

Two phase AC current tracking transducer

CE-IJ21T-14BD3-0.5

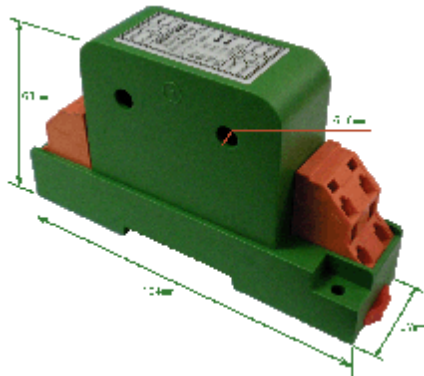
1 Overview

This device is a two phase AC current tracking transducer, can real-time track and measure the AC current signal, after isolation processing, converted to linear 0 ~ 5V AC tracking signal. It applies to power equipment, power grid monitoring systems, railway signaling systems.

Features:

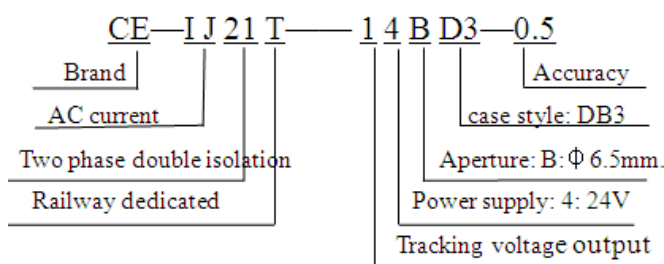
- ☆ High-precision, low temperature drift;
- ☆ Small size, high reliability;
- ☆ Fast response, wide frequency response.

2 Case style



D3 case (L×W×H = 104 cm×27cm×60 cm)

3 part number



4 Specifications

Test conditions: power supply: +24V, room temperature: 25℃;

Accuracy: 0.5class

Power supply: DC +24V

Input range: AC 0 ~ 1A

Input frequency: 1700Hz ~ 2600Hz

Output: AC 0 ~ 5V

Load capacity: load ≥2KΩ

Power frequency difference: 35°

Temperature drift: ≤200ppm/℃

Isolation voltage: DC 2500 V

Response time: ≤100 mS

Rated power consumption: ≤0.5W

Output ripple: ≤10mV

Frequency range: 45~65Hz (Up to 5K, order instructions)

Surge impact immunity:

Power port four-level: 4000V, output port three-level: 2000V.

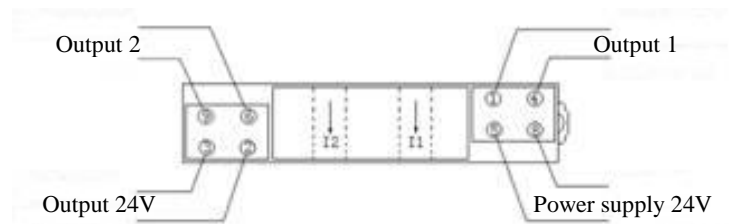
Input overload capacity: 20 times of the measured current nominal value (Maximum 500A, sustainable 1 second)

Operating condition: Temperature: -10℃ ~ +60℃

Storage condition: Temperature: -55~65℃; Humidity: ≤95% (no dew);

5 Connections Diagram

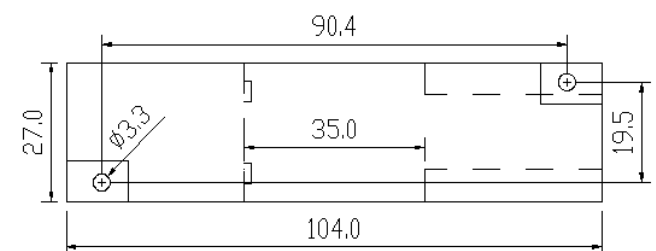
(For reference only, the actual application please refer to the wiring diagram on the product)



Product wiring diagram

6. Mounting Diagram

DIN35 rail mounting or screw mounting, the installation dimensions as shown below, unit: mm.



Installation dimension

7. Product's Service

1 Installation

1.1 DIN rail installation method:

- ① The transducer fixed on the side of the card slot and hook on the mounting rail;

- ② Pull the spring pin down (as show in the bottom of figure1 the red spring pin);
- ③ Clip the transducer mount on the mounting rail;
- ④ Release the spring pin and clip the transmitter on the mounting rail.

1.2 Screw mounting method:

- ① Inset a screw hole less than $\Phi 3.2\text{mm}$ in the fixed plate according to the screw hole position shown in installation dimensions;

- ② Use the M3 screw to insert into hole and fix it.

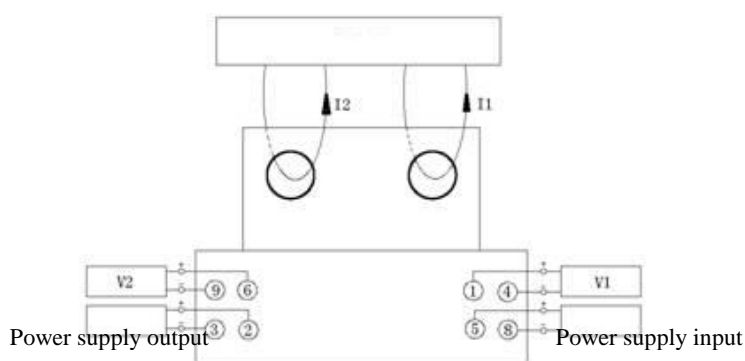
2 When the product is shipped from the factory, it has been accurately set according to "Product Standards", and it can be energized after the connection is confirmed.

3 The maximum wire diameter of the terminal block is 2mm (16-26AWG). Remove the 4mm ~ 5mm insulation layer from the end of the mounting wire and insert it into the terminal block. Then tighten the screw.

4 Auxiliary Power Requirements: Accuracy is not less than 5%, ripple $\leq 10\text{mV}$.

8. Example of product accuracy level verification

1 According to the transducer's terminal definition to connect the test circuit as shown below.



2 The test shall be carried out under the following environmental conditions:

- ◆ Power supply: nominal $\pm 5\%$, ripple $\leq 10\text{mV}$;
- ◆ Ambient temperature: $25\text{ }^{\circ}\text{C} \pm 5\text{ }^{\circ}\text{C}$;
- ◆ Relative humidity: RH (45 ~ 80)%;
- ◆ The accuracy of the signal source and measuring instrument is 0.05 class above.

3 Power preheat 2min;

4 Monitoring the output signal with signal monitoring table V1 and V2, the transducer's two input of each is

0 ~ 1A, output of each is 0 ~ 5VAC, given an input value I_{in} arbitrarily within the transducer's range, the theoretical output value V_g of the transmitter is calculated as follows:

$$V_g = 5V \times I_{in} / 1A$$

5 The AC voltage output value V_g measured by the monitoring table V1 and V2, $|V_g - V_o| \leq 25\text{mV}$ is normal, otherwise the accuracy is exceeded.

6 Note: please consult with our company for the verification method of other technical indicators.

9 Notes

1 Please pay attention to the power supply information on the product label, and the power supply grade used by the transducer, otherwise it will cause damage to the product.

2 Integrated structure of the transducer, non-removable, and should avoid collision and fall.

3 The transducers are used in environments with strong electromagnetic interference. Please pay attention to the shielding of the input and /or output lines. If a group of transducers are mounted together, keep a space more than 10mm between adjacent units.

4 The input value given on the transmitter label is the RMS value of the ac signal.

5 Can only use the effective terminal of the transducer.

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 tolerance is $+75\text{ }^{\circ}\text{C}$. The shell will be deformed with high-temperature baking, and will affect product performance. Do not use or store the product near the heat source. Do not bake the product in a high-temperature oven.