

Features

- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Fail-safe relay contact output for de-energized and energized to safe function
- Logic input 20 V DC ... 26.5 V DC, non-polarized
- Test pulse immunity
- Up to SIL3 acc. to IEC 61508

Function

This signal conditioner is a relay module that is suitable for safely switching applications of a load circuit. The device isolates load circuits up to 230 V and the 24 V control interface.

The energized to safe (ETS) function is permitted for SIL3 applications with output I. The de-energized to safe (DTS) function is permitted for SIL3 applications with output II. Additionally a dual pole switching (DPS) is possible by combination of output I and II.

The relays are of diverse design, but have a common effect on the individual switch output. For checking of these relays, terminals 10, 11 and 12 can be used. The test mode will be indicated by LEDs according to NAMUR NE44.

The outputs are galvanically isolated from the input. Output II is protected against contact welding by a fuse depending on the used terminal.

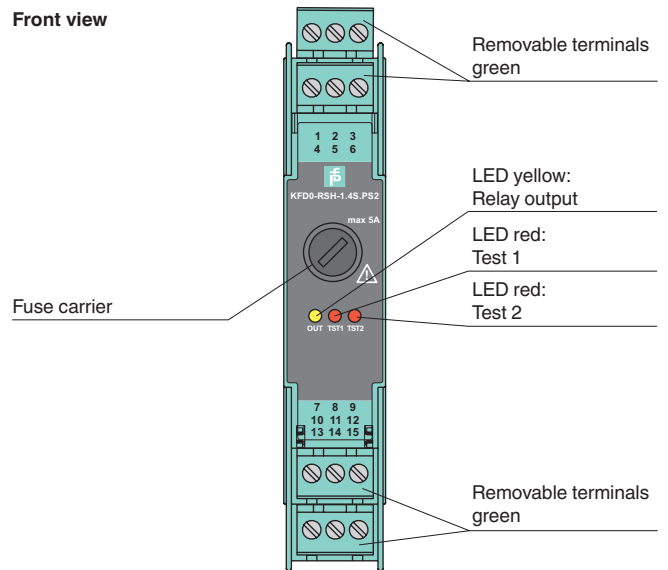
Application

This device is compatible to the controls:

- Yokogawa ProSafe DO cards SDV531, SDV541
- Honeywell DO card SDO-0824

Compatibility check to other ESD/DCS systems on request.

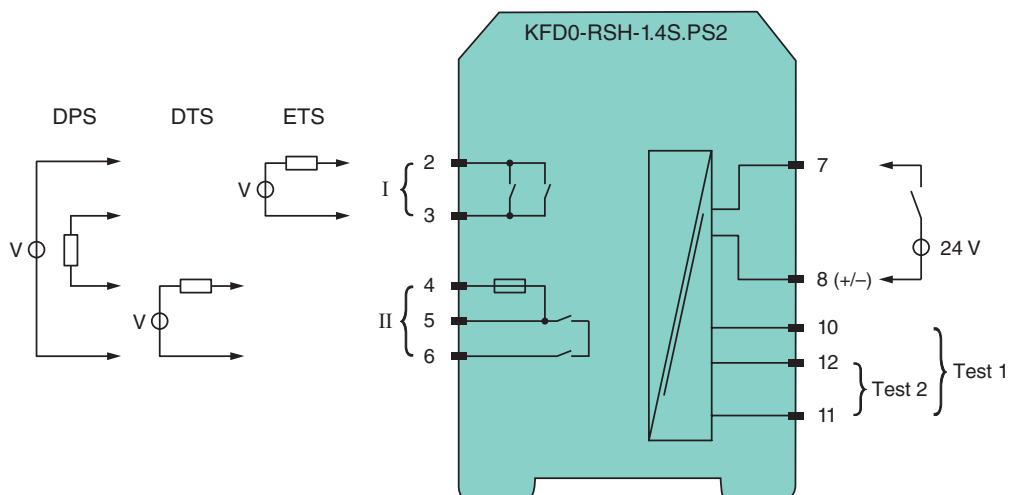
Assembly



SIL3



Connection

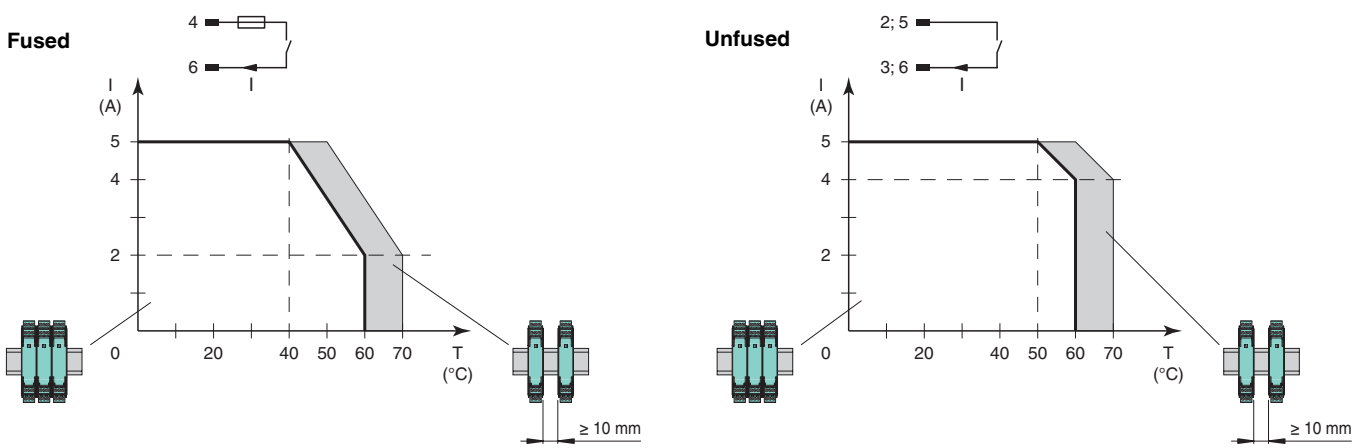


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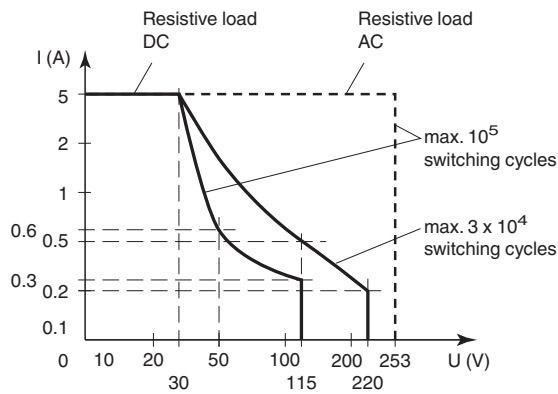
General specifications	
Signal type	Digital Output
Supply	
Power loss	< 1.5 W
Power consumption	< 1.5 W
Input	
Connection	Input terminals 7, 8 ; test input terminals 10, 11, 12
Pulse/Pause ratio	≥ 20 ms / ≥ 20 ms
Test input	see Safety Manual
Signal level	0-signal: -3 ... 3 V DC 1-signal: 20 ... 26.5 V
Rated current I_n	45 ... 50 mA
Output	
Connection	output I (ETS): terminals 2, 3 output II (DTS): terminals 4, 5, 6 output I and II (DPS): terminals 2, 3, 4, 5, 6
Contact loading	253 V AC/5 A/cos φ 0.7; 30 V DC/5 A resistive load
Minimum switch current	2 mA / 24 V DC
Energized/De-energized delay	approx. 10 ms / approx. 5 ms
Mechanical life	5 x 10 ⁶ switching cycles
Fuse rating	2.5 A (max. 5 A) recommended maximum utilization of the fuse: 80 %
Transfer characteristics	
Switching frequency	< 10 Hz
Electrical isolation	
Input/Output	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}
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Low voltage	
Directive 2006/95/EC	EN 61010-1:2010
Conformity	
Electromagnetic compatibility	NE 21:2006
Degree of protection	IEC 60529:2001
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Degree of protection	IP20
Mass	approx. 100 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
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 .

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Derating



Maximal switching power of output contacts



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

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