

Zero Sequence AC Current Isolation Transducer

Instructions

CE-IJ03-#4E12-0.5

1 Overview

The product is zero sequence AC current isolation transducer, mainly used to measure the three-phase current phasor in three-phase four-wire circuit and the current change of neutral line N (zero line). Compared with the zero sequence current transformer (CT) detection, there are obvious advantages on signal isolation and stability, standard output signal can be directly connected to the host of the final stage control (such as PLC, etc.). The shell is made of flame-retardant ABS plastic shell. It adopts resin casting, which effectively avoids the corrosion of transformer in the course of long-term use. Products are with good insulation properties, good linearity, reliable operation, easy installation and so on. It can be applied widely to controlling systems such as communication system, electrical power system, railway and various industrial control systems. In the electrical fire monitoring, fire leakage systems, small current grounding systems and computer equipment protection are also widely applied.

Features:

- Ø High accuracy, better than 0.5%;
- Ø Wide power supply DC + 11 ~ + 28V;
- Ø Standard signal output, can be directly connected to use the PLC equipment;
- Ø High anti-interference ability, surge immunity 2KV, pulse group immunity 4KV;
- Ø Epoxy resin packaging technology, high electrical isolation strength;
- Ø Compact structure, easy installation, small footprint, a variety of shapes to choose from;

2 Case Style



Figure 1: Appearance of the product

3 Part number

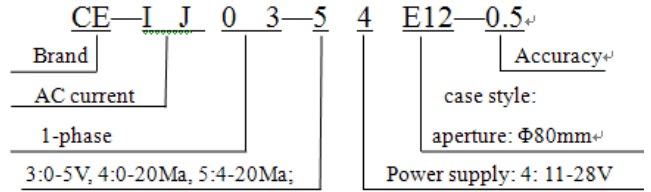


Figure 2, Product Selection Table

4 specifications

- Power supply DC + 11 ~ + 28V;
- Maximum current impact adaptability: 1000A / 0.2S, 5 times;
- Rated operating current: <30mA;
- Input range: AC Current: 0 ~ 5A, 0 ~ 10A, 0 ~ 15A, optional;
- Frequency: 50Hz/60Hz;
- Output: 0 ~ 5V/0 ~ 20mA/4 ~ 20mA;
- Accuracy class: 0.5% (with reference error);
- Load capacity: voltage output is greater than 1KΩ, the current output is less than 300Ω;
- Temperature drift: ≤200ppm/°C;
- Isolation voltage: ≥2500 V DC;
- Response time: ≤200 Ms;
- Rated power consumption: ≤ 0.4W
- Output ripple: ≤5mV
- Frequency range: 45~65Hz (up to 5K, please specify when ordering)
- 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: input / power port ± 4KV
Analog I/O port ± 4KV
- Input overload capacity: continuous overload: 120%;
- Short-term overload: 1000A / 0.2S, 5 times;
- Operating temperature: -20~ +70°C; humidity: ≤95% (no dew)
- Storage temperature: -55 ~+65°C; humidity: ≤95% (no dew)

5 Connections Diagram

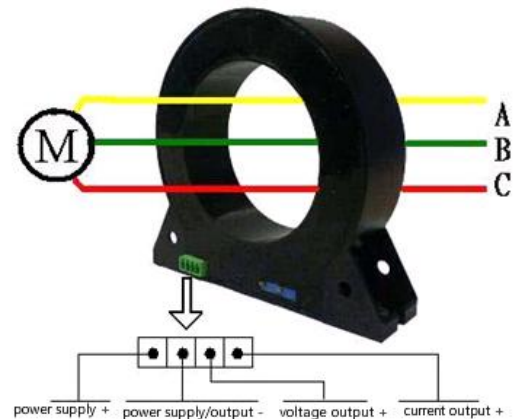


Figure 3, wiring diagram (Note: example. measure the three-phase)

motor load of zero sequence current as an example.)

6 Dimensions

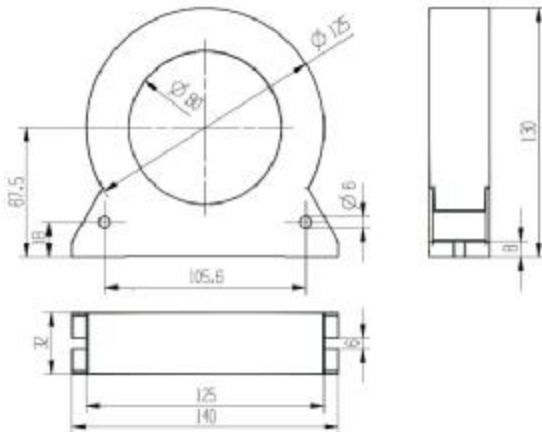


Figure 4 Overall dimensions (in mm)

7 Product's Service

7.1 Crew mounting method:

- ① 5.5 mm diameter hole in the fixed plate according to the $\Phi 6$ screw hole position shown in Fig. 3;
- ② Use the screw smaller than $\Phi 5.0$ to insert into hole 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 $\geq 2000\text{VAC}$, AC ripple $< 10\text{mV}$. 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 R L standard is $\leq 250\Omega$, and 0-5V voltage output R L standard is $\geq 1\text{K}\Omega$, can guarantee the output accuracy and linearity over the entire rated input range

8 Notes

- 1 The potentiometer on the transducer is only for debugging by the technician, and the user is not allowed to use it.
- 2 Transducer for the integrated structure, not removable, and should avoid collision and fall.
- 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.

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

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

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.

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 The transducers use flame-retardant ABS plastic shell package, which limit temperature is $+75\text{ }^{\circ}\text{C}$. 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.