



MIDAS ECM

The MIDAS ECM is a highly versatile point current meter, designed with durability and ease of deployment in mind. Valeport's latest electronics architecture allows multiple additional sensors, and a variety of communications options, making it one of the few multi-parameter current meters that allows real time operations over several thousand metres of cable, as well autonomous deployments. The Titanium housing gives a depth rating up to 5000m.

DATA SHEET

Product Details



CURRENT



OPTIONAL
CTD



SOUND
SPEED



OPTIONAL
TURBIDITY



DATALOG
X2 SOFTWARE &
DATALOG PRO

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Sensors				
Sensor	Type	Range	Accuracy	Resolution
Current	Valeport EM	0 – 5m/s	+/-1%reading	0.001m/s
Direction	Fluxgate	0 – 360°	+/-<1°	0.001°
Pressure	Piezo-Resistive	Up to 500Bar	+/-0.01%	0.001%
Temperature	PRT	-5 - +35°C	+/-0.005°C	0.002°C
Conductivity	Inductive Cell	0 – 80mS/cm	+/-0.01mS/cm	0.002mS/cm
Turbidity	Seapoint STM	0 – 2000FTU	+/-2%	0.002%

Data Acquisition	
Continuous	Regular output from all sensors at 1, 2, 4 or 8Hz.
Burst	Regular sampling pattern, where instrument takes a number of readings, then sleeps for a defined time.
Conditional	Instrument sleeps until a selected parameter reaches a set value.
Delay	Instrument sleeps until predefined start time.

Communications	
The instrument will operate autonomously, with setup and data extraction performed by direct communications with PC before and after deployment. It also operates in real time, with a choice of communication protocols for a variety of cable lengths, all fitted as standard and selected by pin choice on the output connector:	

Standard	
RS232	Up to 200m cable, direct to serial port via USB adapter
RS485	Up to 1000m cable, addressable half duplex comms

Optional FSK	
2 wire power & comms up to 6000m cable (cable dependent)	
Baud Rate	2400 - 115200 (FSK fixed at 19200, USB 460800)
Protocol	8 data bits, 1 stop bit, No parity, No flow control

Memory	
The MIDAS ECM is fitted with 16Mb solid-state non-volatile FLASH memory. Total capacity depends on sampling mode; continuous & burst modes have a single time stamp at the start of the file, trip mode (profiling) stores a time stamp with each reading. A single line of current data uses 10bytes, with each additional parameter taking 2bytes and a time stamp uses 7 bytes. The examples are for an instrument measuring speed, direction and CTD.	
Continuous	>520,000 data points
Profile	>360,000 data points (>15 profiles to 5000m)

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

Electrical	
Internal	8 x D cells, 1.5V alkaline or 3.6V lithium
External	9 – 30V DC
Power	1.7W (sampling), <1mW (sleeping)
Battery Life	>100 hours operation (alkaline) >250 hours operation (lithium)
Connector	SubConn MCBH10F

Physical	
Materials	Titanium housing, polyurethane sensor components, stainless steel (316) cage
Depth Rating	5000m (titanium)
Instrument Size	150mmØ x 700mm long
Cage Size	210mm Ø x 732mm long
Weight (in cage)	20kg - Titanium
Shipping	130 x 37 x 32cm, 38kg - Titanium

Ordering	
0808007A	MIDAS ECM Current Meter (Titanium) - is supplied with: <ul style="list-style-type: none"> • Deployment cage • SubConn switch plug • 3m communications lead • USB adapter • DataLog x2 software • Manual, tool kit and transit case

Options	
0808007B	MIDAS ECM, titanium housed, standard package with FSK communications option
0808007C-XX	MIDAS ECM, titanium housed, standard package with Pressure option
0808007D-XX	MIDAS ECM, titanium housed, standard package with Pressure & FSK communications options
0808007E-XX	MIDAS ECM, titanium housed, standard package with CTD options
0808007F-XX	MIDAS ECM, titanium housed, standard package with CTD & FSK communications
0808007G-XX	MIDAS ECM, titanium housed, standard package with CTD & Turbidity options
0808007H-XX	MIDAS ECM, titanium housed, standard package with CTD, Turbidity & FSK communications options
Note	XX on code denotes pressure transducer range. Select from 10, 20, 30, 50, 100, 200, 300, 400, or 600bar (for 5000m operational use)

Cables	
0400EA50CD	50m Signal cable on hand reel. Fitted with Subconn 10 way connectors.
Note	further cable options available, consult Valeport.

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