

CB-450 Data Buoy

A data buoy system shall be provided to monitor the water quality in (Specify Location).

The buoy flotation shall be constructed of a closed cell, cross-linked polyethylene foam hull with a polyurea skin and Kevlar reinforced top coat providing 450 lbs of buoyancy. The flotation shall be yellow in color in accordance with international data buoy standards.

The buoy structure shall consist of an internal type 316 stainless steel frame, (3) topside lifting eyes and subsurface mooring eyes for both single-point and two-point moorings. The frame shall support attachment of instrument mounting cages directly below the center of the buoy.

The buoy shall be fitted with an integral data well providing adequate space for batteries and instrumentation. Both feed-through gland fittings and watertight connectors shall be available on an O-ring sealed lid.

The buoy shall allow adequate topside space to accommodate various telemetry modules including radio, cellular, Iridium satellite and WiFi.

The buoy shall be fitted with (3) 15-watt solar panels with a waterproof termination for charging up to (2) 28 A-Hr batteries.

The buoy shall support mounting of both topside and subsurface sensors. A top plate shall be pre-drilled for mounting a 1-3 nautical mile range LED beacon, weather station mast and other sensor supports. The plate shall accommodate passage of multiple sensor cables and connectors up to 1.5 inches in diameter.

The buoy shall include a bottom stainless steel instrument cage with mooring eye for securing instrument clamps to accommodate water quality sondes and other subsurface sensors. The cage shall be removable for ease of maintenance and storage when not deployed.

(3) 4-inch pipes, each with 4-inch NPT female threaded fitting, shall allow sensor pass-through and accommodate deployment pipes below the buoy. Hatches shall cover the passages and conceal cables.

The complete data buoy system shall be Series CB-450 as manufactured by NexSens Technology, Inc. or approved equal.