

**ABS Bucket  
Type Rain Gauge  
RAIN  
SENSOR  
INSTRUCTION  
MANUAL**

**JXBS-3001-MCYL  
Ver1.0**



## CHAPTER1 PRODUCT BRIEF INTRODUCTION

### 1.1 Product Overview

The JXBS-3001-YL series rain sensor is an instrument that can automatically observe and store "rainfall" parameters. It is divided into ABS and stainless steel types.

The sensor developed by our company is small and light, easy to carry and assemble. It is used to measure the rainfall in nature, and at the same time convert the rainfall into digital information output in the form of switch, to meet the needs of information transmission, processing, recording, etc. .

It is widely used in relevant departments such as meteorological stations, hydrological stations, agriculture and forestry, national defense, field observation and reporting stations, and can provide original data for flood control, water supply dispatching, and water regime management of power stations and reservoirs.

### 1.2 Product Features

(1) High precision: using electronic circuits and microcomputer technology, the output pulse fertilizer resolution is 0.2mm, and each output pulse represents 0.2mm of rainfall.

(2) The rain intensity range that can be measured is the largest: the sensor rain intensity measurement range is 0.1mm-3mm/min, up to 5mm/min.

(3) Minimum measurement error: The national standard for rain gauge error is  $\pm 4\%$ , but our sensor is developed and

produced in accordance with the International Meteorological Organization standard, and the error is less than  $\pm 3\%$ .

### 1.3 Product Advantages

- (1) Low cost, strong practicability, and can be used in the field for a long time.
- (2) Small size, simple operation and reliable performance.
- (3) Made of ABS engineering plastics, no rust.
- (4) The water receiving port is made of ABS plastic injection molding and aluminum alloy material, with high smoothness and small error caused by stagnant water.
- (5) The internal tipping bucket is well-manufactured, and the frictional resistance generated is small, so the response is sensitive and the error is small.
- (6) The internal chassis is equipped with level adjustment bubbles, which can assist the bottom corner to adjust the equipment to the best level.
- (7) The bottom is fixed with iron sheets and expansion screws to ensure stable product performance and reliable work.

### 1.4 Main Parameters

Parameter	Technical Index
Measuring range	0.01mm~3mm/min
Resolution	0.2mm
Precision	0.2mm
Measurement error	$\pm 3\%$
Response time	Less than 1 second
Communication method	Pulse type
Baud rate	2400/4800/9600

Power supply	12V-24V DC
Power consumption	<1W
Working temperature environment	-10-50°C
Working humidity environment	0-95% (relative humidity), no condensation
Water-bearing caliber	ABS material: 164mm Aluminum alloy material: 200mm
Appearance material	ABS material Stainless steel material

## CHAPTER2 HARDWARE CONNECTION

### 2.1 Check Before Equipment Installing

Please check the equipment list before installing the equipment:

Name	Quantity
High precision sensor	1
12V waterproof power supply	1(optional)
Expansion screw	4
Iron sheets	2
Nut screw	4
Warranty card/certificate	1

### 2.2 Product Appearance Size and Internal Structure

#### 2.2.1 Appearance Dimension

The following figure is the appearance and size of the sensor, which can be installed reasonably according to the size,

as shown in the figure:

ABS材质尺寸

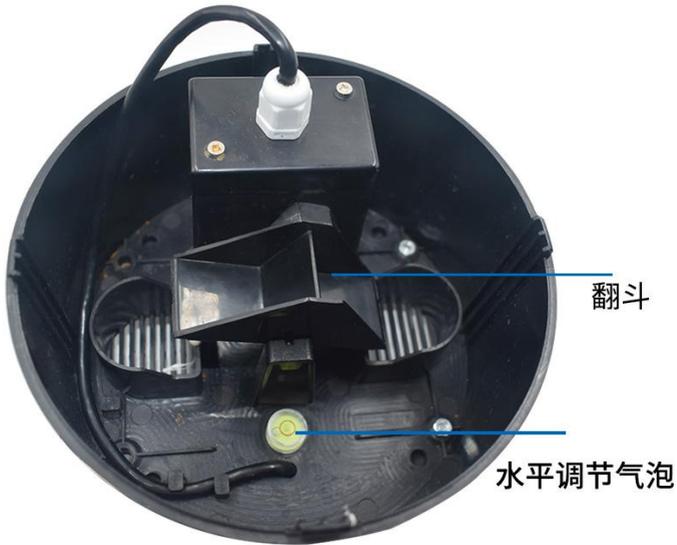


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## 2.2.2 Internal Structure

The following figure shows the internal structure of the product, as shown in the figure:



### 2.3 Interface Description

The power interface is a wide-voltage power input of 12-24V. The wiring of the pulse signal line is yellow, and the line sequence description is shown in the following figure (table):

#### 接线说明

线色	说明
电源 <b>棕色</b>	电源正 (12-24VDC)
<b>黑色</b>	电源负
通信 <b>黄色</b>	脉冲信号线



	Wire color	Description
Power supply	Brown	Positive power supply (12-24VDC)
	Black	Negative Power
Communication	Yellow	Pulse signal line

**Note:** There is no yellow line in the line sequence that may be provided in some factory batches. At this time, the gray line is equivalent to replace the yellow line.

## 2.4 Installation Instructions

- (1) First use the screws delivered by our company to fix the patch on the bottom of the sensor, and at the same time install the expansion screw at the corresponding position of the iron plate.
- (2) Determine the installation position, and then drill or install according to the distance between the expansion screws at the bottom of the sensor.
- (3) Fix the sensor to the position where it needs to be installed, and observe that the horizontal bubble (yellow) is maintained in the middle position; keep the sensor at the best level to ensure the accuracy of the rainfall data.
- (4) Before the sensor is shipped, the internal tipping bucket should be bound with a cable tie, and the strapping should be cut off before use.
- (5) After the above steps are completed, the device can work after power on.

## 2.5 Notes

- (1) Please check whether the packaging is intact, and check whether the transmitter model and specifications are consistent with the products you have purchased; if you have any questions, please contact our after-sales service as soon as possible.
- (2) Before using the sensor, please read the product manual in detail or consult our after-sales staff.
- (3) Confirm whether the output voltage of the power supply is correct, and whether the positive and negative wiring of the power supply and the positive and negative wiring of the product are consistent with the manual. Incorrect wiring will cause the equipment to burn.
- (4) The equipment must be fixed with expansion screws delivered by our company or corresponding in size.

## 2.6 APPENDIX

The warranty clauses follow the sensor after-sales clauses of Weihai Jingxun Changtong Electronic Technology Co., Ltd., two years for the sensor host circuit part, one year for gas-sensitive probes, and three months for accessories (housing/plug/cable, etc.)