Rain Logger Specifications

Rain Gauge

> **Type:** Tipping bucket with 8" diameter collector/funnel

> **Overall Dimensions:** 18"H x 12"W x 12"D, (45.7 cm x 30.5 cm x 30.5 cm)

> **Weight:** 9.25 lbs., (4.2 kg)

> **Resolution:** 0.01" rainfall per bucket tip

> **Accuracy:** 0.5% at 0.5" per hour

> **Base Mounting Plate:** Spring loaded, three-point adjustable

> **Materials of Construction:** Epoxy coated aluminum and anodized aluminum (funnel screen is stainless steel). Three point adjustable base plate. Removable screen.

Rain Logger

> **Enclosure:** Impact resistant plastic

> **Type:** Solid-state memory, battery backed

> **Dimensions:** 1" x 2.75" x 4.125", (2.54 cm x 7 cm x 10.5 cm)

> **Weight:** 8.5 oz., (.24 kg)

> **Electronics:** CMOS, protected to NEMA 4X,6 requirements

> **Operating Temperature:** 32˚ to 135˚F, (0 to 57˚C)

> **Storage Temperature:** -20˚ to 150˚F, (-29˚ to 66˚C)

> **Power Requirements:** Replaceable 9 VDC alkaline battery

> **Battery Life:** 6 months, typical

> **Data Capacity:** 10,080 readings (i.e. 7 days at 1 minute recording intervals, 70 days at 10 minute recording intervals)

> **Time Base Accuracy:** ±1 minute per month over operating temperature range

> **Battery Life Indicator:** LED flashing once every 2.5 seconds indicates a good battery

> **Data Interface:** LED optically coupled RS-232 interface

Rain Reader

> **Enclosure:** Impact resistant plastic

> **Dimensions:** 1" x 2.75"x 4.125", (2.54 cm x 7 cm x 10.5 cm)

> **Weight:** 8.5 oz., (.24 kg)

> **Electronics:** CMOS

> **Power Requirements:** 9 VDC, nominal; supplied via 115 VAC/9 VDC power adapter

> **Data Interface:** LED optically coupled RS-232 interface

> **Data Transfer Rate:** 4800 baud

> **Computer Interface:** RS-232 serial cable, IBM PC compatible

> **Data Collection Modes**
> - Record immediately – Data logging starts immediately after any command that clears memory.
> - Record On First Bucket Tip – Data logging starts upon the first bucket tip. (Each bucket tip represents 0.01" rainfall).
> - Data Transfer Gauge – Indicates data transfer time when transferring data from the Rain Logger to PC.

> **Graphing Data:** Produces rainfall x-y graph Two selectable graph formats:
> - Intensity Plot
> - Cumulative Plot
> - "Zoom" feature lets you inspect any area of the graph more closely. "Data cursor" lets you see individual readings by moving a cursor to the desired point on the graph.

Rain Log Software

> **Hardware requirements:** IBM PC or 100% IBM compatible computer; Hercules mono, EGA or VGA color or monochrome graphics monitor

> **RAM Memory Requirements:** 640k min

> **Hard Disk Drive Requirements:** 800k free disk space for program

> **Floppy Disk Drive Requirements:** 1.2 MB 5^1/$_4$" disk drive or 720K 3^1/$_2$" disk drive

> **Serial communications port**

> **Parallel printer port (optional)**

> **Mouse (optional)**

> **On-Screen Programming of Rain Logger:** User entered recorder site identification – 80-character field; Selectable recording interval – 1, 2, 3, 5, and 10-minute intervals; Settable real-time clock; Battery life indicator – displays Rain Logger 9 VDC battery condition

> **Memory Modes:**
> "Slate" or "Wrap" memory modes
> - Slate Mode – Recording stops with full memory
> - Wrap Mode – Upon full memory, recording continues; oldest data is dropped as new data is recorded.

Order your Data Logging Rain Gauge with Data Logger today from your authorized American Sigma Representative. Contact American Sigma at **800-635-4567** or visit **www.americansigma.com** for more information about how our products and services will improve the way you work.

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Rain Logger™

Automatic Data Logging Rain Gauges

Key Features

> Stainless steel funnel screen prevents plugging from leaves and other wind blown debris

> Removable funnel makes cleaning easy

> Built-in bubble level, with an innovative spring-loaded base plate provides an easy, convenient means to level the gauge

> Base plate permits secure anchored installation

Diverse and Reliable Measuring

Built to National Weather Service standards, the Gauge accurately measures rainfall in 0.01" increments. The tipping bucket mechanism tips with every 0.01" of rainfall, producing a momentary contact closure with each movement.

A stainless steel funnel screen prevents plugging from leaves and other wind-blown debris. The removable funnel permits viewing of a built-in bubble level, with an innovative spring-loaded base plate providing an easy, convenient means to level the gauge. A hole in each corner of the base plate permits a secure, anchored installation.

Principles of Operation

The 8" diameter funnel directs rainwater into a "tipping bucket", which is divided vertically into two halves. When 0.01" of rainfall fills one side of the bucket, the bucket tips, spilling the water through the bottom of the rain gauge. The other side of the bucket is then positioned under the funnel. The bucket alternates tips with each 0.01" of rainfall. With each tip, a magnet, mounted to the bucket, activates a sealed, magnetic reed (proximity) switch, producing a momentary contact closure. When connected to the American Sigma Storm Water Monitoring System, the number of bucket tips may be used to initiate sampling. When used with the Rain Logger™, in a stand-alone state, the number of bucket tips, representing 0.01" of rainfall, is recorded in user selectable time intervals of 1, 2, 3, 5, or 10 minutes. Data storage capacity is 10,080 readings.

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