

Tipping Bucket Rain Gauge

METEOROLOGY | PRECIPITATION | RAINFALL

General Description

HyQuest Solutions' TB4 is a **high-quality tipping bucket rain gauge** for measuring rainfall and precipitation in urban and rural locations. Due to the integrated syphon, the gauge delivers **high levels of accuracy across a broad range of rainfall intensities**.

The TB4's tried and proven design ensures **long-term, accurate and repeatable results**. It is manufactured from high quality, **durable materials ensuring long-term stability in the harshest of environments**. It consists of a robust powder-coated aluminium enclosure, a UV-resistant ASA polymer base, and stainless finger filter and steel fasteners.

TB4 provides a **finger filter** that ensures the collector catch area remains unblocked when leaves, bird droppings and other debris find their way into the catch.

The TB4's base incorporates **two water outlets at the bottom** allowing for water collection and data verification.

Maintenance of the TB4 is easy, because removal of the outer enclosure and access to the tipping bucket mechanism and finger filter assembly is made easy with quick release fasteners.

Output options

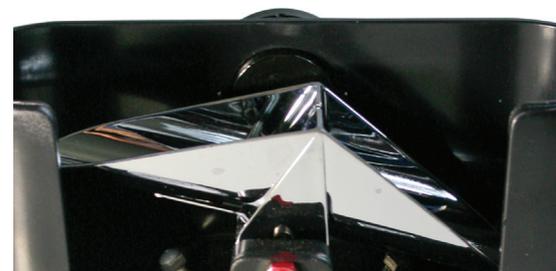
TB4 includes a **dual output 24 V DC reed switch** allowing for output redundancy or the addition of a second data logger. The second output could also be used for connecting HyQuest Solutions' current meter counter CMCbt paired with the free FCD application that allow for easy and accurate field calibration even in noisy (urban) environments. The reed switch incorporates **varistor protection against surges** that may be induced on long, inappropriately shielded signal cables.

Main Features

- Long-term stable calibration
- Accuracy not affected by rainfall intensity
- Minimal maintenance required
- Robust design for all environments
- Expandability: Optional **autonomous real-time rain monitoring and reporting system** RainTrak Undercover with in-built telemetry and logging (see flip side)

Applications

- Classical Meteorology and Climatology
- Hydrometeorology
- Environmental, Hydrological and Air Quality Monitoring
- Road Traffic Infrastructure
- Water Treatment Plants, Dams, Reservoirs
- Agrometeorology
- Airports and Airfields
- Water Resources Management



Technical Specification

Resolution	0.1 mm, 0.2 mm, 0.5 mm, 1.0 mm, 0.01 inch
Accuracy	<ul style="list-style-type: none"> ■ 0-250 mm per hour; +/-2 % ■ 250-500 mm per hour; +/-3 %
Range	700 mm per hour
Material	<ul style="list-style-type: none"> ■ Enclosure: anodised and powder-coated aluminium ■ Base: UV-resistant ASA polymer ■ Bucket: chrome plated ABS
Pivots	Stainless steel rolling bearings on stainless spring steel axle
Dimensions & Mass	<ul style="list-style-type: none"> ■ 200 mm diameter catch ■ 330 mm height ■ 3.3 kg
Environmental Conditions	Operating Temperature Range: +4 °C to +70 °C; Humidity: 0-100 %

Accessories



Autonomous System RainTrak Undercover:

TB4 can be used as a component of the RainTrak to provide a reliable and autonomous real-time rain monitoring and reporting system. Features: turnkey operation, battery operated with solar panel, integrated undercover IP-capable data logger, periodic or event-driven data communication, wireless communication, incl. antenna, custom designed for harsh environments.



Pole Mount Bracket: Pole mount bracket with stainless steel bolts, nuts and washers to suit TB3, TB4 or TB6 Model Tipping Bucket Rain

gauge base. Suits 50 mm NB galvanised pipe with 2" BSP thread.



Bird Guard: The bird guard prevents wild or feral birds from perching or roosting and thus increases accuracy by stopping bird feces from dropping inside the gauge funnel.



Portable Field Calibration Device (FCD): The FCD effectively enables field technicians to run functional tests and calibrations of any given

rain gauge in the field avoiding dismantling of TBRG's, reducing TBRG downtime and thereby saving time and money.



IRIS dataloggers and data modems:

- Robust housing
- IP over one or two channels of your choice: xG /

GPRS, satellite, IoT

- I/O: analog, digital, SDI-12, Modbus
- iLink software
- Telemetry or cloud app



Pulse Counter CMCbt: The CMCbt is a bluetooth pulse counter that provides an interface between the TBRG's reed switch output

and the FCD-App calibration software used in conjunction with HyQuest Solutions' Field Calibration Device FCD.

Please ask for details.

Reseller

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