Self-power one input one output DC current signal isolator

Istructions

CE-SZ17-50MS1-0.2

1Overview

This product is a single-phase passive signal isolator, no external auxiliary power supply. The use of electromagnetic isolation principle, can isolated transmit DC 4 ~ 20mA signal of the input end to the output end for proportional. The input and output of the product are completely isolated from each other, and the output signal is linearly related to the input signal.

It widely used in signal isolation of a variety of 4-20mA current signal output end, reducer the various interference in site, Improve system reliability, can be applied to a variety of complex industrial site.

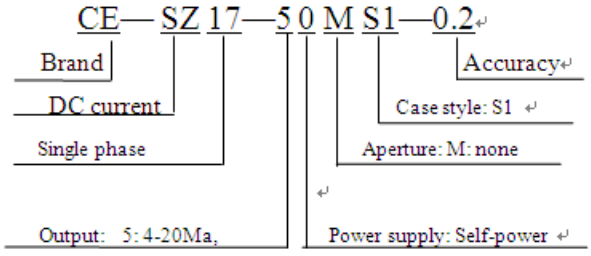
Features:

- Ø No separate external power supply circuit;
- Ø To obtain energy from the input power to transmit the input signal to the output side;
- Ø High precision products, better than the accuracy level;
- Ø low temperature drift, good stability;
- Ø Input and output are full isolation, anti-jamming performance;

2 Case style

Figure 1, MS1 case

3 Part number



4 Specifications

Test conditions: room temperature: 25℃;

Input range: 4-20mADC;

Pressure drop: <3V@20mADC (2V);

Output: 4-20mADC;

Auxiliary power: passive;

Accuracy: 0.2;

Load capacity: ≤300Ω;

Temperature drift: ≤50ppm/℃;

Isolation voltage: 2500V DC;

Response time: ≤20mS;

Rated power consumption: none;

Output ripple: none;

Frequency response range: none;

Input overload capacity:

Current: ≤50mA;

Surge immunity:

Input / output port: three 2KV (L-N / 40Ω / integrated wave);

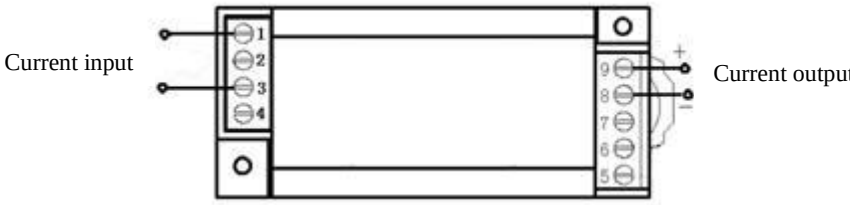
Impulse immunity: none;

Operating temperature: 20~70℃; humidity: ≤95%（(no dew）;

Storage temperature: -40~+70℃.

5 Connections Diagram

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



6 Installations

DIN35 rail-mounted or screw-mounted installation, the installation size is as shown in figure 3(in mm).

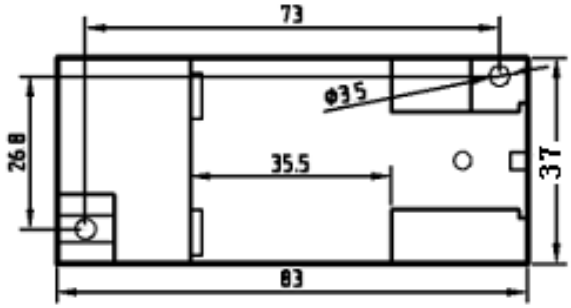


Figure 5, installation dimensions

7 Product's Service

1 Installation

1.1 DIN rail installation method:

①The transducer fixed on the side of the card slot and hook

on the mounting rail;

②Pull the spring pin down;

③Clip the transducer mount on the mounting rail;

④Release the spring pin and clip the transmitter on the mounting rail.

1.2 Screw mounting method:

①4mm diameter hole in the fixed plate according to the position of the screw hole shown in Fig. 9;

② Insert the screw Φ3.5 to into hole and secure.

2 Products factory has been accurately set according to the "product standard". Apply power after determine the correct wiring.

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 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.

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 Example of product accuracy level verification

1 According to the definition of the transducer terminals to connect the test circuit.

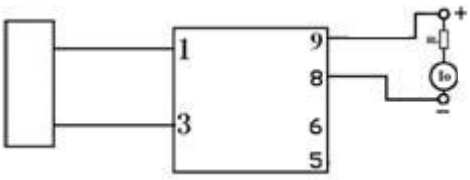


Figure 4, accuracy test wiring diagram

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

- ◆ Ambient temperature: 25 °C ± 5°C;
- ◆ Relative humidity: RH (45 ~ 80)%;
- ◆ The accuracy of the signal source and measurement instrument is 0.05% above.

3 Power preheat 2mins;

4 Current I input and monitoring methods:

①A high-precision high-current meter calibrator can directly input current I, and record the display data of the meter calibration instrument.

②If no high-precision instrument calibrator, you can use ordinary high-precision instrument calibrator to input to the transmitter input end, the precision ammeter is tandem connection to the calibrator output end to detect input current Iz.

5 Measure current output Io with the output monitoring table.

|Io-Iz|≤32uA is normal, or excessive (4-20mA output, 0.2);

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 used grade of the transducer, otherwise it will cause the product to be damaged.

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. The 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, return, repair) services.

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.

9 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.