



Overview

The TB4, manufactured by HS Hyquest Solutions, is a high-end tipping bucket rain gage that has an 8 in. orifice and measures rainfall in 0.01 in. increments. It is ideal for locations where

intense rainfall events may occur. This tipping bucket is compatible with all Campbell Scientific data loggers, and is used in environmental monitoring applications.

Benefits and Features

- › Accuracy is ± 3 percent at high precipitation rates of 500 mm/hr
- › More accurate measurement of high-intensity precipitation
- › High precision—tips at 0.01-in. increments
- › Compatible with most Campbell Scientific data loggers

Detailed Description

The TB4 funnels precipitation into a bucket mechanism that tips when filled to its calibrated level. Each tip is marked by a dual reed switch closure that is recorded by a data logger pulse count channel. After measurement, the water drains through two orifices (accepts 12 mm tubing) in the base, allowing the measured water to be collected in a separate container.


The TB4 contains an internal siphon mechanism that causes rain to flow at a steady rate to the tipping bucket mechanism (regardless of intensity). The siphon allows the sensor to make accurate measurements over a range of 0 to 50 cm per hour.

Specifications

Sensor Type	Tipping bucket with siphon and dual reed switch	Rainfall per Tip	0.254 mm (0.01 in.)
Measurement Uncertainty	› $\pm 3\%$ @ 250 to 500 mm/h (9.8 to 19.7 in./h) › $\pm 2\%$ @ < 250 mm/h (9.8 in./h)	Measurement Range	0 to 700 mm/h (0 to 27.6 in./h)
		Operating Temperature Range	0° to 70°C

Humidity Range	0 to 100%
Cable Type	Two-conductor shielded
Drain Tube Size	Both filters accept 12 mm (0.47 in.) ID tubing.

Orifice Diameter	20 cm (7.9 in.)
Height	33 cm (13 in.)
Weight	2 kg (4.4 lb) with 7.62 m (25 ft) signal cable

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