

# Logging Rain Gauge

## Logging Gauge

The MEA116 combines the RIM8020 tipping bucket rain gauge with a single channel data logger.

## The Rain Gauge

The RIM8020 rain gauge is a tipping-bucket design constructed for long-term operation with minimal maintenance. All materials used are corrosion resistant. The gauge is accurate to within 2% for rainfall rates up to 200mm/Hr.

Rain falling on the collecting funnel is directed through a siphon control unit and discharges as a steady stream into a two-compartment bucket with a 'see-saw' mounting. As each compartment fills the bucket tilts alternately about its axis, each tip corresponding to 0.2m of rainfall.

Each tip magnetically activates a switch, and the resultant pulse is detected by the MEA Data Logger.

Water discharged by each bucket is drained away under the base of the Rain Gauge via a collection gutter integrated into the base.



## The Data Logger

The Rain Gauge is connected to the Data Logger via a cable and weather-proof connector.

The data logger is housed in an industry-standard weatherproof enclosure with an internal battery. Memory capacity is 128k which is adequate for many months of data recording. Data is retrieved from the Logger by connecting a computer to the RS232 port using supplied communications cable. If a laptop is not available, the logger can easily be disconnected from the rain gauge to transport to an office.

## Data Display

MEA's Magpie software is used to set logging parameters and to download and display data.

### Specifications for Logging Rain Gauge (MEA116)

Specifications for RIM8020	
Collector diameter	203mm ±0.2mm
Bucket	Dual 0.2mm (0.25 & 0.5mm available), low friction bearing
Accuracy	± 2% to 200mm/Hr, ±3% to 380mm/Hr, useful to over 500mm/Hr
Operating environment	Temperature: 0° to +60°C; Humidity: 10% to 100%
Switch	NO magnetically actuated reed switch with MOV protection, rare earth magnet
Materials	Collector: copper; Jacket: stainless steel; Bucket: gold-plated brass; Base: paint-anodised marine aluminium; Fasteners: stainless steel.
Dimensions	300mm (H) x 230mm (W (body)) - 275mm (W (base)).
Weight	2.8kg

### Specifications for Data Logger

Memory capacity	128Kb CMOS RAM; 54 000 readings
Memory buffer	Circular (overwrite) or linear (halt when full)
Logging rate	User programmable
Scan (sampling) rate	0.25s to 5 minutes, user programmable
Communications	1 x RS232 port with milspec connector
Power supply	7 to 14 VDC, 10Ah Alkaline battery pack with 12 month life
Operating software	Magpie (MEA3103)