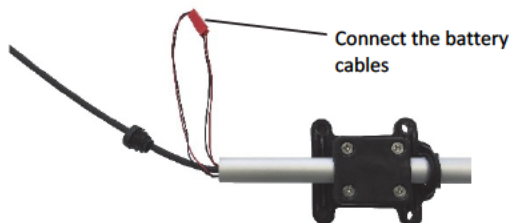


Ultrasonic Wind Speed & Direction Smart Sensor (S-WCG-M003) Quick Start

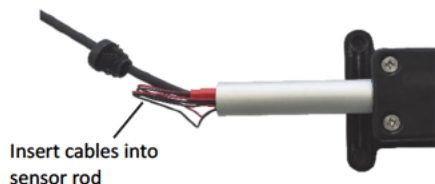
Connecting the Sensor Battery

Important: It is recommended that you only connect the battery when you are ready to deploy the sensor because it will require regular, direct sunlight to remain charged. Once the battery is connected, it will lose its charge after 10 days if it does not receive any sunlight. In addition, you must place the sensor under a light source for at least one minute after the battery is connected to activate the sensor.

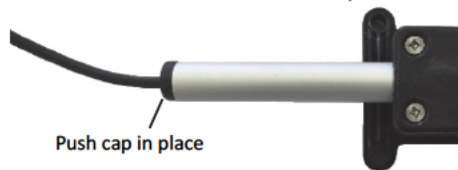
1. Connect the two battery cables.



2. Insert the connected battery cables into the sensor rod tube and then push and twist the cap into place at the end of the sensor rod.



3. Push and twist the cap into place so that it is fully seated in the sensor rod without any gaps as shown below. If there is a gap, remove the cap and push the battery cables further in the sensor rod to make more room for the cap.



4. Slide the sensor rod up so that the bottom is flush with the bottom of the sensor base. Loosely tighten the four screws to keep the sensor rod in place.



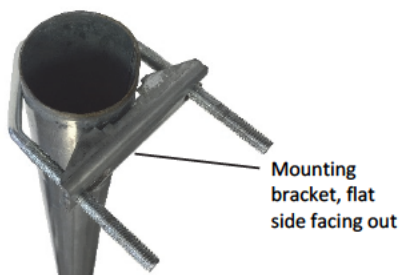
5. Place the solar panel of the sensor under a light source (a bright lamp or direct sunlight) for at least one minute to activate the sensor.

Connecting to a Station

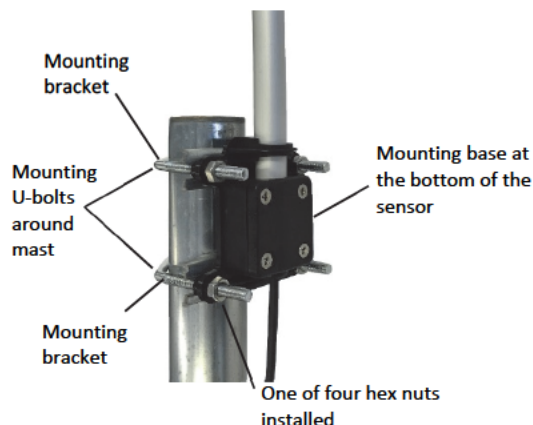
1. Stop the station if it is logging
2. Plug the smart sensor jack into an open smart sensor port on the station.
3. Start logging. See the station manual at www.onsetcomp.com/support/manuals for details on operating stations with smart sensors.

Mounting the Smart Sensor on a Mast

1. Place the mounting U-bolt around the mast and slide the bracket over the threaded U-bolt ends as shown in this example. Make sure the flat part of the bracket is facing out.
6. Use the wrench to tighten the hex nuts until the sensor is firmly fastened on the mast.
7. Use the alignment tool to align the sensor to true north as described in the *North Alignment* section.

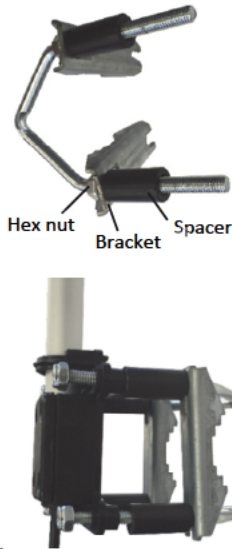


2. Repeat step 2 with the other U-bolt and bracket.
3. Insert the ends of the U-bolts through the four holes in the square sensor base at the bottom of the sensor rod. Loosely install the hex nuts on the four bolt ends with a 10 mm wrench.
4. Raise the sensor to the desired height on the mast.
5. Use the wrench to tighten the hex nuts until the sensor is firmly fastened on the mast.

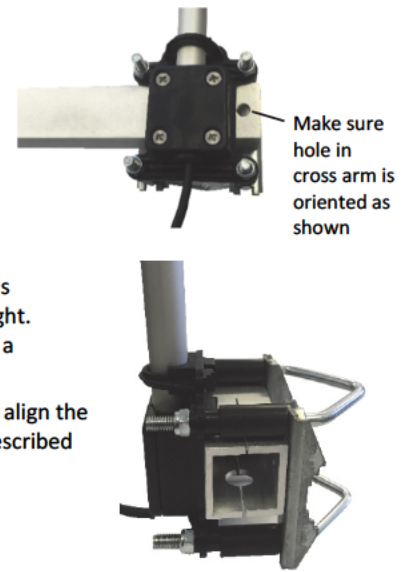


Mounting the Smart Sensor on a Cross Arm

1. Attach the cross arm to the mast before installing the sensor.
2. Use a 10 mm wrench to install two hex nuts at the base of the threaded end of the U-bolts as shown. Tighten the hex nuts all the way down to the end of the threads. Repeat with the other U-bolt.
3. Insert the threaded bolt end through the hole in the bracket so that the bracket rests on top of the hex nut with the flat end facing out. Place a spacer on top of the bracket. Repeat for the other threaded bolt end and for both ends of the other U-bolt.
4. Insert both bolt assemblies through the bottom of the mounting base and secure with finger-tightened lock nuts.



5. Slide the assembly above over the end of the cross arm as shown below. Make sure the hole in the cross arm is centered on the sensor mounting base as shown.
6. Make sure the cross arm is positioned as shown at right. Tighten the locknuts with a wrench.
7. Use the alignment tool to align the sensor to true north as described in the next section.



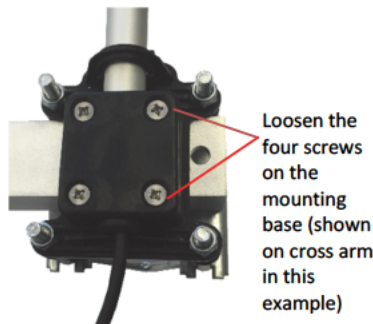
North Alignment

The sensor must be oriented to true north to obtain meaningful wind direction data.

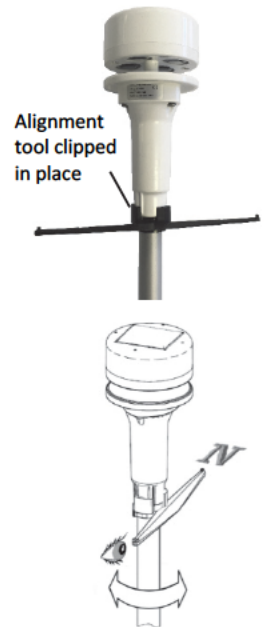
Tools required:

- Alignment tool (included)
- GPS or compass
- Flag, cone, or other temporary marker
- Phillips-head screwdriver

1. Use a Phillips-head screwdriver to slightly loosen the four screws on the sensor rod mounting base so that the sensor rod can be adjusted. (If the rod already moves freely, you do not need to loosen the screws any further.)

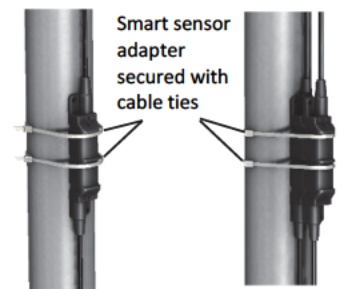


2. Clip the alignment tool on the sensor tube and slide it so that it snaps into the dedicated slots. Do not tamper with the slots. The tool must gently find its place.
3. Using your GPS or a magnetic compass, go to a point that is directly north of the station and at least 100 m (328 ft) away from the station. To determine this point, move until the station is directly south of you. Refer to the product manual for details on using GPS or a compass and using a flag or cone to establish a waypoint.
4. Use the alignment tool to align the sensor so it is pointing north.
5. Once the sensor is aligned to north, tighten the screws and remove the alignment tool.



Deployment Guidelines

- Mount the sensor in the sunlight within 10 days of connecting the battery to prevent it from losing all charge.
- Mount the sensor in a location that receives direct sunlight for several hours a day to ensure the built-in solar panel is charged regularly. Make sure the sensor is positioned in the sun and not under the forest canopy or obstructions.
- After the sensor is mounted on a mast, secure the smart sensor adapter to the mast with the cable ties as shown. Multiple smart sensor adapters can be stacked as shown in the example on the right.



One Smart Sensor Adapter Mounted

Two Smart Sensor Adapters Stacked and Mounted