# CTD 48M
# Memory Probe



## Soundvelocity Profiler
## Maximum Depth 6000 m

- titanium housing Ø 48 mm
- depth range up to 6000 m
- 20 bit AD Converter
- internal memory and/or FSK mode RS 232/485 output
- internal battery
- control LED
- easy handling
- low weight
- calculation according to UNESCO formulas

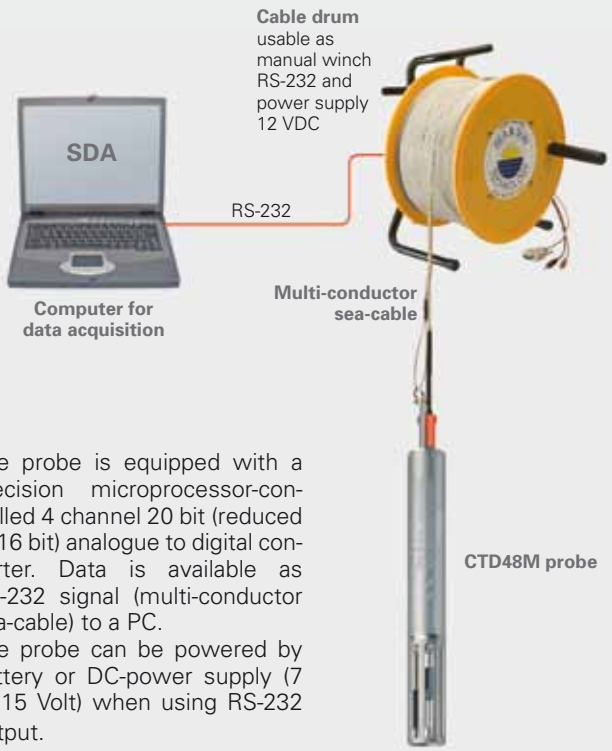
# CTD48M Multi Parameter Memory Probe

The CTD48M is a high quality, high accuracy 4 channel probe for oceanographic and limnologic measurement of conductivity, temperature, depth and one optional parameter in depth up to 6000 m.
SST´s CTD48M runs from an internal battery and records data at programmable time intervals or pressure stamps in a non volatile FLASH memory with a capacity of 8 Mbytes. A standard RS-232 interface is used for programming and data extraction. The supplied Standard Data Acquisition Software package "SST-SDA" for Win® 95 to Vista includes the handling of the logging process and the display of online or recorded data with a shared graphic user interface.
The CTD48M allows the simultaneous measurement of 4 of the following parameters: pressure (depth), temperature, conductivity, pH, Redox (ORP), dissolved oxygen, turbidity.

### Recording modes

Continuous mode: each data set is stored
Time mode: data sets are stored only at programmable intervals with several selectable schemes.
Pressure mode: data sets are stored at programmable depth stamps.
More than 255 casts can be stored at profiling and continuous mode as long as the FLASH memory or the battery capacity is sufficient.
The start of a cast is possible using a magnet; the probe must not be connected to a computer. Up to 400.000 CTD data sets can be recorded, the actual number depends on the selected storage options and the number of sensors adapted to the probe.

### System configuration: FSK telemetry




The probe is equipped with a precision microprocessor-controlled 4 channel 20 bit (reduced to 16 bit) analogue to digital converter. Data is available as RS-232 signal (multi-conductor sea-cable) to a PC.
The probe can be powered by battery or DC-power supply (7 to 15 Volt) when using RS-232 output.

## Standard Sensor Equipment/Dimensions

| Sensors | Principle | Range | Accuracy | Resolution | Response time |
|---|---|---|---|---|---|
| Pressure<br>temperature compensated<br>material: Hastelloy | piezo-resistive<br>full bridge | 0 - 2.5, 10, 20, 50, 100, 200, 400, 600 bar | 0.1 % full scale | 0.002 % full scale | 150 ms |
| Temperature | Pt 100 4 pol | - 2 - + 36 °C | ± 0.005 °C | 0.001 °C | 150 ms |
| Temperature 60°C | Pt 100 4 pol | - 2 - + 60 °C | ± 0.010 °C | 0,0009 °C | 150 ms |
| Conductivity | 7-pole platinum cell | 0 - 70 mS/cm | ± 0.01 mS/cm | 0.001 mS/cm | 150 ms |
| Conductivity | 7-pole platinum cell | 0 - 7 mS/cm | ± 0.005 mS/cm | 0.001 mS/cm | 150 ms |
| pH (60°C) | single rod electr. | 1 - 10 pH | ± 0.05 pH | 0.002 pH | 1 s |
| Sound velocity | calculated | 1400 - 1600 m/s | | 0.1 m/s | 0.01m/s |
| Fast response $O_2$ | galvanic | 0 - 200 % sat. | ± 2 % sat. | 0.02 % sat. | > 200 ms (100 %) |

Standard models are:
**1. CTD with one add. parameter**
**2. $H_2S$-probe with P, T, pH**

### Dimensions

Ø (housing) ..... 48 mm
Length (housing)..... appr. 210 mm
Length (overall) ..... appr. 430 mm

### Material

Housing ..... titanium
Connector ..... titanium, neoprene

**Weight** (in air) ..... appr. 1.5 kg

The CTD48 is delivered in a compact, robust and water resistant plastic case including cables, connection plugs, an instruction manual and a software CD.

Distributor

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