ARVOR I

Autonomous ARGO profiling float with Iridium transmission
Salinity - Temperature - Pressure

ARVOR I provides salinity, temperature and pressure profiles with position information thanks to an integrated GPS receiver. Data are transmitted via Iridium satellites network.

Bluetooth technology enables easy and fast configuration before mission. Iridium downlink enables parameters modification remotely as soon as the ARVOR I surfaces.

With self-ballast and very light design, ARVOR I can be deployed by one person.

It capitalises on both the know-how of Ifremer in floats activities and designing qualified subassemblies and of nke on industrial product development.

Qualified technology for ARGO project
- Sea Bird electronics proven CTD metrology
- GPS positioning
- Iridium SBD transmission
- Up to 300 cycles, 10 days
- High sampling rate capability up to 2000 pts
- Easy connectivity using RF Bluetooth
- Fully operational, light and easy to deploy float
- Weight 20 kg
- Self-ballasted float
## TECHNICAL SPECIFICATIONS

### TYPE ARVOR I float

**SBE 41 CP with pump Seabird Electronics**

- **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 dBars
  - Initial accuracy: ± 2.4 dBar
  - Drift: < 5 dBar / 5 years
  - Offset reset before dive at each surfacing

### FLOAT DIMENSIONS

- Overall Length: 225 cm with antenna
- Hull Length: 170 cm
- Hull Diameter: 17.3 cm
- Weight: 20 kg

### FLOAT CONSTRUCTION

- Hard anodized aluminum casing

### BUOYANCY CONTROL

- Principle Oil ballast with pump & valve
- Positioning accuracy: ± 30 m (98.4 ft.)

### OPERATION FEATURES

- Operation depth until 2000 dbar
- Number of profiles capabilities
- Up to 300 cycles @ 110 pts 2000 bars/CTD
- High sampling capability: up to 2000 pts
- Number of profiles programmable
- Operating temperature: -2°C to +35°C

### POWER SUPPLY

- Lithium cells
- Operating life up to 4.5 years at sea

### USER INTERFACE

- A - Bluetooth User Interface
  - Mission programming, float checking, etc.
  - Terminal Personal Computer
- b - Fan tail ready
  - Activation by magnetic switch
  - Remove magnet launches float and triggers Argos
  - Transmission test

### TELEMETRY IRIDIUM system

- Data transmission: Iridium « 9602 » transceiver, helicoidal antennae.
- Duration on surface approx. 10 min
- Resolution:
  - Salinity: 0.001 PSU
  - Temperature: 0.001°C
  - Pressure: 0.1 dbar
- Position: acquired by GPS receiver, transmitted in Iridium messages

### STORAGE CONDITIONS

- Temperature: -20°C to +70°C (-4°F to +158°F)
- Maximum storage time before use: 1 year
- Real time clock saved by separate battery

---

**Developed in industrial partnership with Ifremer**

**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

---

**ARVOR I_UK3 _ Copyright © nke all rights reserved _ nke reserves the right to modify any of above specifications without notice _ Not commercial photos**