

Idronaut Achieves Breakthrough with Ocean Seven 310 Multi Parameter CTD



Idronaut's Ocean Seven 310 multiparameter CTD represents a real breakthrough in the concept of miniaturisation, integration and performance. Thanks to the adoption of a new generation of electronic devices, the OS310 can interface with up to 14 analogue sensors and up to 2 digital sensors (see list) and can guarantee sampling rates up to 28Hz.

The [OS310 CTD](#) can be easily integrated/adapted to third-party systems like floating profilers and/or oceanographic moorings, ROVs and AUVs. The OS310 does not require pumps or any other external device to flush the sensors, which minimises its power consumption. The OS310 is characterised by drift-free sensor preamplifiers.

Data Storage and Battery

The OS310 CTD is equipped with a 2-Gbyte SD memory card, which allows the storing of about 30,000,000 data sets each one being composed of the reading of all the installed sensors plus the acquisition date and time. The OS310 communicates at a speed of 115k2 bps, thus keeping data uploading time to a minimum.

Different types of battery can be installed in the CTD housing:

- 1x Size "A" Li-SOCl₂ Lithium-thionyl chloride non rechargeable battery 3.6V, 2.4Ah
- 3x Size "AA" 1.5V Alkaline non rechargeable battery assembled in a single pack 4.5V
- 1x Size "C" Li-SOCl₂ Lithium-thionyl chloride non rechargeable battery 3.6V, 8.4Ah
- 1x NiMh rechargeable IDRONAUT custom battery pack(3x1.2 AAA) 3.6V,4.5 Ah

Whenever the OS310 operates in Timed, Burst and Conditional modes, the battery endurance is considerably extended because the CTD enters a deep sleep mode between acquisitions.

Data Telemetry

The telemetry interface allows interfacing the OS310 through standard oceanographic coaxial cables up to 10km long. When communicating through data telemetry, the Idronaut deck units are mandatory. The OS310 can use both the low-voltage (60VDC) Portable deck unit and the high-voltage (220VDC) on-board MkPlus deck unit.

Conductivity Cell

The high-accuracy seven-platinum-ring quartz conductivity cell (patented) can be cleaned in the field without the need for re-calibration. This unique quartz cell employs a large diameter (8mm) and a short length (46mm) to guarantee self-flushing and no clogging after long-term deployment even in biologically active waters. Furthermore, an optional UV LED (280nm), integrated into the conductivity cell, sterilizes the sample under measurement, thus avoiding the early growth of biofouling inside the quartz measuring cell.

The operator can easily select the OS310 sampling rate from 1Hz to 28Hz (samples per second), according to the required monitoring or profiling activity.