

Rain Gauge Tipping Bucket

TR-525M-S Rainfall Sensor



Description

The Texas Electronics, Inc. TR-525M-S Rainfall Sensor is a siphoning tipping bucket mechanism that measures the amount of liquid precipitation with an extended range of accuracy.

The siphon allows control of the "flow rate" of accumulated precipitation. This metering geometry assures higher levels in both accuracy and repeatability during periods of extremely heavy rainfall. It contains an open top, which allows rainfall to fall into the upper portion, which is called the collector. Collected water is funneled to a mechanical device (tipping bucket), which incrementally measures the rainfall accumulation and causes a momentary closure of a switch. As water is collected, the tipping bucket fills to the point where it tips over. This action empties the bucket in preparation for additional measurement. Water discharged by the tipping bucket passes out of the rain gauge with no need for emptying.

The TR-525M-S was designed to meet the need for a rugged and reliable metric rain gauge tipping bucket with high accuracy and low cost.

Features & Benefits

- Interfaces with virtually all data acquisition systems
- Knife-edge collector optimizes rainfall catch
- Exceptional splash-out protection improves accuracy in high winds
- Rugged aluminum exterior
- Anodized aluminum collector for weather resistance
- Integrated bubble level

Specifications

Resolution:	0.1 mm Metric
Accuracy:	0-10 in. (254 mm) per hour; +\ -2% 10-20 in. (508 mm) per hour; +\ -3%
Range:	27" (700 mm) per hour
Collector diameter:	9.66" (245 mm) with knife-edge
Funnel depth:	7.2" (183 mm)
Splash out protection:	>2" (50 mm)
Operating Temp:	32 to 158° F (0 to 50° C)
Storage Temp:	-40 to 185° F (-40 to 70° C)
Humidity Limits:	0 to 100%
Weight:	2 lbs.
Height:	12" (305 mm)
Cable:	10', 24 gauge 2 conductor
Switch:	Momentary potted reed switch
Switch rating:	30 VDC @ 2 A, 115 VAC @ 1 A
Switch Closure Time:	135 ms
Bounce Settling Time:	0.75 ms
Pivot:	Ground bronze pivots with hardened stainless steel shaft
Bucket:	Black PP injection molded
Level:	Integral Bubble Level
Warranty:	3 years

Installation & Maintenance

Installation consists of attaching the three sensor support legs to a firm platform (such as our MB-525 Mounting Base). Pole mounting on the mast of a weather station is available by securing to the included side bracket.

Maintenance consists of routine cleaning of debris from the filter screen, and occasional calibration verification with our FC500 Field Calibration Kit.

Ordering Information

Model #: TR-525M-S
Description: Rain Gauge, Metric

Optional Parts / Accessories

HOBO Pendant Datalogger
MB-525 Pole Mounting Base
FC-500 Field Calibration Kit
BB-525 Bird Repellent
HT-525 Heater, 120 VAC