PROVOR CTS5

We come from the ocean

Autonomous multisensors profiling float

- ***fully BGC-ARGO compliant***
- ***for R&D and demanding application***

Profiling floats

- **Additional sensors to the standard CTD**
- **Fully BGC compliant**
- **6 core BGC ARGO variables + Extras**
  - *Oxygen*
  - *Nitrate*
  - *pH*
  - *Chlorophyll a*
  - *Suspended particles*
  - *Downwelling irradiance*
- **Underwater Vision Profiler Sensor (UVP6-LP)**
- **Up to 0.5 dbar resolution** (average mode)
  Up to 0.1 dbar resolution (raw data mode)
- **High sampling resolution (Down to 1 sec)**
- **Improved Iridium RUDICS telemetry**
- **Down to 2000 meters depth**
- **Graphical user interface to set mission and acquisition parameters**
- **Self-ballasted float with increased buoyancy**

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Profiling floats

PROVOR CTS5

Iridium Rudics transmission

TECHNICAL SPECIFICATIONS

Seabird Electronics SBE 41 CP

- Salinity
  - Range 0 to 40 PSU
  - Initial accuracy ± 0.003 PSU
  - Observed drift < 0.01 PSU / 5 years
- Temperature
  - Range -5° C to +35° C
  - Initial accuracy ± 0.002° C
  - Observed drift < 0.002° C / 5 years
- Pressure
  - Range 0 dbar to 2100 dBar
  - Initial accuracy ± 2.4 dBar
  - Drift < 5 dBar / 5 years

FLOAT DIMENSIONS

Overall Length 225 cm with antenna
Hull Length 170 cm
Hull Ø 17.3 cm
Max. Ø 35 cm (damping collar)
Weight 40 kg *
(depending on configuration)

FLOAT CONSTRUCTION

Hull anodized aluminum casing
Syntactic foam for additional flotation*

BUOYANCY MANAGEMENT

Principle Oil ballast with pump
Positioning accuracy ± 30m (98.4 ft.)

NUMBER OF PROFILES CAPABILITIES

Depends on sensor consumption

OPERATING CONDITIONS

Max operating depth 2000 dbar
Operating temperature -2°C to 35°C
Operating life 4.5 years at sea
Power supply Lithium cells*

USER INTERFACE

- Using Bluetooth
  - Mission programming, float checking...
  - Terminal Personal Computer
- Graphical user interface

TELEMETRY

Data Transmission Iridium RUDICS
Duration on surface time optimized
Positioning GPS

STORAGE CONDITIONS

Temperature -20° C to +50° C (-4° F to +122° F)
Maximum storage time before use: 1 year
Real time clock saved by separate battery

* Depending on configuration

Example of embedded sensors

Bio & Geochemical CRover + ECOtriplet + OCR504
Manufactured by SeaBird, Wetlabs, Hydroptic, Anderaa
Refer to manufacturer data sheet for specifications
Backscattering, Chlorophyll, CDOM integrated in ECO3 set

Backscattering
Range ≈ 0.0024 - 5 m^{-1}
Sensitivity @470nm 1.2 x 10-5 m-1 sr-1
Sensitivity @532nm 7.7 x 10-6 m-1 sr-1
Sensitivity @660nm 3.8 x 10-6 m-1 sr-1

Chlorophyll
Range 0.01-50 µg/l
Sensitivity 0.01 µg/

CDOM
Range 0.18 - 375 ppb
Sensitivity 0.18 ppb

Transmittance Sensor
Range 0 to 100% (0 - 50.000)
Accuracy 0.1% FS
Resolution 1/50000

Irradiance
Range -30 to 300; 0-300 *uW.cm-2. nm-1*
Accuracy 0.0025; 0-300 *uW.cm-2. nm-1*
Resolution 0.01 *uW.cm-2. nm-1*

Dissolved oxygen Optode 4330 manufactured by AANDERAA
Range 0 µM/l to 500 µM/l
Accuracy ±2,5 µM/l or ± 1,5% with multipoint calibration

Nutrient SUNA
Detection range 0.007 to 28 mg/l-N (0.5 to 2000 µM)
Accuracy ±0.028 mg/l (± 2 µM) or ± 10% of reading

pH Sensor (SEAFET)
Accuracy ± 0.05 pH
Typical Stability 0.036 pH/year

*According added payload , additional flotation and battery can be adapted

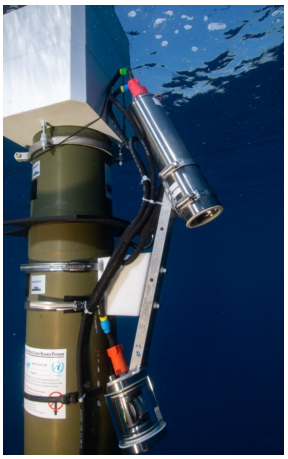
NEW—UNDERWATER VISION PROFILER (UVP6-LP)

The UVP (CNRS patent) is designed to study large (>100 µM) particles and zooplankton simultaneously and to quantify them in a known volume of water.

The UVP system makes use of computerised optical technology with custom lighting to acquire digital images of zooplankton in-situ down to depths of 6000m.

Compatible with ECOTAXA

Credit: HYDROPTIC



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