

# 2500 Series Electrically Heated Rain & Snow Gauge

- Intelligent Thermostat Control
- 2 Individual Heaters
- 12 in (30.5 cm) Diameter Orifice
- Low Power Consumption
- Minimizes Thermal Chimney Effect



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## DESCRIPTION:

The 2500 Series Electrically Heated Rain Gauge accurately measures rain and frozen precipitation. Mechanically the same as the 2400 Series Rain Gauge Top Section, and is designed for mounting on top of a standpipe. (Optional roof mount or pole mount configurations are available).

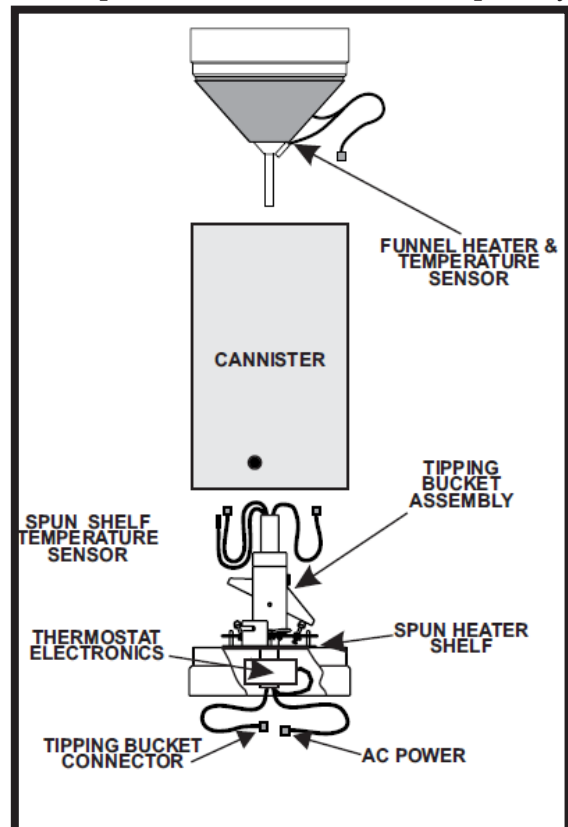
The 2500 Series consists of a one-piece machined aluminum tipping bucket and an aluminum housing which holds a spun aluminum funnel. The gauge includes two separate heaters: a 500 watt wrap-around blanket heater attached to the underside of the collection funnel to melt the precipitation. A 100 watt blanket heater is mounted under the top section base so that the measured precipitation passes out of the gauge freely without freezing. Each heater is controlled by an individual thermostat to reduce power consumption and evaporation.

Note: Laboratory testing at an ambient air temperature of  $-10^{\circ}\text{F}$  ( $-23.33^{\circ}\text{C}$ ) showed power consumption of less than 1 kW hour per day.

As precipitation is collected and melted in the funnel, water is directed to a tipping bucket mechanism adjusted to tip and dump when 1 mm of water is collected. An optional 0.01 inch tipping bucket is available.

With each tip of the bucket, a magnet passes over a sealed reed switch which causes a momentary contact closure. The contact closure is counted by the circuitry in the data collection equipment. Measurement accuracy is  $\pm 1.5\%$  at a precipitation rate up to 2 in (50.8 mm) per hour.

The 2500 operates at 120 VAC, 60 Hz (also available at 240 VAC, 50 Hz) and comes with an 8 ft (2.44 m) power cord. A bulls-eye level is integrally mounted to the tipping base for ease of leveling during installation.



02-2500-00(B)

*Environmental Monitoring Solutions*

WEB SITE: [www.highsierraelectronics.com](http://www.highsierraelectronics.com) E-MAIL: [sales@highsierraelectronics.com](mailto:sales@highsierraelectronics.com)

## Model 2500 Electrically Heated Rain & Snow Gauge

### SPECIFICATIONS:

Event Resolution	1 mm / Tip
Accuracy	± 1.5% for 0 to 2 in (0 to 50.8 mm) per Hour
Sensor Type	Tipping Bucket
Sensor Element	Reed Switch, Normally Open, (Form C - Optional)
Signal Output	Momentary Contact Closure
Hysteresis	5° F (2.8° C) (each Heater)
Upper Heater	Turn-On at 39° F (3.9° C) / Turn-Off at 44° F (6.7° C)
Lower Heater	Turn-On at 33° F (0.6° C) / Turn-Off at 38° F (3.3° C)
Operating Voltage	120 VAC, 60 Hz, (optional 240 VAC, 50 Hz)
Mounting	Standard Top Section for Standpipes, Roof and Pole Mounts available.

### Materials

Funnel	Spun Aluminum
Sensor Housing	Aluminum Cylinder
Catch Bucket	Machined Aluminum
Base	Spun Aluminum

### Cable

Sensor	3-conductor 24 AWG
AC Power	3-conductor 18 AWG with ground

### Cable Length

Sensor	25 ft (7.62 m)
AC Power	8 ft (2.44 m)

Dimensions . . . . . 12 x 23 in (30.5 x 58.4 cm) (Dia x H)

Weight . . . . . 15 lbs (6.8 kg)

Shipping Weight . . . . . 19 lbs (8.6 kg)

### ORDERING GUIDE:

Model 2500-00	Electrically Heated Precipitation Gauge; (Slotted) Includes: Tipping bucket mechanism, 8 ft (2.44 m) power cable, 25 ft (3.66 m) signal cable and Standpipe Mounting Base. Calibration: 1mm/Tip. (PLEASE SPECIFY 120 V or 240 V)
Model 2500-02	Electrically Heated Precipitation Gauge; (Slotted) Includes: Tipping bucket mechanism, 8 ft (2.44 m) power cable, 25 ft (3.66 m) signal cable and Roof Mounting Base. Calibration: 1mm/Tip. (PLEASE SPECIFY 120 V or 240 V)

### OPTIONS/SPARE PARTS:

Model 2400-04	3-Wire (Form "C") Reed Switch
Model 2400-22	Mounting Plate: Pole Mount Base to be used with 2500/2400 Series Rain Gauge. <i>Threaded Pole Flange not included.</i>
Model 2500-05	Retro fit Kit: Includes Kit to retro fit a 2400 Series Rain Gauge to Model 2500 Electrically Heated Precipitation Gauge
Model 2500-07	Extended Base for Roof Mount Rain Gauge (priced per foot)
Model 5101-00	Signal Cable; 3-conductor 24 AWG
Model 10-0012798-01	Power Cable; 8 ft (2.44 m) 3-conductor 18 AWG

See [www.highsierraelectronics.com](http://www.highsierraelectronics.com) for more specification and ordering information.

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