

## Relay Module

### KFD0-RSH-1-Y2

- 1-channel signal conditioner
- 24 V DC supply (loop powered)
- Logic input 20 V DC ... 30 V DC, non-polarized
- Fail-safe relay contact output
- Test pulse immunity
- Up to SIL 3 acc. to IEC/EN 61508

# CE SIL3

## 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 output is galvanically isolated from the input and is protected against contact welding by a fuse. The three relays are of diverse design, but have a common effect on the switch output.

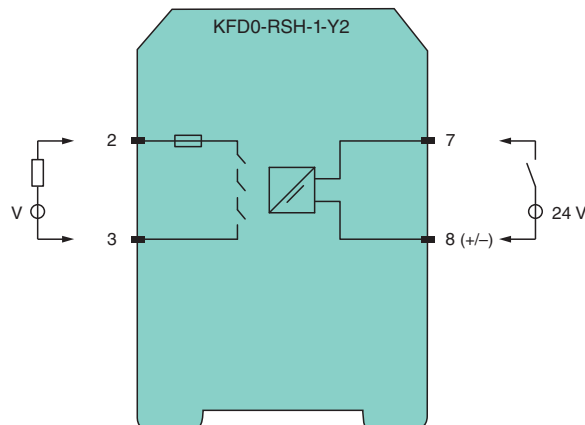
## Application

This device is compatible to the controls:

- Invensys Tricon DO cards 3604, 3624 und 3664
- Invensys Trident DO card DO3401

Compatibility check to other ESD/DCS systems on request.

## Connection



## Technical Data

### General specifications

Signal type Digital Output

### Functional safety related parameters

Safety Integrity Level (SIL) SIL 3

### Supply

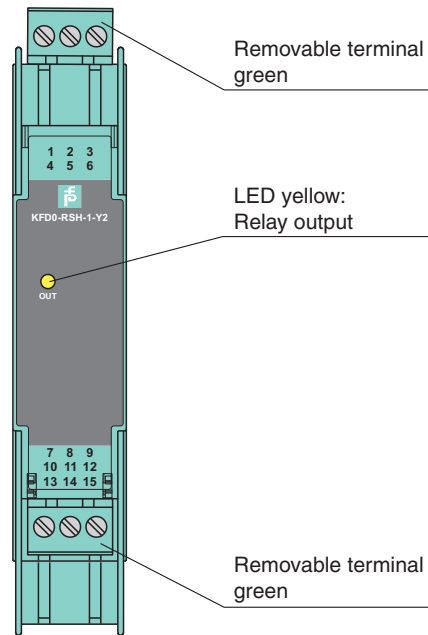
Rated voltage  $U_r$  0-signal: 0 ... 5 V DC , loop powered  
1-signal: 16 ... 30 V DC , loop powered

## Technical Data


Power dissipation		< 1.5 W
Power consumption		< 1.5 W
<b>Input</b>		
Connection side		control side
Connection		terminals 7, 8
Pulse/Pause ratio		min. 35 ms / min. 35 ms
Pulse/Pause ratio test pulse		< 10 %
Test pulse length		max. 2 ms
Signal level		0-signal: 0 ... 5 V DC 1-signal: 20 ... 30 V
Rated current	$I_r$	approx. 58 mA
<b>Output</b>		
Connection side		field side
Connection		terminals 2, 3
Contact loading		230 V AC/2 A/cos $\phi$ 0.7; 40 V DC/2 A resistive load
Minimum switch current		2 mA / 24 V DC
Energized/De-energized delay		5 ... 15 ms / 5 ... 10 ms
Mechanical life		5 x 10 <sup>6</sup> switching cycles
Electrical life		2 x 10 <sup>5</sup> switching cycles , at maximum load
Fuse rating		2.5 A recommended maximum utilization of the fuse: 80 %
<b>Transfer characteristics</b>		
Switching frequency		< 10 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		LED
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 21:2006
Degree of protection		IEC 60529:2001
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 100 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
<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> .

## Assembly



Front view



## Matching System Components

	<b>K-DUCT-GY</b>	Profile rail, wiring comb field side, gray
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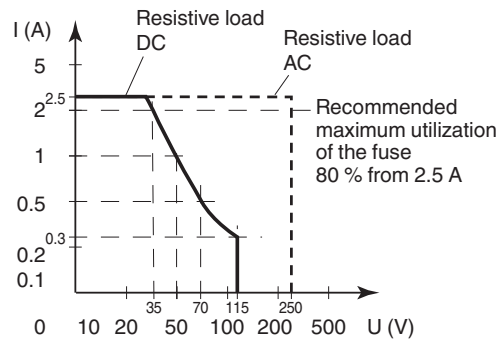
## Accessories

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

Release date: 2023-06-01 Date of issue: 2023-06-01 Filename: 215438\_eng.pdf

# Characteristic Curve

## Maximal switching power of the output



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

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