

Features

- 4-channel
- Input EEx ia IIC
- Device installation in Zone 2
- 24 V DC supply voltage
- Lead breakage (LB) and short-circuit (SC) monitoring
- Power Rail bus
- EMC acc. to NAMUR NE 21

Function

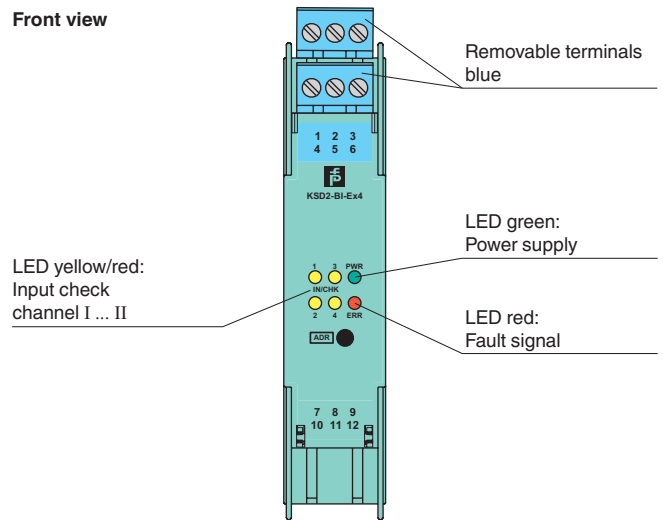
The KSD2-BI-Ex4 transmits digital input signals from the hazardous area into the safe area via the Power Rail bus. Proximity sensors in accordance with EN 60947-5-6 (NAMUR) or mechanical contacts may be used as alarms.

The inputs have a common positive reference and are galvanically isolated from output and power supply in accordance to EN 50020.

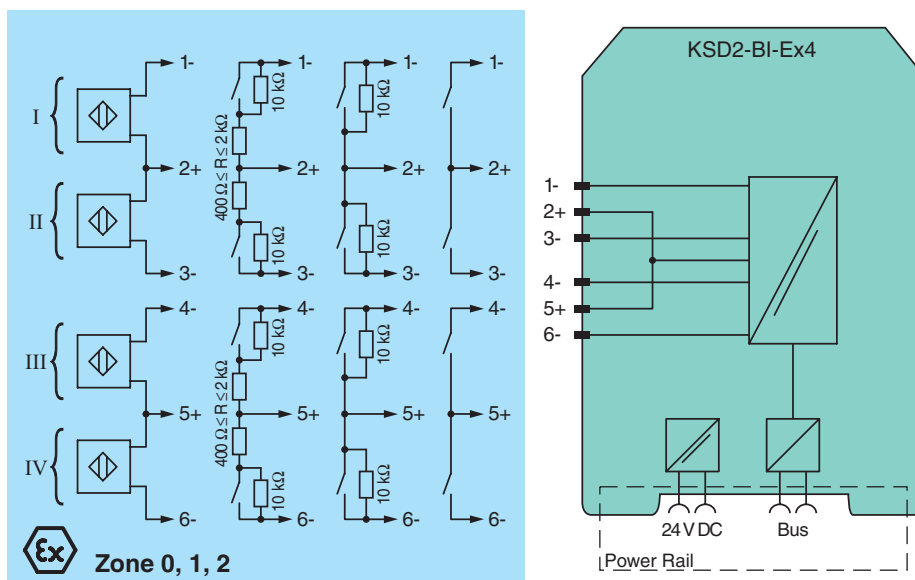
Application

The transfer of digital input signals from proximity switches or dry contacts from the hazardous area to the PLC or the DCS.

Assembly



Connection



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| | |
|---|--|
| Supply | |
| Connection | Power Rail |
| Rated voltage | 20 ... 30 V DC |
| Ripple | < 10 % |
| Power loss | 0.8 W , increase up to 1.0 W in the case of short-circuit on all channels |
| Power consumption | 1 W |
| Input | |
| Connection | terminals 1-, 2+, 3-; 4-, 5+, 6- |
| Rated values | acc. to EN 60947-5-6 (NAMUR) |
| 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 |
| Pulse/Pause ratio | ≥ 20 ms / ≥ 20 ms |
| Lead monitoring | breakage I < 0.1 mA , short-circuit I > 6 mA |
| Output | |
| Interface | CAN protocol via Power Rail bus |
| Connection | Power Rail |
| Transfer characteristics | |
| Switching frequency | ≤ 10 Hz |
| Directive conformity | |
| Electromagnetic compatibility Directive 2004/108/EC | EN 61326-1:2006 |
| Conformity | |
| Insulation coordination | EN 50178:1997 |
| 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 07 ATEX E 066 X , for additional certificates see www.pepperl-fuchs.com |
| Group, category, type of protection | ⊕ II (1)GD [Ex ia] IIC [Ex ia D] ⊕ I (M1) [Ex ia] I |
| Voltage U _o | 9.6 V |
| Current I _o | 16 mA |
| Power P _o | 38 mW (linear characteristic) |
| Statement of conformity | Pepperl+Fuchs |
| Group, category, type of protection, temperature classification | ⊕ II 3G Ex nA II T4 X |
| Electrical isolation | |
| Input/power supply, internal bus | safe electrical isolation acc. to IEC 60079-11:2007, voltage peak value 375 V |
| Directive conformity | |
| Directive 94/9/EC | EN 60079-0:2004, EN 60079-11:2007, EN 60079-26:2004 , EN 50303:2000 , EN 61241-0:2006 , EN 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 . |

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Notes

Software functions

Adjustable by the **PACT_{ware}**TM 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
- Input inversion
- Lead monitoring selectable
- Separate detection and indication of lead breakage and lead short circuit
- Malfunction output status
 - downscale
 - upscale
 - hold last value
- Simulation
 - of the input value
 - of the device diagnosis
 - of the process channel diagnosis