

## 1-phase offside Alarm AC Voltage Transducer

### Instructions

**CE-\*J03 - \*\*\*S\*-2.0**

#### 1 Overview

This device is a 1-phase AC current offside alarm transducer, produced with the use of input, output and power supply isolation. The input signal is a single AC voltage (current) signal, the output signal is the relay passive contact switch (or OC door). The product is mainly used for a variety of electrical control system security protection and other necessary protection devices.

#### Features:

- Ø Product input port, power port can withstand 4KV surge impact, anti-interference ability, safe and reliable;
- Ø With passive relay contacts, OC door and other ways of output, so that a wider range of products for a variety of security systems.
- Ø Standard rail and screw installation, simple and reliable .

#### 2 Case Style

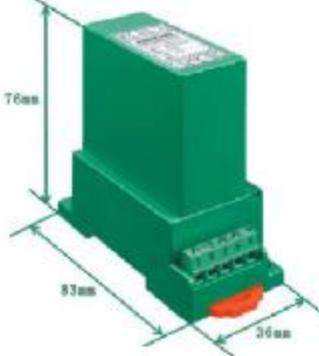


Fig.1, MS3 case

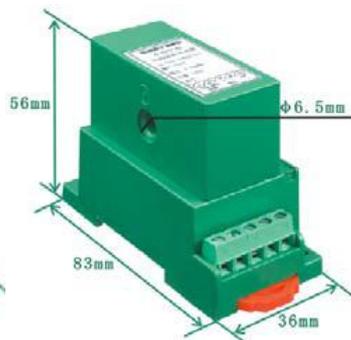


Fig.2, BS2 case

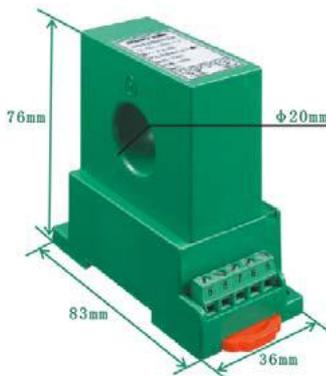
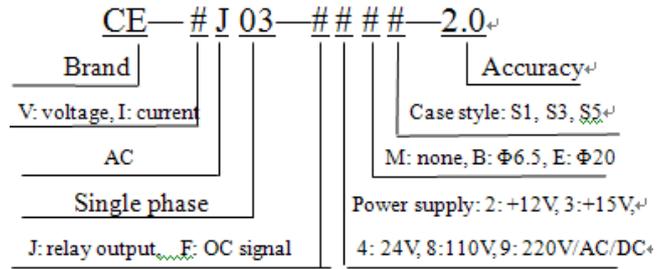


Fig.3, ES3 case

#### 3 Part Number



#### 4 Specifications

Test conditions: auxiliary power: +24V, room temperature: 25°C

Input Range: 0 ~ 1 ~ 500VAC, 0 ~ 0.5 ~ 300AAC

Output: relay output, OC gate output;

Threshold adjustment: customizable;

Hysteresis: -5 ~ -30% (input threshold) (default is 20%);

Power supply: +12VDC, +24VDC, 90V ~ 260V(AC/DC);

Accuracy: 2.0;

Load capacity: 2A / 250VAC or 30VDC (relay output);

RL = 2K, VCC = 24VDC (OC gate output);

Temperature drift: ≤300ppm/°C;

Isolation voltage: ≥2500 V DC;

Response time: ≤300mS;

Rated power consumption: ≤1.1W;

Output ripple: none;

Frequency range: 45~65Hz ( up to 5K,please specify when ordering ) ;

Surge impact immunity: power, input port four level 4KV (L-N / 2Ω / integrated wave);

Input overload capacity: Voltage: 2 times the nominal value, for 1 second interval 10 seconds repeat 10 times; Current: 2 times the nominal value and less than 10A, 5 times a second;

Operating temperature: -10 ~ 60°C; humidity: ≤95 % ( no dew);

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

#### 5 Connections Diagram

(For reference only, the actual application to the product wiring diagram shall prevail)

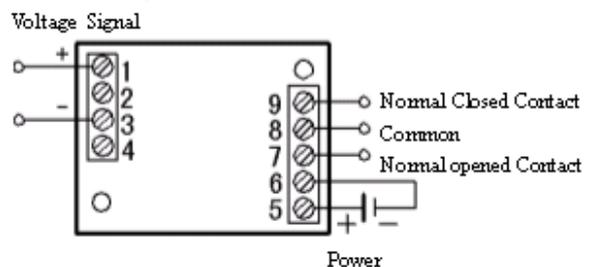


Figure 4, wiring reference diagram of CE-VJ03 relay switch output.

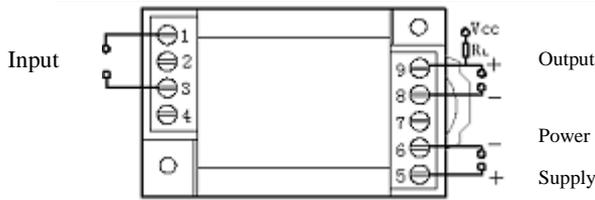


Figure 5, wiring reference diagram of CE-VJ03 OC gate output

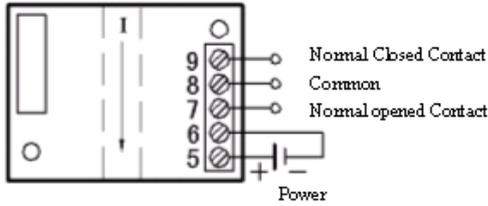


Figure 6, wiring reference diagram of CE-IJ03 relay switch output

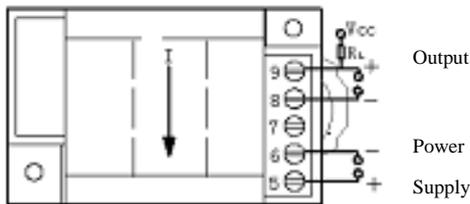


Figure 7, wiring reference diagram of CE-IJ03 OC gate output

## 6 Installations

DIN35 rail mounting or screw mounting, the installation size shown in Figure 8 (in mm).

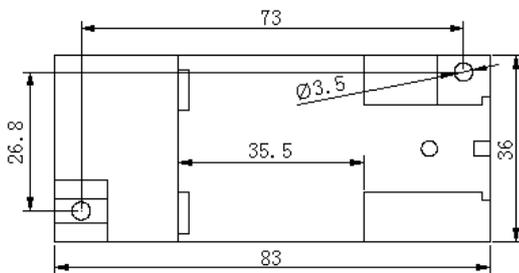


Figure 8 installation dimensions

## 7 Product's Service

### 7.1 Installation

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;
- ③ Clip the transducer mount on the mounting rail;
- ④ Release the spring pin and clip the transmitter on the mounting rail.

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 1.3mm (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.

## 8 Example of product accuracy level verification

8.1 According to the transducer terminal definition to connect the circuit as shown.

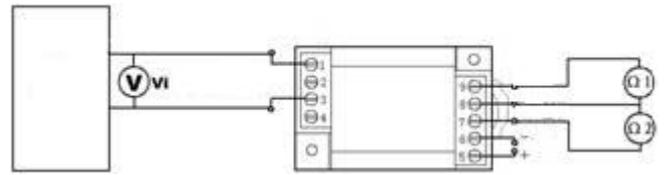


Figure 8, precision test wiring diagram of voltage input relay output (for example).

**Note:** The voltage input is measured with the  $V_i$  meter and the relay output is measured with a  $\Omega$  (resistance) meter.

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

- ◆ Auxiliary power: 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)%;
- ◆ Accuracy is 0.05 above of the signal source and measuring instruments.

8.3 Power preheat 2min;

8.4 Current  $V_i$  input and monitoring methods:

A high-precision high-current meter calibrator can directly input current  $V_i$ , and record the meter calibration instrument display data;

8.5 Assuming that the input threshold voltage of the offside alarm is 100 VAC and the hysteresis is 20%, the output is the relay passive contact switch output.

8.5.1 When the input is 0, the  $\Omega_1$  resistance meter value is  $0\Omega$  and  $\Omega_2$  resistance table value is infinite.

8.5.2 When the input is  $100\text{VAC} \pm 2\text{ VAC}$ , the relay contacts to flip, then  $\Omega_1$  resistance table value is infinite,  $\Omega_2$  resistance meter value is  $0\Omega$ .

8.5.3 When the input is  $100 - (100 * 20\%) = 80\text{VAC} \pm 2\text{ VAC}$ , the relay will turn over again. At this time,  $\Omega_1$  resistance meter value is  $0\Omega$ , and  $\Omega_2$  resistance meter value is infinite. Then the transducer's accuracy level passes.

**Note:** please consult with our company for the verification method

detailed of other technical indicators.

## **9 Notes**

9.1 Please pay attention to the wiring on product label and the output contact capacity.

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

9.3 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.

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

9.5 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.

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

9.7 The transducers use flame-retardant ABS plastic shell package. which limit temperature is +75 °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.

9.8 When measuring the voltage or current with the multi meter pen, please screw the terminal screw in the end, otherwise it may not measure the voltage or current output value.