CB-40 Data Buoy – Quick Start Guide

The NexSens CB-40 Data Buoy offers a compact and affordable platform for deploying water quality sondes and other instruments that integrate power and data logging. The lightweight platform can be deployed from small boats, large vessels or even helicopters, making it the ideal choice for applications where water needs to be monitored at a moment's notice. The buoy can also be used as an underwater float and instrument housing for subsurface deployments.

What's Included:

- (1) Buoy hull with data well
- (3) Top-side lifting eyes
- (3) Bottom-side mooring eyes
- (1) Integrated 4" diameter instrument pipe

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CB-40 Data Buoy – Accessories

The CB-40 Data Buoy is a platform and can be accessorized with any of the following components or users can configure the buoy with alternatives.

Common Accessories	
M550-F-Y	Solar marine light with flange mount & 1-3 nautical mile range, 15 flashes per minute, yellow

CB-40 Deployment

SAFETY FIRST

Warning: It highly recommended that buoys are installed by professionals with training in marine safety. Anchors, chains, heavy gear and boat clutter during deployment is unsafe. Care must be taken during deployment to maintain a clean and safe environment.

Use of proper equipment (work boat, lifting rig, gloves, safety footwear, etc.) is essential to safely deploy any buoy system. Buoy systems can be heavy and personnel can quickly become entangled with mooring lines and anchors. Safety and flotation gear should be worn at all times when working on or near the water.

NEVER EVER work in unsafe conditions, without safety gear, proper equipment or use unsafe practices.

CB-40 Deployment

Understand ballast weight and stability

Important: To prevent overturning and ensure stability, additional ballast weight may be needed.

As configured at the factory, the center of gravity of the buoy is near the water surface. A single point mooring line and chain, connected to the eye at the bottom of the cage is typically enough weight to ensure stability.

Any weight added above the water surface must be appropriately counterbalanced by additional ballast weight below the surface. Be sure to keep topside devices lightweight and positioned as low as possible on the tower and bottom side weight centrally located and deep (mounted to the cage eye).

Before deployment, some experimentation may be required to properly balance the buoy. If needed, add ½" chain (~2.3lb/ft) or other weight to the bottom of the cage.

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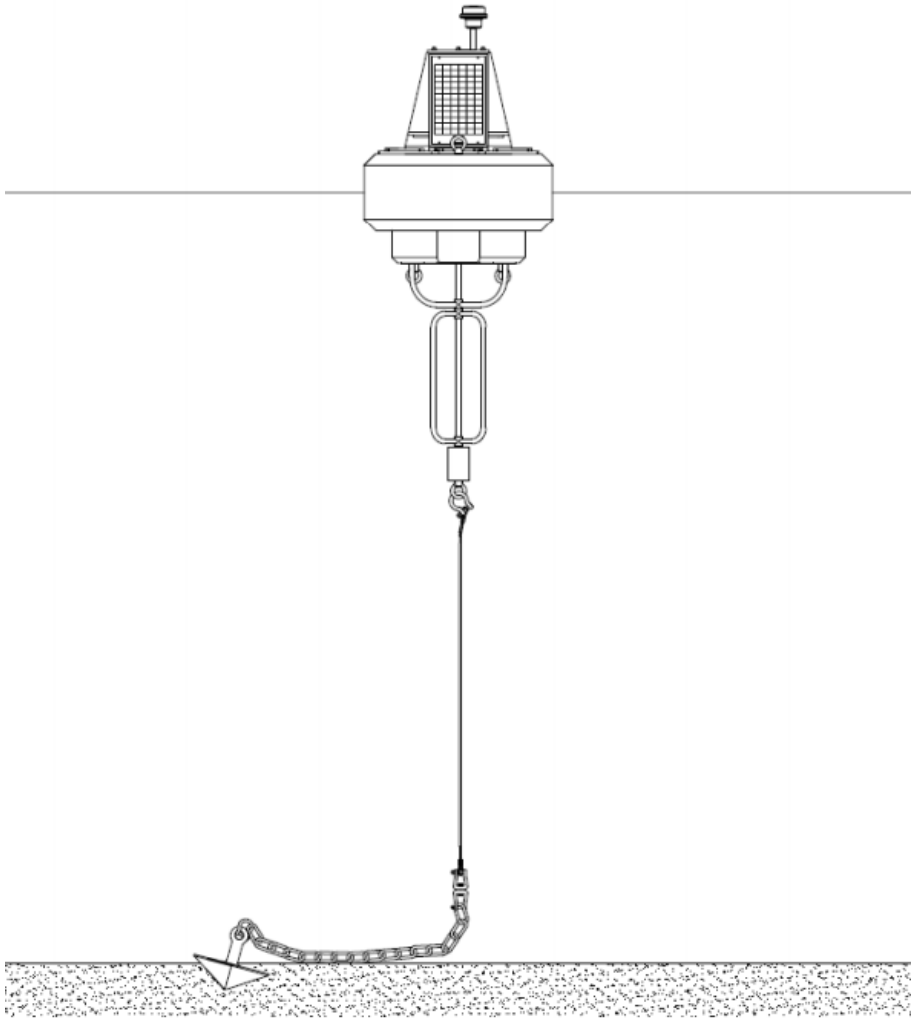
CB-40 Deployment

Single point mooring

Single-point moorings are used in calm waters when monitoring sensors are attached to the instrument cage or housed in deployment pipes. The sensors are thus protected and less vulnerable to damage caused by subsurface debris, high currents, and entanglement from anchor lines.

In a single-point configuration, a stainless steel mooring line connects the buoy directly to a bottom chain and anchor. At normal pool/stage, the mooring line should be taut, with most of the bottom chain resting on the seafloor. As the water level increases and the buoy rises, the bottom chain is lifted from the floor.

Important: *This section contains only general information on the available mooring options for CB-40 data buoys. 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.*



CB-40 Deployment

Two point mooring

Two-point moorings are commonly used when monitoring sensors are deployed in the water column below the buoy. In this setup, the mooring lines are pulled taut away from the buoy, freeing the water column for a suspended sensor line.

In most two-point configurations, mooring lines connect the data buoy to small marine marker floats, often located on the water surface. These marker floats are shackled to another mooring line that runs to the floor and connects to a bottom chain and anchor assembly. Additional subsurface marker floats may also be used in some applications. As in single-point systems, the bottom chain prevents buoy submersion as the water level fluctuates.

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