

Isolating Signal Converter TV 500L

Unipolar or bipolar in- and outputs

Features

- Switch-selectable inputs 0/4...20mA and 0/2...10V or -20 ... 20mA and -10 ... 10V
- Switch-selectable outputs 0/4...20mA and 0/2...10V or -20 ... 20; and -10 ... 10V
- Increasing or decreasing output characteristic
- Supply voltage 230V AC or 24V DC
- Full 3-port isolation
- Power-on LED
- 22.5mm case for DIN rail mounting
- UL-CSA-standard on request



General

Isolating signal converter TV500L can be used to isolate and convert unipolar or bipolar field signals into industry standard unipolar 0/4 ... 20mA and 0/2 ... 10V DC or bipolar signals for process control systems.

Short information

Current output

current output is provided by a link between terminal 8 and 9 max. burden 500 Ω .

Multi-range

input and output can be configurated by DIP switch at the front panel. (varies with version).

Technical data

Power supply

Supply voltage	: 230V AC \pm 10% or 24V DC \pm 15%
Frequency AC	: 47 ... 63 Hz
Power consumption	: < 3VA (24V DC, 80mA)
Working temperature	: -10 ... +50°C
Isolation voltage	: 500V according to VDE 0110 group 2 between input / output / supply
Test voltage	: 4 kV between input / output / supply
CE-conformity	: EN55022, IEC1000-4-3/4/5/11/13, EN60555

Inputs

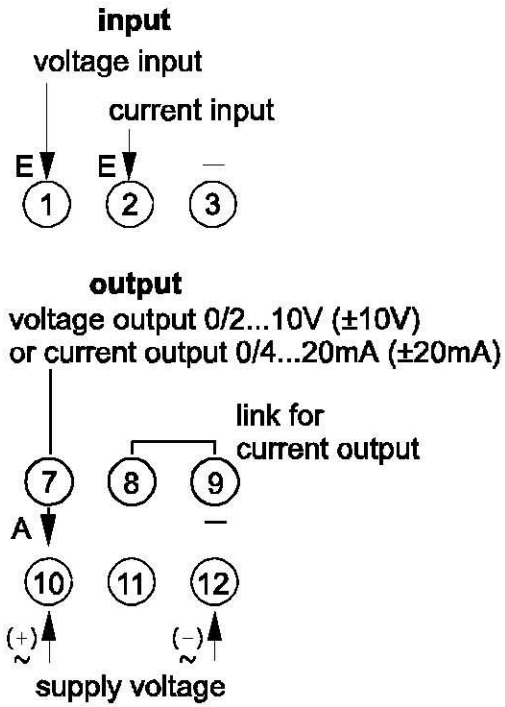
Current input	: -20 ... 20mA DC, or 0/4 ... 20mA DC available, Ri = 43 Ohm max. 100mA overload
Voltage input	: -10 ... 10V DC, or 0/2 ... 10V DC available, Ri = 40kOhm, max. 100V overload
Initial value (0V/2V/4mA)	: adjustable \pm 1.5%
Final value	: adjustable \pm 5%

Output

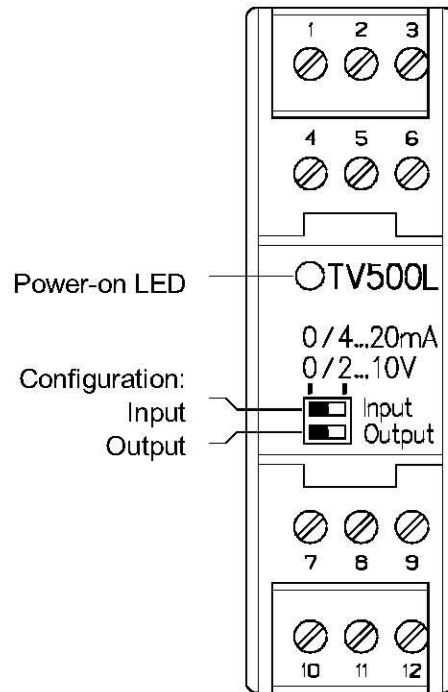
Switchable output voltage to current	: link between terminal 8 and 9
Current output	: 0 ... 20mA, 4 ... 20mA switch selectable, max. burden \leq 400Ohm or -20 ... 20 mA; max. burden \leq 150 Ohm
Voltage output	: 0 ... 10V, 2 ... 10V switch selectable, max. load 15mA or -10 ... 10V max. load 5mA
Accuracy	: < 0.3%
Temperature coefficient	: < 10ppm/K
Rise time (t_{90})	: < 40 ms

Case	: standard case of polycarbonate 8020 UL94V-1
Weight	: ca. 200g
Connections	: screw terminals with pressure plate, max. 2.5 mm ² wire
Protection	: case IP30, terminals IP20, finger safe acc. to German VBG 4

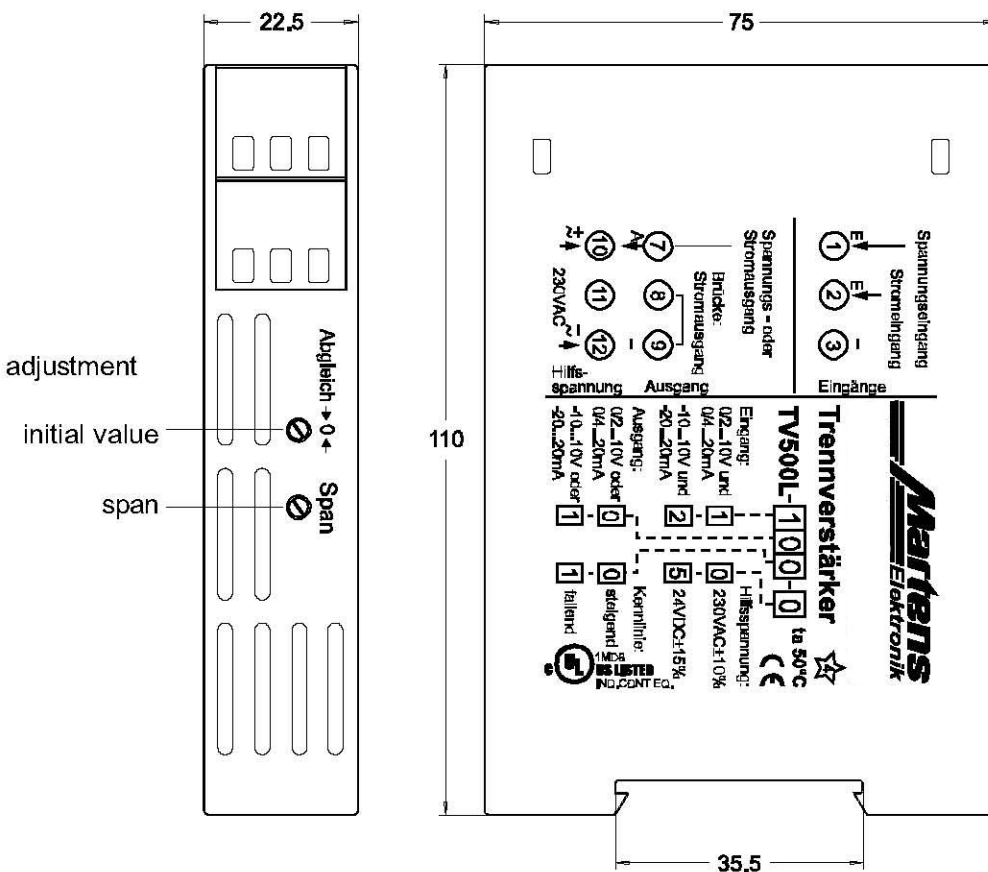
Connection diagram



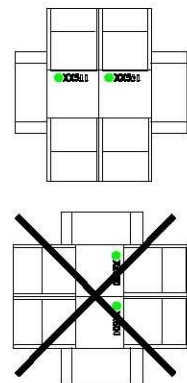
Front panel controls



Dimensions



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



TS 35 DIN rail mounting
acc. to DIN 46277 and DIN EN 50022

Order code

TV500L -

1.	2.	3.
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4.

1. Input

Measuring range programmable from:

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

2. Output

- 0 0/4 ... 20mA or 0/2 ... 10V DC
- 1 -20 ... 20mA or -10 ... 10V DC

3. Output characteristic

- 0 increasing
- 1 decreasing , (please state Input-and Output Signal in clear text)

4. Supply voltage

- 0 230V 50/60Hz $\pm 10\%$
- 5 24V DC $\pm 15\%$

Note!



Isolating signal coupler, including types with transmitter supply, are even available for installation in hazardous areas.