

## Digital output current transmitter

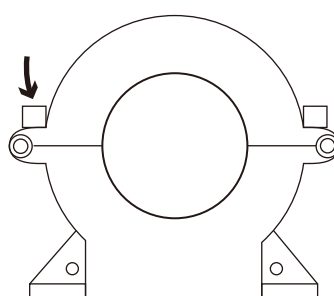
Split core, Crimping terminal output. Detect DC and pulse current, High insulation between primary side and the vice side circuit.



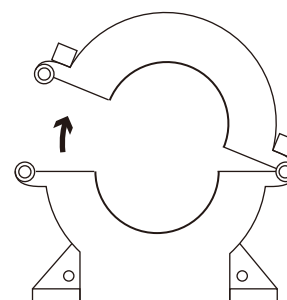
### Product features

- Light weight
- Low power consumption
- Good linearity
- No insertion loss
- Fast response time
- Good anti-interference ability

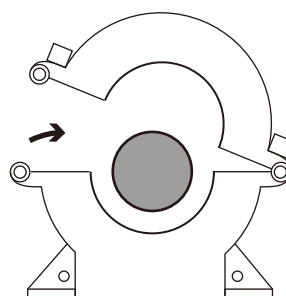
### Installation diagram



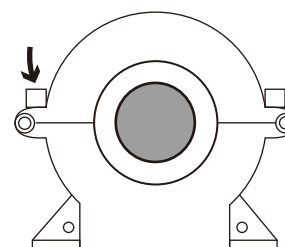
1. Loosen the screw



2. Open up



3. In the lead



4. Tighten the screws

### Product application

- Railway
- Metallurgical
- Welding machine
- Robot
- Motor
- Inverter power supply
- Variable frequency governor
- Uninterrupted power supply and communication power supply

**Electrical parameters:** ( The following parameters are typical values and actual values will be subject to product testing )

**Remarks**

|                         |                            |      |      |       |       |       |       |                                                                         |
|-------------------------|----------------------------|------|------|-------|-------|-------|-------|-------------------------------------------------------------------------|
| Rated input             | 500A                       | 600A | 800A | 1000A | 1500A | 2000A | 2500A | Standard input                                                          |
| Input measurement range | 600A                       | 720A | 960A | 1200A | 1800A | 2400A | 3000A | Default is 1.2 times the input rating                                   |
| Rated output            | Hexadecimal measurements   |      |      |       |       |       |       |                                                                         |
| Accuracy                | 1 %                        |      |      |       |       |       |       |                                                                         |
| Linearity               | 0. 5 %                     |      |      |       |       |       |       |                                                                         |
| Supply voltage (±5%)    | ± 15V/+12V/+24V            |      |      |       |       |       |       | Choose three                                                            |
| Current consumption     | ≤ 50mA                     |      |      |       |       |       |       | Reference will be subject to the measured                               |
| Transmission distance   | ≤ 1000m                    |      |      |       |       |       |       |                                                                         |
| Zero offset TA=25 C     | ≤ ± 15mV                   |      |      |       |       |       |       |                                                                         |
| Response time           | ≤ 20ms                     |      |      |       |       |       |       | 500 m transmission line, baud rate is 56000bps, even check test results |
| Communication protocol  | RS485 Modbus RTU           |      |      |       |       |       |       |                                                                         |
| Baud rate               | 9600bps(Acquiescence)      |      |      |       |       |       |       | 14400bps/19200bps/38400bps/56000bps(optional)                           |
| Device address range    | 0X01(Acquiescence)         |      |      |       |       |       |       | 0X01~0XF7(Can be modified)                                              |
| Check digit             | Parity check(Acquiescence) |      |      |       |       |       |       | Odd check/no check (optional)                                           |
| Weight                  | 1200g                      |      |      |       |       |       |       |                                                                         |
| Operation temperature   | -10 ~ +70 °C               |      |      |       |       |       |       |                                                                         |
| Storage temperature     | -40 ~ +85 °C               |      |      |       |       |       |       |                                                                         |
| Band width              | DC                         |      |      |       |       |       |       | Factory test                                                            |
| Delectric strength      | 2. 5KV 50Hz 1min           |      |      |       |       |       |       |                                                                         |

### Instruction for use:

1. Correct wiring as indicated
2. Full scale measurement, response time and following the speed for the best
3. Faulty wiring can lead to product damage and output uncertainty

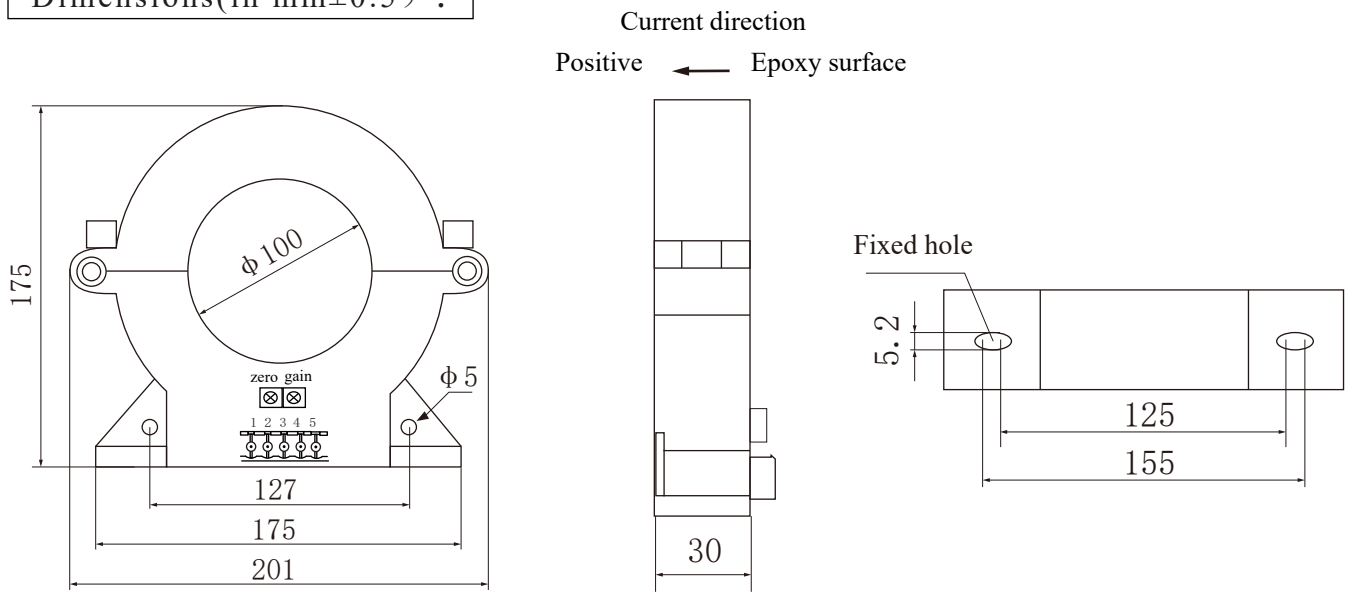
### Safe operation:

- \*Please read this specification carefully before use.
- \*When you need to move the product, please be sure to disconnect the power and all the connected cables.
- \*If found shell, devices attached to the fixed parts, wire, or have any damaged, please immediately deal with hidden dangers.
- \*If there is any doubt about the safe operation of the equipment, the equipment and the corresponding accessories should be closed immediately, and the fastest time for troubleshooting.

### Proclamations:

As our products are constantly being improved and updated, we reserve the right to modify the content of this specification at any time without prior notice.

Dimensions(in mm±0.5) :

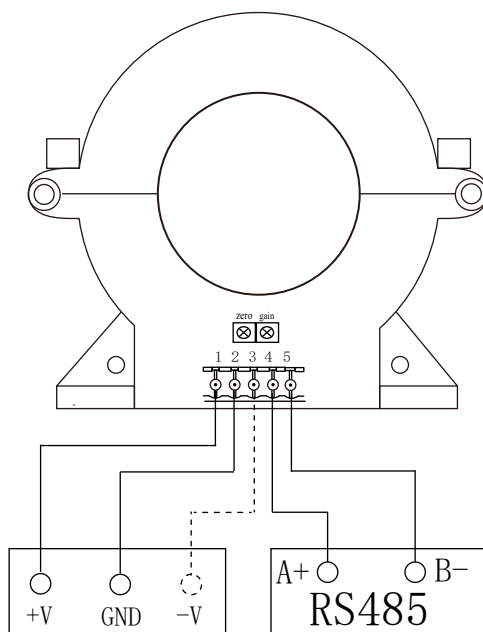


Connector Illustration:



Crimping terminal plug, spacing 5.08 mm

Wiring diagram:



Single power terminal definition: Double power terminal definition:

- |        |        |
|--------|--------|
| 1: +V  | 1: +V  |
| 2: GND | 2: GND |
| 3: N.C | 3: -V  |
| 4: A+  | 4: A+  |
| 5: B-  | 5: B-  |

Potentiometer definition:

Left: zero  
right: gain

※①Choose ripple small ( $\leq 20\text{mV}$ )

Stabilized auxiliary power supply

②Switch on auxiliary power

③Auxiliary power supply connection transmitter

④The transmitter detects primary current

# Communication protocol and instructions **YHDC**®

Model: THST100A-RS485      Power supply:      Rated input:      Check bit: Parity check(Acquiescence)

Baud rate: 9600bps (Acquiescence)      Device address: 0x01 (Acquiescence)

Output signal: The serial communication RS485 interface is adopted, the transmission mode is semi-duplex asynchronous, the starting bit is 1 bit, the data bit is 8 bits, the stop bit is 1 bit, the data transmission rate is 9600bps. Use RTU mode in MODBUS communication protocol.

Read data command

COMMAND (To command) :

01      03      00      01      00      01      D5      CA

RETURN (Return information) :

0x01      0x03      0x02      0x0X      0xXX      0xXX      0xXX

Address of slave device      Function code      Register number      Data height      Low data      CRC-L      CRC-H

| Start bit   | Device address | Function code | Data    | CRC   | Check end   |
|-------------|----------------|---------------|---------|-------|-------------|
| T1-T2-T3-T4 | 8Bit           | 8Bit          | n↑ 8Bit | 16Bit | T1-T2-T3-T4 |

After the upper computer issues the instruction, the slave device will normally respond within 50mS, and in extreme cases, the response time will not exceed 120mS.

Input/Output Table (theoretical value) :

| Current input (A) | RS485 output | corresponding decimal number |
|-------------------|--------------|------------------------------|
| 20%               | 0X0_ _ _ _   | _ _ _ _                      |
| 40%               | 0X0_ _ _ _   | _ _ _ _                      |
| 60%               | 0X0_ _ _ _   | _ _ _ _                      |
| 80%               | 0X0_ _ _ _   | _ _ _ _                      |
| 100%              | 0X0_ _ _ _   | _ _ _ _                      |
| 120%              | 0X0_ _ _ _   | _ _ _ _                      |

**Note:** (1) The input/output correspondence shall be negotiated between the manufacturer and the customer, and the signed version shall prevail

(2) 1V corresponds to the decimal number 1000 and the RS485 output is 0X03E8

2V corresponds to the decimal digit 2000, RS485 outputs 0X07D0

**Note:** Please ensure that the upper and lower parts of the sensor are tightly connected so that the measured data are accurate; The sensor is accurately calibrated before leaving the factory, and the user generally does not need to re-calibrate.