TB6/40 Series II

Tipping Bucket Flow Gauge

WATER FLOW

General Description

HyQuest Solutions' tipping bucket flow gauge TB6/40 Series II is used for **measuring water flow coming out of a pipe or a drain**. The unit comes with a dual reed switch, thus, when connected to a HyQuest Solutions' data logger flow data can be logged and collected manually when required. In addition, the flow gauge can be telemetered by connecting to a ML-IoT device or to a 3G/4G data logger. The only routine maintenance required for the flow gauge is cleaning.

The TB6/40 flow gauge operates on the tipping bucket principle. A receiver of 200 mm diameter collects the water which is strained by a gauze filter before being passed to the tipping bucket measuring system. Tips of the bucket occur with each 40 millilitres of water collected. A reed switch detects these events and produces a momentary contact closure signal for connection to a data logger (e.g iRIS logger or IoT device).

A fully sealed dual reed switch assembly with varistor protection is provided for several reasons:

- Two isolated switches permit the control of two separate circuits; e.g. a local counter and a telemetry circuit.
- Parallel connection of both switches increases the current carrying capacity of the contact system if required.
- Parallel switch operation confers a degree of redundancy in locations where data from the flow gauge is critical to flood warning etc.

All gauges have been calibrated by HyQuest Solutions prior to despatch.

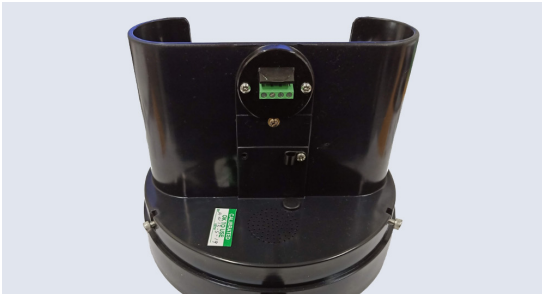
Applications

The TB6/40 is suitable for all applications where water flow out of a pipe or similar outlet needs to be monitored. Typical situations may include:

- Monitoring at basin outlets of any kind of industrial water, grey water or storm water retention basins
- Sewer network injections into a collection basin
- Drain to or from a tailings dam
- Water discharge out of a treatment or intermittent storage basin
- Pump testing

Features

- Non-corrosive materials
- Suitable for harsh environments
- Accurate readings
- Fast and easy cleaning
- Low maintenance
- Outer enclosure keyed to enable the release of the outer enclosure without the need for the removal of the three securing screws
- Insect covers: In-built mesh in the base and stainless steel mesh on the enclosure covering all openings to prevent insects and ants entering gauge
- Robust



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Technical Specifications

Receiver	200 mm + 0.3 diameter heavy duty cast aluminium, powder coated for 1.0 mm
Bucket	Metal; capacity 40 mls of water flow
Sensitivity	One tip
Calibration accuracy 1 mm bucket	**Flow Rate** / **Error** / **Flow Rate** / **Error** 0.5 litre/min / -2 % / 2.0 litre/min / -14 % 1.0 litre/min / -8 % / 3.0 litre/min / -20 %
Temperature and Humidity	■ Operating Temperature +4 to +70 °C ■ Ambient Temperature -20 to +70 °C ■ Humidity 0 to 100 %
Contact System	■ Dual reed switches moulded using TECHNOMELT® PA 657 high performance thermoplastic polyamide rubber with varistor protection ■ Maximun capacity: 0.5 amp, 24 Volts ■ Resistance: Initial contact resistance 0.1 Ohms ■ M.T.B.F: 10^8 to 10^9 operations
Technology	Straight through (no syphon)
Base	Injection moulded non-hydroscopic ASA plastic, UV stabilised
Level	Bulls eye level fitted to base
Mounting Holes	3 slots 20 mm L x 10 mm W equi-spaced @ 244 mm PCD in feet moulded to outside diameter of base
Drain Fittings	To attach 12 mm inside diameter tubing, to catch rainfall after passing through buckets
Bucket Pivot System	Ground sapphire pivots with tough 316 g stainless steel shaft
Height and Weight	Standard: 330 mm, 2.2 kg
Packed Dimensions and Weight	Standard: 27 cm L x 27 cm W x 42 cm H (0.03m³), 5 kg

Accessories

iRIS dataloggers and data modems:

- Robust housing
- IP over one or two channels of your choice: 3G/4G / GPRS, satellite, IoT
- I/O: analog, digital, SDI-12, Modbus
- iLink software
- Telemetry or cloud app

datasphere

datasphere:
KISTERS datasphere is a global all-in-one solution for sensor data. The cloud-based solution with easy-to-use viewing, alarming and integration features is the perfect basis for a range of applications - from simple sensor network management to environmental monitoring, infrastructure/ asset monitoring, smart cities, internet of things, through to new data-based business models. More information in the web: datasphere.online

Custom Solutions:
HyQuest Solutions' engineering and fabrication workshop and experienced engineering staff can provide tailor-made, ready to deploy solutions for any of your monitoring requirements.

Please ask for details.

Reseller

HyQuest Solutions Australia
sales@hyquestsolutions.com.au
www.hyquestsolutions.com

HyQuest Solutions New Zealand
sales@hyquestsolutions.co.nz
www.hyquestsolutions.com

HyQuest Solutions Europe
info@hyquestsolutions.eu
www.hyquestsolutions.eu

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