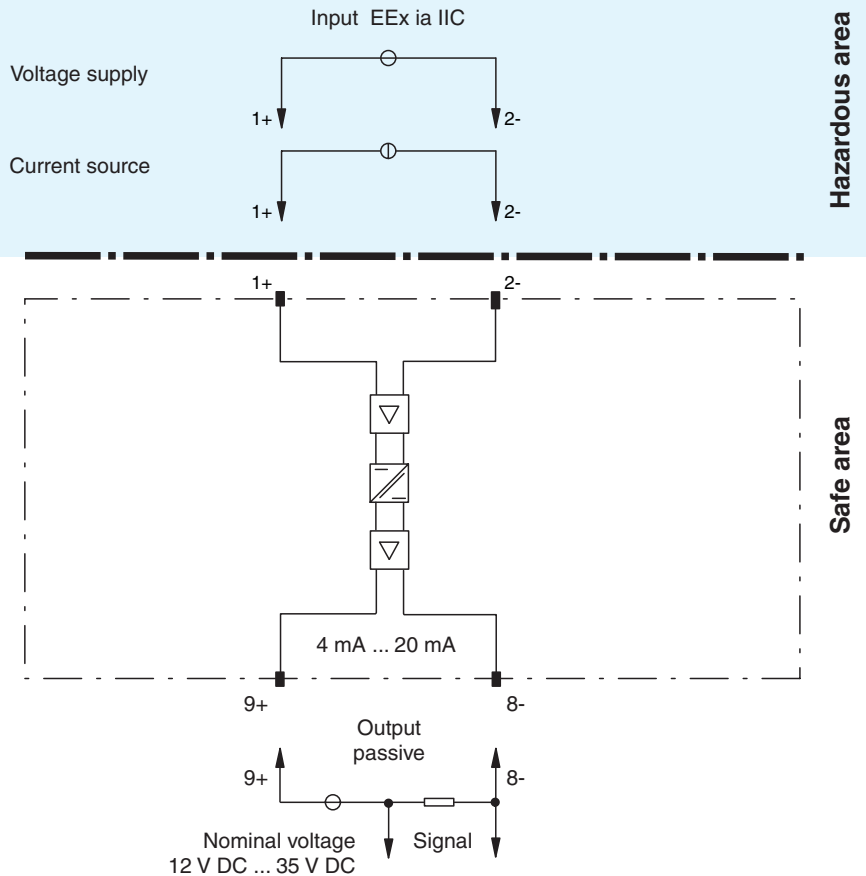




- 1-channel
- Input EEx ia IIC
- Loop powered 12 V DC ... 35 V DC
- Galvanic isolated measuring circuits
- Current range (0/4 mA ... 20 mA) or voltage range (0/1 V ... 5 V, 0/2 V ... 10 V) adjustable via DIP switch, fine tuning (approx. 1%) of the span and zero point possible via DIP switch
- Fine adjustment (approx. 1 %) of the span and of the zero point is possible using a potentiometer
- Output: 4 mA ... 20 mA
- EMC acc. to NAMUR NE 21

Application

The loop powered 2-wire converter is suited for the connection of active current and voltage signal. Each required input range can be set with a switch and a potentiometer. The measured value at the output is a standard 4 mA ... 20 mA signal. The output terminals 9+, 8- should be connected to an active (powered) measurement circuit.



Composition

Front View

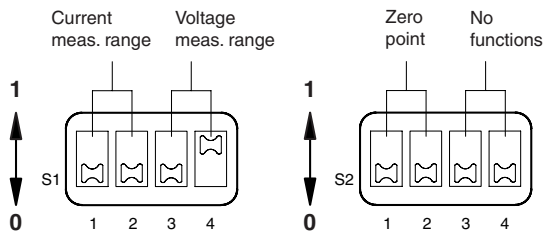
Housing type C
(see system description)



Supply	
Rated voltage	12 ... 35 V DC loop powered
Power loss	0,4 W
Input	
Connection	terminals 1+, 2-
Transmission range	current: 0 ... 20 mA , load ≤ 50 Ohm ; voltage: 0 ... 10 V , load ≥ 100 kOhm
Output	
Connection	terminals 9+, 8-
Load	(U -12 V) / 0.02 A
Current output	4 ... 20 mA , limited to ≤ 35 mA
Fault signal	downscale ≤ 3 mA ≤
Transfer characteristics	
Deviation	
After calibration	0.1 % of full-scale value
Temperature effect	span: 0.050 % of span /K ; zero point: 0.060 % of span /K
Linearisation	≤ 0.04 % of full-scale value
Influence of supply voltage	6.5 ppm/V
Rise time	250 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 50014, EN 50020, EN 50021
Ambient conditions	
Ambient temperature	-20 ... 60 °C (253 ... 333 K)
Mechanical specifications	
Protection degree	IP20
Mass	approx. 100 g
Data for application in conjunction with hazardous areas	
EC-Type Examination Certificate	ZELM 00 ATEX 0034 ; for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection	⊕ II (1) G D [EEx ia] IIC
Input	EEx ia IIC
Voltage U ₀	9,6 V
Current I ₀	0,5 mA
Power P ₀	1,1 mW linear characteristic
Type of protection [EEx ia and EEx ib]	
Explosion group	IIA IIB IIC
External capacitance	210 μF 26 μF 3,6 μF
External inductance	1000 mH 1000 mH 1000 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

DIP switch functions on the side of device.



Measurement range	Switch S1 (Range)				Switch S2 (Zero point)			
	S1.1	S1.2	S1.3	S1.4	S2.1	S2.2	S2.3	S2.4
0 mA ... 20 mA	1	1	-	-	-	-	-	-
4 mA ... 20 mA	1	1	-	-	1	1	-	-
0 V ... 5 V	-	-	1	-	-	-	-	-
1 V ... 5 V	-	-	1	-	1	1	-	-
0 V ... 10 V	-	-	-	1	-	-	-	-
2 V ... 10 V	-	-	-	1	1	1	-	-

Adjustment instructions

Example:

Input signal 0 mA ... 20 mA

Output signal 4 mA ... 20 mA

1. Set DIP switches S1.1 and S1.2 to the 1 position. Set all other DIP switches to the position 0.
2. Set input to minimum value of 0 mA.
3. Adjust output, minimum zero point (4 mA).
4. Add maximum value of 20 mA.
5. Adjust output, range maximum value (20 mA)

Repeat steps 2. ... 5., until stable.