



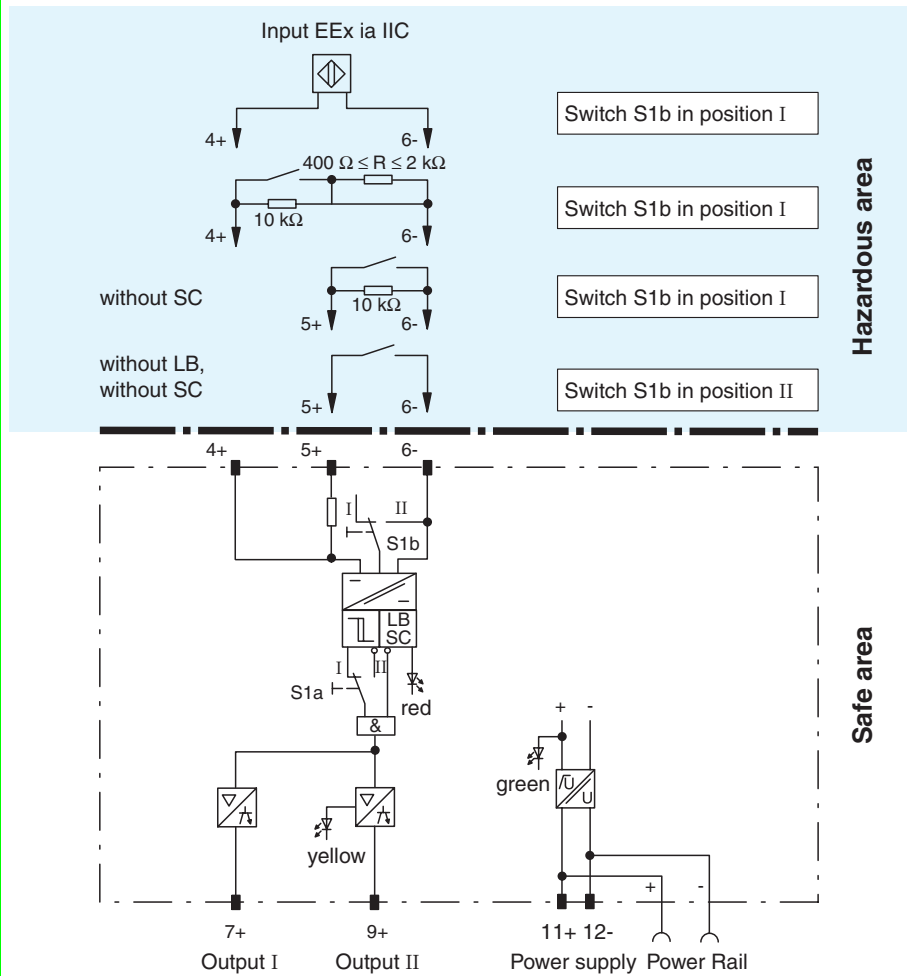
- 1-channel
- Control circuit EEx ia IIC
- 24 V DC nominal supply voltage
- Reversible mode of operation
- Lead breakage (LB) and short-circuit (SC) monitoring
- 2 active electronic outputs
- EMC acc. to NAMUR NE 21

24 V DC

KFD2-ST-Ex1

Successor KFD2-ST2-Ex1.LB

Connection



Composition

Front View

Housing type A2
(see system description)

LED yellow:
Transistor output

LED red:
LB and SC

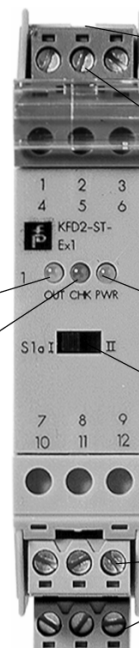
Switch S1b
(LB-monitoring)

Removable terminals
blue

LED green:
Power supply

Switch S1a
(mode of operation)

Removable terminals
green



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General specifications	
Signal type	Digital Input
Supply	
Connection	Power Rail or terminals 11+, 12-
Rated voltage	20 ... 35 V DC
Ripple	≤ 10 %
Rated current	≤ 14 mA
Input	
Connection	terminals 4+, 5+, 6-
Open circuit voltage/short-circuit current	approx. 8 V DC / approx. 8 mA
Switching point/switching hysteresis	1.2 ... 2.1 mA / approx. 0.2 mA
Line fault detection	breakage I ≤ 0.1 mA , short-circuit I > 6 mA
Output	
Connection	output I: terminals 7+ , output II: terminals 9+
Current	100 mA , short-circuit protected
Signal level	Output I/Output II: 1-signal: (L+) -3.5 V / 0-signal: switched off (off-state current ≤ 10 μA)
Output I	electronic output, active
Output II	electronic output, active
Transfer characteristics	
Switching frequency	≤ 5 kHz
Electrical isolation	
Output/power supply	not available
Directive conformity	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
Ambient conditions	
Ambient temperature	-20 ... 65 °C (-4 ... 149 °F)
Mechanical specifications	
Degree of protection	IP20
Mass	approx. 150 g
Data for application in connection with Ex-areas	
EC-Type Examination Certificate	PTB 00 ATEX 2082 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	Ⓔ II (1)GD [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input	EEx ia IIC
Voltage U _o	12.7 V
Current I _o	17.3 mA
Power P _o	55 mW (linear characteristic)
Supply	
Maximum safe voltage U _m	253 V AC / 125 V DC (Attention! U _m is no rated voltage.)
Output	
Maximum safe voltage U _m	60 V AC (Attention! The rated voltage can be lower.)
Electrical isolation	
Input/Output	safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply	safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Directive 94/9/EC	EN 60079-0:2009 , EN 60079-11:2007 , EN 50303:2000

Function

The transformer isolated barrier transfers digital signals from the hazardous area. Sensors per DIN EN 60947-5-6 (NAMUR) and mechanical contacts may be used as alarms. Control circuits are monitored for lead breakage (LB) and short circuit (SC). The external faults are indicated according to NAMUR NE44 by a red flashing LED.

The intrinsically safe input is per DIN EN 50020 safely isolated from the output and the power supply. Both transistor outputs are galvanically connected to each other and the power supply.

Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

Accessories

Power Rail PR-03

Power Rail UPR-03

Power feed module KFD2-EB2...

Using Power Rail PR-03 or UPR-03 the devices are supplied with 24 V DC by means of the power feed modules. If no Power Rails are used, power supply of the individual devices is possible directly via their device terminals.

Each power feed module is used for fusing and monitoring groups with up to 100 individual devices. The Power Rail PR-03 is an inset component for the DIN rail. The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm x 2000 mm. To make electrical contact, the devices are simply engaged.

The Power Rail must not be fed via the device terminals of the individual devices!