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Economical Tipping Bucket Rainfall Sensor
BS400-04

Tipping Bucket Rain Gauge, Compact Rain Sensor, High Accuracy Sensor

Overview

The **BS400-04 Economical Tipping Bucket Rainfall Sensor** is a compact and dependable hydrological and meteorological instrument designed to measure rainfall by converting precipitation into a pulse signal output. It offers high accuracy, excellent stability, and a user-friendly, space-saving design. The sensor features a mesh funnel to prevent debris such as leaves and insects from entering, an insect-proof screen at the outlet, and a clog-free nozzle to ensure smooth operation. Its durable body is made of high-strength ABS material and includes a built-in leveler for precise installation.

Features

- ✓ Compact Size for Easy Use
- ✓ High Accuracy, Good Stability
- ✓ Mesh in the Funnel Preventing Debris Such as Leaves and Insects From Entering the Working of Rain Sensor
- ✓ Well Made Tipping Bucket with Low Resistance
- ✓ The Main Body Made of High Strength ABS
- ✓ Horizontal Bubble in the Bottom
- ✓ Outlet with Insect-Proof Screen

Applications

- ✓ Meteorological Monitoring
- ✓ Hydrologic Monitoring
- ✓ Natural Disaster Monitoring
- ✓ Agrometeorological Research
- ✓ Climate Research

Working Process

Rainfall is captured in the 200mm diameter collector funnel and is directed through a delivery pipe to fill a divided ABS injection molded tipping bucket device.The bucket is pivoted through its center and has a preset calibration to tip for 0.2 mm of rainfall. When the bucket is “full”, it pivots and empties - this action magnetically closes and opens a reed switch, sending a pulse signal to the data logger or electronic counter. Through this tipping “seesaw” action, the other side of the bucket is aligned to receive the flow from the delivery pipe. This recording and tipping cycle continues with rainfall.

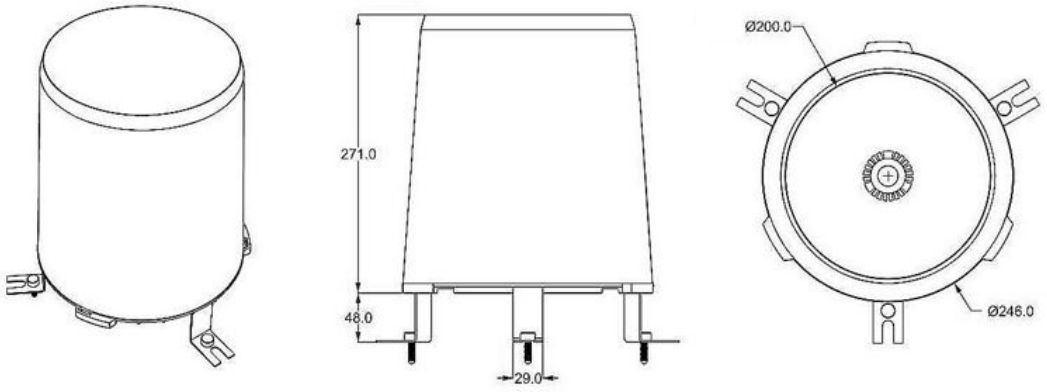
Technical Specifications

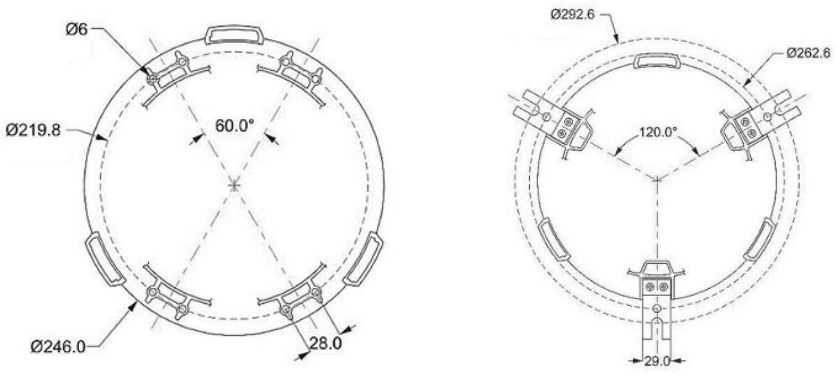
Item	Specification
Collector	Diameter :ϕ200mm, height: 271mm
Measured Rainfall Intensity	Max: 4mm/min
Allow Rainfall Intensity	Max: 8mm/min
Resolution	0.2mm
Accuracy (2mm/min)	±4%
Maximum Load Voltage	30VDC (Pulse Output)
Maximum Load Current	20mA
Output	Pulses(@10kΩ&0.01uF), RS485(12-24VDC Supply)
Operating Temperature	0 ~ 60°C @ 0% ~ 100%RH
Main Material	Rainfall Collector and Tipping Bucket: ABS, Supporting Leg:304SS
Weight (Unpacked)	2kg

Dimension and Mounting

Adjust the balance foot screws to ensure that the apparatus is properly leveled in a horizontal position. Once the correct level is achieved, use the three fastening screws to securely fix the three supporting legs to the platform.

This stabilization process is essential to maintain the instrument at an optimal operational level, ensuring the accuracy and reliability of the rainfall measurement data.





Installation hole position No.1

Installation hole position No.2

Parameter Selection Table

Remark	Series	Type	Output	Cable Length	
BS					
	400				
		04			
			A		Pulse
			B		RS485 (Supply:12 ~ 24VDC)
			C		Customization
				1500	Units: mm (typ)
				3000	Units: mm
				...	Units: mm

Example: BS400-04A1500, Output: Pulse, Cable Length:1.5m.

For comprehensive details, visit: www.buraq.com/BS400-04

BiS
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