

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 ... 20 mA and 0/2 ... 10 V 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 configured by DIP switch at the front panel. (varies with version).

Technical data

Power supply

Supply voltage	: 230 V AC $\pm 10\%$ or 24 V DC $\pm 15\%$
Frequency AC	: 47 ... 63 Hz
Power consumption	: < 3 VA (24 V DC, 80 mA)
Operating temperature	: -10 ... +50 °C (14 ... 122°F)
Isolation voltage	: 500 V AC according to VDE 0110 group 2 between input/output/supply
Test voltage	: 4 kV DC between input/output/supply
 - conformity	: EN55022, IEC61000-4-3/4/5/11/13, EN60555

Inputs

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

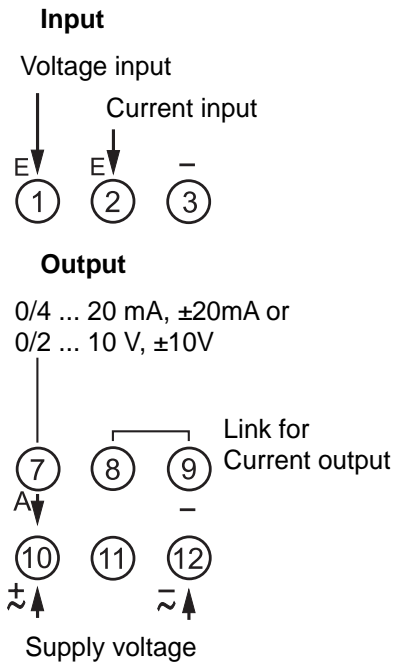
Output

Switchable output voltage to current	: link between terminal 8 and 9
Current output	: 0 ... 20mA, 4 ... 20mA switch selectable, max. burden $\leq 400\ \Omega$ or -20 ... 20 mA; max. burden $\leq 150\ \Omega$
Voltage output	: 0 ... 10 V, 2 ... 10 V switch selectable, max. load 15 mA or -10 ... 10 V max. load 5 mA
Accuracy	: < 0.3 %
Temperature coefficient	: < 10 ppm/K
Rise time (t90)	: < 40 ms

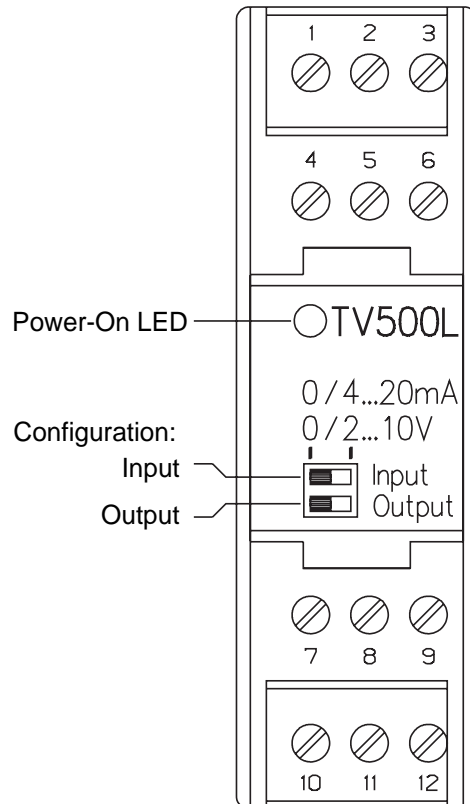
Case

Weight	: standard case of polycarbonate 8020 UL94V-1 : ca. 200 g
Connections	: screw terminals with pressure plate, max. 2.5 mm ² wire
Protection	: case IP30, terminals IP20, finger safe acc. to German BGV A3

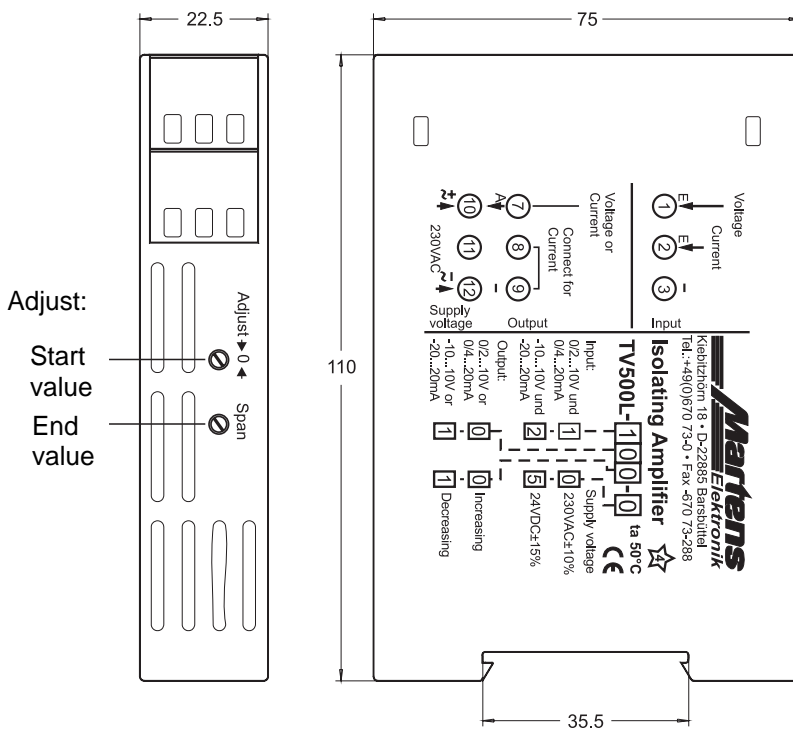
Connection diagram



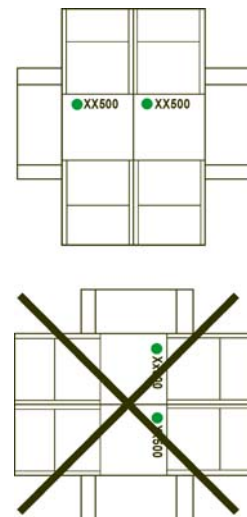
Front panel controls



Dimensions



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



TS35 DIN rail mounting
 acc. to DIN 46277 and DIN EN 50022

Ordering Code

TV500L -

1.	2.	3.

 -

4.

1. Inputs

Measuring range programmable from

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

2. Outputs

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

3. Output characteristic

- 0 increasing
 - 1 decreasing
- please state input- and output signal in plain text

4. Supply voltage

- 0 230 V AC ± 10 %
- 5 24V DC ± 15 %



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