

FEATURES

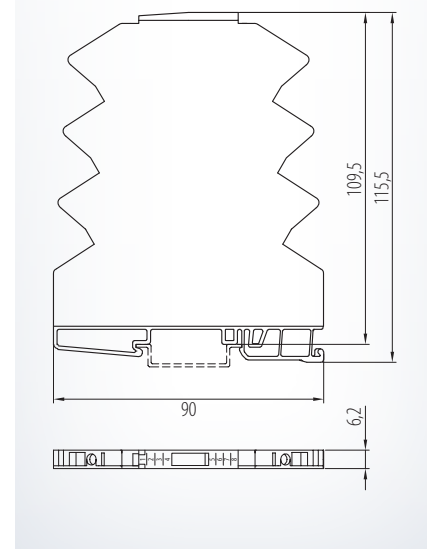
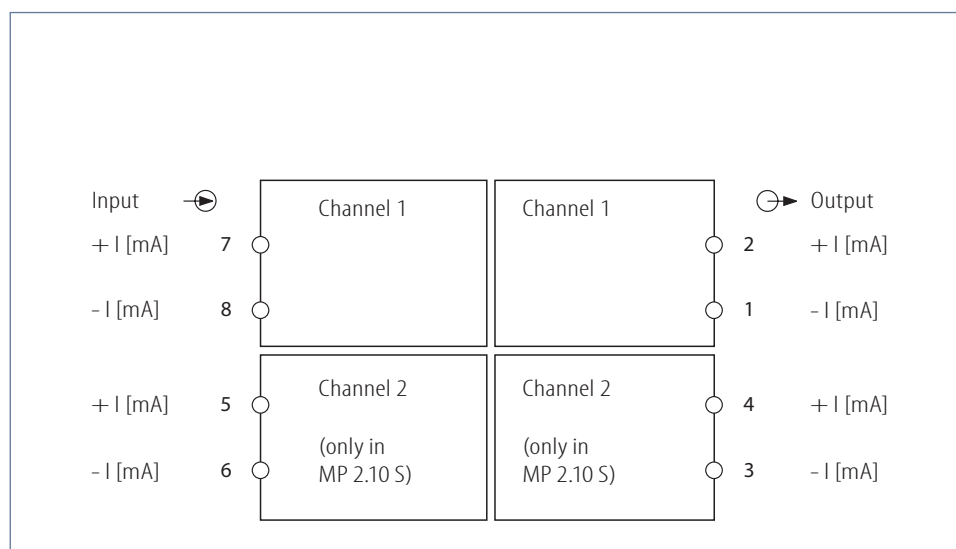
- **Input:**
Current 0(4)...20 mA
1x at MP 1.10 S
2x at MP 2.10 S
- **Output:**
Current 0(4)...20 mA
1x at MP 1.10 S
2x at MP 2.10 S
- **No auxiliary power required**
- **Galvanic 2-way isolation of 500 V**



FUNCTION

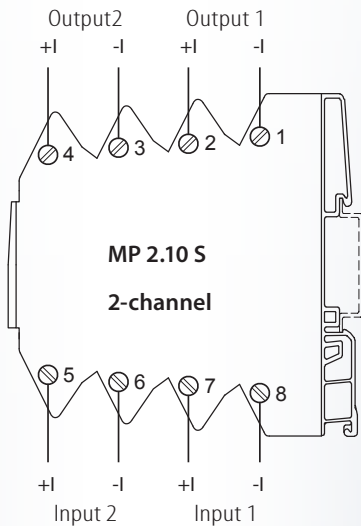
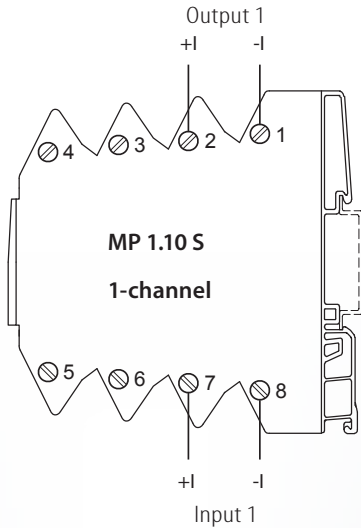
The MP 1.10 S is used for the galvanic isolation of direct current circuits. The ratio of transmission input to output is 1:1. The transducer has only a low power consumption; this capacity is removed from the measuring signal. As far as load is concerned you have to consider that the internal resistance of the transmitter must be added to the input resistance of the final device and is not supposed to exceed the total load of the measuring transducer.

Disturbances by coupling of different signal circuits as well as earth or mass potential differences can easily be avoided or eliminated afterwards by the MP x.10 S. The integrated protective switching with suppressor diode (33 V) protects the secondary circuit from voltage peaks and transient excess voltage. **Attention: with output open the primary loop is interrupted.**



MP 1.10 S MP 2.10 S

Connection diagram:



Input:

I: load-independent DC current:	0(4)...20 mA
input resistance:	$R_i = R_A + 135 \Omega$
max. input current:	35 mA
U_{min} input:	$2,7 V + 0,02 A \times R_A$ (resistance measuring circuit), e.g. at measuring circuit load of 500Ω : $2,7 V + 0,02 A \times 500 \Omega = 12,7 V$ are necessary
connection channel 1:	terminal 8 -, 7 +
connection channel 2:	terminal 6 -, 5 +

transfer ratio is 1:1.

Output:

I: load-independent DC current:	0(4)...20 mA
max. load:	<u>(input voltage - 2,7 V)</u> 0,02 A
output current:	max. 21 mA
connection channel 1:	terminal 1 -, 2 +
connection channel 2:	terminal 3 -, 4 +

Environmental conditions:

Storage temperature:	-40...+70 °C
Operating temperature:	0...55 °C
Isolation voltage:	500 V eff. 1 sec. output/ input

Auxiliary power:

As this device operates without auxiliary power the internal resistance R_i of the load has to be considered. Here the load resistance to be connected may not be exceeded.

Characteristics of transmission:

Transmission error:	< 0,12 %
Linearity error:	< 0,1 %
Temperature error:	< 0,02 %/ K
Load influence I:	< 0,06 % per 100 Ω change of R_A
Setting time:	6 ms at 500 Ω and 20 mA

Directive:

EMC Directive:	2014/30/EU*
Low Voltage Directive:	2014/35/EU
*minimum deviations possible during HF-radiation influence	

Mounting details:

Housing for top hat rail	
Type of protection:	IP 20
Mounting rail fixed according to	EN 50022-35 x 6,2 mm
Width:	6,2 mm
Weight:	60 g
Material:	Polyamide PA
Flammability class:	V0 (UL 94)
Approval:	CE
Connection:	screw clamps 0,14...2,5 mm ²

For safety reasons we recommend to mount the housing for top hat rail with a distance > 1 mm to each other.

Ordering information:

Type: MP 1.10 S	1-channel
MP 2.10 S	2-channel

Schuhmann GmbH & Co. KG
Römerstraße 2
D-74363 Güglingen
Tel. +49 71 35 50 56
Fax +49 71 35 53 55
www.schuhmann-messtechnik.de