

# 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
- Manufactured acc.to UL-CSA-standard



## 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
 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

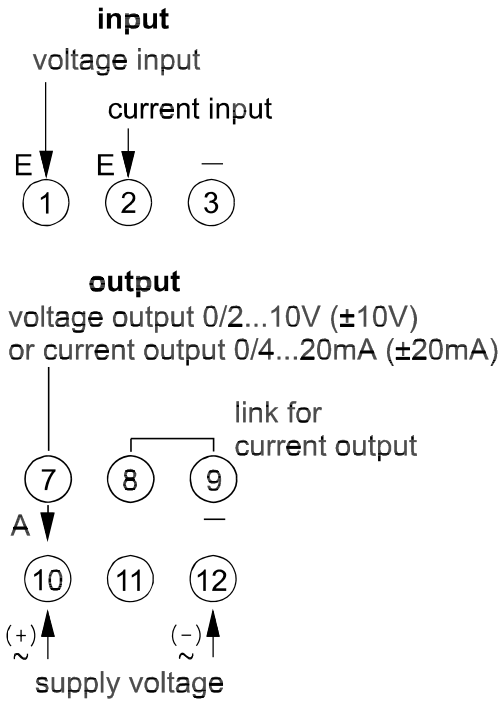
<b>Case</b>	: standard case of polycarbonate 8020 UL94V-1
Weight	: ca. 200g
Connections	: screw terminals with pressure plate, max. 2.5 mm <sup>2</sup> wire
Protection	: case IP30, terminals IP20, finger safe acc. to German VBG 4

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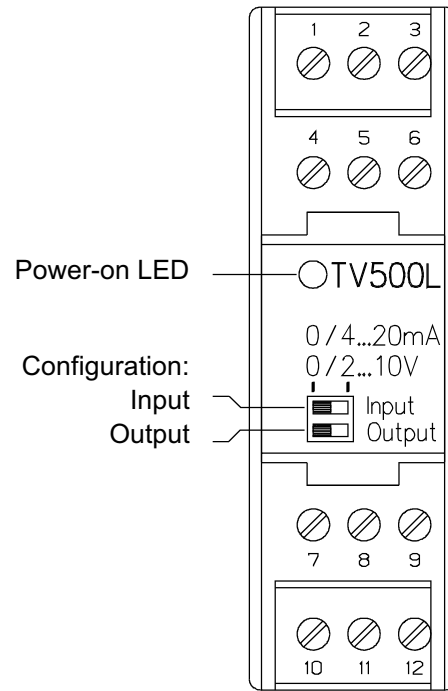
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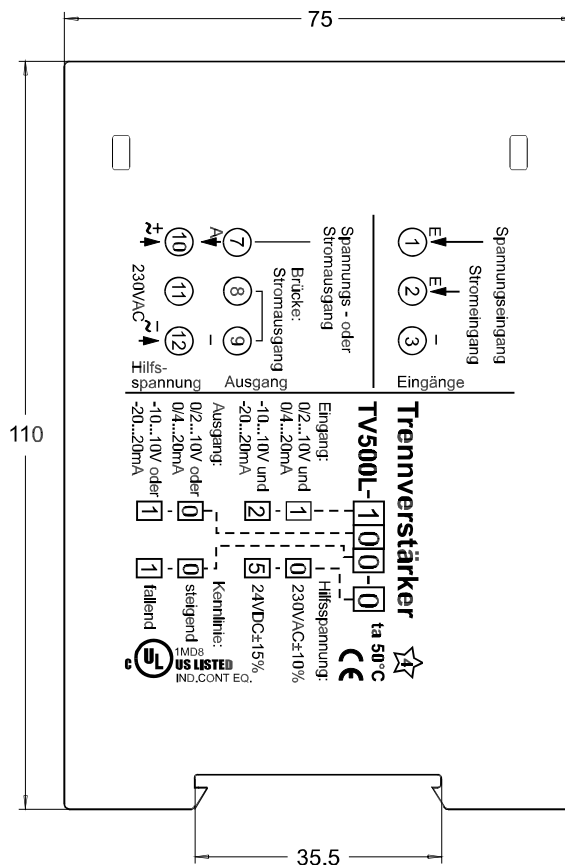
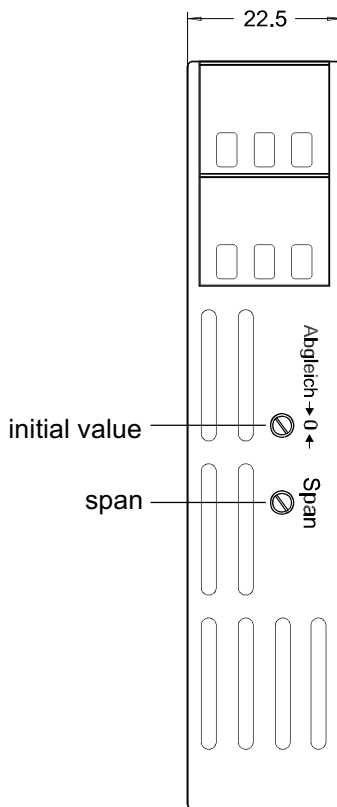
## Connection diagram



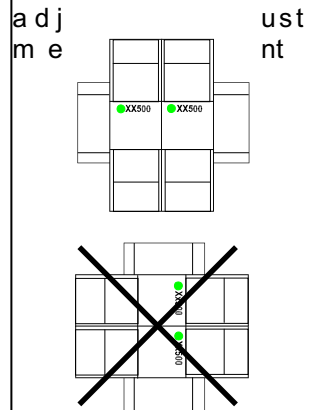
## Front panel controls



## 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.	4.

### 1. Input

Measuring range programable 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
- 2 -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 ±10%
- 5 24V DC ±15%

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