

Isolating Converter TV 500P

1- and 2-channels loop powered

Features

- Inputs
 - 0 ... 20 mA and 0 ... 10 V DC,
 - 4 ... 20 mA and 2 ... 10 V DC,
 - 20 ... 20 mA and -10 ... 10 V DC
- Outputs 4 ... 20 mA , 2-wire connection
- Increasing or decreasing output characteristic
- End value ± 5 % adjustable with front side trimpot
- Loop voltage 14 ... 30 V DC
- Full 2-port isolation
- Power-on-LED for each channel
- 22.5mm standard case for DIN rail TH35



General

Loop powered signal converter series TV500P are highly compact devices to isolate and adapt standard signals to active inputs of SPC- and DDC-systems. The device is loop powered via the 4-20 mA output (please see wiring example page 2).

If several isolating converter are needed, the use of the TV500P with 2 channels is particularly economical and cost saving.

Technical Data

Power supply

Loop voltage	: 14 ... 30 V DC
Operating temperature	: -10 ... 50°C
Rated voltage	: 250 V AC, pollution degree 2, overvoltage cat. II
Test voltage	: 3 kV DC, between input/output

Inputs

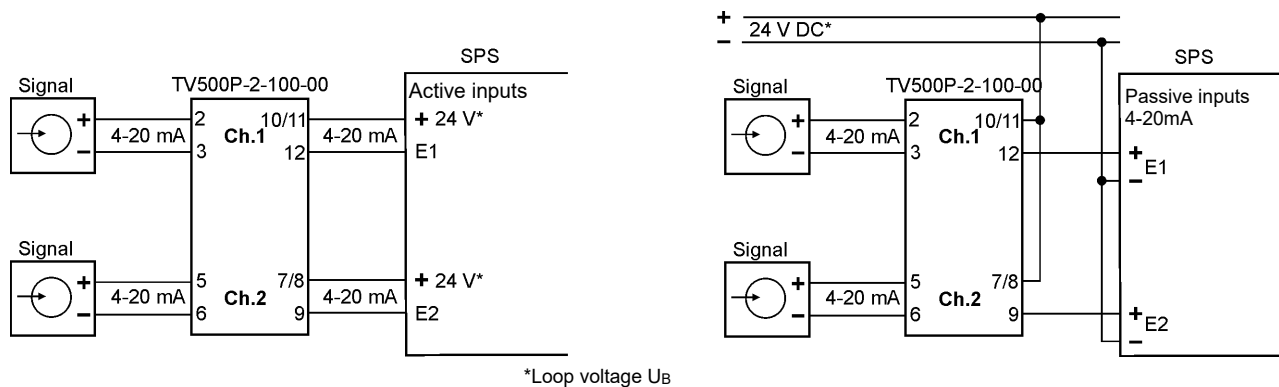
Current input	: 0 ... 20 mA, 4 ... 20 mA or -20 ... 20 mA Ri = 43 Ω, overload max. 100mA
Voltage input	: 0 ... 10 V, 2 ... 10 V or -10 ... 10 V Ri = 160 kΩ, overload max. 100 V
End value 20 mA	: adjustable in the range ± 5 %
Accuracy	
- Standard	: < 0.2 % (< 0.1 % factory calibration for one range available)
- Linearity	: < 0.05 %
- Temperature	: < 0.01

Output

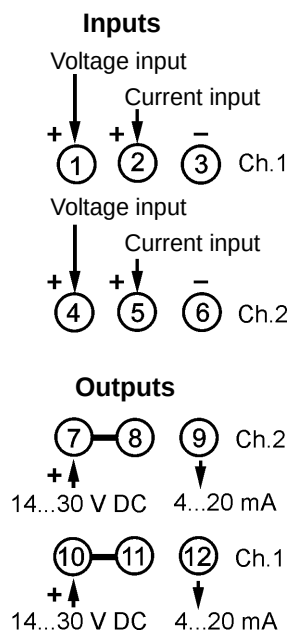
Current output	: 4 ... 20 mA , $R_{\max} = \frac{U_B - 14 \text{ V}}{20 \text{ mA}}$
Burden error	: < 0.05 %
Rise time t90	: < 70 ms
Note!	: output switches to 22 mA, if the input signal fall below -34 % or exceeds +34 % of the input signal.

Case	: standard case of polycarbonate 8020 UL94V-1
Weight	: approx. 200 g
Protection	: case IP30, terminals IP20 (acc. to German BGV A3)
Connection	: screw terminals with pressure plate, max. 2.5 mm ²

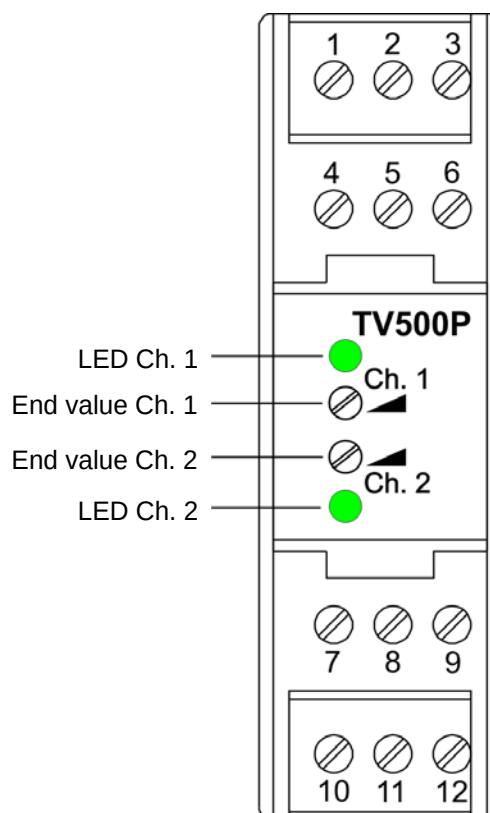
Wiring examples



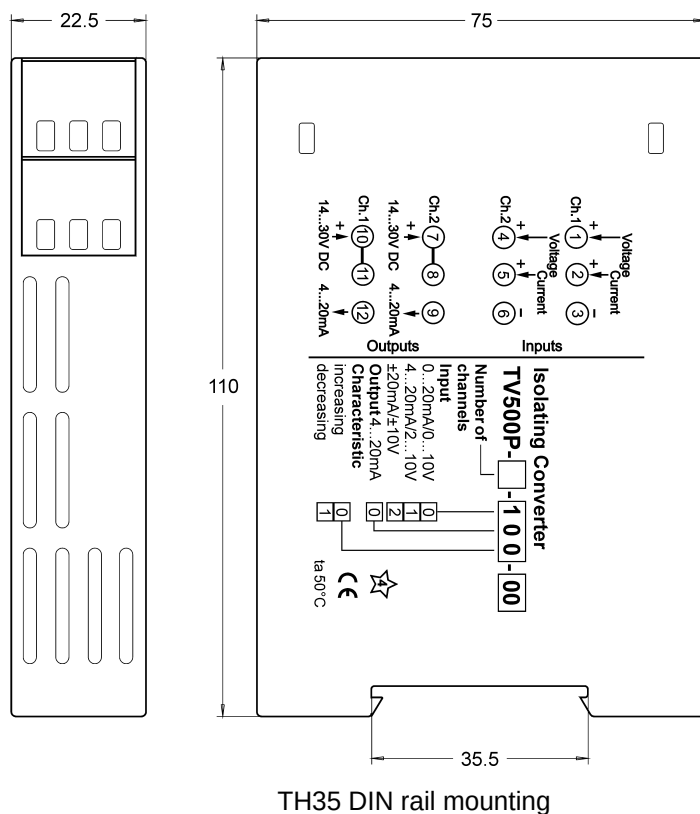
Connection diagram



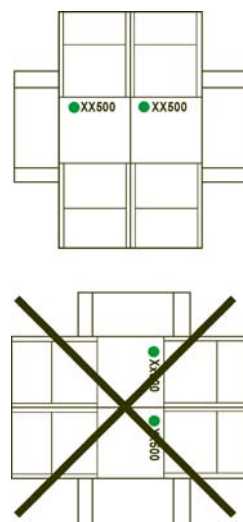
Front panel controls



Dimensions



Caution!
Mounting of multiple units without distance is only permitted in horizontal orientation.



Ordering Code

TV500P -

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1. Number of channels

1
2

2. Inputs

0	0 ... 20 mA and 2 ... 10 V DC
1	4 ... 20 mA and 2 ... 10 V DC
2	-20 ... 20 mA and -10 ... 10 V DC

3. Outputs

0	4 ... 20 mA passive
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4. Output characteristic

0	increasing
1	decreasing (inverted)

5. Options

00	without option
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