

## Features

- 1-channel isolated barrier
- 24 V DC supply (loop powered)
- Resistance input 0.5 k $\Omega$  ... 11 k $\Omega$
- Output 4 mA ... 20 mA
- Rotary switch selectable ranges
- Line fault detection (LFD)

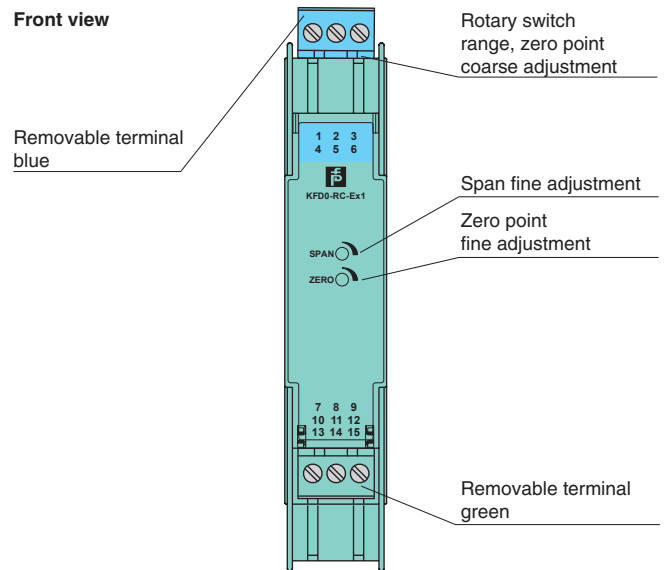
## Function

This isolated barrier is used for intrinsic safety applications. It converts a 500  $\Omega$  ... 11 k $\Omega$  resistance in the hazardous area to a 4 mA ... 20 mA signal in the safe area.

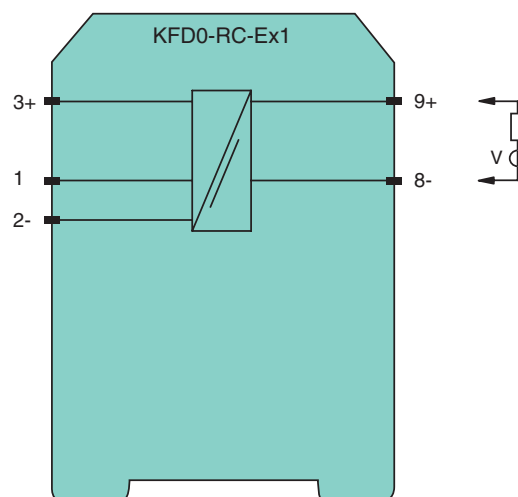
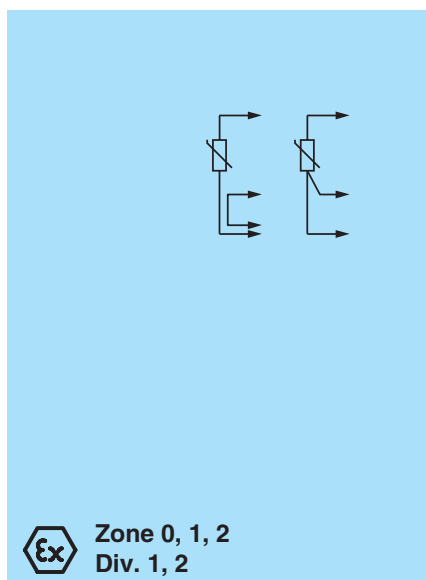
A 3-wire connection is possible to compensate for lead resistance. If only 2-wire connection is desired, a jumper between terminal 1 and 2 must be connected.

Additional features include rotary switches and potentiometers for easy field calibration.



## Assembly



## Connection



Zone 2  
Div. 2

<b>General specifications</b>	
Signal type	Analog input
<b>Supply</b>	
Rated voltage	12 ... 35 V DC loop powered
Power loss	0.4 W
<b>Input</b>	
Connection	terminals 1, 2-, 3+ ; loop powered ; suitable for resistors from 0.5 ... 11 kΩ, 3-wire connection for lead compensation
Line resistance	≤ 100 Ω per lead
Measuring current	approx. 1 mA
<b>Output</b>	
Connection	terminals 9+, 8-
Load	(U -12 V) / 0.02 A
Current output	4 ... 20 mA , limited to ≤ 35 mA
Fault signal	lead breakage: upscaling ≥ 22 mA , limited to ≤ 35 mA
<b>Transfer characteristics</b>	
Measuring range $f_n$	(adjustable) 0.5 ... 11 kΩ; full-scale value: 0.45 ... 11 kΩ; zero point: 0 ... 10 % of full-scale value
Deviation	
After calibration	0.1 % of full-scale value
Temperature effect	span 5 μA/K; zero point 5 μA/K
Linearisation	≤ 0.04 % of full-scale value
Influence of supply voltage	6.5 ppm/V
Rise time	700 ms
<b>Electrical isolation</b>	
Input/output	safe isolation according to EN 50178, rated insulation voltage 253 V <sub>eff</sub>
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2004/108/EC	EN 61326-1:2006
<b>Conformity</b>	
Insulation coordination	EN 50178
Electrical isolation	EN 50178
Electromagnetic compatibility	NE 21
Protection degree	IEC 60529
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
<b>Mechanical specifications</b>	
Protection degree	IP20
Mass	approx. 150 g
Dimensions	20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
<b>Data for application in conjunction with hazardous areas</b>	
EC-Type Examination Certificate	TÜV 98 ATEX 1381 , for additional certificates see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a>
Group, category, type of protection	 II (1)GD [Ex ia] IIC [Ex iaD]
Input	Ex ia IIC, Ex iaD
Voltage $U_o$	16.2 V
Current $I_o$	13.1 mA
Power $P_o$	53 mW
Output	
Safety maximum voltage $U_m$	60 V (Attention! The rated voltage can be lower.)
Statement of conformity	TÜV 01 ATEX 1777X , observe statement of conformity
Group, category, type of protection, temperature classification	 II 3G Ex nA II T4
Electrical isolation	
Input/output	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
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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**Configuration**

**Rotary switch function**



Switch SPAN coarse adjustment	Measurement range end value (Ω)	
0	500	700
1	700	1110
2	1110	1700
3	1500	2100
4	2100	3100
5	2400	3400
6	2800	4100
7	3100	4700
8	4700	7400
9	5000	7700
A	5400	8500
B	5800	8900
C	6400	9900
D	6700	10400
E	7000	10900
F	7400	11000

**Adjustment instruction (example):**

Input                      0 Ω ... 1.5 kΩ  
 Output signal            4 mA ... 20 mA

1. Enter resistance 0 Ω at the input (short circuit the input)
2. Span coarse adjustment (switch SPAN position 2)
3. Adjust output: zero point fine adjustment (4 mA)
4. 1.5 kΩ enter at the input
5. Span fine adjustment (20 mA)

If necessary repeat steps 3. ... 5.