAMUR sensors or dry contacts) from the field to the control system.

Each input controls a relay contact 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.

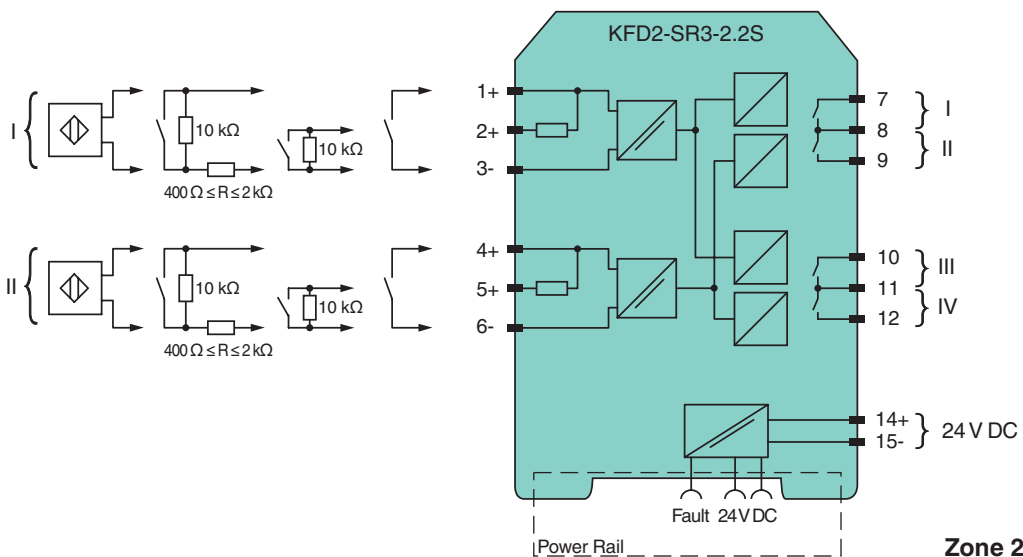
Assembly



CE

SIL 2

Connection



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

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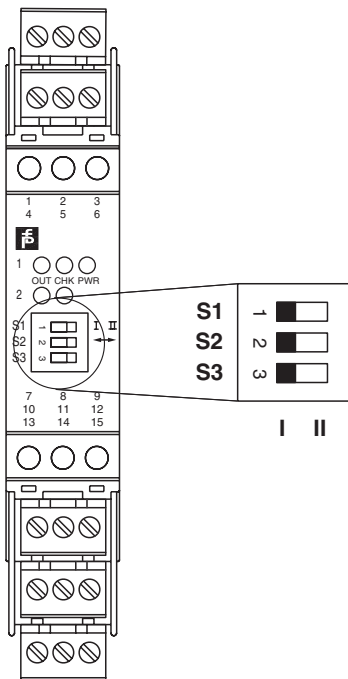
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General specifications		
Signal type		Digital Input
Supply		
Connection		Power Rail or terminals 14+, 15-
Rated voltage	U_r	19 ... 30 V DC
Ripple		≤ 10 %
Rated current	I_r	30 ... 20 mA
Power consumption		< 600 mW
Input		
Connection		terminals 1+, 2+, 3-; 4+, 5+, 6-
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 $I \leq 0.1$ mA , short-circuit $I \geq 6.5$ mA
Pulse/Pause ratio		≥ 20 ms / ≥ 20 ms
Output		
Connection		output I: terminals 7, 8 ; output II: terminals 8, 9 ; output III: terminals 10, 11 ; output IV: terminals 11, 12
Output I, II, III, IV		channel 1, 2; relay
Contact loading		48 V AC/1 A/cos $\phi > 0.7$; 40 V DC/1 A resistive load
Minimum switch current		1 mA / 24 V DC
Energized/De-energized delay		approx. 20 ms / approx. 20 ms
Mechanical life		10 ⁸ switching cycles
Collective error message		Power Rail
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		basic insulation according to IEC/EN 61010-1, rated insulation voltage 32 V _{eff} , functional insulation, rated insulation voltage 50 V _{eff}
Output/Output		basic insulation according to IEC/EN 61010-1, rated insulation voltage 32 V _{eff} , functional insulation, rated insulation voltage 50 V _{eff}
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2012 , EN 61326-3-2:2008
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
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 inch) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
Certificate		PF 16 CERT 3903 X
Marking		⊕ II 3G Ex nA nC IIC T4 Gc
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-15:2010
International approvals		
IECEX approval		IECEX EXA 16.0001X
Approved for		Ex nA nC IIC T4 Gc
General information		
Supplementary information		Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com .
Accessories		
Optional accessories		power feed module KFD2-EB2 Universal Power Rail UPR-03 Universal Power Rail UPR-03-S profile rail K-DUCT-BU profile rail K-DUCT-UPR-03

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Configuration



Switch position

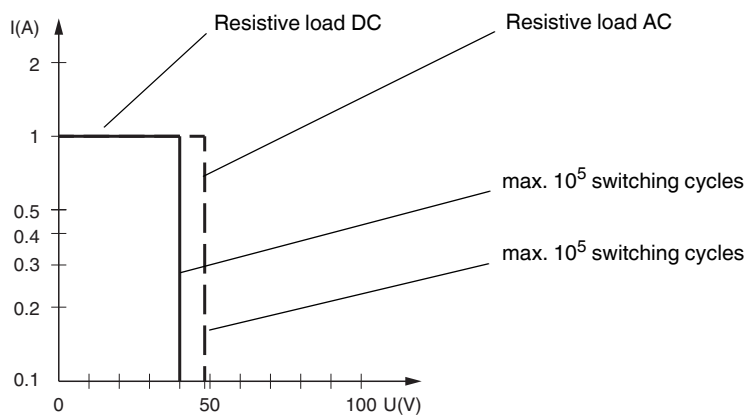
S	Function		Position
1	Mode of operation Channel I (relay) energized	with high input current	I
		with low input current	II
2	Mode of operation Channel II (relay) energized	with high input current	I
		with low input current	II
3	Line fault detection	ON	I
		OFF	II

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

Maximal Switching Power of Output Contacts



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