

SPECIFICATIONS

Measurement Units:

Millimetres

Range: 0 to 720mm rainfall/hr

Sensor Type: Tipping bucket mechanism

Switch Closure: Two reed switches potted with contact cleaning circuitry

RG2 Tip Size: 0.2mm

RG2 Resolution: 0.2mm

RG5 Tip Size: 0.5mm

RG5 Resolution: 0.5mm

Accuracy:

>127mm/hour $\pm 2\%$

>254mm/hour $\pm 3\%$

>381mm/hour $\pm 4\%$

Temperature Range: +1°C to +60°C (operating, non-heated); heated version available for applications below 0°C

Humidity Range: 0-100%

Reliability: With proper maintenance, an operating lifetime in excess of 10 years is expected

Output: Serial data ASCII format plus either voltage 0-1 or 0-2.5V, or frequency +5V pulse (2-10Hz)

Options: 4-20mA

Power requirements:

Power Supply: +4.5 to 7V DC unregulated

Current Drain: < 1mA

Cable lengths:

Standard cable length 8m

Maximum cable length 4km

using Modbus communications

Installation kit:

Three predrilled mounting brackets in the base for 9mm diameter bolts. A bubble level is provided

Sensor dimensions:

Overall Height: 325mm

Collector Diameter: 200mm

Weight: 2.3kg (unpacked)

Related products:

EnviroStation™ Automatic Weather Station

SL5 Smart Logger

EP2 Electronic Pluviometer

Tipping bucket rain gauge

The “smart” digital tipping bucket rain gauge by ICT International provides reliable measurement of rainfall and intensity. The design includes several features to maintain accuracy of measurement, including a siphoning device which “smooths” the flow of water through the system, minimising errors associated with varying intensity of rainfall.

Rainfall is captured in the 203mm 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 0.5mm of rainfall.

When full, the bucket 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.

The recording and tipping cycle continues with rainfall while fine stainless-steel mesh prevents debris such as dirt and insects from entering the workings of the rain gauge.

Multi-use flexibility

ICT’s “smart” tipping bucket rain gauge can be used as an integral component of the EnviroStation™ weather station; a stand-alone “plug and play” rain gauge used with an ICT Smart Logger; a standard tipping bucket rain gauge for integration with an existing weather station or data logger; or it can be connected directly into a PC using an S18 serial interface for teaching or greenhouse applications on a budget.

The smart rain gauge can calculate maximum rain rate, daily total from 9am to 9am as well as the 24-hour total. When connected to a Smart Logger the rain gauge can be used to calculate total rainfall in any logging period that is set in the logger.

The RG5 (0.5 mm calibration tip) is recommended for most applications. The RG2 (0.2 mm version) is used where low intensity of rainfall and/or extreme sensitivity of measurement is important.

Applications

- Catchment measurement
- Flood studies/alerts
- Rainfall intensity
- Meteorological rainfall monitoring
- Automatic weather stations
- Agriculture and horticulture
- Hydrology
- Runoff monitoring
- First flush system diversion control in conjunction with the sentry controller

Features

- Corrosion-resistant materials
- Robust design
- Options for 0.2 or 0.5mm per tip
- Can be upgraded to pluviometer
- Simple re-calibration procedure
- Low power consumption

