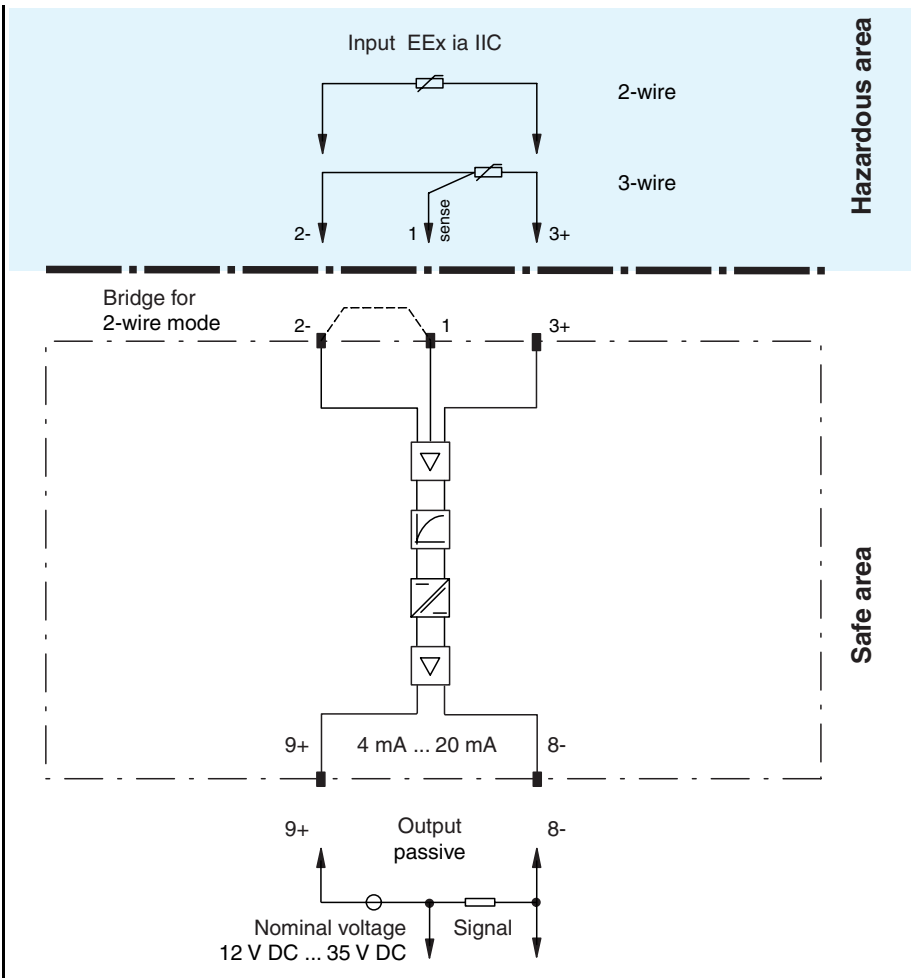




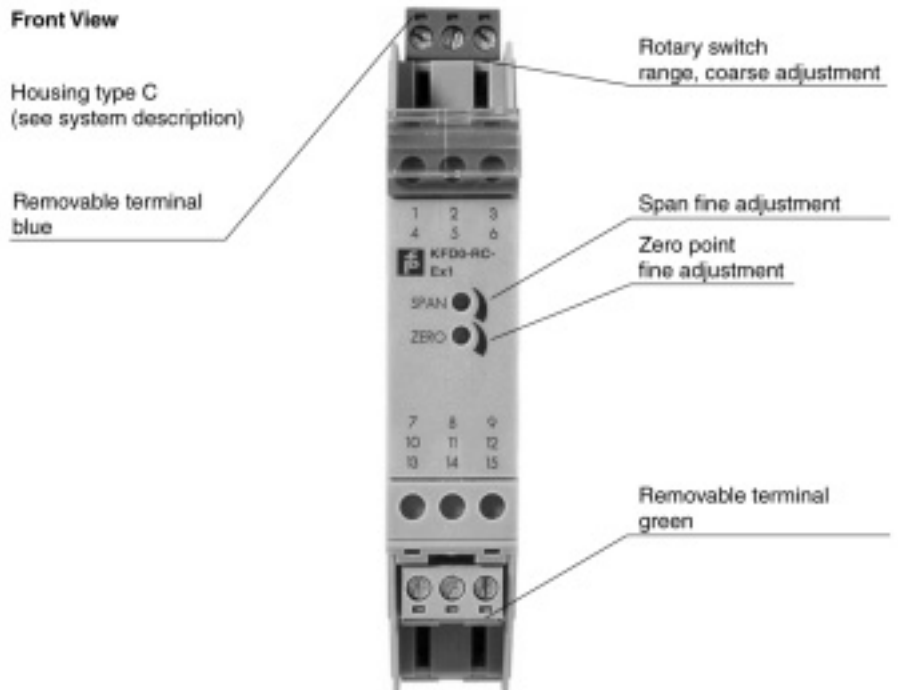
- 1-channel
- Input EEx ia IIC
- Loop powered 12 V DC ... 35 V DC
- Galvanic isolated measuring circuits
- Resistance input
- 3-wire connection for lead compensation
- Lead breakage monitoring
- EMC acc. to NAMUR NE 21

Application

The loop powered converter is suited for the connection of resistors. A 3-wire circuit for lead compensation is possible. If 2-wire mode is desired, the supplied jumper must be mounted between terminal 1 and 2.



Composition



Supply	
Rated voltage	12 ... 35 V DC loop powered
Power loss	0,4 W
Input	
Connection	terminals 1, 2-, 3+ ; loop powered ; suitable for resistors from 0.5 ... 11 kOhm, 3-wire connection for lead compensation
Lead resistance	≤ 100 Ω per lead
Measuring current	approx. 1 mA
Output	
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
Transfer characteristics	
Measurement range f_n	(adjustable) 0.5 ... 11 kOhm; full-scale value: 0.45 ... 11 kOhm; 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
Electrical isolation	
Input/Output	safe isolation according to EN 50178, rated insulation voltage 253 V _{eff}
Standard conformity	
Coordination of insulation	acc. to DIN EN 50178
Electrical isolation	acc. to DIN EN 50178
Electromagnetic compatibility	NAMUR NE 21
Climatic conditions	acc. to DIN IEC 721
Directive conformity	
Electromagnetic compatibility	standards
Directive 89/336/EG	EN 61326, EN 50081-2
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 150 g
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	TÜV 98 ATEX 1381 ; for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II (1) G [EEx ia] IIC
Voltage U_0	16,2 V
Current I_0	13,1 mA
Type of protection [EEx ia and EEx ib]	
Explosion group	IIB IIC
External capacitance	2,63 μF 0,389 μF
External inductance	600 mH 160 mH
Statement of conformity	TÜV 01 ATEX 1777X (observe statement of conformity)
Group, category, type of protection, Temperature classification	⊕ II 3 G EEx nA II T4
Output	
Safety maximum voltage U_m	60 V (Attention! The rated voltage can be lower)
Electrical isolation	
Input/Output	safe electrical isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity	standards
Directive 94/9 EU	EN 50014, EN 50020, EN 50021

Notes

Rotary switch
function on the side
of device

Span
coarse
adjust-
ment



Switch SPAN	Measurement range end value (Ohm)	
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 instructions

Example:

Input 0 Ohm ... 1.5 kOhm

Output signal 4 mA ... 20 mA

1. Enter resistance 0 Ohm 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 kOhm enter at the input
5. Span fine adjustment (20 mA)

If necessary repeat steps 3. ... 5.