

Features

- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Logic input 19 V DC ... 26.5 V DC, non-polarized
- Relay contact output for energized to safe function
- Test pulse immunity
- Up to SIL 3 acc. to IEC 61508

Function

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

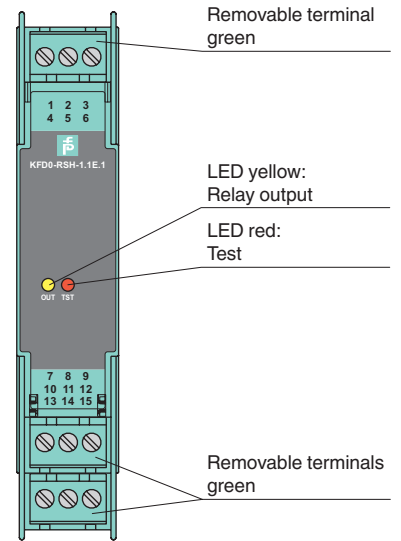
The device is a relay module that is suitable for safely switching applications of a load circuit. The device isolates load circuits up to 230 V and the 24 V control circuit.

The energized to safe (ETS) function is permitted for SIL 3 applications.

For testing of the relays, test terminals can be used. The test mode will be indicated by a LED according to NAMUR NE44.

Assembly

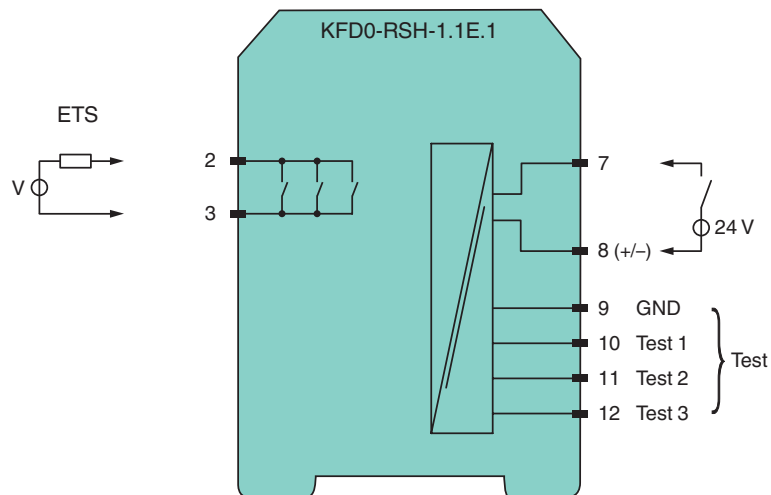
Front view



CE

SIL 3

Connection



Zone 2

Release date 2018-05-08 08:09 Date of issue 2018-05-08 274889_eng.xml

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

Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

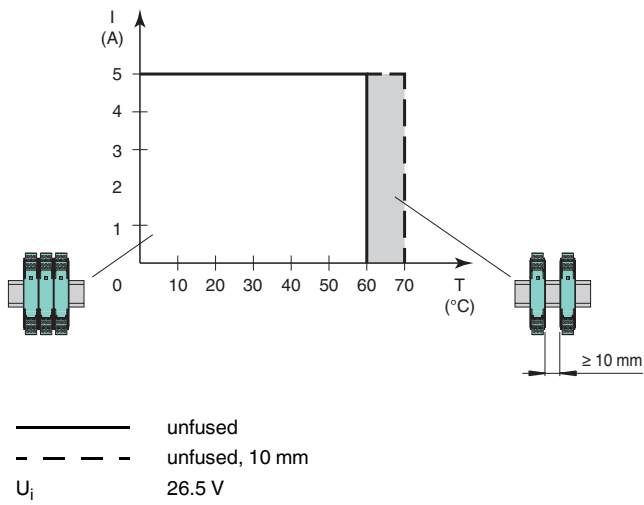
Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

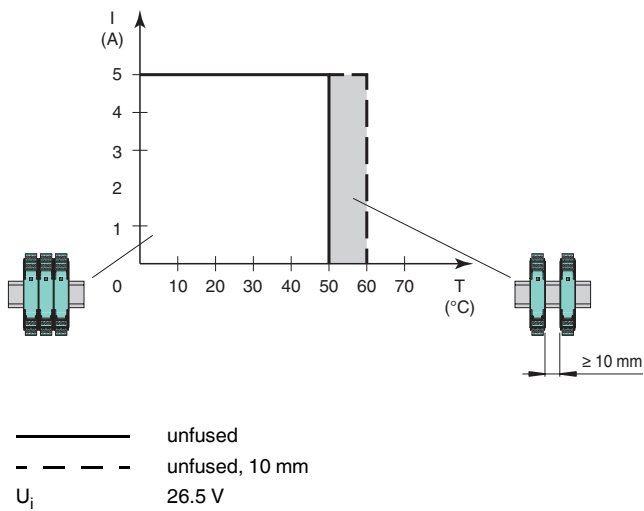
General specifications	
Signal type	Digital Output
Functional safety related parameters	
Safety Integrity Level (SIL)	SIL 3
Supply	
Connection	loop powered
Rated voltage U_r	19 ... 30 V DC loop powered
Power dissipation	< 1.5 W
Power consumption	< 1.5 W
Input	
Connection side	control side
Connection	Input terminals 7, 8 ; test input terminals 9, 10, 11, 12
Pulse/Pause ratio	150 ms / 150 ms
Test pulse length	≤ 4 ms from DO card
Test input	see Functional Safety Manual
Signal level	0-signal: -5 ... 5 V 1-signal: 19 ... 26.5 V
Rated current I_r	0-signal: typ. 1.6 mA at 1.5 V DC; typ. 8 mA at 3 V DC (maximum leakage current DO card) 1-signal: ≥ 36 mA (minimum load current DO card)
Output	
Connection side	field side
Connection	terminals 2, 3
Contact loading	253 V AC/5 A/cos φ 0.7; 30 V DC/5 A resistive load 253 V AC / 1/2 HP
Minimum switch current	10 mA / 24 V DC
Energized/De-energized delay	150 ms / 150 ms
Mechanical life	5 x 10 ⁶ switching cycles
Transfer characteristics	
Switching frequency	< 3 Hz
Galvanic isolation	
Input/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 21:2012 , EN 61326-3-1:2008 , EN 61326-3-2:2008
Degree of protection	IEC 60529:2013
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F) Observe the temperature range limited by derating, see section derating.
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals
Mass	approx. 120 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 15 CERT 3933 X
Marking	⊕ II 3G Ex nC ec IIC T4 Gc [device in zone 2]
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-7:2015 , EN 60079-15:2010
International approvals	
UL approval	E106378
General information	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Release date 2018-05-08 08:09 Date of issue 2018-05-08 274889_eng.xml

Derating



Derating for Zone 2 Application



Release date 2018-05-08 08:09 Date of issue 2018-05-08 274889_eng.xml

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

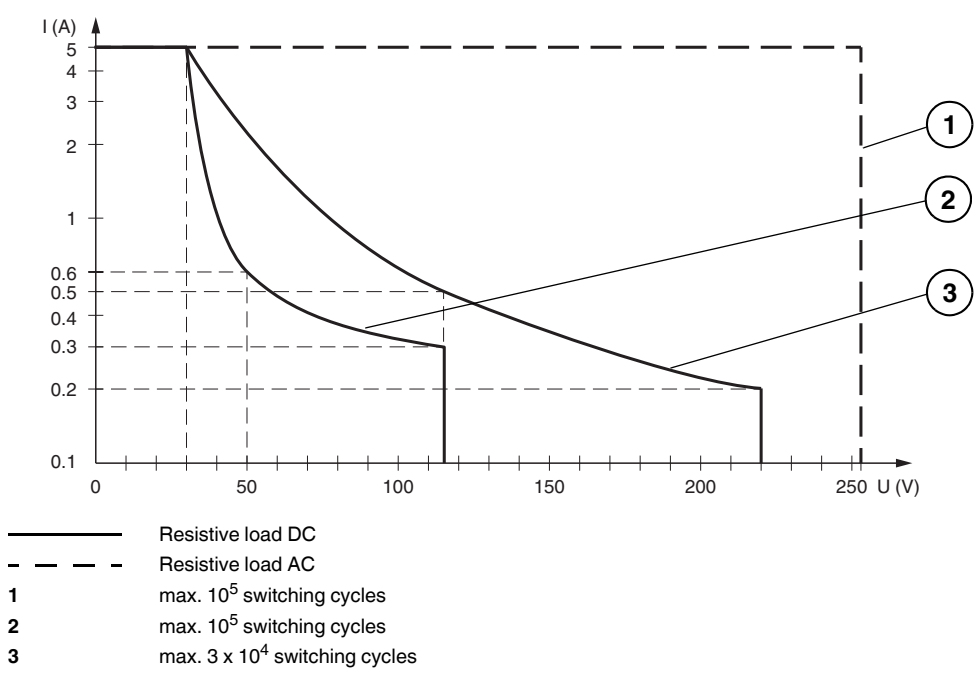
Pepperl+Fuchs Group
www.pepperl-fuchs.com

USA: +1 330 486 0002
pa-info@us.pepperl-fuchs.com

Germany: +49 621 776 2222
pa-info@de.pepperl-fuchs.com

Singapore: +65 6779 9091
pa-info@sg.pepperl-fuchs.com

Maximum Switching Power of Output Contacts



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

Release date 2018-05-08 08:09 Date of issue 2018-05-08 274889_eng.xml