DC Current / Voltage Converter CYAVC-DC2000A

User's Manual

(Version 1, Released in March 2023)

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CYAVC-DC2000A is DC current/voltage converter, which converts DC current to DC voltage according to the fluxgate principle. The input current can be measured by measuring the output voltage. The converter has a good long-term stability and small temperature coefficient and is very suitable for DC current measurement and calibration of current measuring systems and current sensors. The maximal measuring current is 2000A with measuring accuracy of ±0.02%.
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 ~ 2000A DC
Aperture size for current input:	Φ51mm
Output voltage:	0 ~ 2V DC
Current/voltage conversion ratio:	1A/mV
Measuring uncertainty:	±0.02% FS
Linearity:	±0.01% FS
Offset current:	±10mA
Power supply:	220V ± 10%, 50~60Hz
Operation temperature range:	20°C ± 2°C
Storage temperature:	18°C ~ 28°C
Relative humidity:	30 ~70%
Dimensions:	300 x 200 x 110mm (excluding handle size)
Unit weight:	5.23kg
Warranty term:	12 months after shipment date

2. Application instructions

Before using this converter, you need to connect the 220V 50Hz AC power supply to warm up for 5 minutes, connect the DC digital voltmeter at the output end, put the current wire to be measured through the hole center of the converter, see Figure 1, observe the digital voltmeter reading, and calculate the current according to the conversion ratio of 1A/mV.

You can use the method of winding more turns (n) to improve the accuracy of small current measurement. The conversion ratio is 1/n x 1A/mV.

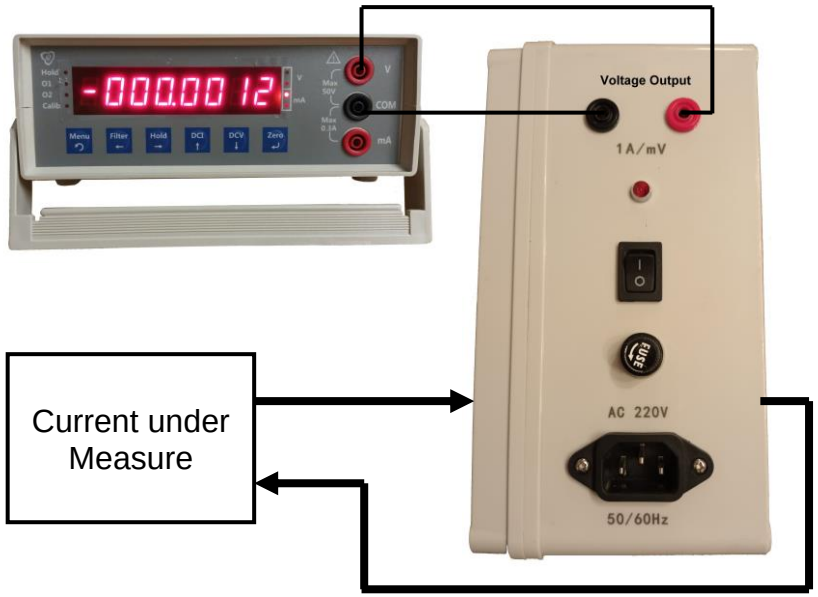

Figure 1 Current measuring system
(The current direction is the direction of the arrow)

3. Notes

1. The input current must be strictly guaranteed not to exceed the maximum current of 2000A to avoid any 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.

3. When measuring the current below 200A, the input current should be measured when the current wire is put forwards and backwards through the hole center of the converter, respectively. One should take the average value as measuring value.

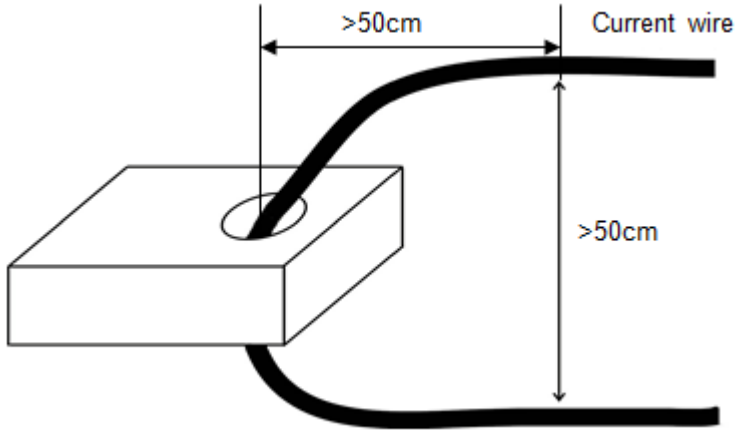

Figure 2 Current wire threading requirement

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.