

Direct Reading CTD

Model 602



FEATURES

- Linearised Thermistor Temperature Sensor
- Dual Inductive Coil Conductivity Sensor
- Calibrated to International Standards
- Battery Powered by Standard Dry Cells
- Salinity, Density Anomaly Gamma, and Speed of Sound derived over a wide range of Conductivity and Temperature
- Up to 500m Depth Capability

APPLICATIONS

- Oceanographic Studies
- Hydrographic Surveys
- Seismic Operations
- Coastal and Estuary Surveys
- Education
- Marine Research

INTRODUCTION

In keeping with Valeport's policy of continuing development, we have taken our industry standard Series 600 MkII CTDS Probe, and developed a new control display unit for it; the new system is known as the Model 602.

The probe itself is fitted with Conductivity, Temperature and Pressure sensors, information from which is relayed to the surface as analogue outputs. The new control unit displays these three parameters, and also calculates and displays Salinity, Density Anomaly Gamma and Speed of Sound.

All derived parameters are calculated using proven industry standard formulae.

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DESCRIPTION

PROBE

The Model 602 Direct Reading CTD Probe is manufactured from black, shock resistant Delrin (acetal) which provides excellent corrosion protection and allows the unit to be used in depths of up to 500 metres.

The probe is supplied complete with a stainless steel suspension assembly, which as well as providing an attachment point for the suspension cable also allows a hanger bar and sinker weight to be used, to prevent excessive streaming of the unit behind the vessel.

The Conductivity, Temperature and Pressure sensors are internally mounted to prevent accidental damage. A 'T' hole permits free water flow past the sensors.

SIGNAL

The outputs from the three sensors are transmitted to the surface as three separate analogue signals, via Valeport signal cable. This is polyurethane sheathed oceanographic cable, with integral Kevlar strain member, and has a safe working load of 100kg.

SURFACE UNIT

The outputs from the probe are displayed on the Model 602-12 surface unit. This is sealed to IP67 (10 seconds at 0.3m) and features a backlit dot matrix LCD display, with membrane keys for ease of operation.

The surface unit uses the three measured parameters (Conductivity, Temperature and Pressure) to calculate and display the derived parameters of Salinity, Density Anomaly Gamma, and Speed of Sound, using industry standard equations.

ORDERING

Model 602 Sets, comprising, CTD probe, control display unit, 3m deck cable, signal cable, operating manual and transit case. Please specify:

0602010: Above system, supplied with 50m signal cable and 100dBar pressure transducer.

0602011: Above system, supplied with 100m signal cable and 100dBar pressure transducer.

0602012: Above system, supplied with 200m signal cable and 200dBar pressure transducer.

0602003: Control Display Unit only. The CDU is backwards compatible with existing Model 600MkII CTDs (provided they are fitted with Mil-Spec type connectors).

Options

0300031: Memory option for control unit and replay software (minimum 10,000 records)

0300012: Interface to PC for above.

SENSOR SPECIFICATIONS

	Type	Range	Accuracy	Resolution
Temperature	Linearised Thermistor	-5 to 40 deg C	± 0.2 deg C	0.002 deg C
Conductivity	Inductive Coils	0.1 to 60 mS/cm	± 0.2 mS/cm	0.003 mS/cm
Pressure	Strain Gauge	100, 200, or 500 dBar	± 0.3% FS	0.005% FS

Salinity, Speed of Sound and Density Anomaly Gamma can be derived from the sensor data, with the following accuracy/resolution:

	Type	Range	Accuracy	Resolution
Salinity	Derived [SAL78]		± 2%	0.003 PSU
Speed of Sound	Derived [Chen & Millero 1977]		± 0.05%	0.02 m/sec
Density Anomaly Gamma	Derived [EOS-80]		± 2%	0.01 kg/m3

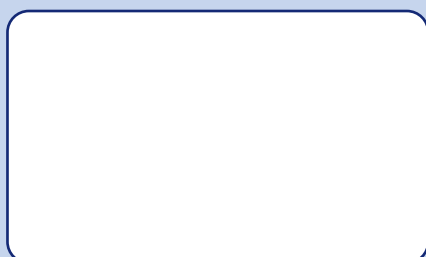
PHYSICAL SPECIFICATIONS

Probe Size: 380mm x 72mm diameter
Weight: 3kg (air), 0.5kg (water)
Depth Rating: 500m

Cable Size(200m): 380mm diameter x 210mm
Weight: 17kg

Surface Unit Size: 244mm x 163mm x 94mm
Weight: 2kgf

Shipping Dimensions: 710 x 510 x 300mm
Total packed weight: 38kg



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



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