



Model 106 Current Meter

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 DataLog X2 software supplied, or an optional dedicated display unit.

DATA SHEET

Product Details



CURRENT



DATALOG X2 &
CDU EXPRESS SOFTWARE

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Sensors

Current Speed

Type High Impact Styrene Impeller

Size 125 mm diameter by 270 mm pitch

Range 0.03 - 5 m/s

Accuracy ± 0.004 m/s (below 0.15 m/s)
 $\pm 1.5\%$ of read (above 0.15 m/s)

Direction

Type Flux gate compass

Range 0 - 360°

Accuracy $\pm 2.5^\circ$

Resolution 0.5°

Temperature

Type Thermistor

Range -5 - 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 X2 software or by using the Model 8008 CDU. However, for autonomous, self-recording operation the 106 is supplied with a SubConn switch cap that fits in place of a direct cable connection.

Display unit

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

Size 244 mm x 193 mm x 94 mm, 2 kg

Protection IP67 (10 secs @ 0.3 m)

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. 1.5 V alkaline cell gives approximately 30 days at 10 second sample rate, or 56 days at 5 minute sample rate. 3.6 V Lithium cell gives approximately 90 days at 10 second sample rate, or 180 days at 5 minute sample rate

External For external supply, power must be in the range of 12-28 V DC. Power can also be taken from the Model 8008 CDU

Communications

Fitted with SubConn MCBH10F (Brass)
RS232 to PC over cable lengths up to 200 m
Digital Current Loop to Model 8008 CDU, or to PC over longer cable lengths (requires additional adapter)

Physical

Instrument

Materials Titanium, acetal and ABS plastic

Size $\varnothing 640$ mm x 50 mm
tail 133 mm wide x 270 mm high

Weight 3 kg (air), 2 kg (water)

Depth Rating 500 m

Shipping

Model 106 Size 84 cm x 42 cm x 39 cm

Model 106 Weight 17 kg

50 m Cable Size 42 cm x 33 cm x 49 cm

50 m Cable Weight 11 kg

Software

System is supplied with DataLog X2 Windows based PC software, for instrument setup, data extraction and display of tabular and graphical data plots. DataLog X2 is licence free

Ordering

0106004SCXX Model 106 Self-Recording/Direct Reading Fitted with:
• Speed and Direction with Pressure (Depth)
Supplied with:
- Communications lead (3m Y lead)
- Switch Cap
- Software
- Operating manual, Tool kit and transit case

0106005SCXX As 0106001SC plus Temperature & Depth option

Note: (XX denotes pressure transducer range)

Datasheet Reference: Model 106 Current Meter | February 2024

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