

Current- and Voltage- Monitoring Relay CVG500

Measuring input DC- and sinusoidal AC-signals

Features

- Arithmetic average value measuring
RMS calibrated(AC) or DC
- Output 1 relay SPDT limit contact
- High(HI) or low (LO) alarm switch selectable
- Time delay adjustable 0.1 ... 8 sec.
- Hysteresis (Dead band) adjustable 1 ... 25 %
- Indicating LED for set point
- Full 3-port isolation
- Supply voltage 230 V AC
or 24 V DC
- Power-on LED
- 22.5mm case for DIN rail mounting



General

CVG500 monitoring relays can be used for monitoring current or voltage levels. The standard model is designed for input 0...1/5 A and 0...125/250 V AC/DC.
Models with inputs in range of 0...1 mA/5 A AC/DC or 0...50 mV/400 V AC/DC are available.

Short information

Output	adjustable time delay prevents faulty switching released from inrush currents or voltage spikes on the input signal. The adjustable hysteresis rejects little fluctuations of the input signal.
AC / DC	input AC or DC signal is selectable with DIP-switch.

Technical data

Power supply

Supply voltage	: 230 V AC \pm 10 % or 24 V DC -30/+40 %
Frequency AC	: 47 ... 63 Hz
Power consumption	: <3 VA
Operating temperature	: -10 ... +50 °C, 14 ... 131 °F (-25 ... +70 °C, -13 ... 158 °F on request)
Rated voltage	: 250 V \sim acc. to VDE 0110 group 2 between input/output and supply voltage
Test voltage	: 4 kV= between input/output/supply voltage
CE-conformity	: EN55022, EN60555, IEC61000-4-3/4/5/11/13

Input

Scala error	: \leq 2 %
Repeatability	: \leq .1 %
Temperature coefficient	: \leq 0.01 %/K
Frequency AC	: 40 ... 200 Hz (other ranges on request)
<i>Standard measuring ranges</i>	
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 continue, 4-times max. 5 seconds
Voltage input	: 0 ... 125 V und 0 ... 250 V sinusoidal or DC
Input resistance	: 600 K Ω (125 V input) or 1.2 M Ω (250 V input)
Overload	: max. 300 V \approx
<i>Special measuring ranges</i>	
Voltage	: Final value in range 0.05 ... 400 V \approx
Input resistance	: 4.8 k Ω /V
Overload	: 5-times input voltage max. 500 V \approx
Current	: Final value in range 0.001 ... 5 A \approx
Input resistance (Ri)	: $\frac{100 \text{ m}\Omega}{(\text{measuring range [A]})}$
Overload	: 2-times, 4-times max. 5 seconds

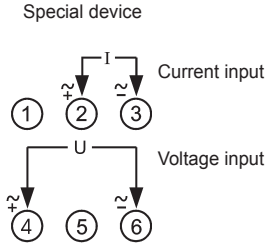
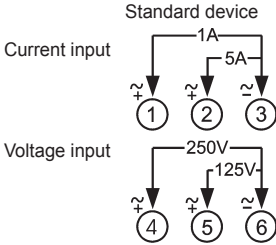
Output

Relay SPDT limit contact	: 250 V AC < 250 VA < 2 A; 100 V= < 50 W < 1 A
Relay activation	: min. / max. selectable
Hysteresis	: 1 ... 25 %
Delay time	: 0.1 ... 8 sec

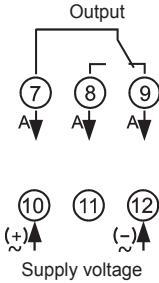
Case

Weight	: Standard case, polycarbonate 8020 UL94V-1
Connection	: appr. 200 g
Protection	: Screw terminal with pressure plate, max. 2.5 mm ²
	: case IP30, Terminals IP20 acc to German BGV A3

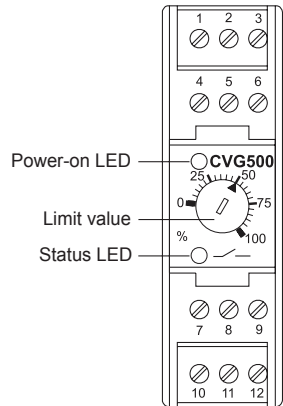
Connection diagram



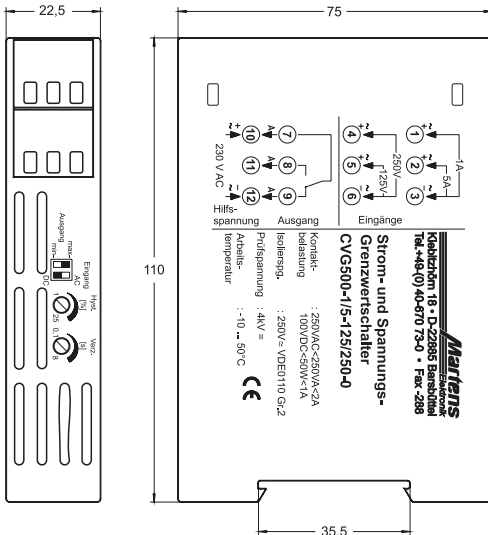
Attention !
It is not permitted to use current and voltage inputs at the same time.



Front panel controls



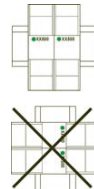
Dimensions



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

CT500 - 1. - 2. - 3.

1. Current measuring ranges

- 0 not installed (special measuring range voltage)
- 1/5 standard type 0 ... 1 A and 0 ... 5 AAC/DC
Special measuring ranges please state in clear text

2. Voltage measuring ranges

- 0 not installed (with special measuring range current)
- 1/5 standard type 0 ... 125 V and 0 ... 250 V AC/DC
Special measuring ranges please state in clear text

3. Supply voltage

- 0 230 V AC ±10 %
- 5 24 V DC -30 ... 40 %

Note: For special measurements the end value must be in range 0.001 ... 5A or 0.05 ... 400V AC/DC

Example of order: CVG500 with voltage measuring range 0 ... 150mV and supply voltage 230V AC:
CVG500 - 0 - 0.15 - 0

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