

Sigma RAIN LOGGER™

Automatic Data Logging Rain Gauges



Features and Benefits

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.

Principle 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. 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.

DW = drinking water **WW** = wastewater municipal **PW** = pure water / power
IW = industrial water **E** = environmental **C** = collections **FB** = food and beverage

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*
- *Compatible with Sigma Flo-Center and Insight Data Management and Analysis Software.*

WW

IW

C



Be Right™

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)

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)

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 RainLogger 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 IBM compatible

Serial communications port

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.

ORDERING INFORMATION

Rainlogger System

Each site requires a Rain Gauge and one (or two) Rainloggers. Only one Rain Reader and software is required for use with (IBM compatible) PC.

2459 Rain Gauge with tipping bucket, bubble level, level adjust and base mounting plate.

2390 Rainlogger includes 9 VDC battery.

2391 Rain Reader, 115 VAC includes 115 VAC power adapter and rain reader/logger cradle. Domestic.

4339 Rain Reader, 230 VAC includes 230 VAC power adapter and rain reader/logger cradle. International.

5254 Insight Software (free of charge)

Remote Rainlogger System

Each site requires Rain Gauge, Rainlogger, and Remote Rainlogger. One Rain Reader is required to download data from all sites.

2149 Rain Gauge with 25 ft. Cable - For use with 3638 remote rainlogger. Mounting Base Plate

3638 Remote Rainlogger requires 2149 rain gauge.

2221 Rain Gauge Extension with 100 ft. Cable. Extension cable for 2149 rain gauge.

2390 Rainlogger includes 9VDC battery.

2391 Rain Reader, 115 VAC includes 115 VAC power adapter and rain reader/logger cradle. Domestic.

4339 Rain Reader, 230 VAC includes 230 VAC power adapter and rain reader/logger cradle. International.

5254 Insight Software (free of charge)

At Hach, it's about learning from our customers and providing the right answers. It's more than ensuring the quality of water—it's about ensuring the quality of life. When it comes to the things that touch our lives...

Keep it pure.

Make it simple.

Be right.

For current price information, technical support, and ordering assistance, contact the Hach office or distributor serving your area.

In the United States and all countries except Europe, contact:

Hach Company
4539 Metropolitan Court
Frederick, MD 21704-9452, U.S.A
Telephone: (800) 368-2723
Fax: 301-874-8459
E-mail: hachflowsales@hach.com
www.hachflow.com

In Europe for all countries except France, Spain and Great Britain:

Flow-Tronic
RUE J.H. COOL 19a
B-4840 Welkenraedt Belgium
Telephone: +-32-87-899797 or 899799
Fax: +-32-87-899790
E-mail: site@flow-tronic.com
www.flow-tronic.com

For France
HACH LANGE FRANCE S.A.S.

33, Rue du Ballon
93165 Noisy-le-Grand
Telephone: ++33 (0)1 48 15 68 70
Fax: ++33 (0)1 48 15 80 00
E-mail: info@hach-lange.fr
www.hach-lange.fr

For Spain

HACH LANGE, S.L.U
C/ Larrauri, 1C, 2ª Pl.
48160 Derio, Bizkaia
Telephone: 902 131441 94 6573388
Fax: 94 6573397
E-mail: info@hach-lange.es
www.hach-lange.es

For Great Britain
HACH LANGE LTD
Pacific Way

Salford
Manchester, M50 1DL
Telephone: 0161 872 1487
Fax: 0 161 848 7324
E-mail: sales@hach-lange.co.uk
www.hach-lange.co.uk



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