

PROVOR SPI

Argo profiling float for polar regions

PROVOR SPI is designed to operate under ice. It slides along a tightened cable hanged under an Ice Tether Platform (ITP)

The base of the PROVOR SPI is the PROVOR CTS3 designed for the ARGO project. The firmware has been upgraded to optimize the diving mission. The ITP is an amphibious buoy which can operate as well on the ice than as floating offshore.

The communication with buoy is achieved by means of an inductive link, communication with the buoy uses the bidirectional iridium communication system. The PROVOR SPI is divided in several easily transportable elements to enable transport by small aircrafts until deployment area.

PROVOR SPI has been successfully deployed during Barneo campaign in the frame of the laos project.

Main features

- Qualified ARGO technology
- CTD and DO sensors
- Iridium telemetry providing increased



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Profiling floats



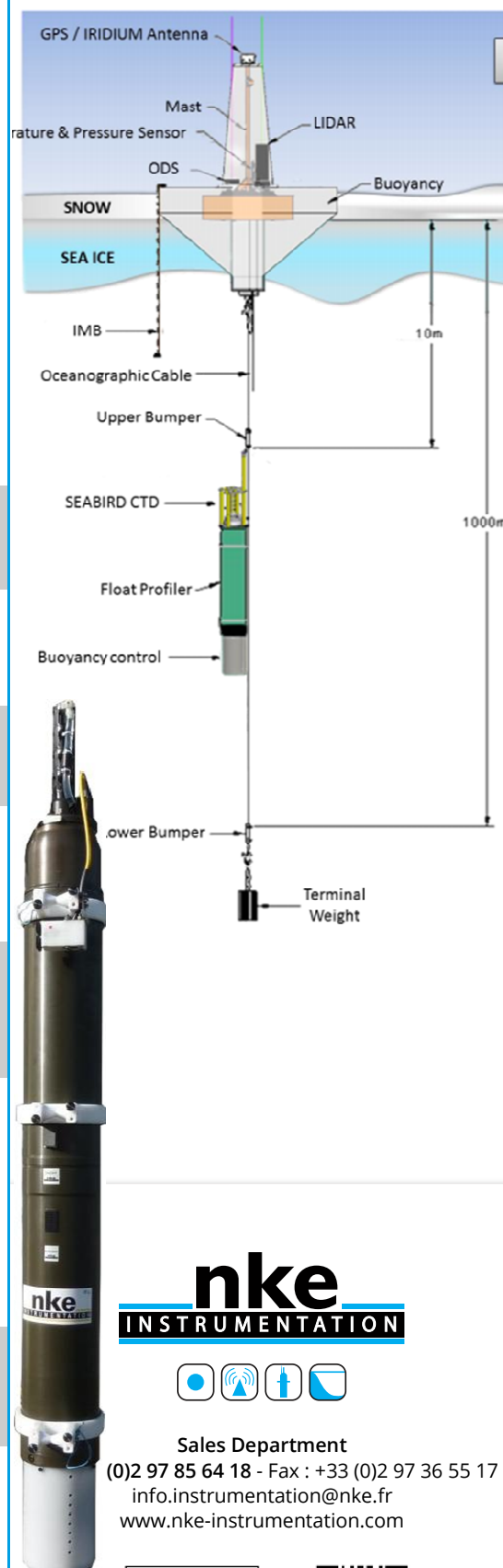
PROVOR SPI

Sliding Profiling float with Inductive communications



IAOOS equipex project

TECHNICAL SPECIFICATIONS TYPE PROVOR CTS4	
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 $+35^{\circ}\text{C}$ Initial accuracy $\pm 0.002^{\circ}\text{C}$ Observed drift $< 0.002^{\circ}\text{C}$ / 5 years
► Pressure	Range 0 dbar to 2100 dbar Initial accuracy ± 2.4 dbar Drift < 5 dbar / 5 years
AANDERAA Dissolved oxygen Optode 4330	
Range	0 $\mu\text{M/l}$ to 500 $\mu\text{M/l}$
Accuracy	8 $\mu\text{M/l}$ or $\pm 5\%$
FLOAT CONSTRUCTION	
Hull Length 170 cm, Hull $\varnothing$ 17 cm, Weight 35 kg Hull anodized aluminum casing, low friction sliding system	
BUOY CONSTRUCTION	
Aluminium and watertight housing, antenna protected against polar bear	
BUOYANCY MANAGEMENT	
Principle Oil ballast with pump Positioning accuracy $\pm 30\text{m}$ (98.4 ft.)	
NUMBER OF PROFILES CAPABILITIES	
Up to 600 profiles @800 meters Up to 2 profiles per day Depends on the current strength in the area	
FLOAT ENVIRONMENTAL OPERATING CONDITIONS	
Max operating depth 1000 dbar Operating temperature -2°C to $+35^{\circ}\text{C}$ Power supply Lithium cells	
USER INTERFACE	
a - Using Bluetooth Mission programming, float checking... Terminal Personal Computer	
b- Fan tail ready Activation by magnetic switch Remove magnet launches float Audible informations for selftest results	
TELEMETRY	
Between float and buoy inductive modem. Between buoy and user Iridium Positioning GPS	
STORAGE CONDITIONS	
Temperature -20°C to $+50^{\circ}\text{C}$ (-4°F to $+122^{\circ}\text{F}$) Maximum storage time before use: 1 year	



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