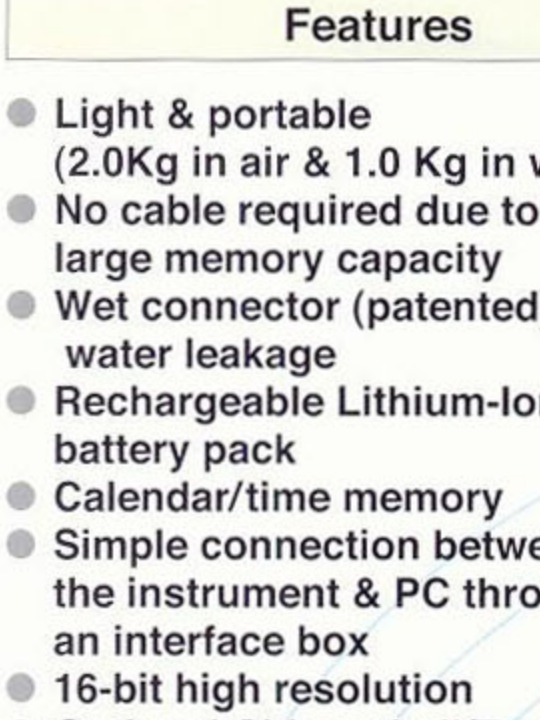
Miniature CTD Data Logger

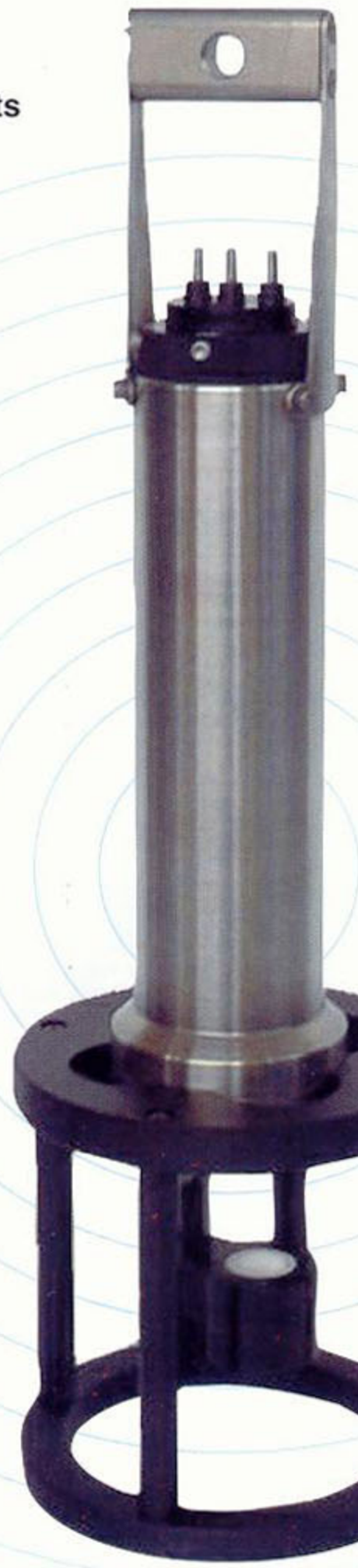
COMPACT CTD ASTD687

Depth Temperature Conductivity
Chlorophyll Turbidity

Features

- Light & portable (2.0Kg in air & 1.0 Kg in water)
- No cable required due to built-in large memory capacity
- Wet connector (patented) prevents water leakage
- Rechargeable Lithium-Ion battery pack
- Calendar/time memory
- Simple connection between the instrument & PC through an interface box
- 16-bit high resolution
- Optional Chlorophyll/Turbidity sensor available
- Robust titanium pressure case - no corrosion





The COMPACT-CTD is a small, light and precise data logger equipped with sensors to measure conductivity, temperature & depth. A chlorophyll/turbidity sensor is available as an option. Since the COMPACT-CTD is so light and because no communication cable is required, it is very easy to take profiling measurements just by lowering the COMPACT-CTD with a rope.

Along with profiling capabilities in depth trigger and time trigger modes, the COMPACT-CTD can be used for short-term mooring observations.

The COMPACT-CTD has a built-in 2M-byte flash memory that enables multiple casts without the need to transfer data between casts. For example, the COMPACT-CTD can take 190 profiles to 100 m depth with 10 cm depth pitch without the need for data transfer. With the built-in rechargeable lithium-ion battery, the COMPACT-CTD is capable of 10 hours of continuous measurements (time trigger mode with 0.2 second measuring intervals). The non-volatile flash-memory prevents data loss in case of power failure or irregular battery voltage.

The COMPACT-CTD has been designed to avoid complicated operation and maintenance issues that can cause data acquisition problems. A wet connector (patented technology) is used for data transfer and battery charging. Since there are no penetrating parts, there are no leakage problems. The pressure case does not have to be opened to access the data transfer connector or for charging the battery.

The data processing program offers clear and logical screens for easy operation.

Wet connector (patented technology)
& easily visible pilot lamp

Sensor Specifications

Parameters	Type	Measuring Range	Resolution	Accuracy	Time Constant
Depth	Semiconductor Pressure Sensor	0～600m	0.01m	0.3%FS	0.1sec
Temperature	Thermistor	−5～40℃	0.001℃	±0.02℃	0.1sec
Salinity (Conductivity)	UNESCO Formula (Inductive Cell)	0～40 0～60mS/cm	0.001 0.001mS/cm	±0.03 ±0.02mS/cm	0.1sec
Turbidity (Option)	Ultra red light Backscattering	0～1000FTU (Formazine)	0.03FTU	±2% of measured data or Zero-drift ±0.3FTU	0.2sec
Chlorophyll (Option)	Fluorescent	0～400μg/ℓ (Uranine)	0.01μg/ℓ	1% of lineality (0～200μg/ℓ) or Zero-drift±0.1μg/ℓ	0.2sec

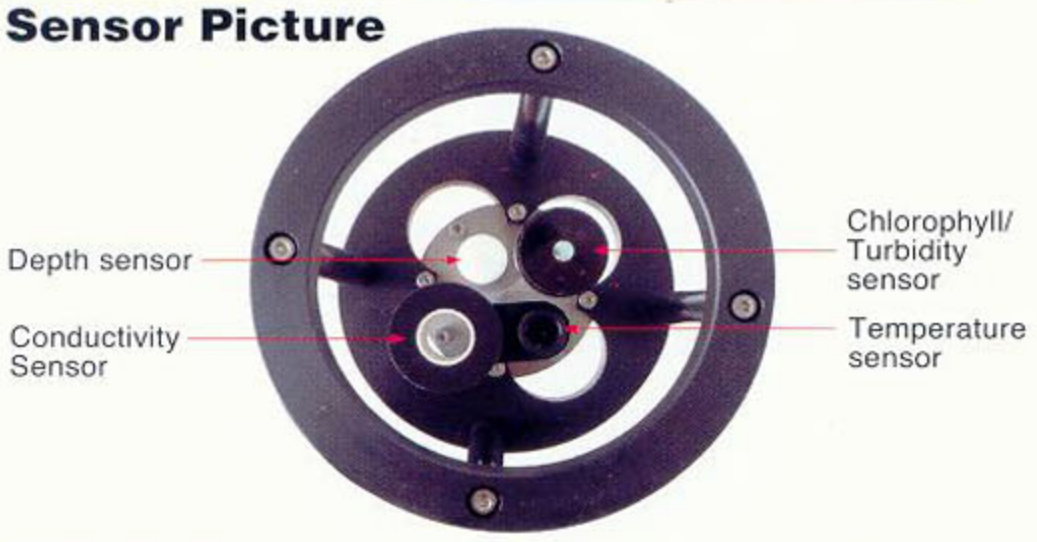
Specification of logger

Deployment mode	Depth trigger mode	Time trigger mode
Interval	0.1, 0.2, 0.5, 1.0m	0.1, 0.2, 0.5, 1.0 second
Memory type	2 M-byte flash memory	
Recording capacity	at 0.1m pitch, 190 measurements for 100m profile	about 200,000 data
Power	rechargeable lithium-ion battery (to be changed once a year) measurable 10 consecutive hours	
Weight	2.0 kg in air, 1.0 kg in water	
Dimension	dia 60mm×length 462 mm, sensor guard diameter 136 mm	
Material	Titanium	
Others	calendar memory function	

Interface Specification

Transfer Time	About 12 min (Full data)
Charging Time	Within 3 hours approx.
Weight	1.1 kg approx.
Dimension	170×169×66 mm approx.
Material	Die-cast Aluminum
Power	Alkaline battery (4 pcs.) UM-3 (Approx. 40 hours for communication use), AC100-240V (Comm/Charge use)
RS232-C Cable	5 m standard (Max. 20 m)

Sensor Picture



COMPACT-CTD connected to a PC via RS232-C cable

Dimensions