WWW.BURAQ.COM

Tipping Bucket Rainfall Sensor
BS400-01

Reliable & Industrial Economical Tipping Bucket Rainfall Sensor

Overview

The **BS400-01 Tipping Bucket Rainfall Sensor** is a precision instrument designed to measure natural rainfall accurately. To facilitate data transmission, processing, recording, and display, the measured rainfall is converted into a standardized pulse output.

This sensor is widely applicable in weather stations, hydrometric monitoring, agriculture and forestry, defense systems, and remote field stations. It provides essential raw data for flood forecasting, water resource management, reservoir operation, and water supply systems.

Features

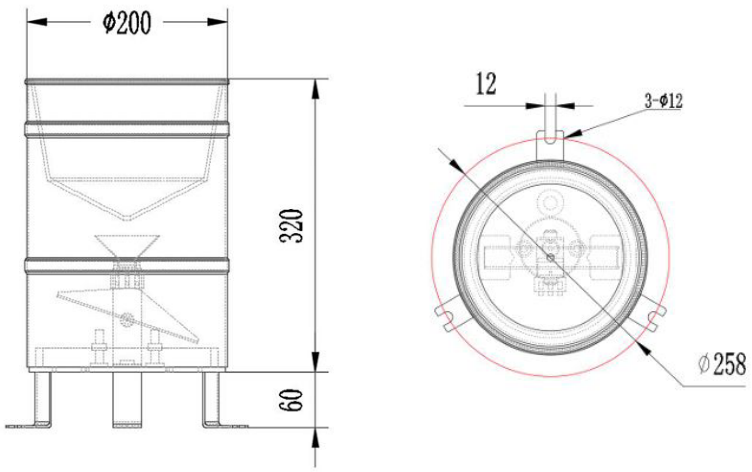
- ✓ Compact Size for Easy Use
- ✓ High Accuracy, Good Stability
- ✓ Mesh in the Funnel Preventing Debris such as Leaves and Insects from Entering the Working of Rain Sensor (Mesh is Optional)
- ✓ Well Made Tipping Bucket with Low Resistance
- ✓ High Polished Stainless Steel Construction

Applications

- ✓ Water Supply System
- ✓ Hydrologic Monitoring
- ✓ Natural Disaster Monitoring
- ✓ Agro-Meteorological Research
- ✓ Climate Research

Dimension

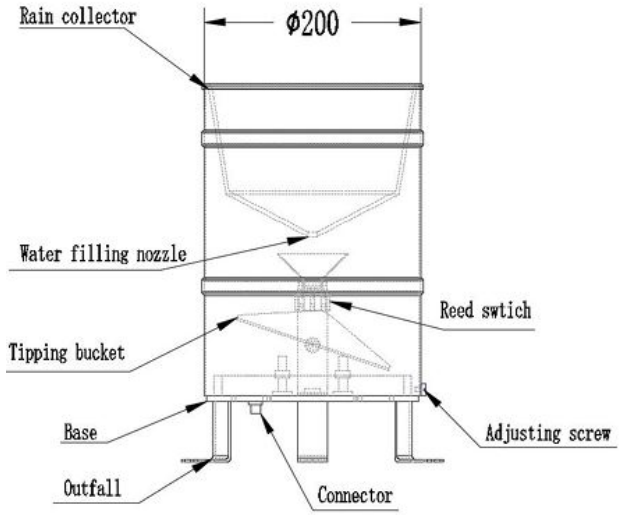
Unit: mm



For comprehensive details, visit: www.buraq.com/BS400-01

Working Process

Rainfall is collected through a 200 mm diameter funnel and directed via a delivery pipe into a divided, ABS injection-molded tipping bucket mechanism. The bucket, pivoted at its center, is precisely calibrated to tip after collecting 0.2 mm of rainfall. Once full, the bucket tilts and empties, triggering a reed switch through a magnetic action that sends a pulse signal to the data logger or electronic counter. As the bucket tips, the opposite side automatically aligns to receive the next flow of rainwater. This tipping “seesaw” process repeats continuously throughout the rainfall event.



Technical Specifications

Item	Specifications
Rainfall Collector	Diameter: Φ200mm, height: 350mm
Measured Rainfall Intensity	Max: 4mm/min
Allow Rainfall Intensity	Max: 10mm/min
Resolution	0.1mm, 0.2mm
Accuracy (2mm/min)	±4%
Maximum Load Voltage	30VDC (Pulse Output)
Maximum Load Current	20mA (Pulse Output)
Output	Reeds Witch Pulses, RS485 (12-24VDC Supply)
Operating Temperature (No Freeze)	-20°C ~ 80°C
Main Material	Collector:304SS, Tipping Bucket: ABS
Tipping Bucket	Single
Heating (Optional)①	Heating Power: Approx..350W Heating Voltage: 22VAC
Collector Filter	Removable Filter (Prevent Leaves and Sundries) Optional
Weight (Unpacked)	3.5kg

①According to user requirements,set heating start point and heated end point before leaving the factory.

Parameter Selection Table

Remark	Series	Type	Output	Resolution	Heating	Filter	Cable Length	
BS								
	400							
		01						
			A					Pulse (Reed Switch)
			B					RS485
			C					Customization
				A				0.2mm (Default)
				X				Other
					A			Without Heating
					B			With Heating (Independent Cable)
						A		Without Filter
						B		With Filter
							1500	Units: mm
							3000	Units: mm
							...	Units: mm

Example: RK400-01AAAA1500 Output:pulse, Resolution: 0.2mm, Without heating, Without filter, Cable Length: 1.5m.

Appendix:

Rainfall intensity scale	
Scale	24-hour rainfall (mm)
Light Rain	1 - 9.9
Moderate Rain	10 - 24.9
Heavy Rain	25 - 49.9
Rainstorm	50 - 99.9
Torrential Rain	200
Super-Torrential Rain	>200

HQ: Buraq Center, 11-D, 6th Road, Satellite Town, Rawalpindi, Pakistan.
STZ: 1st Floor, Alpha-18, NASTP, Old Airport Road, Rawalpindi, Pakistan.
info@buraq.com