



Data Buoy DB 4700

is a unique Data Collecting System for Met/Ocean Parameters. The Buoy can accommodate a selection of sensors depending on customer's request. Each Data Buoy is delivered as an Aanderaa Engineering solution to benefit the customer requirements.

Subsea Parameters:

The Buoy can measure Wave Height and Period, Sea Current Speed and Direction, Sea Temperature, Dissolved Oxygen, Conductivity, Turbidity and Salinity

Meteorological Parameters:

Air Pressure, Air Temperature, Humidity, Visibility, Net and Solar Radiation, Wind Direction and Speed.

Data Access:

Data from the Buoy can be transmitted Real-Time and/or stored internally.

Buoy Features:

Rugged and Compact Construction, Modular Design, Potted Waterproof Units, Low Power Consumption and Solar cell powered. The Buoy is easy to deploy and use. The Buoy has extra Storage Compartment for external equipment.

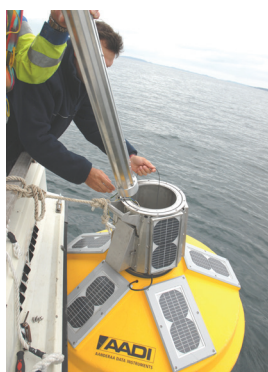
Application Areas:

Ports, Harbours, Fjords, Coastal Waters and other areas depending on the depth and wave conditions.

The Sensor Ring mounted on top of the Mast Section can fit 7 Meteorological Sensors.



The Mast Section is equipped with a Mini Tri-Lens Reflector (The reflector coverage is 330 degrees) and a Sealite Flashing Light, SL 15.



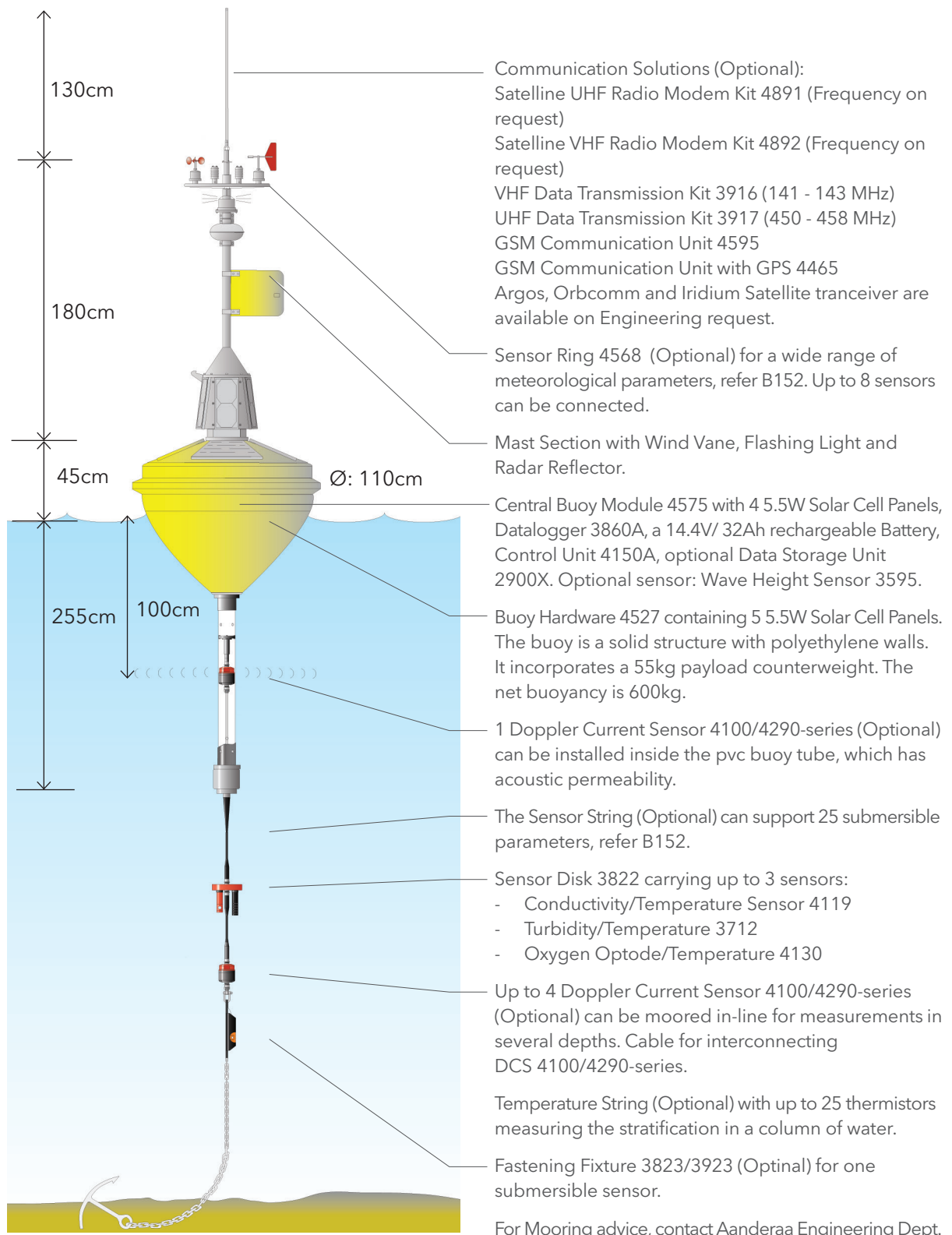
The buoy is of modular design which enables a variety of applications.

The Central Buoy Module can be pulled out of the Buoy Hardware without disconnecting the sensor string. Some service can be performed offshore.

The Buoy is Solar Cell powered. The panels are positioned in two angles to maximize the effect from solar radiation and reflections from the sea.

The Buoy Hardware is a solid structure; the walls are made of Polyethylene. The hardware is bumper protected.

Fully Equipped Buoy



Engineering Solution:

The Data Buoy is an Aanderaa Engineering Solution to fit the specific application in which the Buoy is used; the Buoy is complete as requested by the customer. Each Buoy has been tested prior to delivery.

Aanderaa enclose a complete System Drawing for easy installation of the Buoy System. The Buoy System can be delivered as a Turn Key Solution.

Buoy Applications

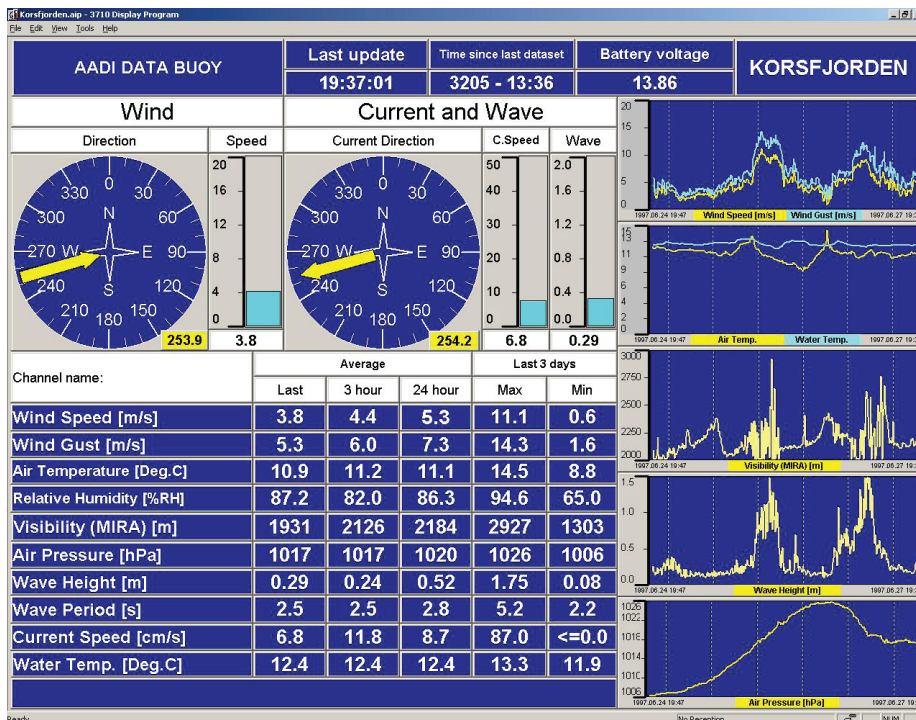


Unique, Combined Met/Ocean Data Buoy for e.g.

Coastal Management, Storm Warnings, Dredging, Traffic Monitoring, Environmental Monitoring and Research.



Display Program 3710



Refer Data Sheet D318 for more information about Display Program 3710.

A 30-day test program can be downloaded from our Internet site at: www.aadi.no
Note that you have to sign in first.

Data Display Program 3710

- The Display Program 3710 is designed to collect, save and display data from Aanderaa datalogging equipment.
- Collects data from several stations or buoys.
- Displays data on the PC monitor.
- Data can be saved to files for further analysis in e.g. MS Excel.
- The program converts raw data in RS-232C format to data in Engineering Units.
- Customized Display with five basic types of graphs.

Communication Solutions

VHF Data Transmission Kit 3916 (141 - 143 MHz) and UHF Data Transmission Kit 3917 (450 - 458 MHz).

The radio set is a low power, short range system, operating in the VHF band on frequency 141-143 MHz and UHF band on frequency 400-500MHz. Both requires free line of sight between transmitter and receiver to function properly. Typical range is 6-8 km range over sea depending on local conditions. Range can be extended if receiver is equipped with direction antenna and the antenna is located high above ground. To convey data in real-time from stations or buoys, VHF/ UHF radio communication has been found to be the best and least expensive solution.

GSM Communication Unit 4595 and GSM Communication Unit w/GPS 4465

Suitable when designing of a network of stations. Enables two way communication for remote programming

and downloading of data. With 4465 version, GPS info will also be available, which is useful if the buoy starts drifting.

Satellite communication solutions

To be used when global coverage is needed in areas where no other communication is possible. Available systems are: Iridium, Orbcomm and Argos. Solutions available only on request directly to Aanderaa Engineering department.

Communication over the AIS network

AIS transponder can be mounted inside the DB4700 and HYD/MET data can be transmitted into the AIS network. Can be supplied on request. Contact Aanderaa Engineering department.

Note: Not all countries allows this use of the AIS network.

Buoy Specifications

Datalogger:	Up to 30 channels. Refer Data Sheet D337. Recording Interval: Typical 10 to 60 minutes for buoys. Data storage capacity of ca 30 days. Resolution: 10-bit binary. Accuracy: ± 1 -bit binary.
Control Unit:	Interface for all equipment. Provides 15V and 12V output.
Sensor Ring:	Fits up to 7 Meteorological sensors, Communication antenna and optional GPS.
Flashing Light:	Sealite Flashing Light, SL 15. Range: 1Nm. Output: 0.45W solar module. 4 ultra-high intensity LEDs. Intensity: > 1.5 cd. Battery: 1.6Ah. Horizontal Output: 360 degrees. Vertical Divergence: 9 degrees. Waterproof rating of IP68.
Radar Reflector:	Mini Tri-Lens Reflector. Reflective Cross Section: 0.6 -1m ² . Reflector coverage: 330 degrees.
Submersible String:	Up to 25 parameters can be fitted on customer request.
Buoy Hardware:	Solid structure with Polyethylene walls. Net Buoyancy of 600kg. It incorporates a payload counterweight of 55kg. The Buoy Hardware will float even if the walls are punctured.
Solar Cells:	9x5.5W. Total: 2A max. charge. Nominal output 17.2V.
Batteries:	32Ah capacity. Maximum 17.5V output. Voltage Regulated to 12V in the Control Unit.
Size:	See page 2.
Packing:	334x125x135cm (LxWxH).
Weight:	Gross weight: ~350 kg. Net weight: ~250 kg.



The Buoy is cone-shaped with a low centre of gravity; this provides High Stability and reduces wear and tare of Cables.

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Let's Solve Water

Visit our Web site for the latest version of this document and more information
www.aadi.no

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