Davis® (0.01" or 0.2 mm) Rain Gauge Smart Sensor (S-RGE-M002, S-RGF-M002) Data Sheet

HOBO®
Data Loggers

The Davis (0.01" or 0.2 mm) Rain Gauge smart sensor is designed to work with HOBO® stations. The smart sensor has a plug-in modular connector that allows it to be added easily to a HOBO station. All sensor parameters are stored inside the smart sensor, which automatically communicates configuration information to the logger without the need for any programming or extensive user setup. **Note:** This sensor has been modified to work with Onset station loggers only.

Rain Gauge Smart Sensor

Models: S-RGE-M002
          S-RGF-M002

Items required:
- Electrical tape or weather-resistant cable ties

If mounting on pole or mast:
- 7/16 inch combination wrench

If mounting on flat surface:
- Drill with 5 mm (3/16 inch) drill bit
- Adjustable wrench

Accessories:
- Guy wire kit (M-GWA)
- 1.5 meter mast (M-MPB)
- Mast level (M-MLA)

Specifications

Measurement Range	0 to 10.2 cm (0 to 4 in.) per hour, maximum 4,000 tips per logging interval
Accuracy	±4.0%, ±1 rainfall count between 0.2 and 50.0 mm (0.01 and 2.0 in.) per hour; ±5.0%, ±1 rainfall count between 50.0 and 100.0 mm (2.0 and 4.0 in.) per hour
Resolution	0.01 in. (S-RGE-M002) or 0.2 mm (S-RGF-M002)
Operating Temperature Range	0° to 50°C (32° to 122°F), survival -40° to 75°C (-40° to 167°F)
Environmental Rating	Weatherproof
Housing	UV-stabilized ABS plastic
Mechanism	Tipping spoon with magnetic reed switch pivots on metal shaft
Dimensions	16.5 cm opening diameter (6.5 in.) x 24 cm (9.5 in.) high; 214 cm^2 (33.2 in.^{2}) collection area
Weight	1.2 kg (2.7 lbs)
Bits per Sample	12
Number of Data Channels*	1
Measurement Averaging	No
Cable Length Available	2 m (6.6 ft)
Length of Smart Sensor Network Cable*	0.5 m (1.6 ft)

$\mathrm{C}\mathrm{E}$ The CE Marking identifies this product as complying with all relevant directives in the European Union (EU).

* A single HOBO station can accommodate 15 data channels and up to 100 m (328 ft) of smart sensor cable (the digital communications portion of the sensor cables).

Operation

Rain enters the collector cone, passes through a debris-filtering screen, and collects in the chamber of the tipping mechanism. The tipping spoon tips when it has collected an amount of water equal to the increment in which the sensor measures (0.2 mm or 0.01 inch). As the spoon tips, it causes a switch closure and then springs back. The rain water drains out through the screened drains in the base of the collector.

Components

The smart sensor includes a hardware kit with the items most commonly needed for installation. The items you use from the kit depend on where you install the sensor. You may need to adapt or purchase additional hardware to fit your individual requirements.