



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

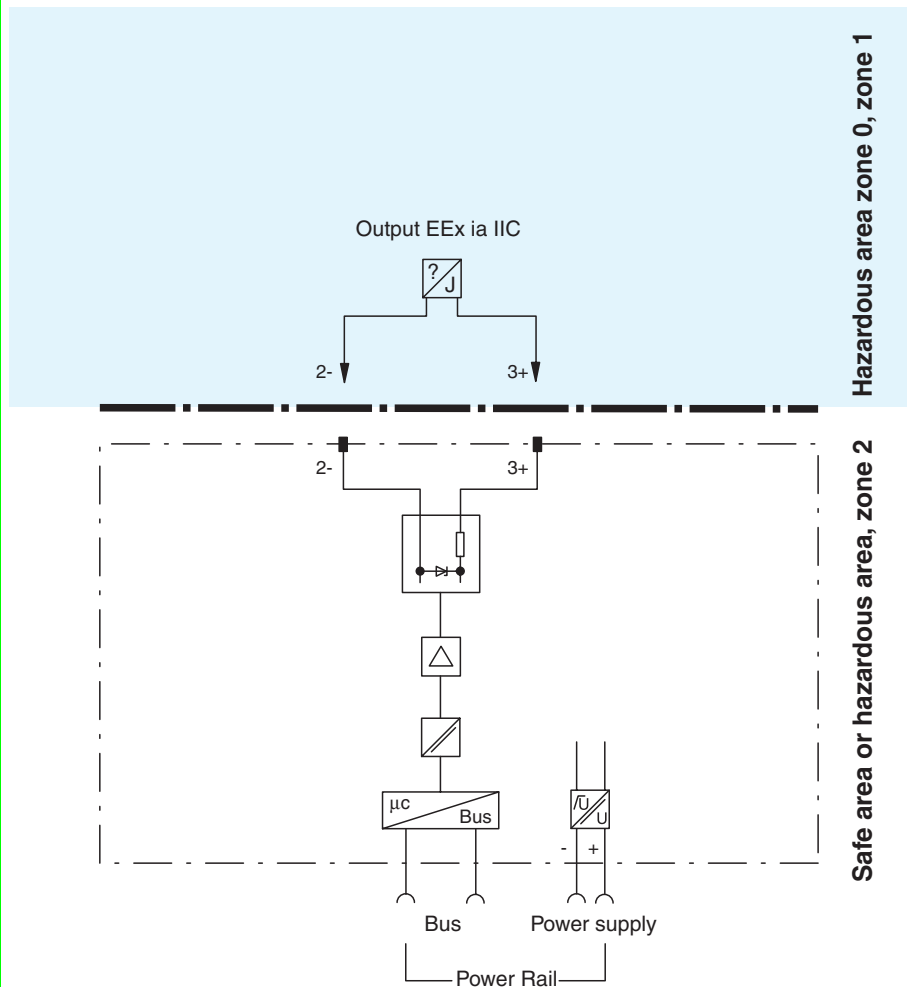
Function

The KSD2-CO-Ex transmits a 0/4 mA ... 20 mA current signal to the hazardous area. Loads between 30 Ω ... 750 Ω can be connected. The output is galvanically isolated from the bus and power supply. The output field circuit is monitored for lead breakage and short circuit conditions.

Application

The control of pneumatic positioners (I/P converter) and intrinsically safe solenoid valves.

Connection



Hazardous area zone 0, zone 1

Safe area or hazardous area, zone 2

Composition

Front View

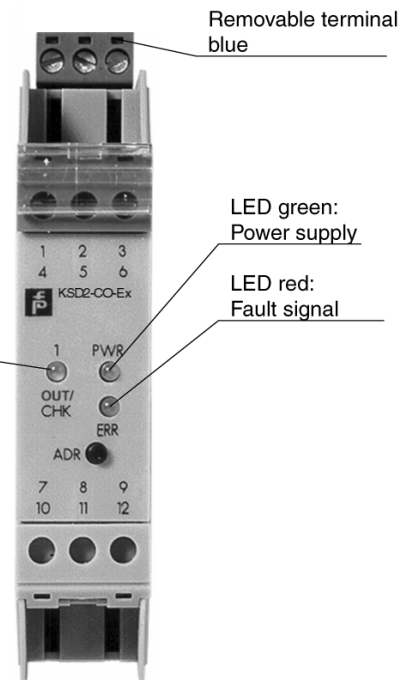
Housing type A3
(see system description)



LED yellow/red:
Output check

Removable terminal
blue

LED green:
Power supply

LED red:
Fault signal



Supply	
Connection	Power Rail
Rated voltage	20 ... 30 V DC
Ripple	< 10 %
Power loss	1.3 W
Power consumption	1.3 W
Input	
Connection	Power Rail
Interface	CAN protocol via Power Rail bus
Output	
Connection	terminals 2, 3
Current	0/4 ... 20 mA
Load	30 ... 750 Ω
Residual ripple	≤ 0.25 %
Lead monitoring	possible for $I_{\text{nominal}} \geq 1 \text{ mA}$ breakage $I < 3.6 \text{ mA}$, short-circuit, load $< 30 \text{ } \Omega$
Transfer characteristics	
Deviation	0.1 % of output signal range at 20 °C (293 K)
Influence of ambient temperature	0.01 % / K of output signal range
Electrical isolation	
Output/power supply, internal bus	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	
Electromagnetic compatibility	
Directive 89/336/EC	EN 61326
Explosion protection	
Directive 94/9 EC	EN 50014, EN 50020, EN 50021
Standard conformity	
Insulation coordination	EN 50178
Electrical isolation	EN 50020
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
Climatic conditions	IEC 60721
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Damaging gas	acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Protection degree	IP20
Connection	terminal connection $\leq 2.5 \text{ mm}^2$
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 conjunction with hazardous areas	
EC-Type Examination Certificate	ZELM 99 ATEX 0013 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	 II (1)G [Ex ia] IIC
Voltage U_o	24.2 V
Current I_o	91 mA
Power P_o	547 mW (linear characteristic)
Type of protection [Ex ia]	
Explosion group	IIB IIC
External capacitance	910 nF 122 nF
External inductance	18 mH 4.9 mH
Statement of conformity	TÜV 00 ATEX 1617 X , observe statement of conformity
Group, category, type of protection, temperature classification	 II 3G EEx nA II T4
Electrical isolation	
Output/power supply, internal bus	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Entity parameter	
Certification number	J.I.0D2A4.AX
FM control drawing	No. 116-0150
Suitable for installation in division 2	yes
Output I	terminals 2, 3
Voltage V_{OC}	24.8 V
Current I_{SC}	92 mA
Explosion group	A&B C&E D, F&G

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Max. external capacitance C_a	0.19 μ F 0.57 μ F 1.54 μ F
Max. external inductance L_a	4.3 mH 17.2 mH 35.2 mH
Safety parameter	
CSA control drawing	LR 36087-18
Control drawing	No. 116-0149
Output I	terminals 2, 3
Safety parameter	24.2 V / 270 Ohm
Voltage V_{OC}	24.2 V
Current I_{SC}	91 mA
Explosion group	A&B C&E D, F&G
Max. external capacitance C_a	0.2 μ F 0.6 μ F 1.6 μ F
Max. external inductance L_a	4 mH 16.2 mH 32 mH

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.

Notes

Software functions

Adjustable by the **PACTware™** human machine interface:

- TAG numbers, 28 alphanumeric characters, can be programmed into device
- Commentary, may be saved in PC memory
- Information on devices may be saved in PC memory
- Physical units are adjustable
 - list see system description RPI
- Lead monitoring selectable
- Separate detection and indication of lead breakage and lead short circuit
- Lower scale value and upper scale value of the measurement range
 - for the determination of the overflow and underflow range
 - for the configuration of the analogue monitor of the human machine interface
- Overrange and underrange alarm
- Malfunction output status
 - user defined
 - min.
 - max.
 - hold last value
- Simulation
 - of the input value
 - of the device diagnosis
 - of the process channel diagnosis