HOBO MX800 Two-Sensor Adapter (W-ADAPT-2) User Guide

Overview

The two-sensor adapter connects any combination of two W-series sensors (W-DO, W-CTD, W-CT) to one HOBO MX800 logger. Also available is an optional anti-biofouling guard that goes over the sensor guard.

Contents of this package

- 1 two-sensor adapter
- 1 sensor guard that goes over the sensors
- 2 straight collars for connecting the sensors
- 1 tapered collar for connecting the adapter to the end of a W-series cable (CABLE-W-xxx)
- 1 sensor stabilizer for connecting between the two sensors
- 5 nylon set screws for locking the sensor guard

Dimensions

Length of 2-sensor adapter only: 6.38 cm (2.51")

Length with sensor guard: 31.2 cm (12.3")

Length with sensor guard and optional antifouling guard: 31.8 cm (12.5")

Diameter with sensor guard: 6.06 cm (2.385")

Diameter with sensor guard and optional antifouling guard: 6.35 cm (2.5")

Weight

2-sensor adapter only: 97.5 grams (3.44 ounces)

Total weight of adapter with sensor guard, couplers and stabilizer: 256 grams (9.03 ounces)

Optional antifouling guard: 173 grams (6.10 ounces).

Depth/Environmental Rating: IP68, waterproof to 100 m (328') – Requires sensors and logger or cable to be attached; any unused sensor inputs must have a protective plug (W-PLUG) attached.
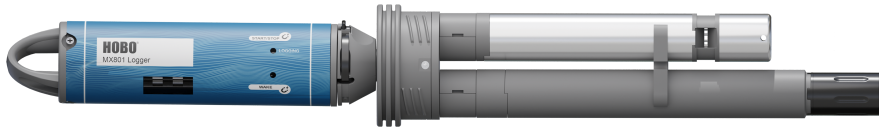
Wetted Materials

- 2-Sensor Adapter
  - NORYL GFN2F
  - 316 Stainless Steel Screws
  - Buna-N (Nitrile Rubber) O-rings
  - Nylon Screw (Black)
- Tapered and Straight Collars
  - HDPE (High-Density Polyethylene)
  - 316 Stainless Steel Screws
  - Magnet Fob: Silicone Rubber
- 2-Sensor Stabilizer
  - NORYL GFN2F
- Sensor guard
  - PVC
- Optional Anti-biofouling Guard
  - Copper 110
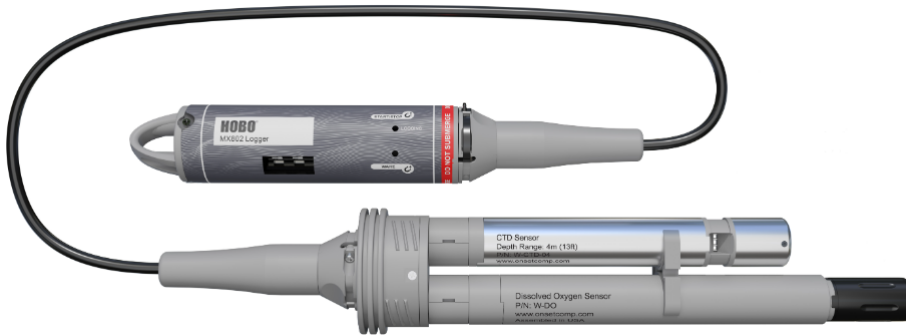 - Nylon Rivet (White)

Typical Configurations

The following are some typical configurations of the MX800 series logger for various two-sensor deployments.

- MX801 with a two-sensor adapter connected directly to it and a W-DO and W-CT or W-CTD connected to the adapter.
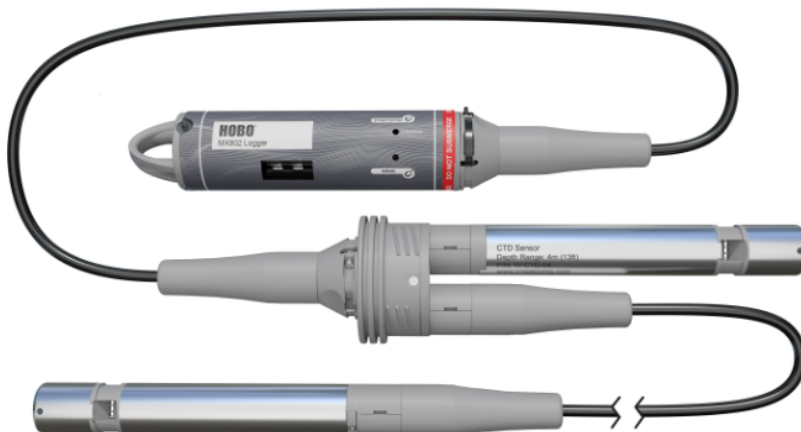

> **Note:** Care should be taken that the sensor and logger connection will not experience excess flexing. Loggers that are subject to movement or impact, such as in flowing streams or on buoy lines, should be mounted in such a way that the logger is held stable.

- MX802 with a two-sensor adapter connected directly to it and a CABLE-W-xxx connected to the adapter with a W-DO and W-CT or W-CTD connected to the adapter.

- MX802 with a CABLE-W-xxx to the adapter with one W- sensor and a cable to another W-sensor at a lower depth.
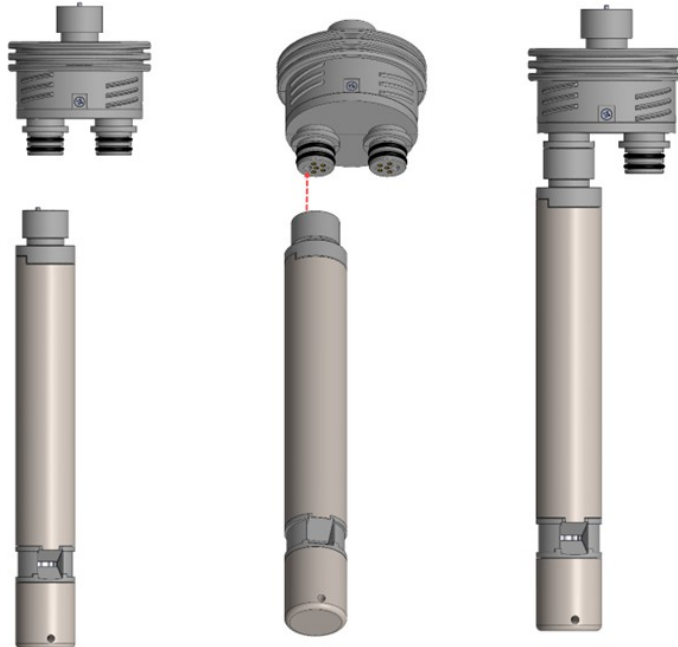
Connecting Two Sensors to the Adapter

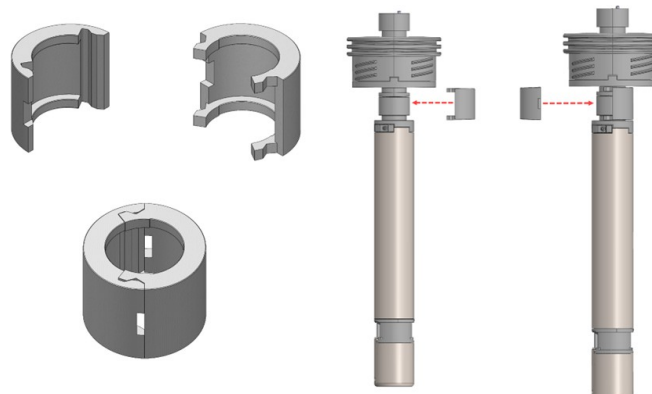These instructions describe how to connect two sensors to the adapter.

> **Note:** If you leave one of the sensor connections open, the logger is not weatherproof or waterproof. This allows moisture or water into the connected sensor and logger. It is best to connect the adapter to the logger and connect two sensors to the adapter in a dry environment. Then take the completed assembly into the field. If you expect to be taking sensors on and off the adapter on a regular basis, use the W-PLUG to protect the unterminated sensor port.
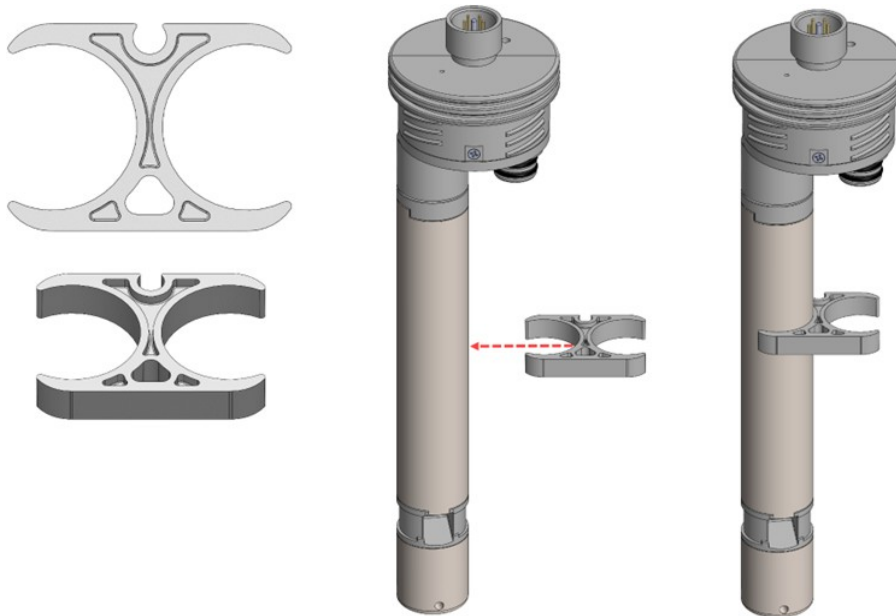
1. Align the alignment pin on the sensor with the hole on the adapter as shown in the following illustration. Attach the sensor to the adapter.
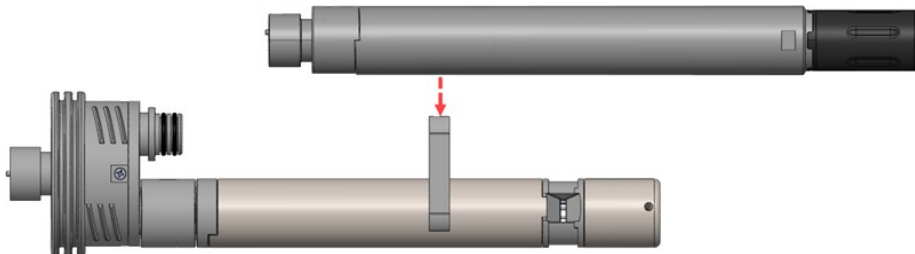
2. Snap the straight collar pieces onto the sensor one at a time, starting with the collar piece that has the fingers, as shown in the following illustration.
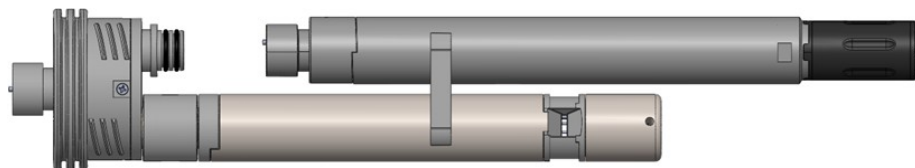
3. Attach the sensor stabilizer to the first sensor, as shown in the following illustration.

4. Snap the second sensor onto the stabilizer. Then slide the sensor toward the adapter.

5. Align the alignment pin on the second sensor with the alignment hole on the adapter and plug in the sensor.
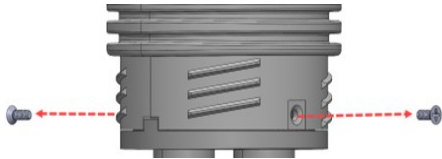

6. Snap the straight collar pieces onto the sensor as you did in step 2 above.
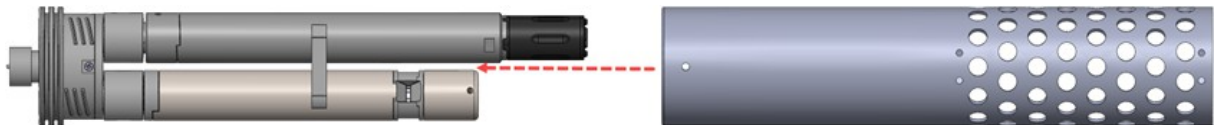
Attaching the Sensor Guard

The following instructions show you how to attach the sensor guard to the adapter.

1. Remove the two screws from the adapter. You only need to do this if you want to use the included nylon locking screws to lock the sensor guard onto the logger. This is recommended for applications where the logger will experience shock or vibration.

2. Slide the sensor guard over the sensor/adapter assembly.

3. Align either hole on the sensor guard with the arrow on the adapter and slide the guard on until it stops. Twist the guard ½ turn until it stops.

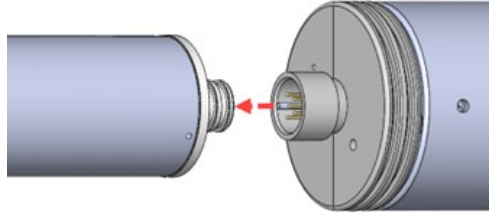4. Tighten the sensor guard onto the adapter with 1/2 turn.

5. If using the nylon locking screws, install them through the holes in the sensor guard into the threaded hole in the adapter. Only install the nylon screws until they are flush with the outer surface of the sensor guard.
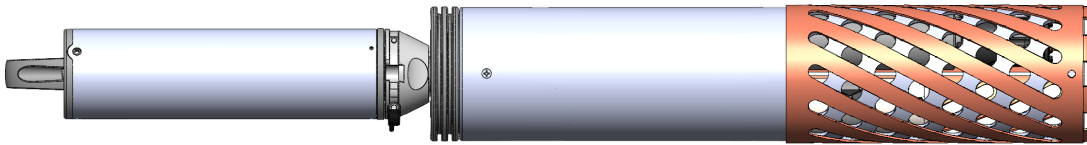
Plugging the Adapter into the MX800 Logger

To connect the adapter to the logger:

1. Align the alignment pin with the alignment hole on the MX800 logger and plug in the adapter to the logger.

Snap the tapered collar onto the connection between the adapter and the logger with the wider end of the collar toward the logger.
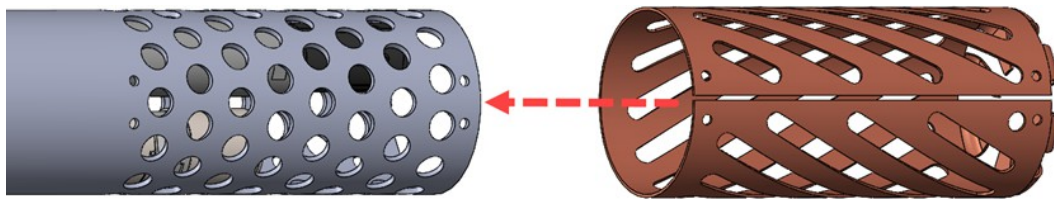
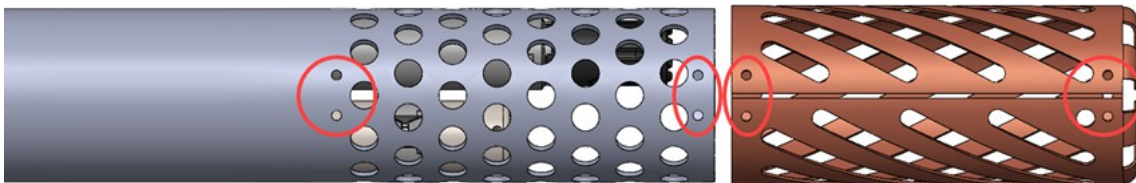2. Use a 3/32" hex wrench to screw in the 2 screws on the tapered collar.

Attaching the Anti-biofouling Guard (W-GUARD-2)

Use the optional copper anti-biofouling guard to reduce biofouling and reduce the frequency that you need to clean the sensors.
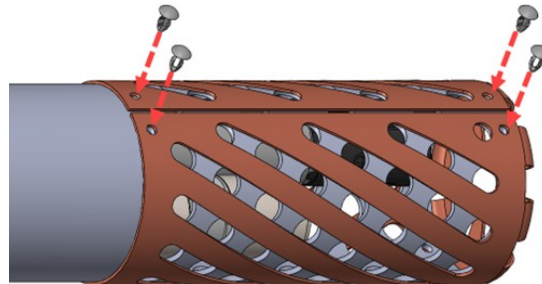
1. Slide the copper guard (W-Guard-2) over the end of the sensor guard.

2. Align the small holes on the sensor guard with the holes on the copper guard.
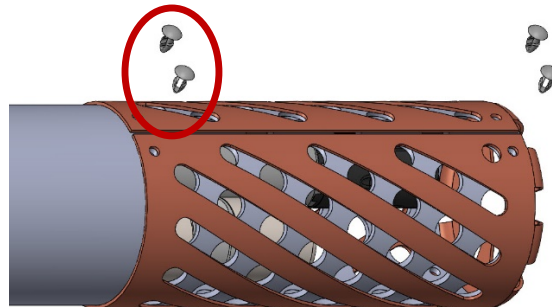
3. Snap in two of the rivets supplied with the guard, along the seam at the end. (The ones on the right in the diagram below.) For added security you can install two more rivets on the end closer to the logger. (The ones on the left in the diagram below.) Note that if you install this second pair of rivets you will need to pop them out when removing the sensor guard to access the sensors for cleaning.
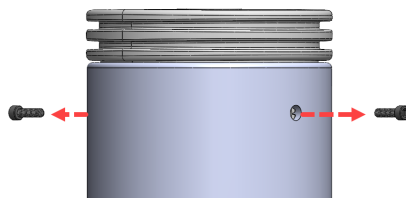

Removing the Sensor Guard for Servicing the Sensors

1. To remove the sensor guard you will need to remove the two circled rivets because they will hit the sensors while the guard is being unscrewed. These two are optional during deployment.
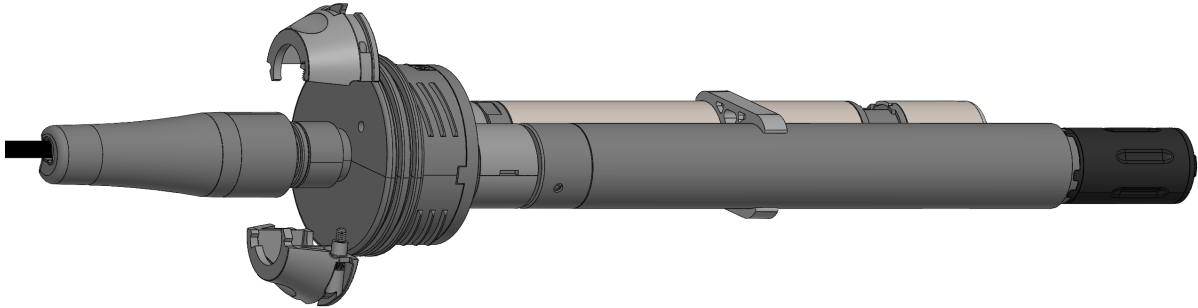

1. Remove the two black nylon screws if those are present.

2. Unscrew the sensor guard ½ turn and pull it off the 2-sensor adapter.

Connecting the Adapter to the End of a W-Series Cable

1. Plug the adapter onto the end of the cable, being careful to align the pins as done for the other cable and sensor connections.
2. Snap on the tapered collar (one with no magnetic fob) with the smaller side towards the cable. Use a 3/32" hex wrench to screw in the 2 screws on the tapered collar.

Connecting a W-Series Cable to the Adapter

3. Plug the male end of the cable into one of the sensor inputs being careful to align the pins as done for other cable and sensor connections.
4. Snap the straight collar pieces onto the cable connection one at a time, starting with the collar piece that has the fingers.