XB-200 DATA BUOY

QUICK START GUIDE

Figure 1: NexSens XB-200 Data Buoy

Overview

The XB-200 data buoy is constructed of UV stabilized, linear low-density polyethylene (LLDPE). The hull is filled with a lightweight, closed-cell polyurethane foam providing 200lb. buoyancy and will float even when pierced or damaged. Batteries are housed in a waterproof compartment in the hull with additional room for measurement electronics and telemetric equipment. When configured with a NexSens X3 data logger, all electronics are mounted under the solar tower top plate. Three 4" pass-through ports accommodate water monitoring sensors, and a configurable top plate accommodates weather sensors and a beacon.

What's Included?

- (1) Buoy hull providing 200 lb. buoyancy
- (1) Buoy tower
- (3) 15-W solar panels
- (3) 4" pass-through sensor pipes
- (2) Bottom-side mooring eyes
- (1) Instrument cage

Important Specifications

- Net buoyancy: 200 lbs. (91kg)
- Weight: 67 lbs. (30.4kg)
- Battery Well Dimensions: 9.7" (23.6cm) inside diameter; 20.5" (52.1cm) tall

Instrument Cage Installation

1. Use a 3/4" socket or wrench to remove the (6) pre-installed bolts from the bottom of the buoy.

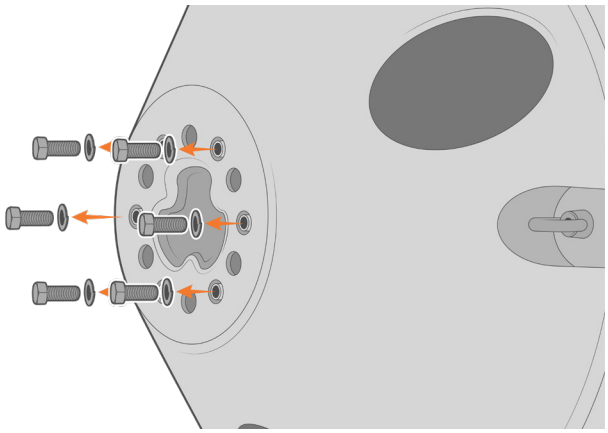

Figure 2: Cage bolt removal.

2. Align the included instrument cage with the open bolt holes on the bottom of the buoy. Use a 3/4" socket or wrench to re-install the (6) bolts and tighten the cage to the buoy.
    a. Ensure to tighten only until the lock washers are flattened.

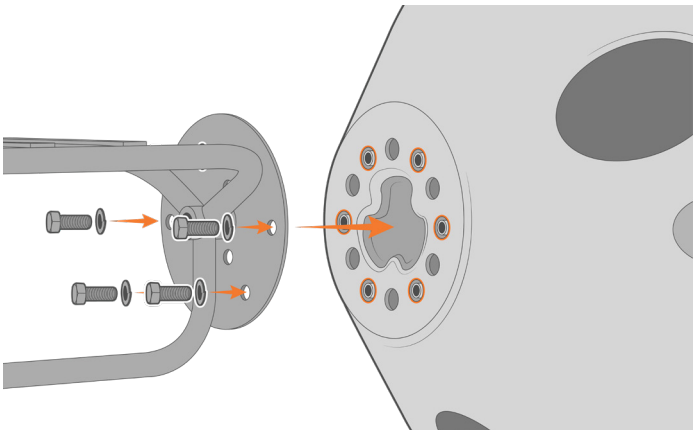

Figure 3: Cage installation.

Solar Tower Installation

Use a 1/2" socket or wrench and the (6) included hex head cap bolts, lock washers, and flat washers to install the solar tower.

- It is recommended to apply anti-seize compound to the bottom threads of each bolt before installation.
- Ensure the solar tower cables are free and not pinched beneath the tower upon installation.

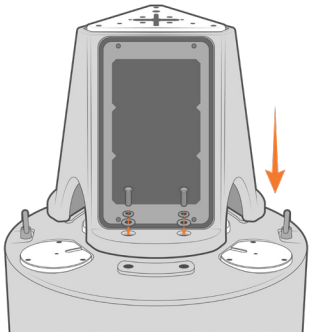

Figure 4: Solar tower installation.

Mooring Configurations

To develop an effective mooring strategy, a variety of application-specific criteria (water level fluctuations, currents and wave action, debris loads, etc.) must be thoroughly reviewed prior to deployment. NexSens does not endorse any particular mooring strategy for any specific application.

a. For more information on mooring configurations, follow the link provided:

nexsens.com/mooringdb

Safe Deployment

Warning: Always follow safe marine and boating practices. Heavy anchors, ballast weights, and chain require careful maneuvering. Small boats with limited lifting equipment and boat clutter can be unsafe. Care must be taken during deployment to maintain a clean and safe environment.

a. For more information regarding safe deployment practices and tips, follow the link provided:

nexsens.com/deptip

Saltwater Deployment

Sacrificial zinc anodes should be used whenever a buoy is deployed in a saltwater environment to prevent corrosion. These zinc anodes must be inspected and replaced as needed.

a. For more information regarding the use of zinc anodes, follow the link provided:

nexsens.com/usecb

Ballast Weight & Stability

To prevent overturning of a XB-200 buoy system and to ensure that it is stable in the water, additional ballast weight may be needed. The buoy's center of gravity is near the water surface without instruments connected. Any weight added above the water surface must be appropriately counterbalanced by adding ballast weight below the surface.

a. For more information regarding top-side and ballast weight, follow the link provided.

nexsens.com/dbbwstab

The buoy data well is not rated for submersion, so proper ballast weight is critical to ensure that the buoy does not overturn, including when the buoy is subjected to additional loading (e.g. high wind/waves, periodic snow/ice loads, etc.).

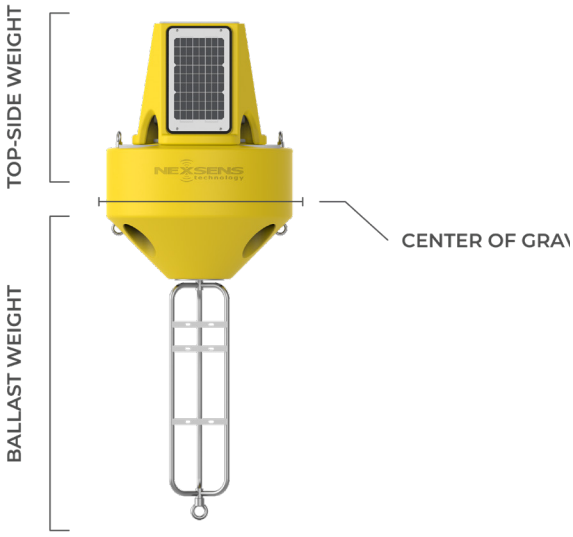

Figure 5: XB-200 buoyancy diagram.

For additional information, please reference the XB-200 Resource Library on the NexSens Knowledge Base.

nexsens.com/xb200kb

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