



# 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

**Valeport Limited**  
St. Peter's Quay, Totnes,  
Devon TQ9 5EW United Kingdom

Telephone: +44 (0) 1803 869292  
Email: [sales@valeport.co.uk](mailto:sales@valeport.co.uk)  
[www.valeport.co.uk](http://www.valeport.co.uk)



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	
<b>Continuous</b>	Regular output from all sensors at 1, 2, 4 or 8Hz.
<b>Burst</b>	Regular sampling pattern, where instrument takes a number of readings, then sleeps for a defined time.
<b>Conditional</b>	Instrument sleeps until a selected parameter reaches a set value.
<b>Delay</b>	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	
<b>RS232</b>	Up to 200m cable, direct to serial port via USB adapter
<b>RS485</b>	Up to 1000m cable, addressable half duplex comms

Optional FSK	
2 wire power & comms up to 6000m cable (cable dependent)	
<b>Baud Rate</b>	2400 - 115200 (FSK fixed at 19200, USB 460800)
<b>Protocol</b>	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.	
<b>Continuous</b>	>520,000 data points
<b>Profile</b>	>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	
<b>Internal</b>	8 x D cells, 1.5V alkaline or 3.6V lithium
<b>External</b>	9 – 30V DC
<b>Power</b>	1.7W (sampling), <1mW (sleeping)
<b>Battery Life</b>	>100 hours operation (alkaline) >250 hours operation (lithium)
<b>Connector</b>	SubConn MCBH10F

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

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

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

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

## Datasheet Reference: MIDAS ECM | April 2020

As part of our policy of continuing development, Valeport Ltd. reserve the right to alter at any time, without notice, all prices, specifications, designs and conditions of sale of all equipment - Valeport Ltd © 2020

