



MODEL 108MKIII Current Meter



The Model 108 MKIII Direct Reading Oceanographic Current Meter is a well proven tool for the collection of single point current (and other) data in real time 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. The real time display is updated at the end of each averaging period.

Communications

<i>RS232:</i>	Standard, up to 100m cable, direct to PC
<i>Digital</i>	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))
<i>Current Loop:</i>	
<i>RS485:</i>	Option, suitable for communications over cable lengths up to 1500m (factory fit, disables RS232).



Control Display Unit

The 108 MKIII 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.

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

Power

<i>External:</i>	10 - 18vDC, <1W. (May be taken from 8008 CDU).
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Physical

<i>Depth rating:</i>	1000m and 2000m
<i>Materials:</i>	Titanium, 316 Stainless Steel & Acetal and ABS plastic
<i>Size:</i>	76mmØ x 880mm
<i>Weight:</i>	11kg
<i>Suspension:</i>	100kg
<i>Shipping:</i>	102 x 48 x 54cm (inc 50m cable + CDU), 31kg

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

0108001	Model 108 MkIII Current Meter with Control display unit, 50m cable, 3m deck lead, manual and transit case.
0108002	Model 108 MkIII Current Meter with Control display unit, 100m cable, 3m deck lead, manual and transit case.
0108003	Model 108 MkIII Current Meter with Control display unit, 200m cable, 3m deck lead, manual and transit case.
0300003	Pressure -specify range (100, 200, 500, 1000 or 2000 dbar)
0300004	Temperature - PRT
0300006	Conductivity