CB-250 DATA BUOY

QUICK START GUIDE

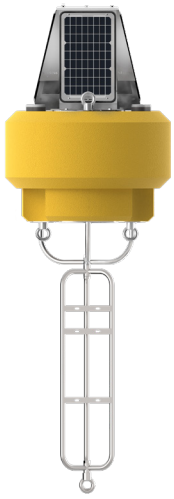

Figure 1: NexSens CB-250 Data Buoy

Overview

The CB-250 data buoy is constructed of an inner core of cross-linked polyethylene foam with a polyurea coating that provides 250 lb. buoyancy. A stainless steel internal frame provides topside lifting eyes and subsurface mooring eyes for single- and multi-point mooring. An integrated data well accommodates internal batteries, which are recharged by (3) 15-watt solar panels mounted on the buoy tower. The data well lid is available as a NexSens X2-CB buoy-mounted data logger or as a standard lid with included pass-through fittings.

What's Included?

- (1) Buoy hull with data well, 250 lb. buoyancy
- (1) Buoy tower
- (3) 15-W solar panels
- (3) 2" pass-through sensor pipes
- (3) Top-side lifting eyes
- (3) Bottom-side mooring eyes
- (1) Instrument cage

Important Specifications

- Buoyancy: 250 lbs. (114 kg)
- Weight: 115 lbs. (52 kg)
- Data Well Dimensions: 10.3" (26.2 cm) inside diameter; 19.5" (49.5 cm) tall

Instrument Cage Installation

1. Use the provided bolt, lock washer and castle nut to attach the cage to the buoy frame.

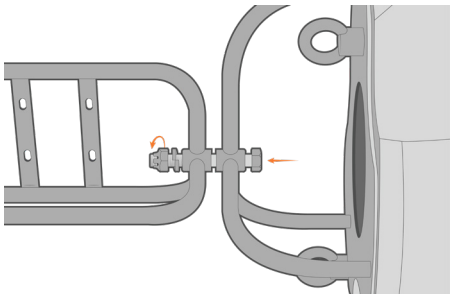

Figure 2: Bolt installation and cage connection.

2. Tighten firmly with a pair of 1-1/8" wrenches.
   a. Ensure to flatten the lock washer and align the bolt hole with a notch on the castle nut.

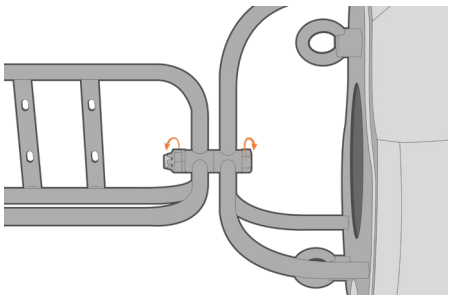

Figure 3: Secured cage.

3. Place the cotter pin through the bolt hole and bend the long leg of the pin.

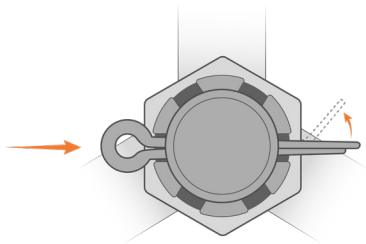

Figure 4: Cotter pin installation. Bent pin for security.

Solar Tower Installation

Use a 9/16" socket or wrench and the (6) included hex head cap bolts and lockwashers to install the solar tower.

- It is recommended to apply anti-seize compound to the bottom threads of each bolt before installation.
- Ensure the 6-pin solar tower cable is free and not pinched beneath the tower upon installation.

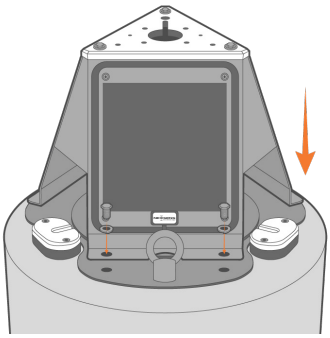

Figure 5: Solar tower installation.

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 CB-250 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.).

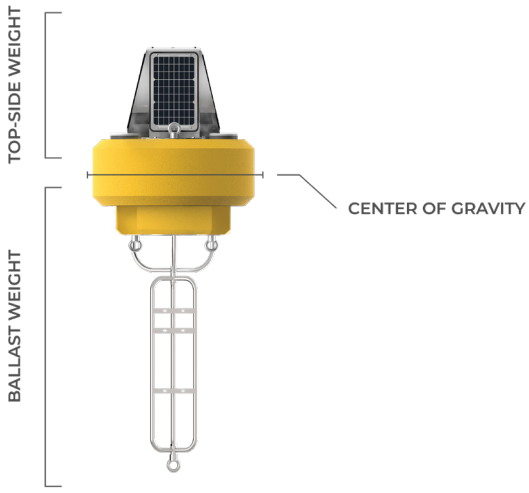

Figure 6: CB-250 buoyancy diagram.

For additional information, please reference the CB-250 Resource Library on the NexSens Knowledge Base.

nexsens.com/cb250kb

937-426-2703
www.nexsens.com

2091 Exchange Court
Fairborn, Ohio 45324