

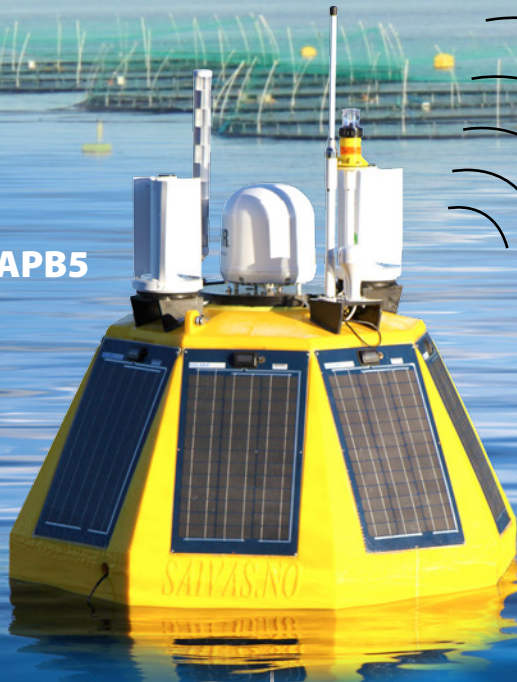
APB5

Automatic Profiling Buoy

On-Board Webserver with Real-Time Data on Internet
Coastal Waters • Fjords • Lakes • Fish Farms

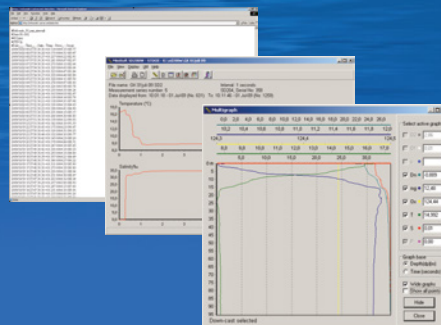
- Salinity
- Temperature
- Turbidity (Auto Range)
- Conductivity
- Oxygen
- Fluorescence (Auto Range)
- Current Speed
- Sonar
- Depth

APB5



4mm Rope

Multi-Parameter Probe
CTD - Model SD208



Features:

- *No Biofouling on Sensors*
- *No Cable / Connectors*
- *Real-Time Data on Webpage, accessible on Internet (HTTP)*
- *Two-Way Communication*
- *Programmable Speed, Depth & Intermediate Stops*
- *GPRS & Satellite (INMARSAT/Iridium)*
- *Profiling Depth: - Standard 75m - Ext. 150m*
- *Weather Station (Optional)*
- *Current Speed/Direction from ADCP (Optional)*
- *FTP, E-mail, SMS, NTP, (WIFI Optional)*
- *2-Year Data Storage*

SAIVA/S Environmental Sensors & Systems

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Automatic Profiling Buoy APB5

On-Board Webserver with Real-Time Data on Internet

The APB5 is designed for monitoring water quality in coastal waters, fjords, lakes and fish farms. The buoy contains a control unit, CU801B, an Embedded Web Server, a GSM/GPRS/EDGE or satellite (INMARSAT/Iridium) router, a winch, a short range radio for communication with sensor unit, solar cells and battery pack.

In fish farm application, the buoy is normally powered from an external supply. The control unit can be remotely programmed to desired profiling frequency and depth. In between profiles, the sensor unit rests above the water inside the buoy. This eliminates biofouling on the sensors. Since the sensor unit requires a wireless RS232 in/out feature, the CTD Multi-Parameter SD208 is perfect for this use.

The data is transmitted to the control unit, and the Embedded Web Server produces a web page accessible on the internet at the address:

station.saivas.net ("station" to be given by the user).

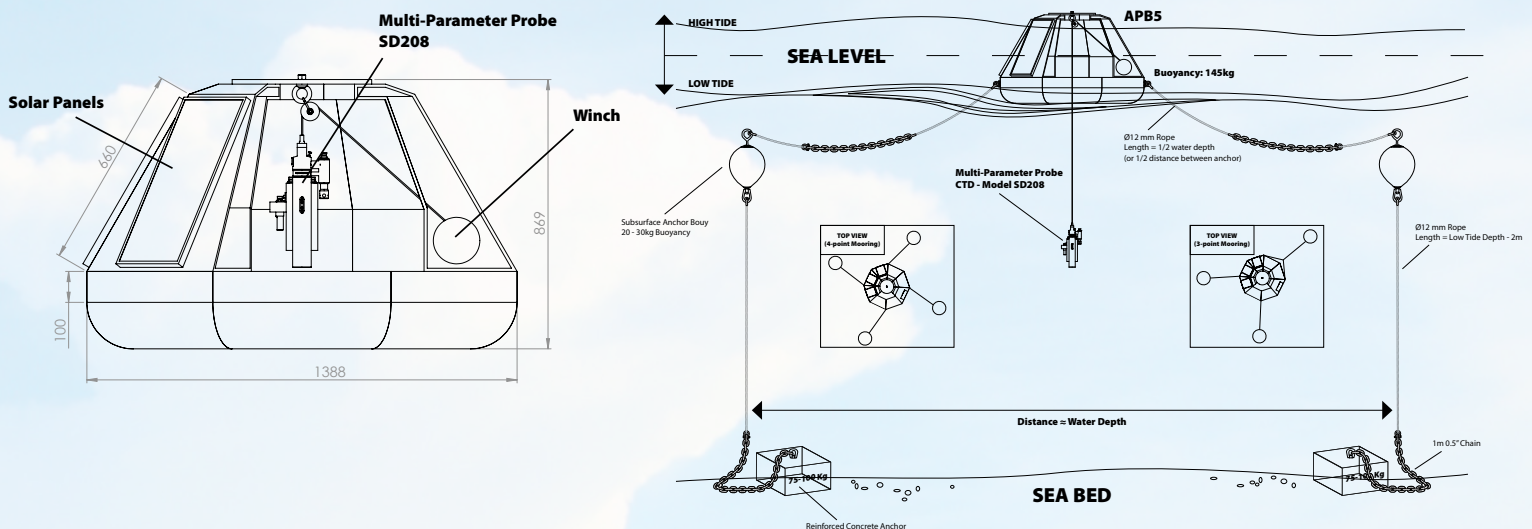
The user will provide a SIM-card, and when the buoy is powered up, the APB5 will configure itself. Besides programming and data collection, utility data are also available, e.g. diagnostic info for the buoy and sensor unit.

An expert system using data from APB5 for fish welfare in aquaculture has been developed by The Institute of Marine Research (IRM). Link to IMR Welfaremeter:

<http://www.imr.no/welfaremeter/>

Mooring Example

3 or 4-Point Anchoring System for the APB5 Automatic Profiling Buoy



Specifications

- Embedded Web Server
- GSM/GPRS/EDGE, 900 - 1800 MHz, or satellite router (INMARSAT/Iridium)
- Winch control unit and motor
- 24 Volt battery pack
- Solar Cells: 160 Watt
- Unique address: station.saivas.net.
- Configurable via Webpage
- Programmable Profiling interval, depth etc.
- Profiling Depth Range: Standard 75m / Extended 150m
- 868 MHz Radio controllers for instrument communication
- Transparent communication to all devices in the buoy and sensor unit for diagnostic purpose etc.
- User to provide SIM card from local mobile phone provider
- Data presented instantaneously on Internet
- Mooring points: 4 shackle points at lower buoy section
- Anchoring: 3 - 4 anchors (depending on conditions)
- Weight of complete buoy in air: 198 kg

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