

# Isolating Converter TV 500P

## 1- and 2-channels loop powered

### Merkmale

- 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  $\pm 5$  % 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 TS35
- UL-CSA-certification in preparation



### 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.

## Technische Daten

### Power supply

Loop voltage	: 14 ... 30 V DC
Operating temperature	: -10 ... 50°C
Rated voltage	: 250 V AC acc. to VDE 0110 group 2
Test voltage	: 4 kV DC between input/output
CE-conformity	: EN55022, IEC61000-4-3/4/5

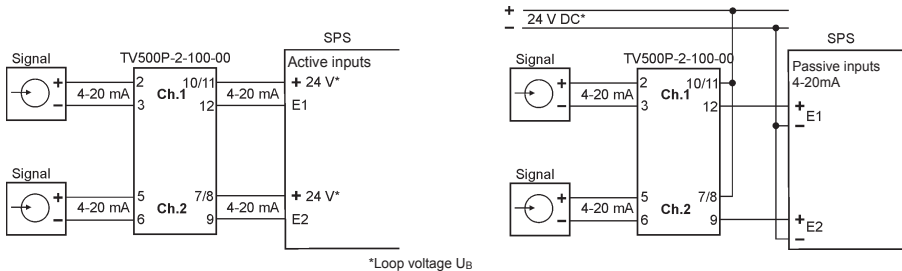
### Inputs

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

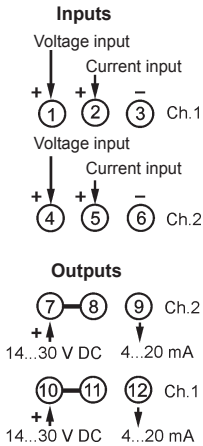
### Output

Current output	: 4 ... 20 mA, $R_{max} = \frac{U_B - 14 V}{20 mA}$
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 <sup>2</sup>

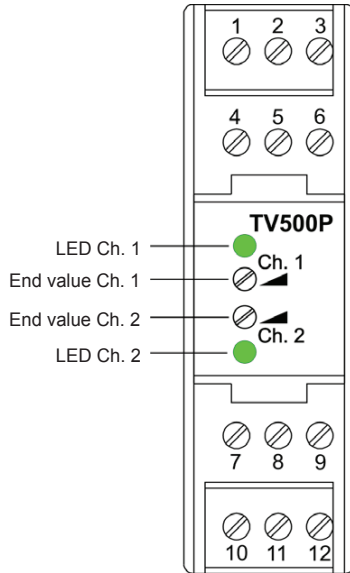
## Wiring examples



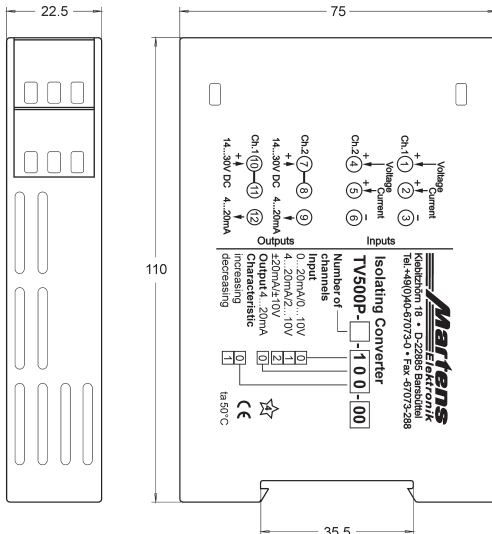
## Connection diagram



## Front panel controls



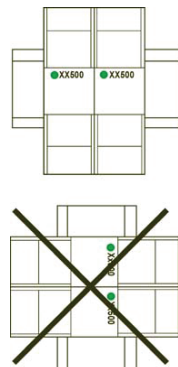
## Dimensions



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

### Caution!

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



## Ordering Code

TV500P -  1. -  2.  3.  4. -  5.

### 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

### 4. Output characteristic

0 increasing  
1 decreasing (inverted)

### 5. Options

00 without option