

**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.

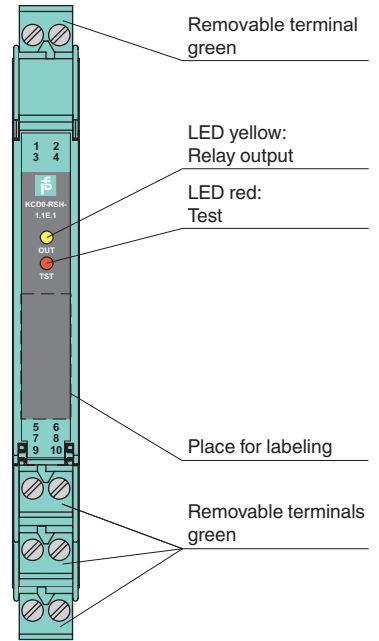
The device is a relay module that is suitable for safely switching applications of a load circuit. The device isolates load circuits up to 230 V and the 24 V control circuit.

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**

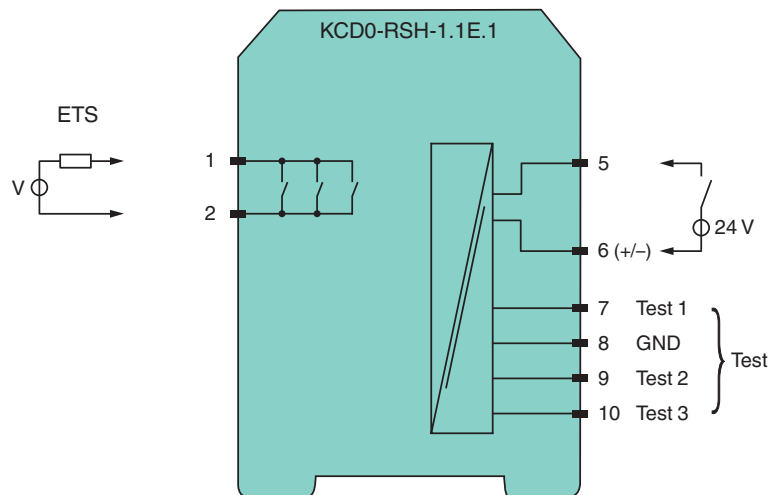
Front view



CE

SIL 3

**Connection**



Zone 2

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

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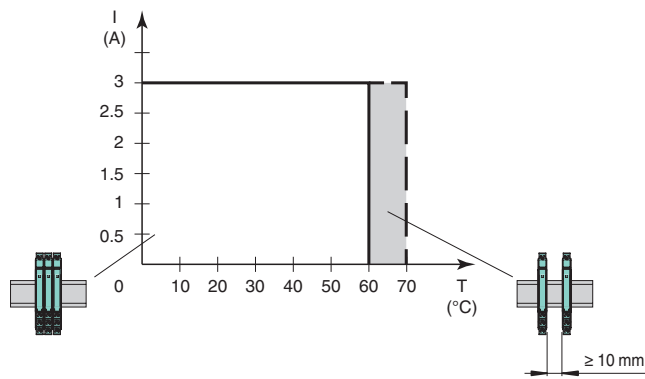
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<b>General specifications</b>	
Signal type	Digital Output
<b>Functional safety related parameters</b>	
Safety Integrity Level (SIL)	SIL 3
<b>Supply</b>	
Connection	loop powered
Rated voltage $U_r$	19 ... 30 V DC loop powered
Power dissipation	< 1.5 W
Power consumption	< 1.5 W
<b>Input</b>	
Connection side	control side
Connection	Input terminals 5, 6 ; test input terminals 7, 8, 9, 10
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)
<b>Output</b>	
Connection side	field side
Connection	terminals 1, 2
Contact loading	253 V AC/3 A/cos φ 0.7; 30 V DC/3 A resistive load 253 V AC / 1/8 HP
Minimum switch current	10 mA / 24 V DC
Energized/De-energized delay	150 ms / 150 ms
Mechanical life	5 x 10 <sup>6</sup> switching cycles
<b>Transfer characteristics</b>	
Switching frequency	< 3 Hz
<b>Galvanic isolation</b>	
Input/Output	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>	
Display elements	LEDs
Labeling	space for labeling at the front
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
<b>Conformity</b>	
Electromagnetic compatibility	NE 21:2012 , EN 61326-3-1:2008 , EN 61326-3-2:2008
Degree of protection	IEC 60529:2013
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F) Observe the temperature range limited by derating, see section derating.
<b>Mechanical specifications</b>	
Degree of protection	IP20
Connection	screw terminals
Mass	approx. 100 g
Dimensions	12.5 x 114 x 119 mm (0.5 x 4.5 x 4.7 inch) , housing type A2
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
<b>Data for application in connection with hazardous areas</b>	
Certificate	PF 15 CERT 3932 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
<b>International approvals</b>	
UL approval	E106378
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

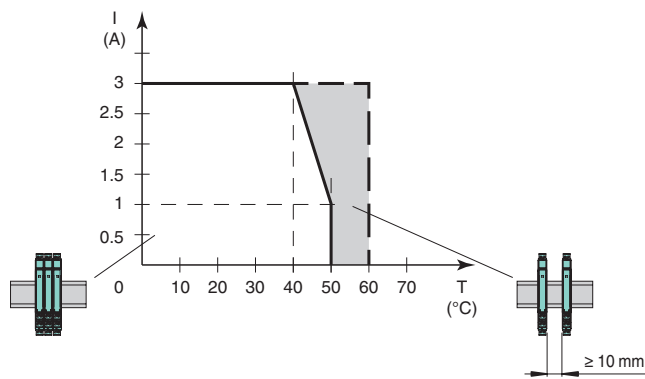
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**Derating**



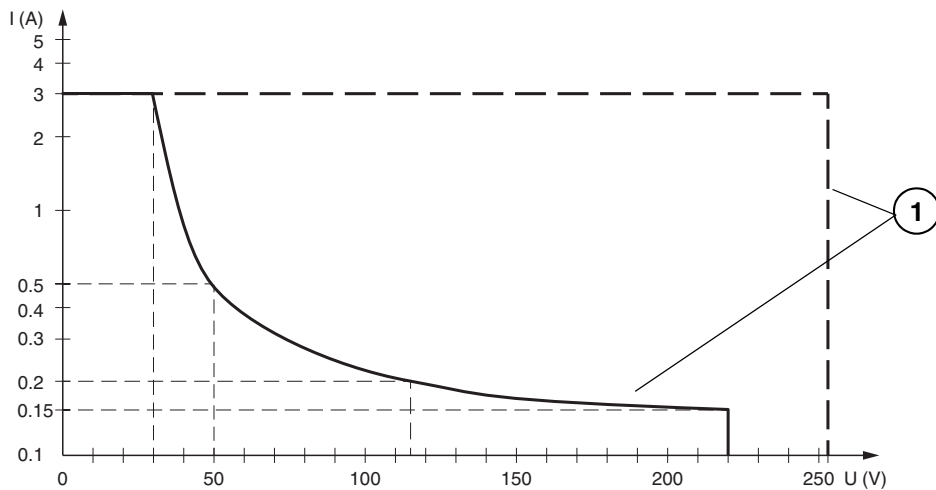
— unfused  
 - - - unfused, 10 mm  
 $U_i$  26.5 V

**Derating for Zone 2 Application**



— unfused  
 - - - unfused, 10 mm  
 $U_i$  26.5 V

**Maximum Switching Power of Output Contacts**



— Resistive load DC  
 - - - Resistive load AC  
**1** max.  $3 \times 10^4$  switching cycles

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