

μSMART SERIES

TIPPING BUCKET RAIN GAUGE



Model RG2, RG5 (0.2 or 0.5 mm per tip)

These digital rain gauges provide reliable measurement of rainfall and intensity using the tipping bucket principle. The design includes several features to maintain accuracy of measurement, including a syphoning device which “smooths” the flow of water through the system thereby minimising errors associated with varying intensity of rainfall.

Rainfall is captured in the 203 mm diameter collector funnel and is directed through a delivery pipe to fill a divided tipping bucket device. The bucket is pivoted through its centre and has a preset calibration to tip for 0.2 or 0.5 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. Fine stainless steel mesh prevents debris such as dirt and insects from entering the workings of the rain gauge.

The 0.5 mm calibration tip is recommended for most applications. The 0.2 mm version is used where low intensity of rainfall and/or sensitivity of measurement is important.

Features

- Corrosion Resistant Materials
- Robust Design
- Options for 0.2mm or 0.5 mm
- Can be upgraded to Pluviometer
- Simple Recalibration Procedure
- Low Power Consumption

Applications

- Catchment Measurement
- Flood Studies/Alerts
- Rainfall Intensity
- Meteorological Rainfall Monitoring
- Automatic Weather Stations
- Agriculture and Horticulture
- Hydrology
- Run-off monitoring
- First flush system diversion control in conjunction with the sentry controller.

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Specifications

Range:	0 to 508 mm rainfall per hour
Switch Closure:	Two Reed Switches potted with contact cleaning circuitry
Calibration Tip Size:	Model RG (X) - 0.2 mm or 0.5 mm
Resolution:	Model RG (X) - 0.2 mm or 0.5 mm
Accuracy:	>127 mm/hr $\pm 2\%$ >254 mm/hr $\pm 3\%$
Temperature Range:	+1°C to +60°C (operating)
Humidity Range:	0-100%
Measurement Units:	Millimetres
Sensor Type:	Tipping Bucket mechanism
Reliability:	With proper maintenance, an operating lifetime in excess of 10 years is expected
Output:	Basic Rain gauge RG2-1, RG5-1: reed switch output, can be connected via internal pull-up resistor to +5 Volt (for pulse input to counter) μSmart version RG2, RG5: Monibus output (serial data 0-5V swing) Requires SI-8 or SI-9 to convert to RS232 (+/-10V swing)
Power Supply:	+4.5Volts to 7 Volts DC unregulated.
Current Drain:	>1 ma
Weight (unpacked):	2.3 Kg
Dimensions:	Overall height 325 mm Collector diameter 200 mm
Mounting:	Three pre-drilled mounting brackets are incorporated in the base of the rain gauge. These accommodate 9 mm diameter bolts. A level bubble is provided to allow the gauge to be levelled accurately.
Cable Lengths:	Standard product has 8 mtrs of cable. Longer cable lengths may be ordered - allow \$2.50/m for additional cable.
Related Products:	SL1 SSmart Logger AWS1 Automatic Weather Station EP2 Electronic Pluviometer SI1 μ Smart interface board for conversion to smart rain gauge μ Smart sensors all act as hosts for the tipping bucket rain gauge for serial data bus applications

RAIN GAUGES WILL NOT BE DESPATCHED UNTIL THE REQUIRED RESOLUTION IS SPECIFIED
i.e. 0.2 or 0.5 mm per tip

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