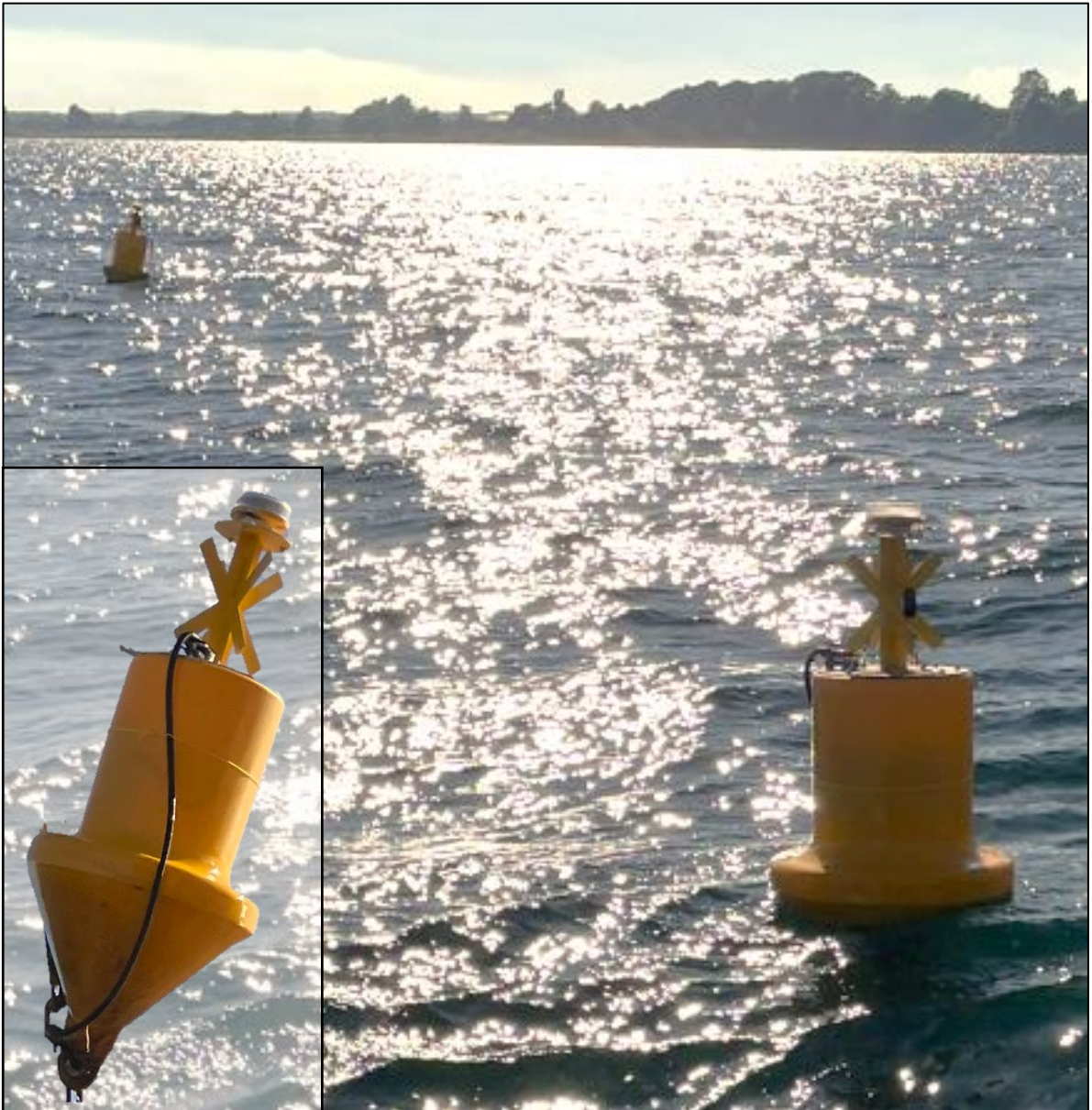# EnviroBuoy

Environmental data buoy

Standard EnviroBuoy

EnviroBuoy

A state of the art extremely flexible buoy, that can be customized for most offshore applications. The buoy is basically an off-shore IOT platform that can be equipped with suite of different sensors relevant for different projects.

Buoy features

Stable and robust with a compact design, waterproff, low power data collection, easy to deploy, extra space inside for installation of further monitorings equipment.

Subsea Parameters

The buoy can be equipped with most sensors developed for offshore applications, like e.g. oxygen, temperature, conductivity, turbidity etc.

Online IOT data

The measured local values can automatically be combined with free online accessible data from e.g. national meteorological institutions if available via API.

System survailance data

Besides environmental data, the buoy continuously logs the temperature, air humidity, and air pressure. This helps early warning and remote diagnostics in case of leaks.

Marine safety

The buoy is as a standard equipped with radar reflector and flashing light (programmable). The battery for the light is charged via an independent solar panel. For safe and legal offshore installation, DMR can also assist in the registration of the installed buoy at the Danish Maritime Authority.
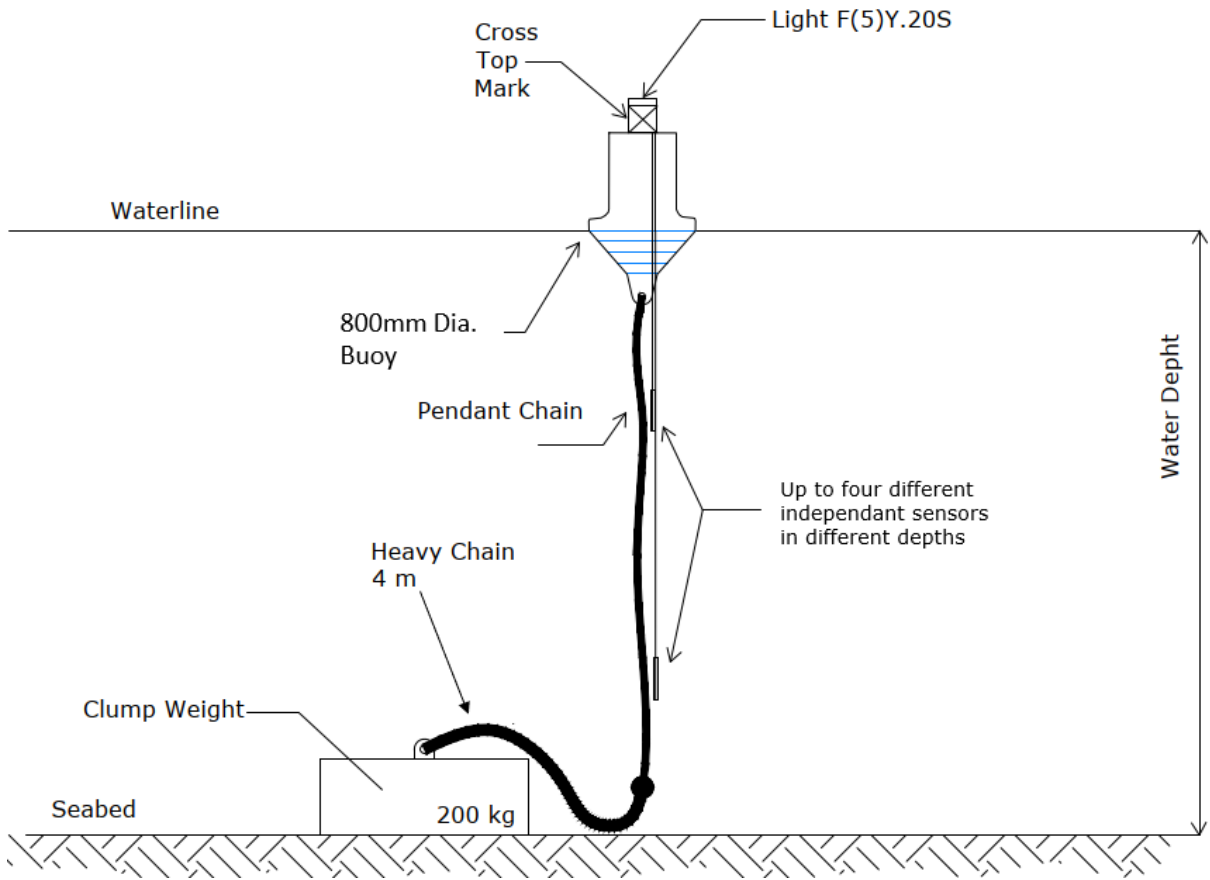
Safe and correct installation

EnviroBuoy is designed for a safe and professional installation procedure. This ensures that it can be deployed with crane equipped ship in a safe manor. DMR can also assist in design of installation procedure for a specific ship, and participate in all parts of deployment, maintenance and recovery depending on the needs of the customer.

Radar reflector and flash light with solar panel

Monitoring station installation

Light F(5)Y.20S

Cross Top Mark

Waterline

800mm Dia. Buoy

Pendant Chain

Up to four different independant sensors in different depths

Heavy Chain 4 m

Water Depht

Clump Weight

Seabed

200 kg

Installed EnviroBuoy

A complete EnviroBuoy installation typically encompass the buoy, a pendant chain, a heavy sinker chain and a clump weight of concrete. The exact size of chains and clump weight will be specific for each installation as it depends on local expected wave heights and depth to seabed.
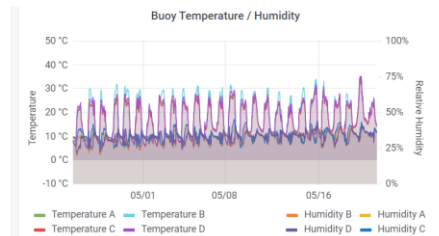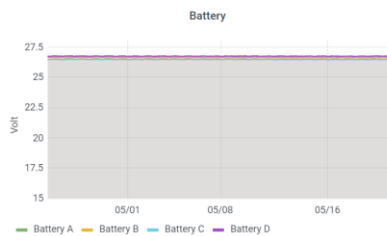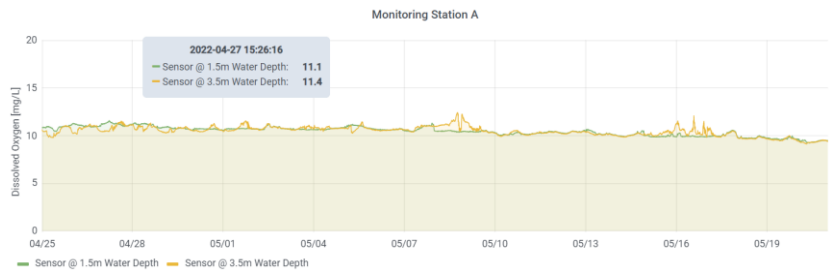
Online data access
Data from EnviroBuoy is passed to DMR Cloud using a narrow band modem.

For safe and professional encrypted data transmission and backup, we use Amazon web service.

Via our webservice we can also setup alarm thresholds for sms or email alarm.

Customers will be invited to DMR's cloud platform where they can access the data and download in a convenient format.

Buoy Specifications

Datalogger

Control of four independent environmental sensors on standard logger board, and possible customization for more sensors is possible on request. The logging frequency is adjustable. The logger boards is equipped with an SD card for onboard backup in case of lost online connection to the cloud platform.

Sensor control

The sensors are powered with a flexible power management system that ensures that we can program for sensor specific power needs. To save power, the complete setup is turned off in between measurements. The calibration of the sensors is done in the online platform, which means that it is possible for DMR to assist field personal in calibration.

GPS localization

The buoys can be equipped with a GPS solution that ensures continuously control and alarms in case of misplacements after installation. This is also handy in case of theft or detachment due to heavy weather situations.

Battery

Lithium SuperPack 1280Wh. The battery lifetime is typically 1-3 years depending on the number of sensors, sensor type and logging frequency.

Size

Height: 135 cm. Width: 80 cm.

Weight

70 kg.