miniCTD

The miniCTD has been developed to provide a cost effective tool for the collection of CTD Profiles, without compromising the quality of the data. Ideally suited to ROV, coastal, or small boat applications, the miniCTD will appeal to survey companies, the military and academia alike, being both simple to use & easy to handle.

Sensors

The miniCTD is fitted with Valeport's unique digital, high stability conductivity sensor, a PRT temperature sensor, and strain gauge pressure transducer. In addition to the measured parameters listed, Salinity and Density values are also calculated by the software.

Conductivity

Range:	0 - 80 mS/cm
Resolution:	0.001mS/cm
Accuracy:	±0.01mS/cm

Temperature

Range:	-5°C to +35°C
Resolution:	0.001°C
Accuracy:	±0.01°C

Pressure

Range:	10, 50, 100, 300 or 600 Bar
Resolution:	0.001% range
Accuracy:	±0.05% range

Data Acquisition

The miniCTD features a selection of pre-programmed sampling regimes, covering many standard applications. Data may be sampled from 1 to 8Hz, making it suitable for rapid profiling or for continuous measurement at a fixed point

Sampling Modes

Continuous:	Regular output from all sensors at 1, 2, 4 or 8Hz.
Profile:	Logs data as the device falls (or rises) by a defined amount through the water column.

Communications

The instrument will operate autonomously, with setup and data extraction performed by direct communications with PC before and after deployment. It also operates in real time, with a choice of communication protocols fitted as standard and selected by pin choice on the output connector:

RS232	Up to 200m cable, direct to serial port
RS485	Up to 1000m cable, addressable half duplex comms
Baud Rate:	4800 - 460800
Protocol:	8 data bits, 1 stop bit, No parity, No flow control
Bluetooth:	Optional Bluetooth adapter available for cable free data recovery (adapter not designed for immersion)

Memory

The miniCTD is fitted with a solid state non-volatile Flash memory, capable of storing over 10 million lines of data (equivalent to 10,000 profiles to 500m at 1m profile resolution).

Electrical

Internal:	1 x C cell, 1.5v alkaline or 3.6v lithium
External:	9 - 28vDC
Power:	<250mW
Battery Life:	approx 30 hours operation (alkaline) approx 90 hours operation (lithium)
Connector:	Subconn MCBH10F

Physical

Materials:	Acetal or titanium housing (as ordered), polyurethane and ceramic sensor components, stainless steel (316) deployment bracket
Depth Rating:	500m (acetal) 6000m (titanium) *NB: Maximum deployment depth may be limited by transducer range*
Instrument Size:	Main Housing 48mmØ Sensor Body 54mmØ Length 370mm (including connector)
Weight:	1kg (acetal) 1.8kg (titanium)
Shipping:	52 x 39 x 16cm, 6kg (acetal) / 7kg (titanium)

Software

System is supplied with DataLog Express Windows based PC software, for instrument setup, data extraction and display. DataLog Express is licence free.

Ordering

0660003	miniCTD Profiler in acetal housing, supplied with deployment clamp, switch plug, 3m communications lead, DataLog Express software, manual and transit case. *Specify required pressure range*
0660004	miniCTD Profiler in titanium housing, supplied with deployment clamp, switch plug, 3m communications lead, DataLog Express software, manual and transit case. *Specify required pressure range*
0400029	Optional RS485 communications adapter
04000536	Optional Bluetooth adapter

Datasheet Reference Number: MINICTD v1B

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