

PROVOR CTS3 DO / DO I

***Salinity - Temperature - Dissolved Oxygen– Depth
Autonomous oceanographic ARGO profiling float
with ARGOS 2 or Iridium transmission***



Profiling floats

PROVOR CTS3 DO and DO I are efficient and reliable autonomous profiling floats designed to acquire CTD and Dissolved oxygen profiles: from 2000 m to the surface.

Once at the surface, data are sent via satellite and a new cycle begins.

The PROVOR DO is proposed with transmission by ARGOS or IRIDIUM. ARGOS is one way data collection and positioning by satellites, IRIDIUM associated with GPS is a two ways communication system enabling data collection, the positioning and remote control facilities.

The PROVOR is a cost-effective float with hydraulic feature enabling a deployment anywhere in the ocean without preballasting: this enables to simplify deployments. It has been developed in industrial partnership with Ifremer.

PROVOR CTS3 DO: ARGOS transmission

PROVOR DO I: IRIDIUM and GPS

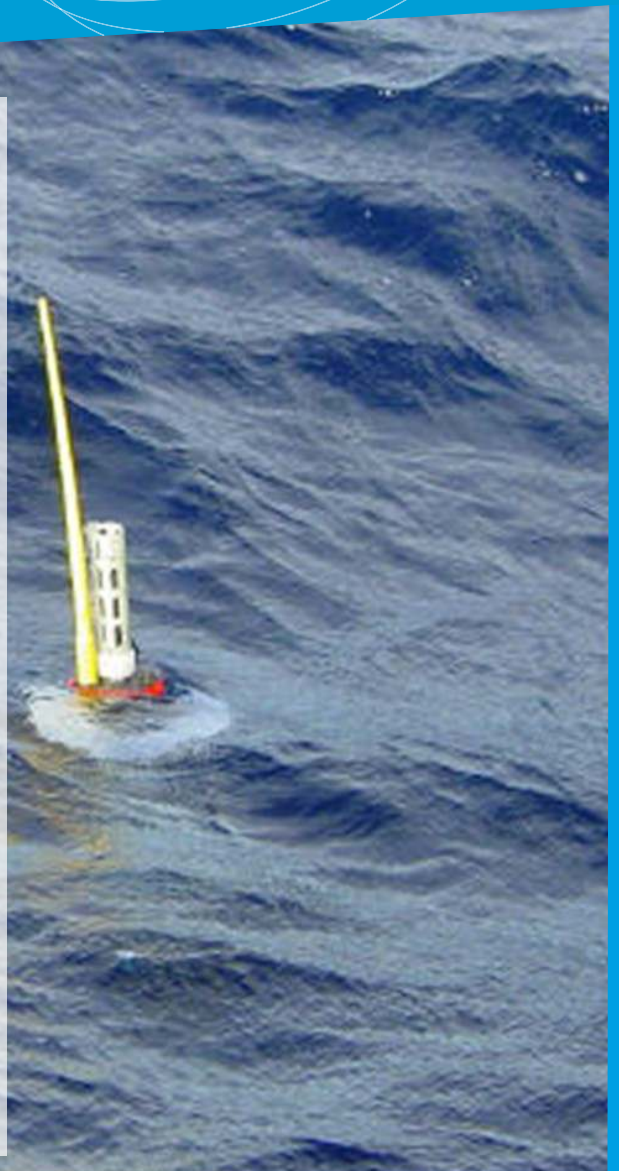
Main characteristics:

- Sea Bird and Aanderaa sensors proven metrology
- High sampling rate with Iridium up to 2000 pts
- Down to 2000 m depth
- Easy connectivity
- Self-ballasted float

More than 700 PROVOR have been produced in several versions, including:

PROVOR CTS3 for ARGO core mission with CTD

PROVOR CTS4 for BioGeoChemical applications



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PROVOR CTS3 DO / DO I

Data collection and PROVOR positioning via ARGOS satellite or Iridium satellites

TECHNICAL SPECIFICATIONS

TYPE PROVOR CTS3 DO		TYPE PROVOR CTS3 DO I
Seabird		Salinity
Electronics		Range 0 to 40 PSU
SBE 41 CP		Initial accuracy ± 0.003 PSU
		Drift < 0.01 PSU / 5 years
		Temperature
		Range -5°C to 35°C
		Initial accuracy $\pm 0.002^{\circ}\text{C}$
		Observed drift $< 0.002^{\circ}\text{C}$ / 5 years
		Pressure
		Range 0 dbars to 2100 dBars
		Initial accuracy ± 2.4 dBar
		Drift < 5 dBar / 5 years
DO Optode Aanderaa 4330		Range 0 $\mu\text{M/l}$ to 500 $\mu\text{M/l}$
		Accuracy $8\mu\text{M/l} \pm 5\%$ (sensor processed)
MECHANICAL FEATURES		Overall Length 225 cm with antenna
		Hull Length 170 cm / Hull Diameter 17.3 cm
		Max Diameter 35 cm (damping collar)
		Weight 34 kg
		Hull anodized aluminum casing
BUOYANCY CONTROL		Principle Oil ballast with high pressure pump
		Positioning accuracy $\pm 30\text{m}$ (98.4 ft.)
NUMBER OF PROFILES COMPUTED	210 cycles with 110 pts, 10 days / CTD in continuous pumping / 2000 meters	300 cycles with 110pts, 10 days /CTD in continuous pumping / 2000 meters
		150 cycles with 1000 pts, 10 days / CTD in continuous pumping / 2000 meters
OPERATING CONDITIONS		Operating temperature -2°C to $+35^{\circ}\text{C}$
		Operating life 4.5 years at sea
		Power supply Lithium cells (Alkaline battery available)
		Operating depth up to 2000 dbars
USER INTERFACE	a - Using connector Mission programming, float checking, etc. Terminal Personal Computer BT link b- Fan tail ready Remove magnet launches float	
TELEMETRY	ARGOS system—Time on surface depending on the quantity of data to transmit with resolution Salinity 0.001 PSU Temperature 0.001 $^{\circ}\text{C}$ Pressure 1 dbar DO 0.002 $^{\circ}\text{C}$ Phase Max sampling 300 pts	IRIDIUM system by Data Trans- mission and remote control. Mission parameters modifi- cation possible after launching SBD 200 Bytes Resolution of message transmitted: Salinity 0.001 PSU Temperature 0.001 $^{\circ}\text{C}$ Pressure 0.1 dbar DO 0.002 $^{\circ}$: C1Phase & C2Phase, 0.001 $^{\circ}\text{C}$: optode temperature Max sampling 2000 pts
<i>Phases and temperature are transmitted in compliance with O2Argo group for improved accuracy</i>		
STORAGE CONDITIONS	Temperature -20°C to $+70^{\circ}\text{C}$ (-4°F to $+158^{\circ}\text{F}$) Maximum storage time before use: 1 year	

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