

# 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 ... 20mA 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



### 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 $\Omega$ .
Multi-range	Input and output can be configured by DIP switch at the front panel (varies with version).

## Technical data

### Hilfsenergie

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	: 250 V AC, pollution degree 2, overvoltage category II
Test voltage	: 3 kV, 50 Hz, 1 min. between input / output / supply.

### Inputs

Current input	: -20 ... 20 mA or 0/4 ... 20 mA available, Ri = 43 $\Omega$ , max. 100 mA overload
Voltage input	: -10 ... 10 V or 0/2 ... 10 V available, Ri = 40 k $\Omega$ , max. 100 V overload
Initial value (0 V/2 V/4 mA)	: adjustable $\pm$ 1,5 %
Final value	: adjustable $\pm$ 1,5 %

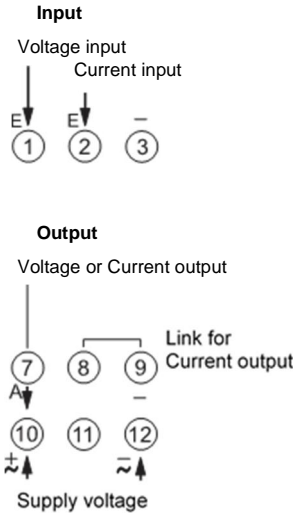
### Output

Switchable output voltage to current	: link between terminal 8 and 9
Current output	: 0/4 ... 20 mA switch selectable, max. burden $\leq$ 400 $\Omega$ ; -20 ... 20 mA, max. burden $\leq$ 150 $\Omega$
Voltage Output	: 0/2 ... 10 V switch selectable, max. load 15 mA or -10 ... 10 V, max. load 5 mA
Rise time (T <sub>90</sub> )	: < 40 ms
Accuracy	: 0,3 %
Temperature coefficient	: < 100 ppm/K

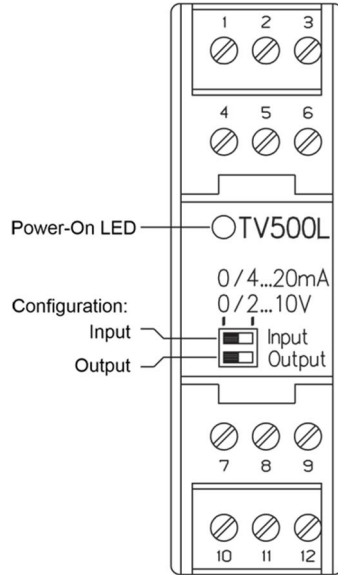
### Case

Material	: polycarbonate 8020 UL94V-1
Weight	: ca. 200 g
Protection	: case IP30, terminals IP20, finger safe acc. to German BGV A3
Connection	: screw terminals with pressure plate max. 2.5 mm <sup>2</sup> wire

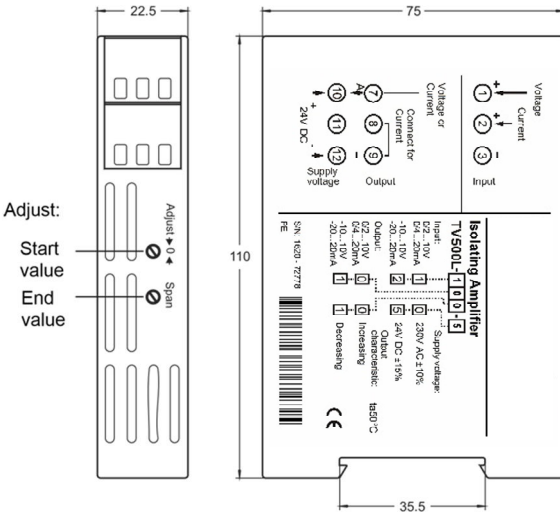
### Connection diagram



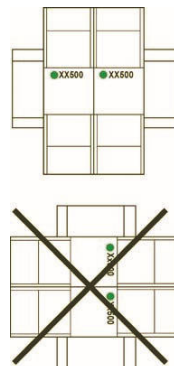
### Front panel controls



### Dimensions



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



## Ordering Code

TV500L - 

1.	2.	3.

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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. Output

- 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  $\pm$  10 %
- 5 24V DC  $\pm$  15 %



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