



An intelligent, real time CTD sensor, ideal for use on ROVs, AUVs or for interface to data acquisition systems

FEATURES

- Real time data output
- On board calculation of Salinity, Density and Speed of Sound
- Pressure balanced Conductivity sensor
- Fast response PRT Temperature sensor
- True synchronised sampling at up to 8Hz
- Depth Trigger mode
- Data on demand mode
- RS232, RS485 and RS422 all fitted as standard
- Up to 5000m depth rating

APPLICATIONS

- ROVs and AUVs
- Oceanographic Studies
- Hydrographic Surveys
- Seismic Operations

DESCRIPTION

Valeport's Modus CTD is effectively a real time only version of the advanced Model 606 CTD Profiler. Without the requirement for onboard batteries or memory, the unit is therefore smaller than the Model 606, but retains much of the functionality, including Valeport's unique synchronised sampling system. This means that all parameters are sampled at exactly the same point during a profile.

The Modus CTD is just one of Valeport's range of Modus instruments, all of which utilise advanced processing technology to give a wide range of sampling programs, synchronised sampling, and a choice of data output formats as standard.

Modus CTD

SPECIFICATION

Sensors

Conductivity

Pressure balanced cell eliminates effect of cell volume changes at depth.

Range: 0 - 80mS/cm
Accuracy: ± 0.01 mS/cm
Resolution: 0.002mS/cm

Temperature

Fast response PRT for high accuracy profiling.

Range: -5°C to $+35^{\circ}\text{C}$
Accuracy: $\pm 0.005^{\circ}\text{C}$
Resolution: 0.002°C

Pressure

Strain Gauge transducer in a choice of ranges. Valeport suggests using the minimum range above expected working depth for greatest accuracy and resolution.

Range: 20, 100, 1000 or 5000dBar (others on request)
Accuracy: $\pm 0.1\%$ FS
Resolution: 0.005% FS

Sampling Modes:

Continuous

Sampling at fixed rate, 1, 2, 4 or 8Hz.

Trip Sampling

Typically used for profiling, where data is sampled at regular pressure increments.

Burst Sampling:

Ideal for long term deployments. Instrument takes a series of samples, then sleeps for a set length of time before waking up and repeating the process. Power is conserved during sleep mode. Standard Deviation and data averaging are available in this mode.

Power

The unit uses the following currents at 12v:
Running: 55mA
Sleep: 0.4mA

The Modus CTD requires an external supply of 9 to 30VDC.

Communications

RS232, RS485 and RS422 communications are all fitted as standard, chosen by pin selection on the connector.

Maximum baud rate is 115,200 for RS232, or 57,600 for RS485 & RS422.

RS232 communications may be used directly with a standard PC comm port, over cable lengths up to 200m. RS485 and RS422 communications may be used with up to 1500m cable lengths, but will require a surface adaptor set to interface to PC.

Software

All Valeport's latest instruments, including the Modus CTD are supplied with DataLog 400 Windows based PC software. The software allows full sampling setup, and features several display modes, including tabular and graphical formats.

Physical

Body: 88mm \varnothing x 380mm
Shipping: 500 x 400 x 200mm. 7.5kg (acetal), 9.5kg (titanium).

Acetal version

Weight (air): 2kg
Weight (water): 0.5kg
Depth rating: up to 1000m (depending on pressure sensor)

Titanium version

Weight (air): 4kg
Weight (water): 2.5kg
Depth rating: up to 5000m (depending on pressure sensor)

ORDERING

0440004

Modus CTD in acetal housing, fitted with pressure balanced conductivity cell, fast response PRT and strain gauge press sensor (specify range). Supplied with 50cm pigtail/interface lead, spare o-rings, operating manual, DataLog 400 software and transit case.

0440005

As above, but with 5000m Titanium housing option

Valeport manufactures a wide range of oceanographic and hydrometric instruments including self-recording and direct reading multi-parameter current meters, sound velocity probes, CTD probes, wave recorders, tide gauges, open channel flow meters, water and plankton samplers, winches, sinker weights, connectors and accessories.

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