

## I. Brief introduction

This series of products are industrial grade products, facing the strong electromagnetic interference environment, for fast passing pulse group, electrostatic discharge, and voltage to make special design, the sensor can accurately measure the temperature and humidity in the range of  $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$  and  $0\% \text{RH} \sim 100\% \text{RH}$ . The circuit uses temperature compensation, and the product works stably and reliably.

- Strong anti-interference ability
- 2 lines of character LCD display temperature and humidity
- Analog output (three wires)
- The transmission part is fully sealed and waterproof
- Fast response time
- Various installation forms are available: one-piece wall-mounted, pipe-mounted and split wall-mounted, with optional installation threads or flanges
- Probe plus professional filter, greatly improve the service life of the product

## II. Technical parameters

Power voltage: DC 24V ( $22\text{V} \sim 26\text{V}$ )

Power loss:

Current output type  $\leq 1.2\text{W}$

Voltage output type  $\leq 0.48\text{W}$

Network output type  $\leq 0.48\text{W}$

Band display type increase  $0.12\text{W}$

Measuring range:

Humidity:  $0\% \text{RH} \sim 100\% \text{RH}$

Temperature:  $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$  (See product label for specific range)

Accuracy:

Grade A:

Humidity  $\pm 2\% \text{RH}$  ( $5\% \text{RH} \sim 95\% \text{RH}, 25^{\circ}\text{C}$ )

Temperature  $\pm 0.5^{\circ}\text{C}$  ( $25^{\circ}\text{C}$ )

Grade B:

Humidity  $\pm 3\% \text{RH}$  ( $5\% \text{RH} \sim 95\% \text{RH}, 25^{\circ}\text{C}$ )

Temperature  $\pm 0.5^{\circ}\text{C}$  ( $25^{\circ}\text{C}$ )

Circuit working temperature:  $-20^{\circ}\text{C} \sim 60^{\circ}\text{C}$

Probe working temperature:  $-40^{\circ}\text{C} \sim 120^{\circ}\text{C}$

Long-term stability:

Humidity:  $\leq 1\% \text{RH}/\text{y}$

Temperature  $\leq 0.1^{\circ}\text{C}/\text{y}$

Response time:

Humidity  $\leq 4\text{s}$  ( $1\text{m/s}$  wind speed)

Temperature  $\leq 15\text{s}$  ( $1\text{m/s}$  wind speed)

Output signal:

Current output type:

Two wire system  $4\text{mA} \sim 20\text{mA}$

Three wire system  $4\text{mA} \sim 20\text{mA}$

Voltage output type:  $0\text{V} \sim 5\text{V}$    $0\text{V} \sim 10\text{V}$

Network output type: RS-485  RS-232

Load capacity:

Current output type:  $\leq 500\Omega$

Voltage output type: Impedance of output  $\leq 250\Omega$

Installation:

Wall-mounted: fixed wall surface

Split type: flange or thread installation

Pipeline type: flanged or threaded installation

Shell: ABS white  $86\text{mm} \times 117\text{mm} \times 41\text{mm}$

Product weight: Wall mounted type  $\leq 170\text{g}$

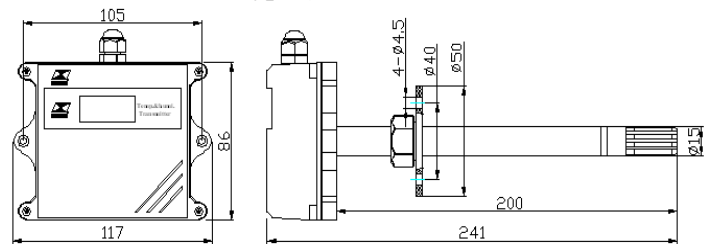
Pipe line type  $\leq 430\text{g}$

## III. Shape and Connection

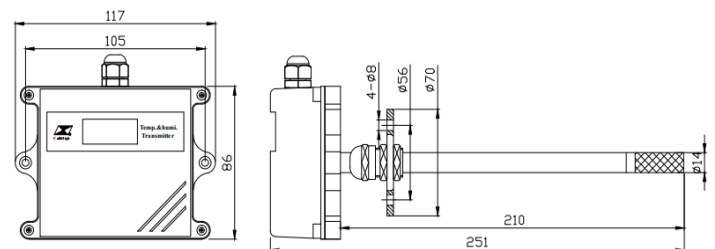
Dimensions:  $86\text{mm} \times 117\text{mm} \times 41\text{mm}$

### 1. Pipe line type

#### D type (ABS)

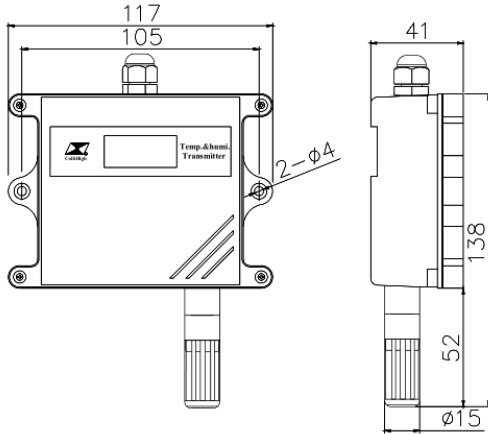


#### D5 or D6 type (Metal)

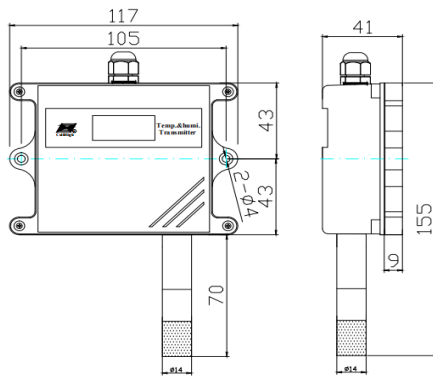


### 2. Wall mounted type

## W type (ABS)

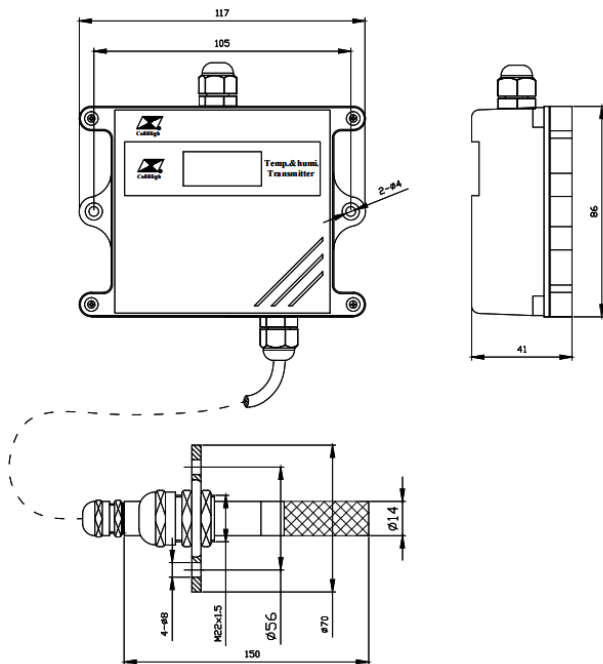


## W6 type (Metal)



Wall-mounted (metal) mounting hole size

## 3.Split type



irreversible damage to the transmitter)

### Two-wire current output

V+: Red (Temperature power +)

V-: Black (Humidity power+)

T: Yellow (Temperature current output)

H: Blue (Humidity current output)

### Three-wire current and voltage output

V+: Red (Power +) GND: Black (Power -)

T: Yellow (Temperature current or voltage output)

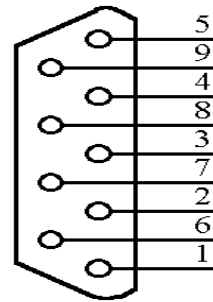
H: Blue (Humidity current or voltage output)

### Network output

V+: Red (Power +) V-: Black (Power -) GND: white

TX/A: Yellow (RS485 signal + A/RS232 receiver)

RX/B: Blue (RS485 signal - B/RS232 sender)



The DB9 terminal outputs are defined as follows:

Pin2: TX/A -- yellow

Pin3: RX/B -- blue

Pin5: GND -- white

### RS232

DB9 socket

### Wiring Diagram

### Note:

Two-wire current type: JWSKE-6ATXX

Three-wire current type: JWSKE-6ACXX

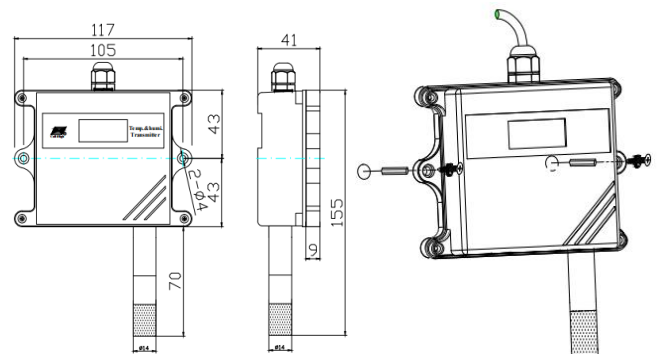
Voltage type: JWSKE-6VBXX JWSKE-6VCXX

Network type: JWSKE-6W1/W2XX

## IV. Installation

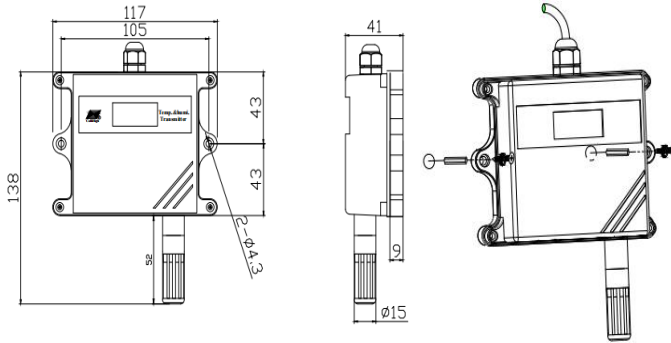
### Installation steps:

1. Wall-mounted type: The transmitter has two  $\phi 4$  mounting holes on both sides and is fixed to the wall with standard expansion screws and screws.

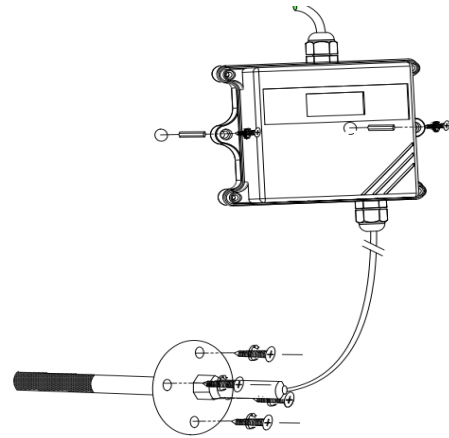


Wall-mounted (metal) mounting hole size

**Wiring instructions:** (any wrong wiring may cause

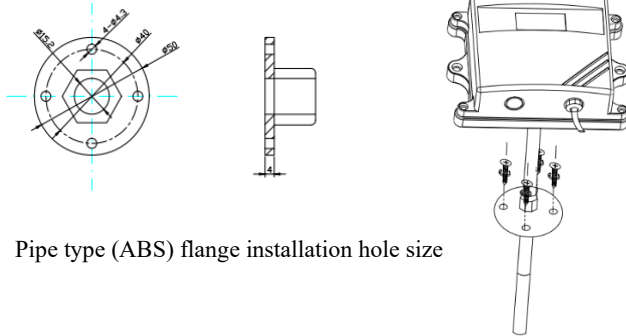


Wall mounted (ABS) mounting hole size

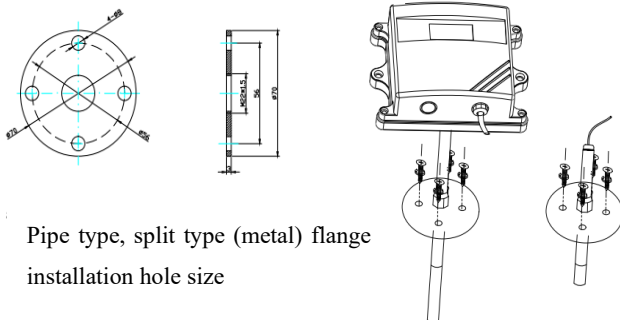


Split installation size drawing

2. Pipe line type: The probe is fixed to the wall or pipe with four holes of  $\phi 8$  in the flange (optional flange), and the probe is fixed to the wall or pipe with M22 $\times$ 1.5 mounting thread (optional thread).



Pipe type (ABS) flange installation hole size



Pipe type, split type (metal) flange installation hole size

3.Split type: There are two  $\phi 4$  mounting holes on both sides of the transmitter, which are fixed on the wall with standard expansion screws and screws; The probe is fixed on the wall or pipe with 4 holes of  $\phi 8$  on the flange (optional flange), and the probe is fixed on the wall or pipe with M22 $\times$ 1.5 mounting thread (optional thread).

4.Connect to the acquisition device with a transmitter cable.

**Note: The installation thread size is M22 $\times$ 1.5**

### Installation location:

1.The transmitter should be placed vertically as far as possible, and when installed, ensure that the sensor is below the transmitter (the font on the transmitter is positive direction);

2.The installation height is the sitting height of the human body or the environmental area where the main requirements are measured.

### Installation note:

1.Avoid the installation in the area where heat transfer is easy and the temperature difference between the area to be measured will be directly caused, otherwise the temperature and humidity measurement will be inaccurate.

2.Installed in the area of environmental stability, avoid direct sunlight, away from the window and air conditioning, heating and other equipment, avoid straight to the window and door.

3.Away from high power interference device as far as possible, lest cause inaccurate measurement, such as frequency converter, motor, etc.

### V. Use

1.Carefully check to ensure that the wiring is correct, network output: through the 485 conversion module connected to the PC serial port, connected to DC 24V or 12V power supply, you can check the temperature and humidity value through the test software; Analog output: turn on DC 24V or 12V power supply, when measured with a multimeter will measure the

corresponding current or voltage value. (See communication protocol V1.7 for details).

2.If you want to remove the transmitter, you must first disconnect the power supply and then remove it.

3.This transmitter is indoor type, the transmitter internal to avoid water entry, so as not to cause damage; If you want to use outdoors, you must install a ventilated shield to avoid water inside the transmitter.

4.The transmitter with liquid crystal display, powered, can directly observe whether the display is correct.

## VI. Attention

1.Please read this manual carefully before use to make sure the wiring is correct. Any incorrect wiring may cause irreversible damage to the transmitter.

2.Avoid installation in zones where heat transfer is easy and will directly cause temperature differences with the area to be measured, as this will result in inaccurate temperature and humidity measurements.

3.Prevent chemical reagents, oil, dust, etc. from directly attacking the sensor, and do not use it for a long time under the environment of condensation and extreme temperature. Do not carry out cold or thermal shock.

4.This product is an electronic product, scrapping will produce environmental pollution, scrapping should follow the national electronic device scrapping related standards.

## VII. Maintenance

1.The transmitter will be offset when used for a long time. In order to ensure the accuracy of measurement, it is best to calibrate once a year.

2.If the sensor filter is made of metal, it can be removed after 2 to 3 months of use, and the filter can be cleaned to make the measurement environment flow normally.

## VIII. Transportation, storage

1.Transmitter try to avoid vibration, lightly take and put.

2.Long-term optimal storage conditions: 10°C ~ 40°C; 20%RH~50%RH.

## IX. Open box inspection

1.After opening the package, check whether the transmitter is intact.

2. Transmitter	1set
Manual	1serving

Certificate of conformity	1sheet
Expansion screw	2 serving
Screw	2 serving

(Network type products also come with a short-circuit cap 2).

## X. Troubleshooting and Analysis

1. When analog output, if the transmitter output is 0, or the output value is not within the range, please check whether the wiring is correct and firm.

2.If not these reasons, please contact the manufacturer.