

# AC Current Transmitter CT 500

## True r.m.s. measurement

### Features

- 12 current measurement ranges selectable  
terminal connection 0 ... 1/2/3/4/5/6 A  
bushing connection 0 ... 10/20/30/40/50/60 A
- Frequency range 40 ... 2000 Hz  
(16<sup>2/3</sup> Hz on request)
- Switch selectable averaging function (slow)
- Outputs for 0/4 ... 20 mA and 0/2 ... 10 V
- Full 3-port isolation
- Supply voltage 85 ... 265 V AC  
or 10 ... 30 V AC/DC
- Power-on LED
- 22.5 mm TS35 DIN rail case



### General information

AC current transmitter CT500 converts true r.m.s. current measuring values of all types of waveform into industry standard signals for process control systems.

For example, the load current of a frequency converter can be detected and converted.

### Short information

Multi range	Measuring range and output configuration can be selected by a 6 stage rotary- and 2 DIP-switches at the front panel.
Adjustment	The final value of the measuring range is adjustable +/-35 %. In case all measuring values in the range 0.65 ... 60 A can be completely adjusted without a gap.
Current output	Maximal burden 1 kΩ.

## Technical data

### Power supply

Supply voltage	: 85 ... 265 V AC or 10 ... 30 V AC/DC
Frequency AC	: 40 ... 400 Hz
Power consumption	: < 3 VA
Operating temperature	: -10 ... 60 °C (14 ... 140°F)
Rated voltage	: 500V $\approx$ , acc. to VDE0110 group 2
Test voltage	: 4 kV, between input/output/supply voltage
CE-conformity	: EN50022, EN60555, IEC61000-4-4/5/11/13

### Measuring input

AC current	
Terminal connection	: 0 ... 1/2/3/4/5/6 A overload max. 9 A
Bushing connection	: 0 ... 10/20/30/40/50/60 A, overload max. 90 A, max. 8 mm cable diameter
Input resistance	: $R_i < 20 \text{ m}\Omega$
Frequency	: 40 ... 2000 Hz (16 <sup>2</sup> / <sub>3</sub> Hz on request)
Start value	: adjustable $\pm 5 \%$
End value	: adjustable $\pm 35 \%$

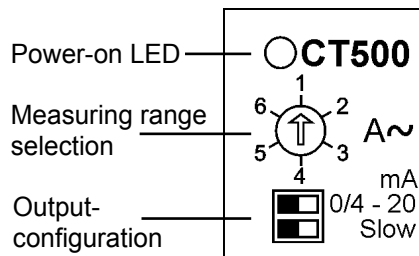
### Outputs

Current output	: 0 ... 20 mA, 4 ... 20 mA switch selectable, burden $\leq 1 \text{ k}\Omega$
Voltage output	: 0 ... 10 V, 2 ... 10 V switch selectable, load max. 15 mA short circuit protection (simultaneously with current output max. 5 mA)
Rise ( $t_{90}$ )	: < 150 ms
Accuracy	: < 0.5 % (< 0.2 % factory calibration for one range available)
Temperature error	: < 0.01 %/K

### Case

Type	: standard case of polycarbonate 8020 UL94V-1
Weight	: approx. 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>

## Front panel controls

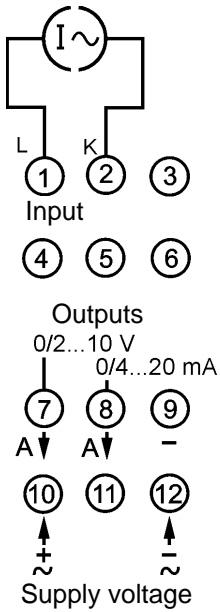


## Current ranges

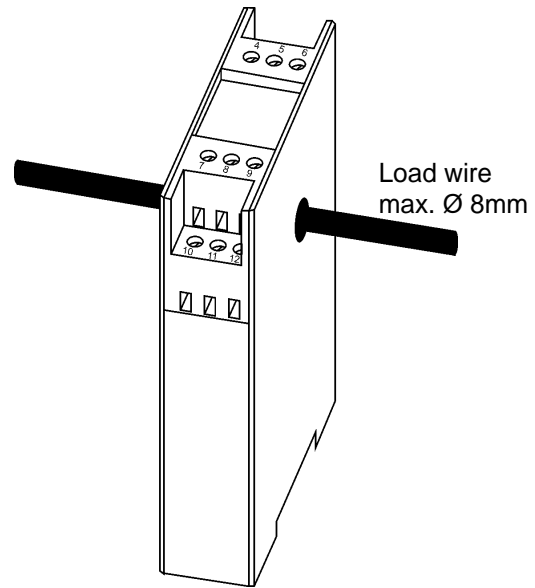
Terminal connection	Bushing-connection	Rotary switch position
Measuring ranges [A ~]		
1	10	1
2	20	2
3	30	3
4	40	4
5	50	5
6	60	6

## Connection diagrams

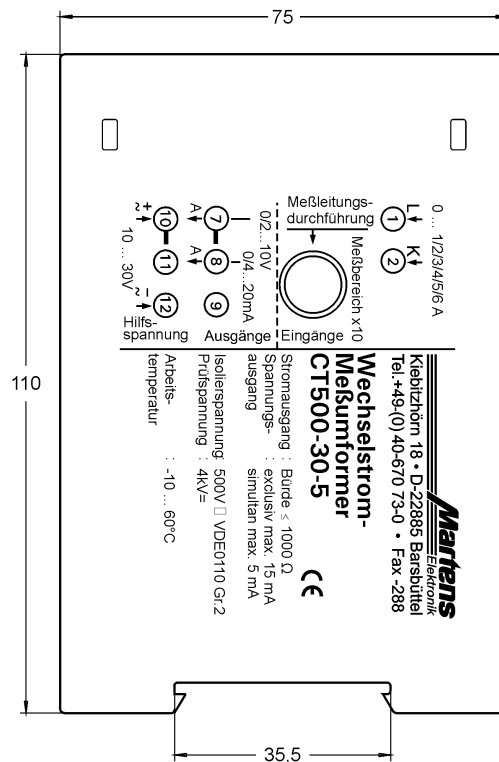
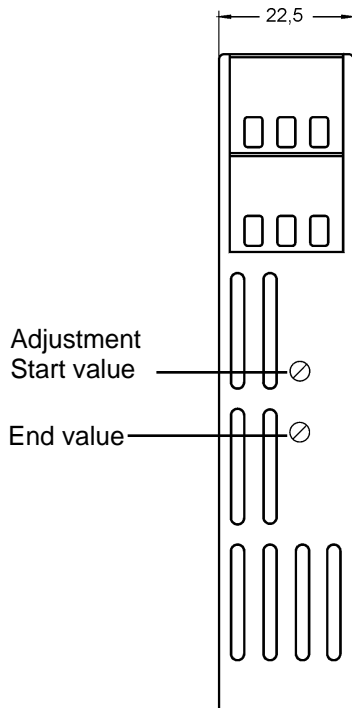
Terminal connection  
0 ... 1/2/3/4/5/6 A



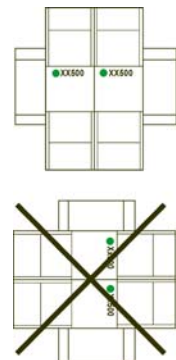
Bushing connection  
0 ... 10/20/30/40/50/60 A



## 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

CT500 -  -

### 1. Measuring ranges

30      0 ... 1/2/3/4/5/6 and  
          0 ... 10/20/30/40/50/60 A  
          Custom ranges on request

### 2. Supply voltage

0        85 ... 265 V AC  
5        10 ... 30 V AC/DC