**The wall wangzi shell**

**temperature and humidity**

**transmitter**

**operation instruction**

**（Analog Quantity Type）**

Document version：V1.2

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# 1. Product Introduction

## 1.1 **Product summary**

This product is widely applied in communication engine room、automation、automatic control where needs the temperature and humidity monitor .The three parts about input power supply, temperature measurement unit and signal output of sensor are completely isolated. Safe and reliable, beautiful appearance, easy installation.

## 1.2. Function feature

●Imported Swiss measure unit，accurately measure.

●Using special analog circuit ，widely applying range.

●10~30V DC wide voltage supply.

●Be applied in three wire and four wire system simultaneously.

## 1.3. Main technology indexes

|  |  |
| --- | --- |
| DC powered（default） | 10~30V DC |
| Maximum power dissipation | Current output | 1.2W |
| Voltage output | 1.2W |
|  Degree of accuracy;（default） | Humidity  | ±3%RH(5%RH~95%RH,25℃) |
| Temperature | ±0.5℃（25℃） |
| Temperature of transmitter electric circuit operation | -20℃~+60℃，0%RH~80%RH |
| Temperature of probe operation | -40℃~+120℃，default -40℃~+80℃ |
| Humidity of probe operation | 0%RH-100%RH |
| Long-term stability | Humidity | ≤1%RH/y |
| Temperature | ≤0.1℃/y |
| Reaction time  | Humidity | ≤8s(1m/s wind speed ) |
| Temperature | ≤25s(1m/s wind speed ) |
| Output signal | Current output | 4~20mA |
| Voltage output | 0~5V/0~10V |
| Load capacity | Voltage output | Electric resistance output≤250Ω |
| Current output | ≤600Ω |
| Note: The maximum current with display products increased by 5mA |

# 2. Product Selection

## 2.1 86LCD Shell

|  |  |  |  |
| --- | --- | --- | --- |
| RS- |  |  | Code of Ren Shuo corporate |
|  | WS- |  |  | Humiture variable and sensor |
|  | I20- |  |  | 4～20 mA current output |
| V05- |  |  | 0～5V voltage output |
| V10- |  |  | 0～10V voltage output |
|  | 1 |  | 86LCD Shell |
|  | 6 | External waterproof probe |
| 7 | External high-sensitivity probe |
| 8 | External common probe |
| 9 | External metal waterproof probe |
| A | External long metal probe |
| B | External wide temperature probe |

**2.2 Probe Selection Table**

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# Device Installation Instruction

## 3.1. Check before device installation

■One transmitter device

■One 12V/2A power（selection）

■Certificate, warranty card, after sales service card and so on

## 3.2. Wiring

### 3.2.1: Power supply wiring

DC power input by wide voltage 10-30V. Only 24V power supply applied in 0-10V output type device.

### 3.2.2: Output interface and wiring

The standard setting of the device is the one which owns two independent analog quantity output and adopts the three wires and four wires system simultaneously.

## 3.3 Specific model wiring

### 3.3.1: Wall wangzi shell wiring

|  |  |  |
| --- | --- | --- |
|  | Line color | Description |
| Power | brown | Power supply |
| black | Power supply negative |
| Output | blue | The temperature signal is positive |
| green | The temperature signal is negative |
| yellow | Humidity signal positive |
| white | Humidity signal negative |

## 3.4 Wiring example

**Four-wire connection diagram**



**Three-wire connection diagram**

# 4. Common Problem and Solution

**Fault situation：no output or wrong output**

Reasons possible:

(1) The wrong measure range leads to PLC calculation wrong, the measure range please refer to the technology in the first part.

(2) Wrong connection mode or wrong connection order.

(3) Wrong power voltage (the type 0-10V is all power supplied in 24V).

(4) Over distance between transducer and collector leads to signal disorder.

(5) PLC collection point is damage.。

(6) Device is broken

# 5. Contact Information

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# 6. Document History

V1.0 Document building.

V1.1 Add a variety of different shell.

V1.2 To increase the wiring and solutions to common problems.

# 7. Shell Size

## Wall wangzi shell ：110×85×44mm

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