

CTD48M – 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 500 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 XP 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
- fast response dissolved oxygen (maximum depth: 100 m)

Standard model is:
CTD with one optional parameter (fast response oxygen sensor for example).

Materials

housing: titanium
connector: titanium, neoprene

Dimensions and weights

L (housing).approx. 215 mm
Ø (housing)..... 48 mm
L (overall)...approx. 400 mm
W (in air).....approx. 1,2 kg



Figure: **CTD48M** probe equipped with C, T, D, and oxygen sensors

Main Features

low weight
easy handling
max. 4 internal sensors
corrosion free housing
depth range up to 500 m
SDA data acquisition software runs under Windows® 95/98/Me/2000/XP
calculation according to UNESCO formulas

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 100 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 400000 CTD data sets can be recorded, the actual number depends on the selected storage options and the number of sensors adapted to the probe.

Battery: not rechargeable

Installed battery: alkali baby cell size C sufficient for data storage during 35 hours in the continuous mode. Duration in the time mode depends on the chosen measuring intervals. Lithium cell on request.

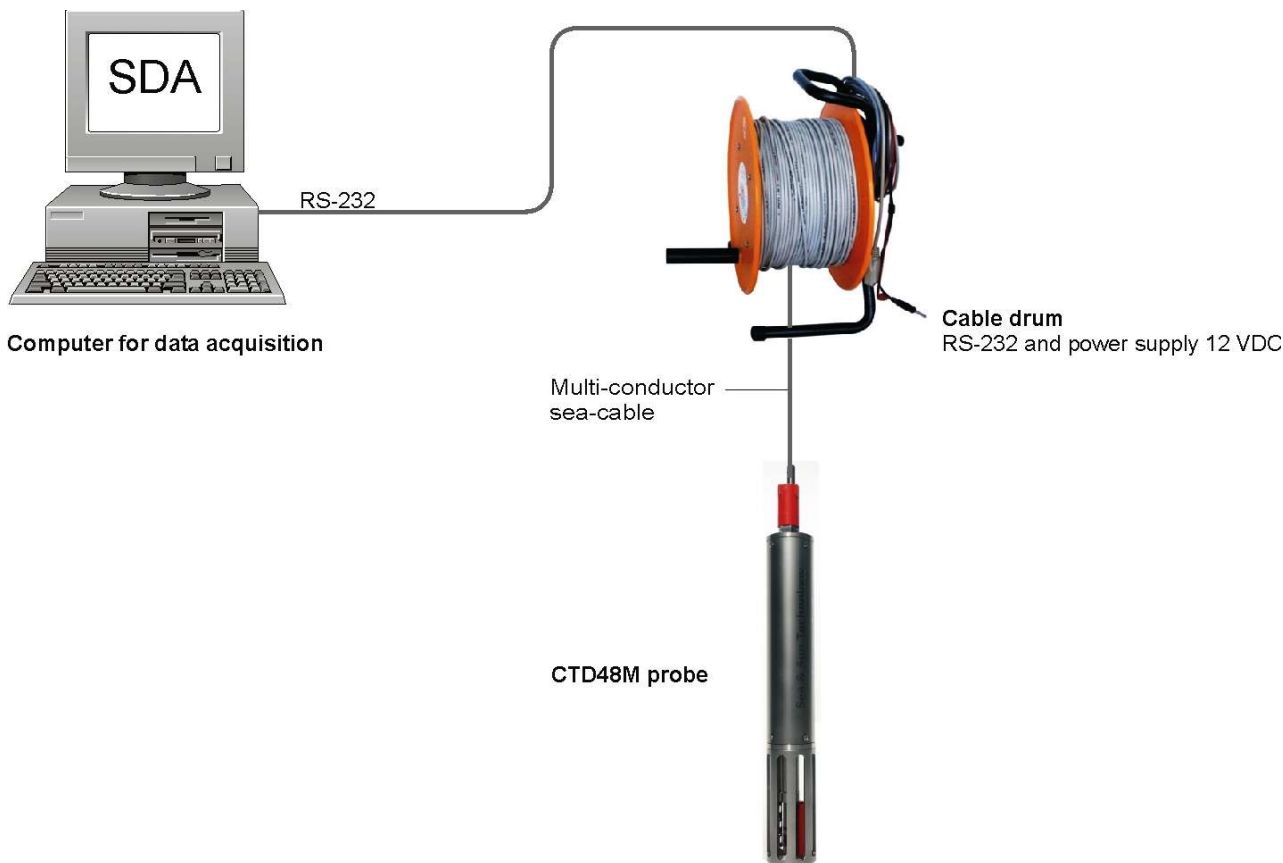
The probe is equipped with a precision microprocessor-controlled 4 channel 16 bit analogue to digital converter. Data is available as RS-232 signal (multi-conductor sea-cable) to a PC. The probe can be powered by battery or DC-power supply (6 to 18 Volt) when using RS-232 output.

Standard sensor equipment

Sensors	Principle	Range	Accuracy	Resolution	Response time
Pressure	piezo-resistive full bridge	10, 20, 50 bar	± 0,1 % FS	0,002 % FS.	150 ms
Temperature	Pt 100	- 2 ... + 36 °C	± 0,003 °C	0,0006 °C	150 ms
Conductivity	7-pole quartz cell	0 ... 60 mS/cm	± 0,010 mS/cm	0,001 mS/cm	150 ms
Sound velocity	calculated	1400 ÷ 1600 m/s	± 0,2 m/s	0,1 m/s	150 ms
Fast response O ₂	galvanic	0 ÷ 200 % sat.	± 2 % sat.	0,02 % sat.	> 200 ms (100 %)

Max. depth: 100 m

System configuration: RS-232 data transmission (direct reading mode)



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