



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



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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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