SDI-12 Tipping Bucket Interface







SPECIFICATIONS

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Overview

A simple and compact SDI-12 Interface to convert any Tipping bucket into a 'smart SDI-12 sensor' that can compute daily & annual accumulation. The SDI-TB has an internal backup power source and can be programmed to compensate for heavy rainfall.

Improved Reliability

The SDI-TB is compact and can be easily mounted inside most tipping buckets. This eliminates the need for long wires (from the tipping bucket to the SDI logger) susceptible to noise,

Programmable Daily and annual resets

The SDI-TB has an internal RTC that can be used to automatically compute yearly and daily accumulations.

Rechargeable Backup Power

The SDI-TB can run off its internal rechargeable backup power in case SDI power is lost. All crucial functions of the SDI-TB, like measuring rainfall and the internal RTC, can run for up to 10 hours without SDI-12 power.

Smart Sensor Compensation

The SDI-TB can be programmed to compensate for rainfall lost due to heavy rainfall rates especially when using a tipping bucket without a siphon.

Low Power

The SDI-TB draws about 100 μA and has been optimized to run on a shoe-string power budget.

Compact Rugged, Water Resistant

The SDI-TB is compact and encapsulated in a water-resistant epoxy compound for installations in humid environments.

Subject to Change Without Notice	
MECHANICAL / ENVIRONMENTAL	
Enclosure	Potted enclosure for humid environments
Dimensions	3 x 1.5 x 2 inches
Weight	~75 gms
Temperature	-40C to +60C
Connector	5 pin connector
POWER	
Input Voltage	4v - 20v DC
Internal backup power run time	10 hours
Internal backup power charge time	~18 hours
Internal backup power charging current	25mA (fully discharged) to 100 μ A (fully charged)
Quiescent Current	100 μA @12v (once fully charged)
COMMUNICATION	
Protocol	SDI-12 v1.3 (SDI communication will be disabled when running off internal backup power)
ORDERING INFORMATION	
SDI-TB-1	SDI-12 Tipping Bucket Interface with Internal Backup Power