HOBO®
Data Loggers

### Connecting to a Station

1. Stop the station if it is logging

2. Plug the smart sensor jack into an open smart sensor port on the station.

3. Start logging. See the station manual at www.onsetcomp.com/support/manuals for details on operating stations with smart sensors.
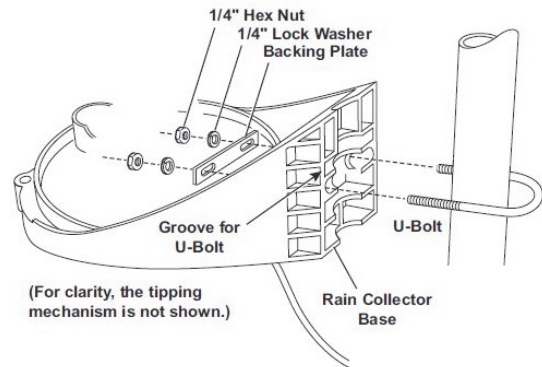
Preparing the Smart Sensor

1. Remove the cone from the base by rotating the base until the latches on the cone line up with the latch openings in the base, then lift the cone away from the base.

2. The tipping assembly on the base has been secured to avoid possible damage to the assembly. Remove the rubber band to release the tipping assembly.
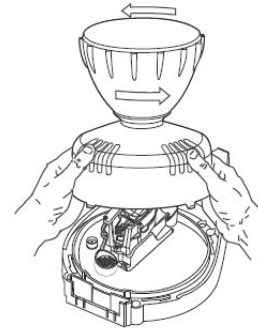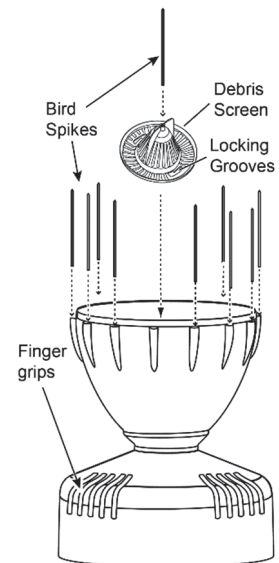

Mounting the Smart Sensor

Follow these instructions for mounting the sensor on a tripod or mast. Use the built-in bubble level to ensure the sensor is level.

1. While holding the mounting base against the pole, place the two ends of a U-bolt around the pole and through the two holes in the base.

2. Slide the metal backing plate over the bolt ends as they stick out toward the rain collector cone. Secure the backing plate with a washer, a lock washer, and a hex nut on each of the bolt ends. Adjust the height of the rain collector, then tighten the nuts.

1/4" Hex Nut
1/4" Lock Washer
Backing Plate

Groove for
U-Bolt

U-Bolt

(For clarity, the tipping mechanism is not shown.)

Rain Collector Base

### Completing the Smart Sensor Installation

1. To use bird spikes, insert one spike into each socket around the rim of the cone. The sockets are tapered; push firmly or tap lightly with a hammer for a more secure fit. Be careful; bird spikes may be sharp. **Note:** If you choose not to install the bird spikes, keep the packet of spikes in case birds become a problem in the future.

2. Place the cone back onto the base by putting the latches on the cone into the latch openings in the base and rotating the cone clockwise until the latches "lock" into place. As you reattach the cone, make sure to run the cable through the cable slot in the base or the cone will not fit snugly against the base.

3. Place the debris screen, pointed end up, into the cone. The screen prevents large bits of debris from blocking the funnel hole. If bird nesting is a problem, you can place a spike in the hole on top of the debris screen. Note that using a bird spike in the debris screen may make the screen more likely to be blown over or out in a high wind gust.

Bird Spikes

Debris Screen

Locking Grooves

Finger grips

Deployment Guidelines

- You must mount the rain gauge smart sensor so that it is level. A built-in bubble level is attached to the base to simplify this process.

- Be sure there is an unobstructed path for water runoff from the drain screens.

- The sensor contains a magnet-operated switch that may not operate correctly if you mount the rain gauge on or near any object that is attracted to a magnet.

- Exposure to winds can reduce the measured rainfall amounts. Mount the sensor where there are no obstructions of rainfall at low angles (such as trees, houses, fences) and as low as possible out of the wind.

- If installing the sensor on a sheet metal roof, insulate the unit by making a platform out of wood. Mount the base of the rain gauge at least 4 cm (1 inch) away from any steel or iron surface and make sure the reed switch is at least 4 cm (1 inch) away from any steel or iron objects (e.g. nails).

- For the most accurate rainfall measurements, mount the sensor upslope, about 3 meters (10 feet) away from the tripod, on a 1.5 meter mounting pole (M-MPB). Alternatively, you can mount the sensor on the tripod mast.

- Tall objects can interfere with accurate rain measurements. It is recommended that you place the rain bucket away from the obstruction by a distance greater than three times the height of the obstruction. If that is not possible, raise the rain bucket as high as possible to avoid shedding.

- Avoid splashing and puddles. Be sure the gauge is high enough above any surface that rain will not splash into the top of the collector.

- Secure the sensor cable with cable ties to protect it from damage.

- Vibration can significantly degrade accuracy of the tipping bucket mechanism. In windy locations make sure that the bucket will be vibration-free. Consider using the guy wire kit (M-GWA) to secure a pole or tower-mounted bucket.

- To provide long-term protection from moisture entry, the smart sensor adapter must be mounted horizontally and with the cable wires routed with drip loops so that water drains away from the cable entry point as shown in the example at right. When mounted properly, the housing is weatherproof (but not waterproof).

Smart sensor adapter mounted horizontally

Drip loop

Drip loop
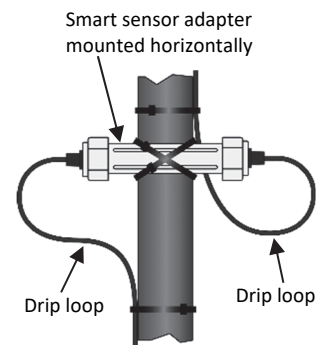
For more information about this smart sensor, refer to the full product manual. Scan the code at left or go to www.onsetcomp.com/support/manuals/s-rgef.