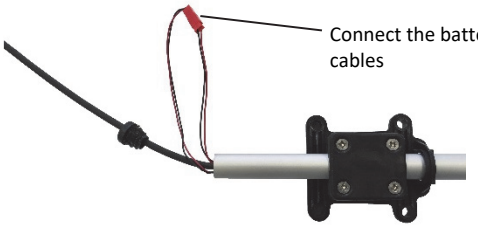
Ultrasonic Wind Speed & Direction Smart Sensor (S-WCG-M003) Quick Start

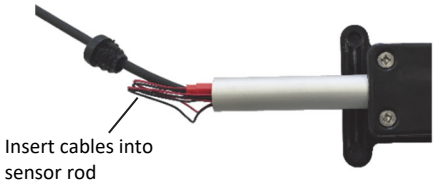
Connecting the Sensor Battery

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.**

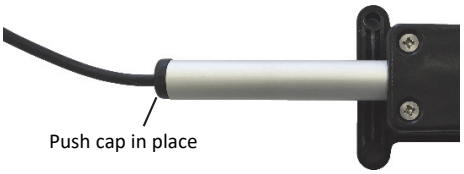
1. Connect the two battery cables.



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.

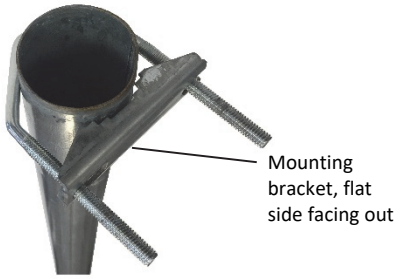
5. Place the solar panel of the sensor under a light source (a bright lamp or direct sunlight) for at least one minute to activate the sensor.

Connecting to a Station

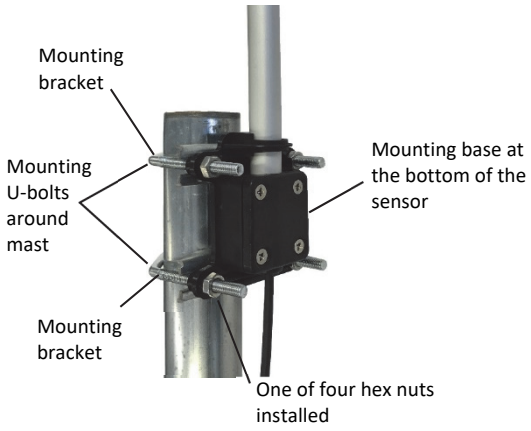
1. Stop the station if it is logging
2. Plug the smart sensor jack into an open smart sensor port on the station.
3. Start logging. See the station manual at www.onsetcomp.com/support/manuals for details on operating stations with smart sensors.

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.

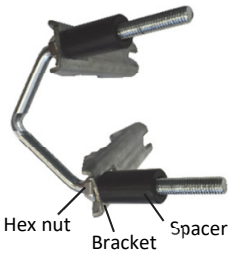


2. Repeat step 2 with the other U-bolt and bracket.
3. Insert the ends of the U-bolts through the four holes in the square sensor base at the bottom of the sensor rod. Loosely install the hex nuts on the four bolt ends with a 10 mm wrench.
4. Raise the sensor to the desired height on the mast.
5. Use the wrench to tighten the hex nuts until the sensor is firmly fastened on the mast.
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. For details on north alignment, see the sensor manual at www.onsetcomp.com/support/manuals/22408-s-wcg-m003-manual.

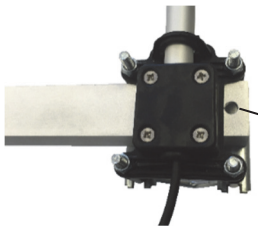


Mounting the Smart Sensor on a Cross Arm

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.

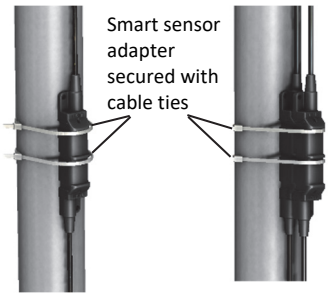


5. Slide the assembly above over the end of the cross arm as shown below. Make sure the hole in the cross arm is centered on the sensor mounting base as shown.
6. Make sure the cross arm is positioned as shown at right. Tighten the locknuts with a wrench.
7. Use the alignment tool to align the sensor to true north. For details on north alignment, see the sensor manual at www.onsetcomp.com/support/manuals/22408-s-wcg-m003-manual.



Deployment Guidelines

- The sensor can be damaged with improper handling. Store the sensor in its shipping box until you are ready to install it.
- Mount the sensor in the sunlight within 10 days of connecting the battery to prevent it from losing all charge.
- Choose a location free of turbulence and magnetic fields resulting from electricity, engines, radio transmitters, radars, etc.
- For the most accurate readings, the sensor should be mounted 3 m (9.8 ft) or more above the ground and 10 m (32.8 ft) away from nearby objects.
- When mounting the sensor on a roof, the sensor must be mounted at a height equal to the building's length or five times the building's height. Install the sensor in the middle of the roof when possible. You may do this by mounting the sensor on an Onset tripod or mast, or a metal pipe. It is not recommended to install the sensor on a slanted roof because it can generate upwards turbulence that will affect the sensor measurements.
- You may mount the sensor on a wooden post. See the product manual for details.
- 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.
- The sensor must be aligned to true north when mounted to ensure accurate wind direction readings. Use the alignment tool as described in the product manual.
- If the sensor is mounted on the same mast as a rain gauge, mount the wind sensor away from the rain gauge on a half cross arm (M-CAB) so that the wind sensor does not interfere with rainfall measurements. If there is no rain gauge on the same mast, mount the wind sensor directly to the top of the mast. You can also mount the sensor to a vertical surface. See the full product manual.
- The tripod or mounting mast must be properly grounded. For field installations, you can use Onset's Grounding Kit (M-GKA).
- If the station is deployed in an area with frequent thunderstorms, installing a lightning rod nearby can reduce the risk of damage.
- To minimize measurement errors due to ambient RF, keep the sensor cable as far as possible from other cables carrying high frequency or high-current signals.
- 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.
- Secure the sensor cable with cable clips or weather resistant cable ties to protect it from damage in the wind. Place clips or cable ties approximately every 1 to 1.6 m (3 to 5 ft). Do not use metal staples to secure the cable as they can cut the cable.
- Secure the mast that the sensor is mounted on so that it does not vibrate. If you are using an Onset mast or tripod, secure it with guy wires.



One Smart Sensor Adapter Mounted

Two Smart Sensor Adapters Stacked and Mounted

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/22408-s-wcg-m003-manual.

ONSET 1-800-LOGGERS (564-4377) • 508-759-9500
www.onsetcomp.com/support/contact

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