

RAIN SENSOR / DATA SHEET
SS206-01

ABS Tipping Bucket Rain Gauge

Cost-effective ABS tipping-bucket rainfall sensor for automatic precipitation measurement, offering selectable 0.2 mm / 0.5 mm resolution and multiple signal outputs for weather stations and field monitoring systems.

Overview

SS206-01 is an ABS tipping-bucket rain gauge designed for automated rainfall measurement in environmental, hydrological, agricultural and weather-station applications.

The instrument uses a tipping-bucket mechanism inside an integrated ABS housing. Rainwater enters through the collection mouth and is guided to the bucket assembly; each bucket tip generates a pulse or digital output that can be accumulated for rainfall calculation.

The product is compact and easy to install, with stable output, long transmission distance and strong anti-interference performance for outdoor monitoring sites.



Resolution 0.2 / 0.5 mm	Cylinder diameter Φ 200 mm	Power supply DC 4.5-30 V / DC 10-30 V	Signal output RS485 / Analog / Pulse
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Key Advantages

- ABS engineering plastic shell, corrosion-resistant and rust-free for outdoor operation.
- Integrated internal structure; no internal mechanism assembly is required on site.
- Good linearity, long transmission distance and strong anti-interference capability.
- Funnel mesh design helps prevent leaves and debris from blocking rainfall flow.
- Multiple output options support integration with data loggers, PLCs and weather-station systems.

Application Scenarios

- Meteorological stations and automatic weather stations.
- Hydrological stations and field observation sites.
- Agricultural irrigation and rainfall monitoring.
- Flood-control, drainage and environmental monitoring projects.
- Remote rainfall data acquisition with RS485, analog or pulse output.

MEASUREMENT PRINCIPLE

Technical Principle

Rainwater is collected by the upper rain-bearing mouth and flows through the funnel into the tipping bucket. When the bucket reaches a preset water volume, it tips and triggers the magnetic/reed-switch assembly. The number of bucket tips is counted and converted into rainfall depth, while the selected output signal transmits the measurement to an external system.

SYSTEM DATA

General Specifications

Item	Specification
Model	SS206-01
Product type	ABS tipping bucket rain gauge
Tipping bucket material	ABS plastic
Rain-bearing mouth material	ABS plastic
Cylinder diameter	Φ 200 mm
Instrument height	255 mm
Resolution	0.2 mm / 0.5 mm optional
Measurement error	±0.32 mm, based on indoor artificial precipitation and the instrument's own water discharge
Rainfall intensity range	0-4 mm/min
Maximum permitted rainfall intensity	8 mm/min

ELECTRICAL DATA

Power & Output

Parameter	Specification
Power supply	DC 4.5-30 V for RS485 version; DC 10-30 V for analog version

Maximum power consumption	0.24 W
Signal output	RS485 / 4-20 mA / 0-2 V / 0-5 V / 0-10 V / Pulse
Output conversion	Each bucket tip corresponds to a rainfall increment according to the selected resolution

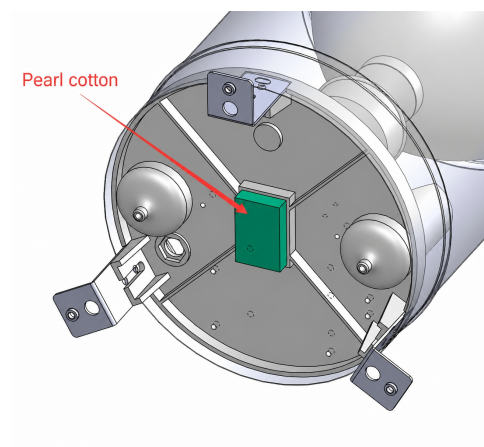
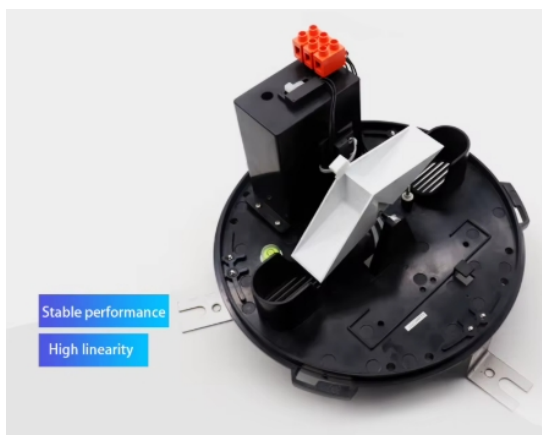
ENVIRONMENTAL DATA

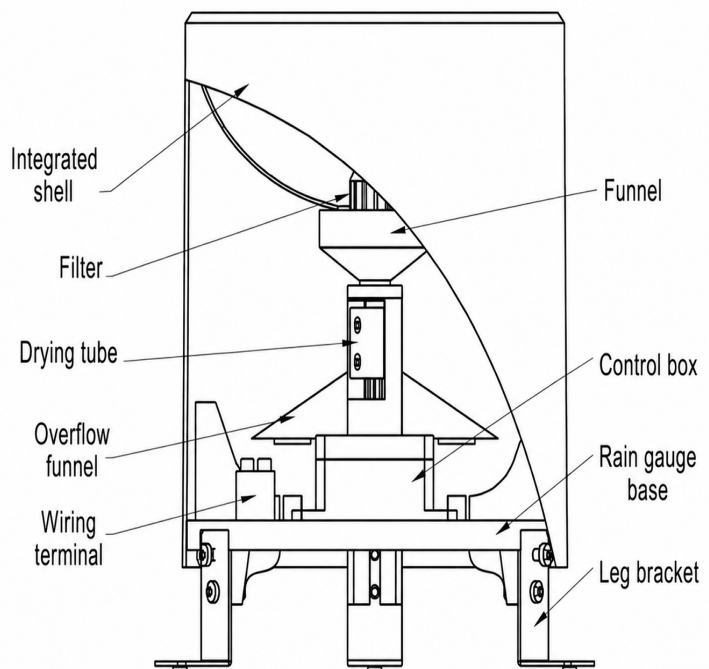
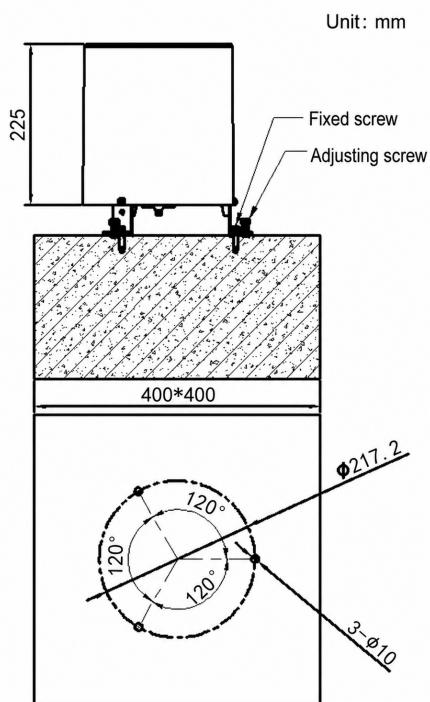
Operating Conditions

Parameter	Specification
Cutting edge angle	40°-45°
Operating environment	0°C to 55°C, <95%RH at 40°C
Storage environment	-40°C to +125°C, <80%RH, non-condensing
Installation base	Outdoor cement foundation recommended: 40 cm x 40 cm square base, height not less than 30 cm; circular base diameter 40 cm also supported
Installation clearance	Rain-bearing mouth should be 70 cm above ground level, with no obstacles higher than the mouth within 3-5 m around the gauge

INSTALLATION

Installation & Structure





Before outdoor installation, inspect the instrument, accessories and tipping-bucket assembly. Keep the tipping bucket clean and avoid touching the inner bucket surface directly. During installation, level the rain-bearing mouth and secure the instrument on the prepared foundation using the supplied mounting hardware.

CONFIGURATION

Product Selection

Code	Description
SS206-01	ABS tipping bucket rain gauge
Resolution option	0.2 mm / 0.5 mm
Output options	RS485, 4-20 mA, 0-2 V, 0-5 V, 0-10 V, Pulse
Application fit	Rainfall accumulation, rainfall intensity and rainfall-duration monitoring

CONTACT / SUPPORT

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