



MODEL 308 Current Meter



The Model 308 Direct Reading / Self Recording Oceanographic Current Meter is a well proven tool for the collection of single point current (and other) data in either real time or autonomous applications. Titanium construction gives excellent durability, whilst low power consumption allows for extended deployment periods. A variety of communication options allow real time operation over cable lengths up to 3000m, and data may be viewed on either a dedicated display unit, or with Valeport's own easy to use DataLog™ software.

Sensors

Speed

Type:	Impeller [0.27m pitch x 125mm Ø]
Range:	0.03 to 5.0 m/s
Accuracy:	<0.15m/s, ±0.004m/s >0.15m/s, ±1.5% reading
Resolution:	0.001m/s

Direction

Type:	Flux gate compass [± 25° gimbal]
Range:	0 - 360°
Accuracy:	± 0.25°
Resolution:	0.25°

Temperature

Type:	PRT
Range:	-5 to 35°C
Accuracy:	± 0.02°C
Resolution:	0.002°C

Conductivity

Type:	Inductive coils
Range:	0.1 to 60mS/cm
Accuracy:	± 0.05 ms/cm
Resolution:	0.003mS/cm

Pressure

Type:	Strain gauge
Range:	100, 200, 500, 1000 or 2000 dBar
Accuracy:	± 0.1% FS
Resolution:	0.005% FS

Derived parameters

Salinity, Speed of Sound and Density are derived from the Conductivity, Temperature and Pressure readings using industry standard equations

Data Acquisition

The vector average is based on a 5 second period during which impeller counts are measured and a single compass reading is made, and the vector average is built up over the averaging period set. Averaging period is any multiple of 5 seconds, up to a maximum of 30 minutes. For the optional parameters, the sample is taken at the end of each sample period, and averaged over the averaging period. Real time display and memory are updated at the end of each averaging period.

Communications

RS232:	Standard, up to 100m cable, direct to PC
Digital Current Loop:	Standard fit, used by 8008 CDU, this is a 2 wire method suitable for real time communications over cable lengths up to 3000m (requires adaptor for PC comms))
RS485:	Option, suitable for communications over cable lengths up to 1500m (factory fit, disables RS232).



Memory

The Model 308 is fitted with 512kb memory, which will hold over 125,000 speed & direction records, or over 50,000 records if CTD is also fitted. An optional 1Mb memory is also available.

Control Display Unit

The Model 308 can be used in real time with Valeport's Model 8008 Control Display Unit (CDU). This features an LCD graphics display of all parameters and allows full sampling set up of the instrument. The 8008 CDU also has its own internal memory, which can be downloaded to PC in spreadsheet compatible format.

Power:	8 x 1.5v "C" cells (also powers instrument)
Size:	244 x 193 x 94mm, 2kg
Protection:	IP67 (10secs @ 0.3m).

Power

Internal:	7 x 1.5v "C" cells, which last for over 1 year at 10 minute recording intervals.
External:	10 - 18vDC, <1W. (May be taken from 8008 CDU).

Physical

Depth rating:	2000m (Only 1000m if Conductivity fitted)
Materials:	Titanium, 316 Stainless Steel & Acetal and ABS plastic
Size:	76mmØ x 1080mm
Weight:	13.5kg
Suspension:	1000kg
Shipping:	130 x 30 x 32cm, 27kg

Software

System is supplied with DataLog™ Windows based PC software, for instrument setup, data extraction and display of tabular and graphical data plots. DataLog™ is license free.

Ordering

0308002	Model 308 Current Meter, with 3m "Y" lead (fish to PC and power supply), tool kit, Datalog software, manual and transit case.
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Other ordering examples and not limited to:

0308003-20	As 0308002 option plus addition of a 20bar pressure transducer
0308005-20	As 0308002 option plus addition of Conductivity, Temperature and 20bar pressure transducer

Datasheet Reference: MODEL 308 version 2c, June 2013