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Rain Gauge — Pluviometer Model RGTE Tipping Bucket

Overview

The Model RGTE Tipping Bucket Rain Gauges are freestanding receptacles for measuring precipitation. The open top, allows precipitation to fall into the upper portion, called the collector. The collector funnel is made of gold-anodized aluminum. Collected water is funneled to a tipping bucket, which fills up and causes a momentary closure of a magnetic switch once the tipping bucket fills to the point where it tips over. This empties the bucket in preparation for additional measurements. The discharged water passes out of the rain gauge with no need for emptying.

The rain gauge may be connected to an event counter on a data logger or to a display such as offered by an AWOS to show and log accumulated precipitation.

The aluminum housing is finished with a white powder coat to withstand years of exposure to the environment.

Electrically Heated Rain & Snow Gauges

Electrically heated rain gauges facilitate their use in areas where snow or freezing rain may occur. These models allow the water equivalent of all types of precipitation, including snow and freezing rain, to be measured and logged. Two low-power heating elements are controlled thermostatically with an additional thermal overload. The heaters allow the rain gauge to be used year-round while at the same time minimizing the amount of evaporation.



Features

- Interfaces to virtually all data acquisition systems
- Knife-edge collector optimizes rainfall catch
- Splash-out protection and screen reduce wind errors
- Easy installation and maintenance
- Integrated bubble level
- Lightweight aluminum exterior with anodized aluminum collector for weather resistance
- Unheated options available for use in areas without snow or freezing rain
- Siphon option allows for extended accuracy and repeatability by controlling the flow rate during periods of extremely heavy precipitation

SENSORS

SPECIFICATIONS

Parameter	Model (see Ordering Information for exact Model Number)						
	*UN-01US	*110H-01US	*UH-1mm	*H-1mm	*UH-2mm	*H-2mm	
Sensor Type	Tipping Bucket						
Switch	Momentary potted reed switch						
Output	135 ms switch closure						
Sensitivity	1 tip per 0.01"		1 tip per 0.1 mm		1 tip per 0.2 mm		
Resolution	0.01"		0.1 mm		0.2 mm		
Calibrated Accuracy	±1% (0–2"/h)		±1% (0–50 mm/h)				
Precipitation Measurement Rate	0–700 mm/h (0–27"/h)						
Collector Orifice Diameter	6.06" (15.4 cm)			9.66" (24.5 cm)			
Collector Measurement Area	28.8 in ² (186 cm ²)			73.3 in ² (471 cm ²)			
Height	10.25" (26.0 cm)			12" (30c5 cm)			
Siphon Option	—	—	✓	✓	✓	✓	
Heaters	Collector	—	71 W	—	71 W	—	71 W
	Housing	—	127 W	—	127 W	—	127 W
Thermostat Set Point	—	7°C (45°F)	—	7°C (45°F)	—	7°C (45°F)	
Heater Power	—	110 V AC, 200 W	—	110/220 VAC, 200 W	—	110/220 VAC, 200 W	
Environmental							
Operating Temperature	0 to +70°C (32 to +158°F)	-54 to +70°C (-65 to +158°F)	0 to +70°C (32 to +158°F)	-54 to +70°C (-65 to +158°F)	0 to +70°C (32 to +158°F)	-54 to +70°C (-65 to +158°F)	
Storage Temperature	-40 to +85°C (-40 to +185°F)						
Relative Humidity	0–100%, noncondensing						
Dimensions (without feet or pole mounting arm)							
Rain Gauge	26.0 cm H × 16.3 cm D (10.25" H × 6.4"D)			30.5 cm H × 24.5 cm D (12" H × 9.66"D)			
Heater	6.3 cm W × 6.3 cm H × 5.5 cm D (2.5" W × 2.5"H × 2.2"D)						

ORDERING INFORMATION

Model Number (without siphon)	Measurement per Tip	Heater Voltage	Model Number (with siphon)
RGTEIUN-01US	0.01"	—	—
RGTEI110H-01US	0.01"	110 VAC	—
RGTEMUH-1mm	0.1 mm	—	RGTEMUH-1mmS
RGTEMUH-2mm	0.2 mm	—	RGTEMUH-2mmS
RGTEM110H-1mm	0.1 mm	110 VAC	RGTEM110H-1mmS
RGTEM110H-2mm	0.2 mm	110 VAC	RGTEM110H-2mmS
RGTEM220H-1mm	0.1 mm	220 VAC*	RGTEM220H-1mmS
RGTEM220H-2mm	0.2 mm	220 VAC*	RGTEM220H-2mmS

* Includes transformer



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