



MODEL 106



The Model 106 Current Meter is a light weight, cost effective impeller current meter, designed for real time current measurement or short to medium term autonomous deployments. Titanium construction ensures durability, and the optional temperature and pressure sensors increase the versatility of the instrument. Ideal for use in rivers and coastal applications, or from small boats, the Model 106 is simple to use with either the Windows based PC software supplied, or an optional dedicated display unit.

Sensors

Speed

Type: High Impact Styrene Impeller
 Size: 125mm diameter by 270mm pitch
 Range: 0.03 to 5m/s
 Accuracy: $\pm 1.5\%$ of reading above 0.15m/s
 $\pm 0.004\text{m/s}$ below 0.15m/s

Direction

Type: Flux gate compass
 Range: 0 to 360°
 Accuracy: $\pm 2.5^\circ$
 Resolution: 0.5°

Temperature

Type: Thermistor
 Range: -5 to 35°C
 Accuracy: $\pm 0.2^\circ\text{C}$
 Resolution: 0.01°C

Pressure

Type: Strain Gauge Transducer
 Range: 50, 100, 200 or 500 dBar
 Accuracy: $\pm 0.2\%$ Range.
 Resolution: 0.025% Range

Data Acquisition

The current meter works on a basic 1 second cycle, during which the impeller counts are taken and a single compass heading reading is made. From this, East and North velocity vectors are calculated, which are then summed over the averaging period. The additional parameters of temperature and pressure (if fitted) are sampled once every sample period, and averaged over the averaging period.

Data Recovery

Direct to PC via communications port. Maximum RS232 data rate of 19200 baud.

Switching On/Off

The meters are switched on and off through software control, either by the DataLog™ software or by using the Model 8008 CDU. However, it is also fitted with a sea switch mechanism, meaning that it will not operate unless submerged. This feature means that memory and power are conserved during periods of non-use, for example during transportation from lab to field site. The switch can be bypassed for setting up and equipment testing.

Software

DataLog™ Windows™ based PC software for data display, instrument set up, data extraction and tabular and graphical data plots.

Display Unit

The Model 106 may be used with a dedicated display unit for real time operations. The display unit allows instrument setup and data display.

Size: 244 x 193 x 94mm, 2kg
 Protection: IP67 (10 secs @ 0.3m)

Memory

512 Kbyte Solid State Memory. Each parameter record uses 2 bytes. As an example, this gives a duration of over 1 week with full parameter sampling every 10 seconds, or 220 days with sampling every 5 minutes.

Power

Internal: 1 x D cell. 1.5v alkaline cell gives approximately 30 days at 10 second sample rate, or 56 days at 5 minute sample rate. 3.6v Lithium cell gives approximately 90 days at 10 second sample rate, or 180 days at 5 minute sample rate.
 External: For external supply, 12-20v DC is required. Power can also be taken from the Model 8008 CDU.

Communications

RS232 to PC over cable lengths up to 50m. Digital Current Loop to Model 8008 CDU, or to PC over longer cable lengths (requires additional adaptor).

Physical

Instrument

Materials: Titanium, acetal and ABS plastic
 Size: 640mm x 50mm Ø, (tail 133mm wide x 270mm high)
 Weight: 3kg (air), 2kg (water)
 Depth Rating: 500m

Shipping

Size: 780mm x 640mm x 370mm
 Weight: 22kg

Ordering

- 0106001** Model 106 Self Recording/Direct Reading unit, fitted with speed and direction sensors. Supplied with communications lead (3m Y lead), operating manual, software and system transit case.
- 0105003** Temperature option
- 0105004** Depth option
- 0105005** Control Display Unit set, comprising deck lead and Model 8008 CDU.
- 0105006** 50m cable on hand reel

As part of our policy of continuing development, we reserve the right to alter at any time, without notice, all specifications, designs, prices and conditions of supply of all equipment.

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