PROVOR NOSS

Autonomous oceanographic profiling float for monitoring absolute salinity and density of seawater

Profiling floats

A PROVOR-NOSS CTS4 profiling float equipped with NOSS sensor is becoming an essential and promise tool to estimate the anomalies of composition of the seawater. This new tool could contribute to improve the knowledge of absolute salinity and density of seawater across TEOS-10 (ARGO program) and the accurate evaluation of the ocean's role in heat transport and in climate changes. It could initiate theoretical and experimental studies on the refractive index/ density of seawater with anomalous composition.

Qualified ARGO technology:

- Possibility to set various types of missions
- Programmable surfacing time
- Iridium telemetry providing increased data transmission and remote control
- GPS positioning
- Down to 2000 m depth
- Self-ballasted float with increased buoyancy (according added sensors)

nke INSTRUMENTATION

www.nke-instrumentation.com

Profiling floats

PROVOR NOSS

TECHNICAL SPECIFICATIONS
SBE 41-CP Sensor

Seabird Electronics SBE 41 CP

- Practical 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

FLOAT CONSTRUCTION
Hull anodized aluminum casing
Syntactic foam for additional flotation

BUOYANCY MANAGEMENT
Principle oil ballast with pump
Positioning accuracy ± 30m (98.4 ft)

TRANSMITTED DATA

- **SBE41-CP**
  Temperature, Pressure, Practical Salinity
- **NKE NOSS SENSOR:**
  Temperature, Pressure, Refractive index, Absolute salinity (Seaver&Millard 1990)
  By postprocessing : density requested by remote control optical raw data
- **PROVOR NOSS**
  Technical parameters

OPERATING CONDITIONS
Max operating depth 2000 dbar
Operating temperature -2° C to 35° C
Power supply Lithium cells

USER INTERFACE
a - Using Bluetooth
Mission programming, float checking
Terminal Personal Computer
b - Remote contrôle through Iridium downlink
c - Fan tail ready
Activation by magnetic switch
Remove magnet launches float
Audible informations for selftest results

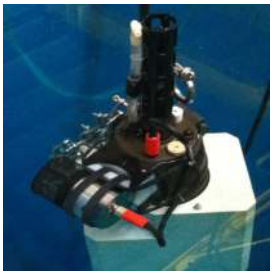
TELEMETRY
Data Transmission Iridium (SBD or Rudics)
Helicoidal antenna
Optimized duration on surface time
GPS Positioning

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

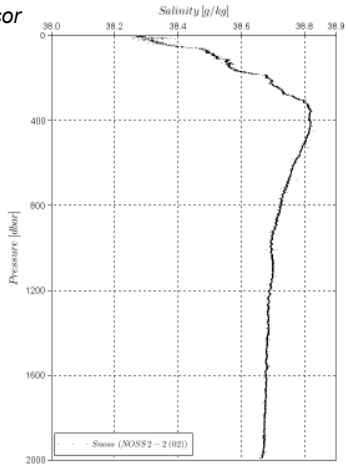
TECHNICAL SPECIFICATIONS
NKE NOSS Sensor

NKE NOSS Sensor

- Density
  Range 1020 to 1030 kg/m^3
  Initial accuracy ± 0.003 kg/m^3
- Absolute salinity
  Range 15 to 42 g/kg
  Initial accuracy ± 0.005 g/kg
- Refractive index
  Range 1.3353 to 1.3458
  Initial accuracy <1.10^{-6}
- Temperature
  Range 0° C to +35° C
  Initial accuracy ± 0.002° C
  Response time (at 63%) <150msec
- Pressure
  Range 0 dbar to 2100 dBar
  Initial accuracy ± 1 dBar



NOSS sensor



nke INSTRUMENTATION

Sales Department
Tel : **+33 (0)2 97 85 64 18** - Fax : +33 (0)2 97 36 55 17
info.instrumentation@nke.fr
www.nke-instrumentation.com