Features

- 2-channel
- Device installation in Zone 2
- Relay output suitable for EEx ia IIC circuits
- Reliable electrical isolation of the relay contacts from each other and from the other circuits
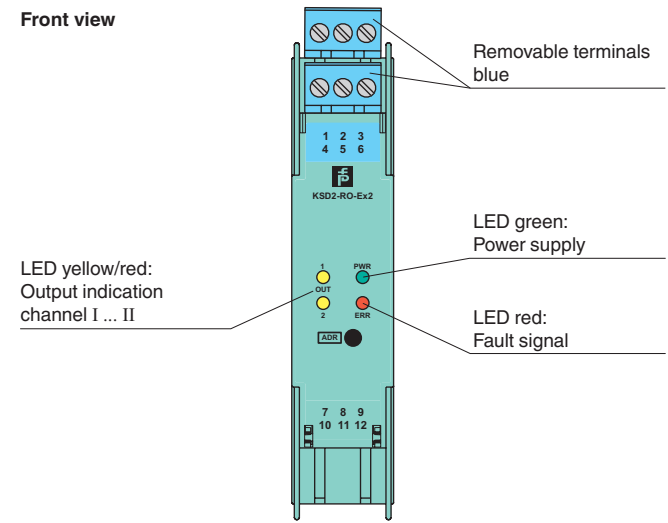- 24 V DC supply voltage
- Power Rail bus
- EMC acc. to NAMUR NE 21

Function

The KSD2-RO-Ex2 allows for switching of 2 field devices. The change-over contacts are galvanically isolated from each other and from the circuit in accordance to EN 50020 and they are suited for controlling intrinsically safe or pressure resistant solenoid valves and alarms in the hazardous area.
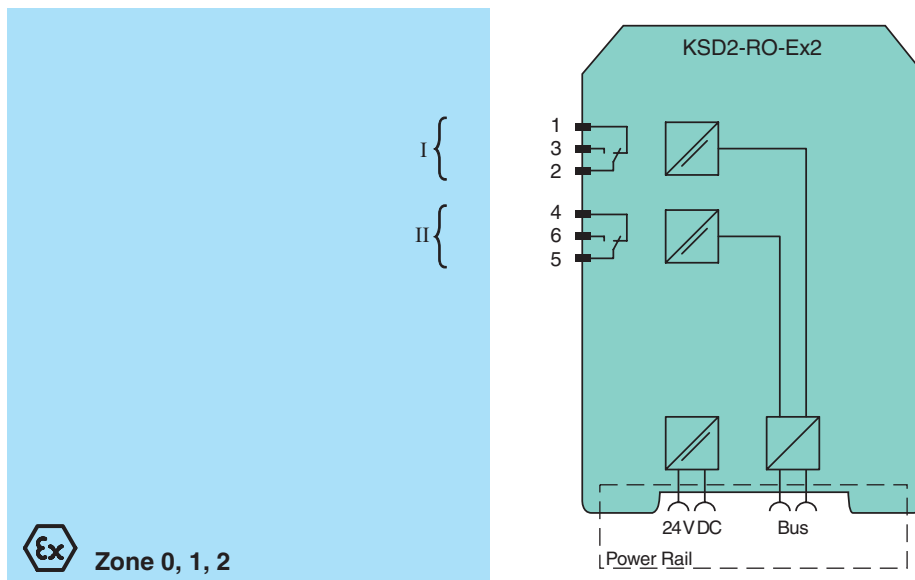
Application

Relay change-over contacts for controlling of non-intrinsically safe devices and valves and intrinsically safe solenoid valves, audible and optical alarms.

Assembly

Front view

Removable terminals blue

KSD2-RO-Ex2

LED green: Power supply

LED yellow/red: Output indication channel I ... II

LED red: Fault signal

Connection

I
II
Zone 0, 1, 2

KSD2-RO-Ex2

1
3
2

4
6
5

24 V DC   Bus

Power Rail

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Release date 2011-04-05 11:03   Date of issue 2011-04-05   189920_ENG.xml

Supply	
Connection	Power Rail
Rated voltage	20 ... 30 V DC
Ripple	< 10 %
Power loss	1 W , increases linear to 1.15 W within the range 25 °C > T > -20 °C
Power consumption	1 W , increases linear to 1.15 W within the range 25 °C > T > -20 °C
Input	
Connection	Power Rail
Interface	CAN protocol via Power Rail bus
Output	
Connection	output I: terminals 1, 2, 3 output II: terminals 4, 5, 6
Output I, II	signal, relay
Mechanical life	10^6 switching cycles
Energized/De-energized delay	approx. 10 ms / approx. 10 ms
Transfer characteristics	
Switching frequency	< 10 Hz
Electrical isolation	
Output I and II	basic insulation according to EN 50178:1997, rated insulation voltage 253 V_{eff}
Output/power supply, internal bus	safe electrical isolation acc. to IEC 60079-11:2007, voltage peak value 375 V
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Conformity	
Insulation coordination	EN 50178:1997
Electrical isolation	EN 60079-11:2007
Electromagnetic compatibility	NE 21:2006
Protection degree	IEC 60529
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications	
Protection degree	IP20
Connection	terminal connection ≤ 2.5 mm^2
Mass	approx. 100 g
Dimensions	20 x 100 x 115 mm (0.8 x 3.9 x 4.5 in)
Mounting	DIN rail mounting
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	BVS 06 ATEX E110 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⟨Ex⟩ II (1)GD [Ex ia] IIC [Ex ia D] ⟨Ex⟩ I (M1) [Ex ia] I
Voltage U_i	60 V
Current I_i	2 A
Power P_i	100 VA
Maximum safe voltage U_m	$U_{i\ output\ I} + U_{i\ output\ II} \leq 60$ V
Supply	Power Rail
Maximum safe voltage U_m	40 V DC (Attention! U_m is no rated voltage.)
Signal	CAN bus (Power Rail)
Maximum safe voltage U_m	60 V DC (Attention! U_m is no rated voltage.)
Statement of conformity	Pepperl+Fuchs
Group, category, type of protection, temperature classification	⟨Ex⟩ II 3G Ex nA nC IIC T4 X
Electrical isolation	
Output/power supply, internal bus	safe electrical isolation acc. to IEC 60079-11:2007, voltage peak value 375 V
Output I, II	safe electrical isolation acc. to EN 60079-11:2007, voltage peak value 60 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2006, EN 60079-11:2007, EN 60079-26:2007 , EN 50303:2000 , IEC 61241-0:2006 , IEC 61241-11:2006
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

Notes

Software functions

Adjustable by the **PACT***ware***™** human machine interface:
- Information on devices may be saved in PC memory

The following are separately adjustable for each channel:
- TAG numbers, 28 alphanumeric characters, can be programmed into device
- Commentary, may be saved in PC memory
- Output inversion
- Malfunction output status
  - relay de-energised
  - relay energised
  - hold last value
- Simulation
  - of the output
  - of the device diagnosis
  - of the process channel diagnosis

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