



HYDRO-BIOS

Smart Sampling

Datasheet CTD with Flowmeter (450 100)



Net Probe CTD with 2 Electronic Flow Meters

Classic conductivity, temperature and pressure measurement in combination with flow velocity

The Net Probe is unique! It is the only CTD probe which is equipped with 2 Electronic Flow Meters for accurate measurement of flow velocity and volume data during plankton net operations. Ideal both for single-ring and double-ring plankton nets. Either to be used in online mode with long-distance telemetry via electro-mechanical towing cables or in self-contained mode with data recording inside its internal data memory.

The system consists of a titanium pressure housing with integrated conductivity, temperature and pressure sensor, measuring electronics, 2 Electronic Flow Meters and a Deck Command Unit. This is the link between underwater unit and PC during online operations and displays the measuring data of the probe in clear text.

Power supply of the underwater unit is made by 3 long-time lithium batteries placed in an external removable battery pack. Batteries can easily be replaced without opening the main electronics housing which eliminates the risk of water ingress and corrosion of the electronics board. The state-of-the-art electronics, optimised in power consumption, are designed for ambient temperatures from -40°C up to $+85^{\circ}\text{C}$.

The system is rated to a maximum operational depth of 3000 meters. The Net Probe is delivered with the data acquisition software OceanLab 3 – an easy-to-use package for pre-deployment system set-up, real-time data acquisition, data visualisation, storing and export.



DESCRIPTION

Accessories

- Additional sensors of various parameters
- Operational depth down to 6000 meters

TECHNICAL DETAILS

| | |
|----------------------------|--|
| length | 160 mm |
| width | 100 mm |
| height | 480 mm |
| weight on air | 7 kg |
| materials | pressure housing and battery compartment: titanium Flowmeter: stainless steel and plastic |
| pressure sensor | 0 ... 3000 dbar \pm 0.1% f.s. |
| temperature sensor | -2 ...+32 \pm 0.005°C |
| conductivity sensor | 0 ... 65 \pm 0.01 mS/cm |
| measuring range | net opening below 0.25 m ² , Volume: 0.0 ... 6500.0 m ³ net opening above 0.25 m ² , Volume: 0.0 ... 65000 m ³ |
| data rate | 1 Hz |
| data memory | 16 MB |
| speed measurement | 0.1 ... 9.9 m/s \pm 1% (0.5 ... 9.9 m/s) \pm 5% (0.1 ... 0.5 m/s) |
| deck command unit | Metal housing for use in 19" rack or as table housing, indication of sensor data and battery status, LCD-display with LED backlight, RS232 Interface for PC, power supply: 85- 260 V AC |
| product ID | 450 100 |



CHARACTERISTICS

- Combined online/ offline use
- Bi-directional communication
- Standard depth range 3000m (6000m on request)
- Long-distance FSK-telemetry (>10000 m)
- Low power consumption
- Battery operated Underwater Unit, max. voltage of 5 V at the conductor cable
- Electronics operate from -40°C up to +85°C
- EC-conformity (CE) EN 50081-1, EN 50082-1