RK400-01 Tipping Bucket Rainfall Sensor

Overview

RK400-01 Tipping Bucket Rainfall Sensor is an instrument for testing rainfall in the nature. In order to meet the requirement of information transmission, processing, recording and display, the amount of rainfall is converted to pulse output. It can be widely used in weather station, hydrometric station, agriculture & forestry, defense & field monitoring station. It can provide the original data for flood-prevention, water-supply system, and reservoir water management in plant.

Features

- Compact size for easy use
- High accuracy, good stability
- Removable filter
- Well made tipping bucket with low resistance
- Highly polished stainless steel construction
- Horizontal Bubble in the bottom
- Rain collector with filter, to prevent the leaves, such as debris jam over the holes

Applications

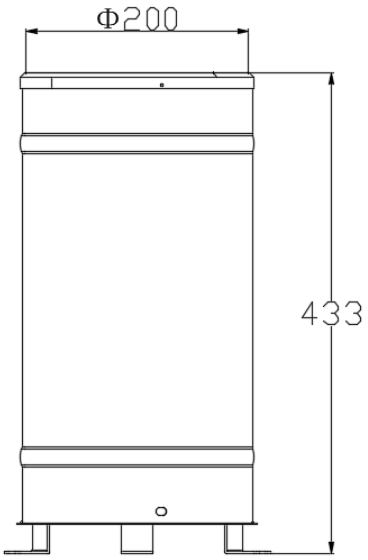
- Water supply system
- Hydrologic monitoring
- Natural disaster monitoring
- Agro-meteorological research
- Climate research

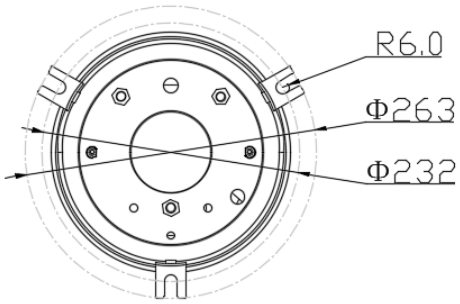
Technical Parameter

Item	Technical Specification
Rainfall collector	Φ200mm,40-45°
Measured rainfall intensity	Max: 4mm/min
Allow rainfall intensity	Max: 10mm/min
Resolution	0.2mm
Accuracy(2mm/min)	±4%(Indoor static test, rain intensity of 2mm/min)
Maximum load voltage	30VDC(pulse output)
Maximum load current	20mA(pulse output)
Output	Reed switch pulses,RS485(12-24VDC supply)
Operating temperature(no freeze)	0-70℃
Main material	Collector:304SS,tipping bucket:ABS
Tipping bucket	Single
Collector filter	Removable filter (prevent leaves and sundries)
Bird spikes	Optional
Heating(optional)	200W@220V
Weight(unpacked)	3.5kg

Dimension

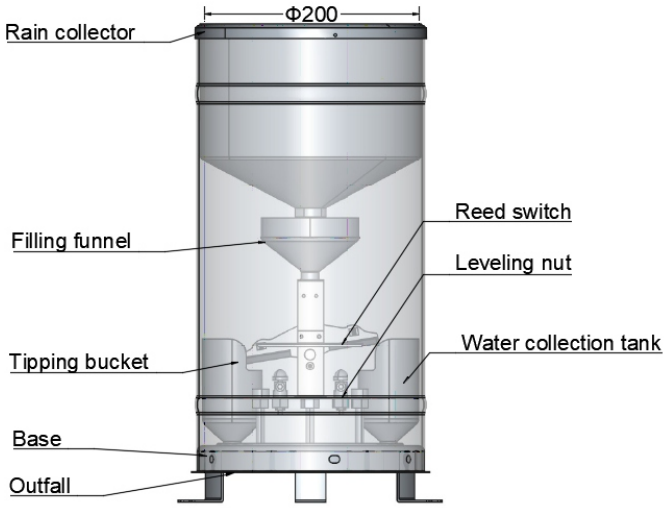
Unit:mm





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.



Accessories

M10*80 Expansion screws

Filter

Bird spikes(Optional)

Parameter Selection Table

Remark	Series	Type	Output	Resolution	Heating	Bird Spikes	Cable Length	
RK								
	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 bird spikes
						B		With bird spikes
							5000	Units:mm(Typ.)
							10000	Units:mm
							…	Units:mm

Example: RK400-01AAAA5000 Output: Pulse(Reed switch), Resolution:0.2mm, Without heating ,Without bird spikes, Cable length:5m.

Revision time	Reviser	Current Version	Remarks
20250616	Echo	V5. 0	