AC Current/Voltage Converter
CYAVC-AC1000A

User's Manual

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The CYAVC-AC1000A is an AC current/voltage converter that converts AC current to AC voltage based on the principle of electromagnetic induction. The input AC current can be measured by measuring the output AC voltage. The converter has good long-term stability and small temperature coefficient, and is very suitable for AC current measurement as well as calibration of AC current measuring systems and current sensors. The maximum measuring current is 1000AAC and the measuring accuracy is ±0.01% in the frequency range of 50Hz to1kHz.
It is recommended to use a 6.5-digit or higher digital voltmeter (or equivalent) for voltage measurement.

1. Technical Data

Input current range:	0~1A, 0~10A, 0~100A, 0~1000AAC
Aperture size for current input:	Φ25mm ~ Φ32mm
Output voltage per range:	0~1V AC
Current/voltage conversion rate:	1A/V (0~1A), 10A/V (0~10A), 100A/V (0~100A), 1000A/V (0~1000A) (Conversion rate = full scale /V)
Measuring uncertainty*:	±0.01% (50Hz~1kHz), ±0.02% (1kHz~2.5kHz) ±0.05% (2.5kHz~5kHz), ±0.1% (5kHz~10kHz)
Operation temperature range:	20°C ± 2°C
Storage temperature:	18°C ~ 28°C
Relative humidity:	30 ~70%
Dimensions:	200x150x100mm(excluding handle size)
Unit weight:	3kg
Warranty term:	12 months after shipment date

(* Measurement accuracy is evaluated when the input current is greater than 20% of the range)

2. Application instructions

The current to be measured below 100A is input through the right terminal, and the voltage measurement terminal is connected to a high-precision digital voltmeter, observe the reading of the digital voltmeter, and calculate the current to be measured according to the full scale/V conversion ratio.
If current is higher than 100A the current wire should passed through the hole center of the converter, see Figure 1, observe the reading of the digital voltmeter, and calculate the current value according to the conversion ratio of 1000A/V.

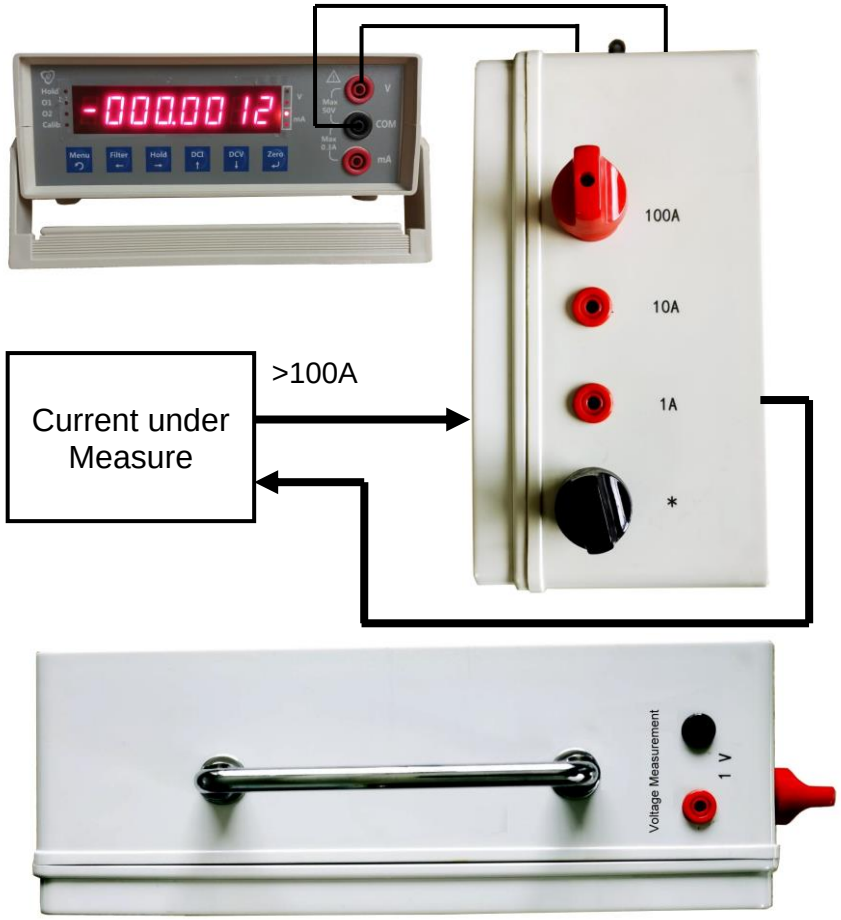

Figure 1 Current measuring system
(The current direction is the direction of the arrow)

3. Notes

1. The current to be measured should not exceed 110% of the measuring range, and the measured current must be strictly guaranteed not to be overloaded to avoid permanent damage.
2. The input current wire of the converter should not be placed in too small circle, and the distance between the incoming and outgoing wires of the current should be at least 50cm, see the figure 2, otherwise it will affect the measuring accuracy.

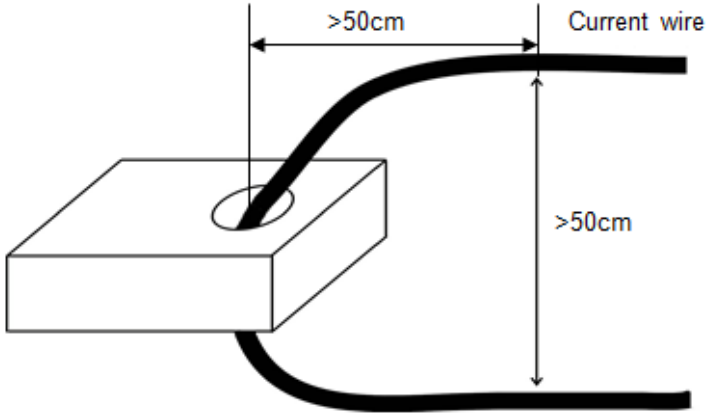

Figure 2 Current wire threading requirement

4. Warranty

ChenYang Technologies GmbH & Co. KG warrants its products against defects in workmanship and materials under normal use and service for a period of 12 Months from the shipping date. All obligations and liabilities under this warranty are limited to repairing or replacing at our option.
The warranty is extended only to the original purchaser. The warranty shall not apply to any products or parts which have been damaged on account of improper installation, improper connections, misuse, neglect, accident or abnormal conditions of operation. Any attempt to tamper with the products as evidenced by disruption of warranty sticker and/or unauthorised repair/modification of the products shall render this warranty null and void.

5. Storage

When using the DC current/voltage converter it must be complied with all rules of using precision instruments. The converter should be kept at ambient temperature of 18°C~28°C and relative humidity below 70%. Any acidic gases, which cause corrosion, hazardous substances, dust, and so on are not allowed in the storage room.