

Current- and Voltage Transmitter CVT 500

Measuring input DC- and sinusoidal AC-signals

Features

- Arithmetic average value measurement, RMS calibrated or DC
- Output 0/4 ... 20 mA or 0/2 ... 10 V DC switch selectable
- Span adjustable $\pm 5\%$
- Full 3-port isolation
- Supply voltage 230 V AC or 24 V DC
- Power on LED
- 22.5 mm case for DIN rail mounting



General information

Transmitter CVT 500 convert current or voltage signals to proportional industry standard signal 0/4...20 mA; 0/2...10 V DC. Direct measurement of currents up to 5 A and voltages up to 400 V are possible.

Short information

- Output The output is switch selectable on the front panel between 0/4...20mA or 0/2...10 V. For current output a link from terminal 8 to 9 must be connected.
- AC / DC The input signal can be changed from AC to DC by DIP-switch on the front panel.

Technical data

Power supply

Supply voltage	: 230 V AC ± 10 % or 24 V DC ± 15 %
Frequency AC	: 47 ... 63 Hz
Power consumption	: <3 VA
Working temperature	: -10 ... +50 °C (14 ... 122 °F)
Isolation voltage	: 250 V AC, pollution degree 2 and overvoltage cat. II
Test voltage	: 3 kV DC, between input/output/supply voltage

Measuring inputs

Frequency AC	: 40 ... 200 Hz (other ranges on request)
Standard range	
Current input	: 0 ... 1 A and 0 ... 5 A sinusoidal or DC
Input resistance	: 20 m Ω (5 A input) or 100 m Ω (1 A input)
Overload	: 2-times, 4-times for max. 5 sec
Voltage input	
Measuring range	: 0 ... 125 V and 0 ... 250 V sinusoidal or DC
Input resistance	: 600 k Ω (125 V input) or 1.2 M Ω (250 V input)
Overload	: max. 500 V $\approx$
Special range	
Voltage input	: End value in range 0.1 ... 400 V $\approx$
Input resistance	: 4.8 k Ω /V
Overload	: 5-times nominal input voltage, max. 500 V $\approx$
Current input	: End value in range 0.001 ... 5 A $\approx$
Input resistance	: $\frac{100 \text{ m}\Omega}{(\text{Meas. range [A]})}$
Overload	: 2-times, 4-times for max. 5 sec.
Measuring end value	: Adjustable ± 5 %

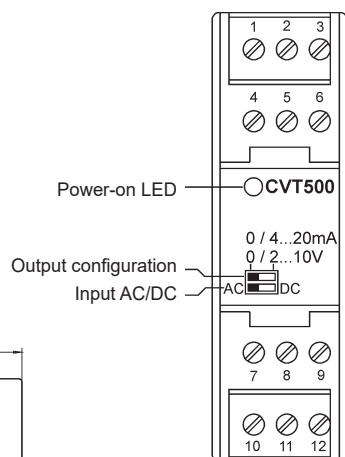
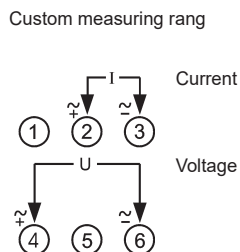
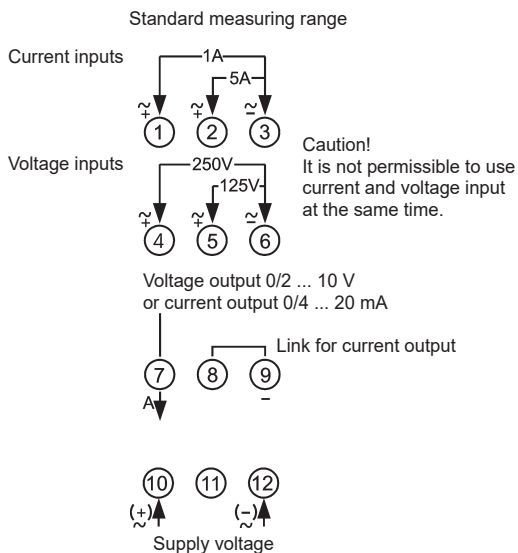
Output

Change output from voltage to current	: Link between terminal 8 and 9
Current output	: 0/4 ... 20 mA switch selectable, burden $\leq 500 \Omega$
Rise time (T_{90})	: < 650 ms
Burden error	: < 0.1 % ($R_L = 0 \dots 200 \Omega$), < 0.2 % ($R_L = 0 \dots 500 \Omega$)
Voltage output	: 0/2 ... 10 V DC switch selectable, load max. 10 mA
Accuracy	: ≤ 0.5 % (≤ 0.2 % factory adjustment for single range)
Temperatur coefficient	: ≤ 0.01 %/K

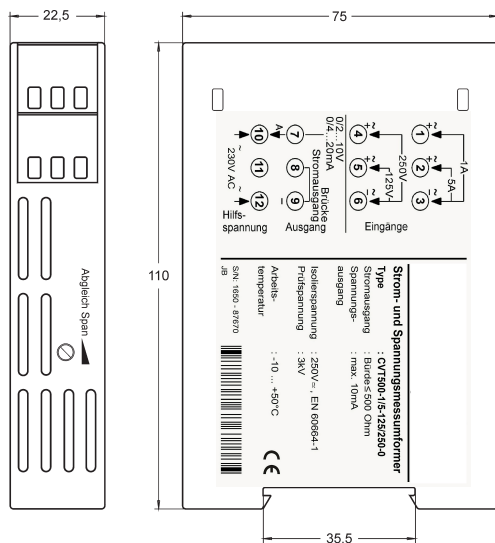
Case

Type	: Standard case of Polycarbonate 8020 UL94V-1
Weight	: Approx. 200 g
Connection	: 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

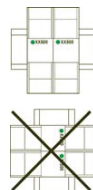


Dimensions



TH35 DIN rail mounting

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



Ordering code

CVT500 - ^{1.} - ^{2.} - ^{3.}

1. Current measuring ranges

0 not installed (custom measuring range voltage)

1/5 standard type 0...1A and 0 ... 5A AC/DC

Special measuring ranges please state in clear text

2. Voltage measuring ranges

0 not installed (custom measuring range current)

125/250 standard type 0...125V and 0 ... 250V AC/DC

Special measuring ranges please state in clear text

3. Supply voltage

0 230 V AC ±10 %

5 24 V DC ±15%

Note: For special measurements the end value must be in range 0.001 ... 5A or 0.1 ... 400V AC/DC

Example of order: CVT500 with voltage measuring range 0 ... 150mV and supply voltage 230V AC:
CVT500 - 0 - 0.15 - 0

For measurement of higher currents or voltages choose current or voltage transformer.