Single phase High AC Current transducer

CE-IJ03-#4E9-0.5

CE-IJ03-#4E10-0.5

CE-IJ03-#4E11-0.5

1 Overview

This series of products are high AC current measurement isolation transducer, the maximum measurement up to 3000A, completely isolated between the input and output of the transducer, easy installation, good security. The device can easily achieve high current measurement, Compared to the transformer (CT) detection, there are obvious advantages on signal isolation and stability, and the standard output signal can be directly connected to the PLC. The product is quite suitable for power, communications, railways, industrial control and other areas of AC high current detection applications.

Features:

- Ø High accuracy, better than 0.5%;
- Ø Frequency response: 40Hz ~ 8KHz
- Ø Wide power supply DC + 11 ~ + 28V;
- Ø High stability: temperature drift, bandwidth and accuracy have obvious advantages;
- Ø Epoxy encapsulation process, high electrical isolation.

2 Case Style

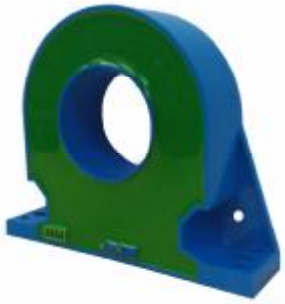


Figure 1: Appearance of the product

3Part number

CE—I J 0 3—5 4 E9—0.5

- Brand
- AC current
- 1-phase
- 3:0-5V, 4:0-20Ma, 5:4-20Ma;
- case style: E9: Φ45mm, E10: Φ55mm, E11: Φ72mm
- Accuracy
- Power supply: 4: 11-28V

Figure 2, Product Selection Table

4 specifications

Power supply DC + 11 ~ + 28V;

Rated operating current: <30mA;;

Input range: AC current: 100A～3000A(E9≤1000A,E10≤2000A, E11≤3000A);

Accuracy class: 0.5% (with reference error);

Output: 0 ~ 5V / 0 ~ 20mA / 4 ~ 20mA;

Load capacity: voltage output is greater than 1KΩ, the current output is less than 300Ω;

Temperature drift: ≤200ppm/℃;

Isolation voltage: ≥2500 VD;

Response time: ≤200 Ms;

Rated power consumption: ≤ 0.4W, ≤0.5W;

Output ripple: ≤10mV;

Frequency range: 40~80 KHz;

Surge impact immunity:

Power port three level 2KV (L-N / 2Ω / integrated wave)

Output port three level 2KV (L-N / 40Ω / integrated wave)

Impulse immunity: power port ± 4KV

Analog I /O port ± 4KV

Input overload capacity: continuous overload: 120%;

Short-term overload: 2times;

Operating temperature: -20~+70°C; humidity: ≤95% (no dew)

Storage temperature: -55 ~+65°C; humidity: ≤95% (no dew)

5 Connections Diagram

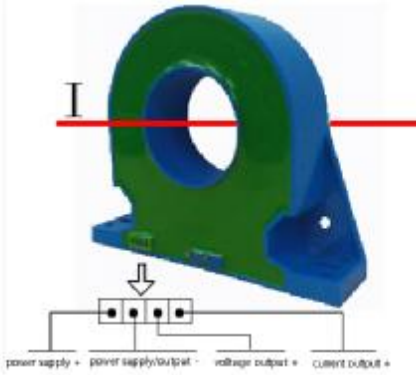
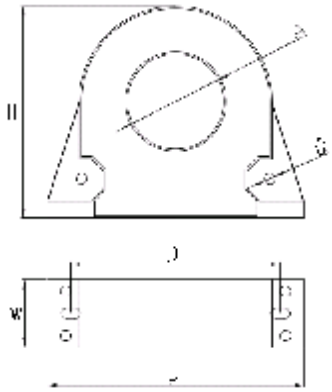


Figure 3, Product wiring diagram

6 Dimensions



Aperture A (mm)	Shape Code	Dimension (mm)				
		L	W	H	D	G
45	E9	120	36	102	98	5.0
55	E10	150	36	126	138	5.5
72	E11	126	30	138	110	6.5

Figure 4, Overall dimensions (in mm)

7 Product's Service

7.1Crew mounting method:

①According to Figure 4, G-labeled screw holes in the fixed plate to play the same diameter holes;

②Use appropriate screw insertion holes to secure it.

7.2 Product has been accurately set according to the "product standard". Apply power after determine the correct wiring.

7.3 The maximum wire diameter of the terminal block is 1.5mm (16-26AWG). Remove the 4mm ~ 5mm insulation layer from the end of the mounting wire and insert it into the terminal block. Tighten the screw.

7.4 Product supply power requires the isolation voltage ≥ 2000VAC, AC ripple <10mV. Multiple transducers can share a common set of power supplies, but the power circuit can no longer be used to drive relays and other can produce spikes in the load, in order to avoid interference signal transmission to the transducer.

7.5 The transducers output 0-20mA (or 4-20mA) , the RL standard is ≤ 250Ω, and 0-5V voltage output RL standard is ≥ 1KΩ, can guarantee the output accuracy and linearity over the entire rated input range.

8 Notes

8.1 The potentiometer on the transducer is only for debugging by the technician, and the user is not allowed to use it.

8.2 Transducer for the integrated structure, not removable, and should avoid collision and fall.

8.3 The transducers are used in environments with strong electromagnetic interference. Standard precaution such as shielding the input and /or output lines should be observed. All lines should be as short as possible. If a group of transducers are mounted together, keep a space more than 10mm between adjacent units.

8.4 The input value given on the transducer label refers to the RMS value of the ac signal.

8.5 Only use the effective terminal of the transducer. Other terminal may be connected with the internal circuit of the transducer, and can't be used for other purposes.

8.6 Transducer has a certain anti-lightning ability, but when the transducer input and output feeders exposed to extreme bad environments, must be taken lightning protection measures.

8.7 Don't damage or modify the product label and logo. Don't disassemble or modify the transmitter, otherwise the company will no longer provide the product "three guarantees" (replacement, returns, repair) services.

8.8 The transducers use flame-retardant ABS plastic shell package. which limit temperature is +75 ℃. The shell will be deformed with high-temperature baking, and will affect product performance. Do not use or save the product near the heat source. Do not bake the product in a high-temperature oven.