

**Model 485 wind speed sensor an instruction manual**

**JXBS-3001-FS**

**Ver1.0**

# Chapter 1 product introduction

* 1. Product overview

Jxbs-3001-fs series wind speed sensor is small and light in appearance, easy to carry and assemble. The three cup design concept can effectively obtain the external environment information. The shell is made of high-quality polycarbonate material, and the internal smooth bearing system ensures the accuracy of information collection. It is widely used in greenhouse, environmental protection, weather stations, ships, docks, aquaculture and other environment wind speed measurement.

### Main parameter

**Parameter Technical index**

**Wind speed measurement range**

**Wind speed measurement accuracy**

0-30m/s

±1m/s

**response time** less than5seconds

**Baud rate** 9600

**Communicati on port**

### RS485

**Power supply** 12V-24V DC

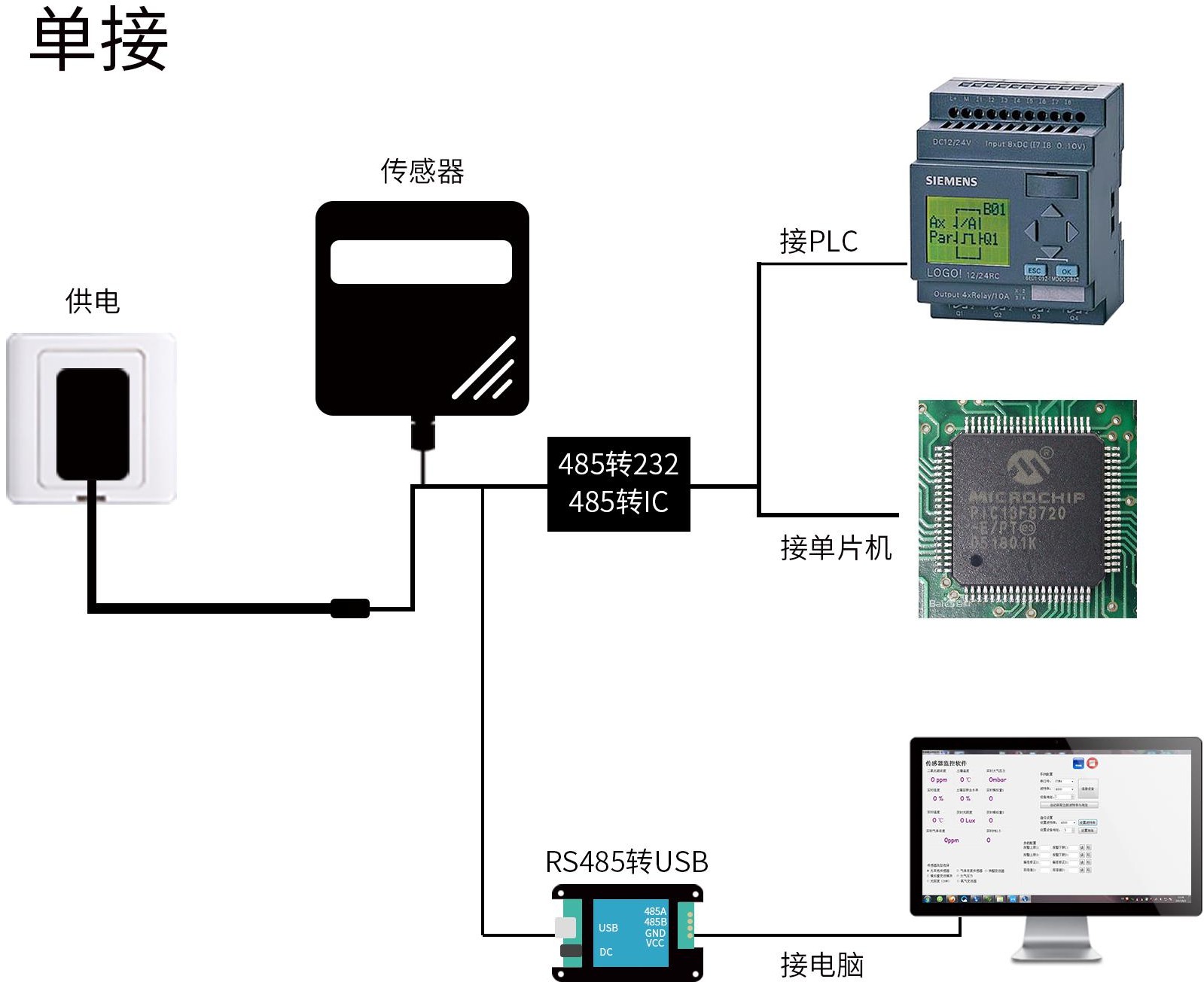
## consume power Operating temperature

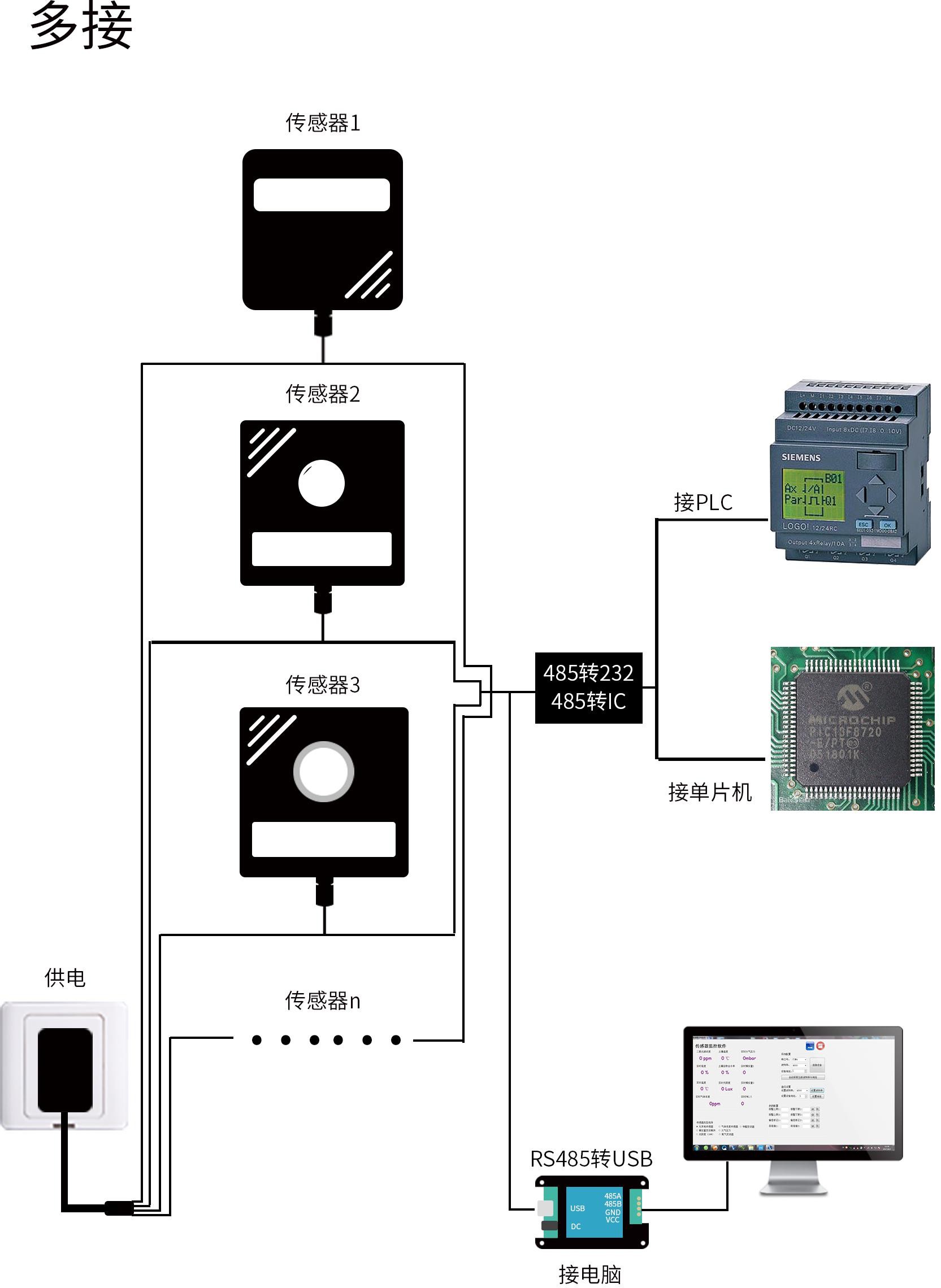
<1W

### -30-80℃

**Working humidity environment**

0-100%RH（15-95%RH）

* 1. system framework diagram



Chapter 2 hardware connection

* 1. inspection before equipment installation

Please check the equipment list before installing the equipment:

**Name number**

**High precision sensor**

**Wind speed 485 line**

**12V waterproof power supply**

1 set

1 wire 1(optional)

**USB to 485 device** 1(optional)

**Warranty card /** 1 copy

**certificate**

* + 1. wiring：



##### Line colou r

**Note**

**Powe r suppl y Com**

**munic ations**

Red Positive power

Black Negative power

Yellow 485A 485B

Green

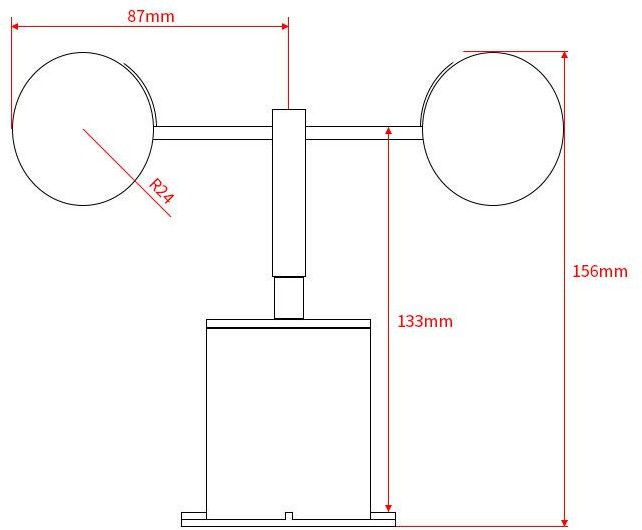
Factory default to provide 0.6 meters long wire, customers can extend wire or sequential wiring as needed.

* 1. Installation mode

Using flange installation, threaded flange connection makes the lower pipe fittings of wind speed sensor firmly fixed on flange, four mounting holes are opened on the circumference of chassis, and bolts are used to fasten them tightly to the support. Ensure the accuracy of wind direction data, flange connection easy to use, can withstand greater pressure.

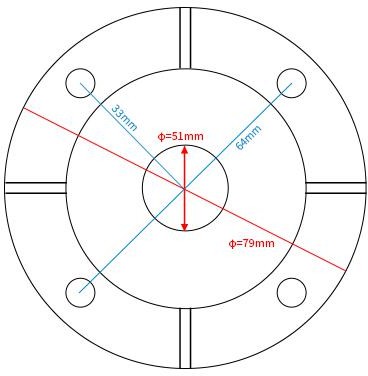
* + 1. **fixation**

# The sensor size is shown



below:

Main Drawing

Dimensions

### Base dimensions

According to the size of the sensor, you can install the sensor to the right position 。

Chapter 3 Communications Agreements

* 1. Basic communication parameters

**Parameters Content**

**Code** 8-bit binary

**Data bits** 8-bit

**parity bit** No

**Stop position** 1 bit

Error calibration

**Error**

**calibration**

**baud rate** 2400bps/4800bps/9600 bps Available,

### factory default is 9600 bps

**Code** 8 Bit binary

* 1. **Data frame format definition**

Adopt the Modbus-RTU protocol as follows:

Initial structure >=4 bytes time Address =1 byte

Function =1 byte Data =N bytes

Error check =16-bit CRC code End structure >=4 bytes of time

Address code: the address of the transmitter, unique in the inquiry network (factory default 0 x01).

Function code: the host sends the instruction function prompt, this transmitter only uses the function code 0 x03( reads the memory data).

Data area: data area is a specific query area, note that 16 bits data high byte before CRC code: two-byte check code.

### Question frame

#### Register

Check theCheck the high

#### Address Functi Functional length

low bit

bit

#### code onal code

code

1 bytes 1 bytes 2 bytes 2 bytes 1 bytes 1 bytes

Response frames

Function Number ofData area I Second Data N data area

Address al code code

valid bytes

Area

1bytes 1bytes 1bytes 2bytes 2bytes 2bytes

* 1. Register address

|  |  |  |  |
| --- | --- | --- | --- |
| Register address | PLC  Configura tion Address | content | Operatio n |
| 0000H | 40001 | Wind speed (0.1m/s ) | Read |
| 0100H | 40101 | Device address(0-252) | only  Read |

0101H 40102 baud rate

(2400/4800/9600)

and write Read and write

* 1. Examples of communication protocols and explanations
     1. read the wind speed value x01 device address 0 Question frame

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Addre ss code | Funct ional code | Starting address | Data length | Check the low bit | Check  the high bit |
| 0x01 | 0x03 | 0x00,0x00 | 0x00,0x01 | 0x84 | 0x0A |

Answer frame (e.g. reading wind speed2.3 m/s )

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Addre ss code | Funct ional code | Number of valid bytes | Wind speed | Low Checkin g code | High Checking code |
| 0x01 | 0x03 | 0x02 | 0x00 0x17 | 0xB8 | 0x41 |

Wind speed:

0017H( hexadecimal)=23=> wind speed =2.3 m/s

* 1. **Notes:**

Please check that the package is in good condition and check that the transmitter model and specifications are in accordance with the products you choose. If you have any questions, please contact us as soon as possible.

Please confirm before use: whether the output voltage of the power supply is correct; the positive and negative connection mode of the power supply with the product; and read the product specification or consult our company in detail. Any wiring error will cause irreversible damage to the transmitter.

* 1. **Quality Assurance and After-sale**

Quality assurance terms follow Weihai Jingxun unblocked Electronic Technology Co., Ltd. Sensor after-sale terms, for sensor mainframe circuit part of the warranty for two years, gas sensor quality assurance for one year, accessories (shell / plug / cable, etc.) warranty for three months.