

**Features**

- 1-channel
- Output Ex ia IIC
- ATEX approval
- Device installation in Zone 2
- 24 V DC supply voltage
- Lead breakage (LB) and short-circuit (SC) monitoring
- Transfer of HART signals
- Power Rail bus
- EMC acc. to NAMUR NE 21

**Function**

The KSD2-CO-S-Ex transmits a 0/4 mA ... 20 mA current signal into the hazardous area. Loads between 30 Ω ... 750 Ω can be connected. The output is galvanically isolated from the bus and power supply.

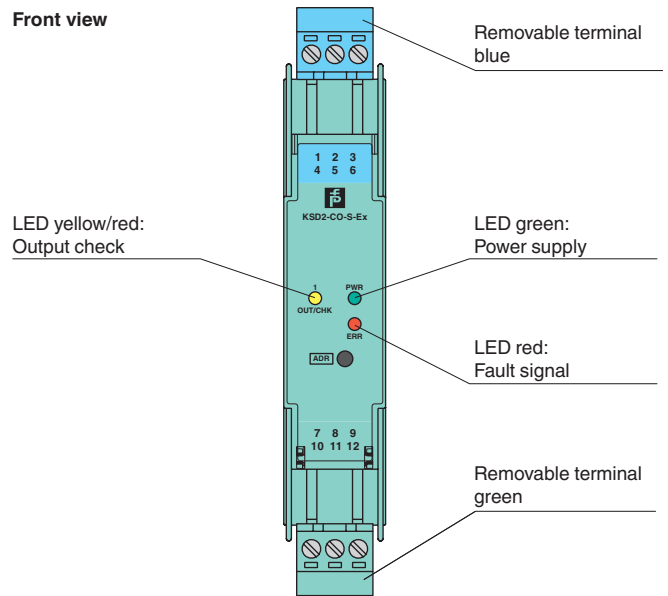
The output field circuit is monitored for lead breakage and short circuit conditions. The device allows for monitoring and programming of positioners, which support the HART protocol.

The KSD2-CO-S-Ex is delivered standard with the KF-STP-\*\* device connectors. The 2.3 mm jacks are integrated in this connector for use with HART communicators. The KFD2-HMM-16 or KFD0-HMS-16 HART multiplexers can be connected to terminals 11+ and 10-.

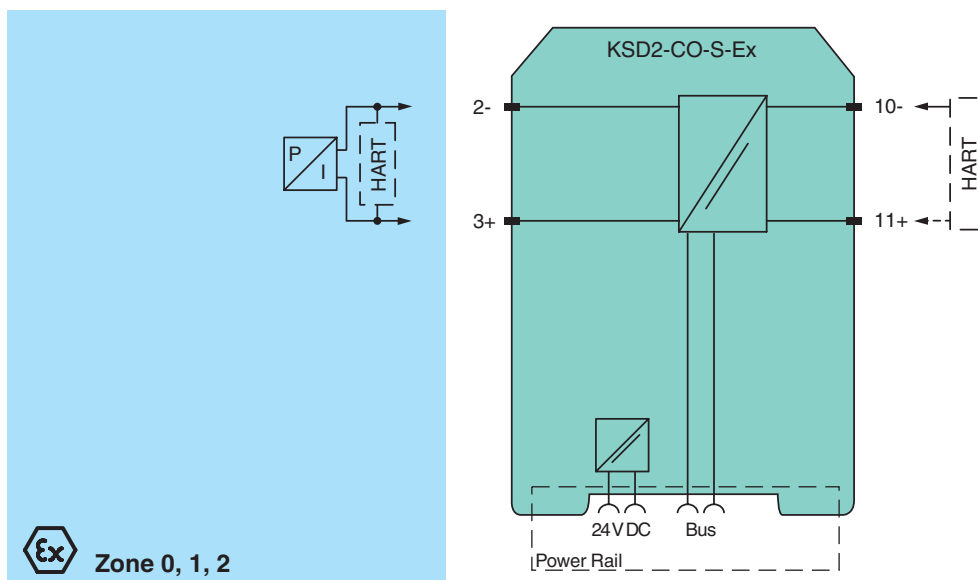
**Application**

The control of intrinsically safe solenoid valves and positioners. The interface allows a bidirectional communication between the position controller and a handheld terminal or a HART multiplexer. These devices can be connected in the safe area. The bus transfers the digital control signal exclusively.

**Assembly**



**Connection**



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<b>Supply</b>	
Connection	Power Rail
Rated voltage	20 ... 30 V DC
Ripple	< 10 %
Power loss	1.3 W
Power consumption	1.3 W
<b>Input</b>	
Connection	Power Rail
Interface	CAN protocol via Power Rail bus
<b>Output</b>	
Connection	terminals 2, 3
Current	0/4 ... 20 mA
Load	30 ... 750 Ω
Residual ripple	≤ 0.25 %
Line fault detection	line breakage possible for $I_{nominal} \geq 0.2 \text{ mA}$ , line breakage at $I < 0,1 \text{ mA}$ short circuit possible for $I_{nominal} \geq 1.0 \text{ mA}$ , short circuit at load < 30 Ohms
<b>Transfer characteristics</b>	
Deviation	0.1 % of output signal range at 20 °C (293 K)
Influence of ambient temperature	0.01 % / K of output signal range
<b>Electrical isolation</b>	
Output/power supply, internal bus	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Insulation coordination	IEC 62103
Electromagnetic compatibility	NE 21:2006
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Damaging gas	acc. to ISA-S71.04-1985, severity level G3
<b>Mechanical specifications</b>	
Protection degree	IP20
Connection	terminal connection ≤ 2.5 mm <sup>2</sup>
Mass	approx. 120 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 in)
Mounting	DIN rail mounting
<b>Data for application in connection with Ex-areas</b>	
EC-Type Examination Certificate	BVS 10 ATEX E 061 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	⊕ II (1) G [Ex ia] IIC ⊕ II (1) D [Ex iaD]
Voltage $U_o$	24.2 V
Current $I_o$	91.3 mA
Power $P_o$	551 mW (linear characteristic)
Declaration of conformity	Pepperl+Fuchs
Group, category, type of protection, temperature classification	⊕ II 3 G Ex nA II T4
Electrical isolation	
Output/power supply, internal bus	safe galvanic isolation acc. to EN 60079-11:2007
Directive conformity	
Directive 94/9/EC	EN 60079-0:2006, EN 60079-11:2007, EN 60079-15:2005, EN 60079-26:2007, EN 61241-0:2006, EN 61241-11:2006
<b>General information</b>	
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 <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

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## 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