The flexible, economical, ready to use data logging solution

From the inventors of solid state data logging

- Flexible monitoring and control
- Painless point ‘n’ click configuration
- Telemetry ready
- Low cost of ownership
How does it benefit me?

- **Low cost of ownership**
  - Economical to purchase and install
  - Integrated package - includes data logger, charging regulator and battery

- **Flexible monitoring and control**
  - Standard I/O card supports seven sensor inputs and four outputs
  - Expandable to five I/O cards
  - Automated sensor power management
  - Use multiple 3rd party water quantity sensors
    - pH
    - Conductivity
    - Dissolved oxygen
  - Multi-channel data logging (2Mb RAM)
  - Use multiple 3rd party water quality sensors
    - Downward looking ultrasonic depth sensor
    - Insert electromagnetic
    - Paddle wheels
    - Transit time

- **Quick and painless configuration**
  - Powerful easy to use Windows software
  - Easy point ‘n’ click channel configuration and calibration
  - No proprietary coding knowledge required
  - Multiple flume/weir lookup table

- **Telemetry ready**
  - ModBUS
  - SDI-12
  - GSM/GPRS modem

How does it work?

- **FloCom® Software**
  - Free to user
  - Easy to use
  - Configure, download, diagnostics
  - No proprietary coding knowledge required

- **Electronics Module**
  - Integrated package - includes data logger, charging regulator & battery
  - Rugged weather proof, UV stabilised, lockable enclosure
  - Solar or mains powered charging
  - Wall or pole mountable

- **Telemetry**
  - Real-time digital display of data channels
  - User configurable channel names
  - Units Metric and US

- **Plug ‘n’ play expansion**
  - MACE CardBus system with five slots
  - Standard I/O card supports seven sensor inputs and four outputs
  - MACE FloSI telemetry interface
    - ModBUS, SDI-12
  - HydroMace 3000 is expandable to a maximum of five I/O cards.

Where can I use it?

- **Aquaculture Monitoring**
- **Flow Measurement**
- **Programmable Logic Controller (PLC)**
- **Telemetry**
- **Water Sampler**

- **Weir and Flume look-up table**
  - In-built equations for all major types:
    - Parshall flumes
    - V-notch weir (30°, 45°, 60°, 90°)
    - Cipolletti weir
    - Replogle flume
    - Rectangular weir (contracted / suppressed)

- **Dissolved Oxygen (DO) Sensor**
- **Downward Looking Ultrasonic Sensor**
- **pH Sensor**
- **Conductivity Sensor**
- **H₂O Quality Multi-probe**
- **Rain Gauge**

- **Sewer Wet Wall Monitoring**
- **Water Quality Monitoring**
- **Rainfall Monitoring**
- **Industrial Monitoring**
- **Weather Station Monitoring**
- **Flume/Weir Monitoring**
HYDROMACE 3000 SPECIFICATIONS

GENERAL

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>11lbs</td>
</tr>
<tr>
<td>Dimensions</td>
<td>14.2&quot; (H) x 10.2&quot; (W) x 6.7&quot; (D)</td>
</tr>
<tr>
<td>Enclosure rating</td>
<td>IP66</td>
</tr>
<tr>
<td>Enclosure material</td>
<td>UV stabilized poly carbonate</td>
</tr>
<tr>
<td>Operating temperature (with internal battery installed)</td>
<td>5 to 122 degrees Fahrenheit</td>
</tr>
<tr>
<td>Operating temperature (with internal battery removed and external power used)</td>
<td>-4 to 150 degrees Fahrenheit</td>
</tr>
<tr>
<td>Flow display</td>
<td>16 character x 2 line alphanumeric LCD with backlight</td>
</tr>
<tr>
<td>Program memory</td>
<td>2 Mb flash</td>
</tr>
<tr>
<td>Power</td>
<td>Internal 12Volt 7.2Ah battery with external solar panel or mains charger</td>
</tr>
<tr>
<td>Units of measure</td>
<td>User definable (metric/US)</td>
</tr>
<tr>
<td>Application software</td>
<td>FloCom+ PC software for system configuration, calibration and data downloading.</td>
</tr>
<tr>
<td>Factory backup</td>
<td>HydroMace 3000 is backed by a 24 month parts and labour guarantee</td>
</tr>
</tbody>
</table>

TELEMETRY OPTIONS

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Telemetry options</td>
<td>Optional MACE FloSi card supports MODBUS, SDI-12, RS232, RS485.</td>
</tr>
<tr>
<td></td>
<td>Optional MACE data modem card</td>
</tr>
</tbody>
</table>

INPUTS/OUTPUTS PER CARD

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>One I/O Card Standard. Expandable to maximum of five I/O cards</td>
<td></td>
</tr>
<tr>
<td>Analogue inputs (per card)</td>
<td>2 X 4-20mA inputs, 12 bit resolution, accuracy 0.5% of full scale</td>
</tr>
<tr>
<td></td>
<td>2 X Voltage inputs (0-2.5V or 0-30V)</td>
</tr>
<tr>
<td>Analogue outputs (per card)</td>
<td>2 X 4-20mA outputs, 12 bit resolution, accuracy 0.5% of full scale</td>
</tr>
<tr>
<td>Digital inputs (per card)</td>
<td>2 X Frequency inputs, 16 bit resolution, range 0 – 16383Hz</td>
</tr>
<tr>
<td></td>
<td>2 X Counter inputs, range 0 – 10Hz</td>
</tr>
<tr>
<td>Digital outputs (per card)</td>
<td>2 X digital/pulse outputs, open collector referenced to GND, range 0 – 10Hz</td>
</tr>
<tr>
<td>Power Outputs (per card)</td>
<td>12Volt switched power output for 3rd party sensor power</td>
</tr>
</tbody>
</table>

NOTE TO END USERS: THESE SPECIFICATIONS ARE SUBJECT TO CHANGE AT ANY TIME WITHOUT NOTICE. MACE TAKES NO RESPONSIBILITY FOR THE USE OF THESE FIGURES. PLEASE CONSULT MACE FOR THE LATEST SPECIFICATIONS BEFORE USING THEM IN TENDER SUBMISSIONS OR THIRD PARTY QUOTES ETC. MACE RESERVES THE RIGHT TO CHANGE SPECIFICATIONS WITHOUT PRIOR WARNING. ALL QUOTED FIGURES ARE BASED ON TEST CONDITIONS AND ARE SUBJECT TO VARIATION DUE TO SITE CONDITIONS.

What instrument do I need?

<table>
<thead>
<tr>
<th>Feature</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log ONLY Flow rate and total</td>
<td>No</td>
</tr>
<tr>
<td>Log ALL configured channels (e.g. depth, velocity, total, pH etc.)</td>
<td>Yes</td>
</tr>
<tr>
<td>Accepts MACE Doppler flow sensor cards</td>
<td>Yes (up to 3)</td>
</tr>
<tr>
<td>Accepts MACE Input/Output cards</td>
<td>Yes (up to 5)</td>
</tr>
<tr>
<td>Accepts MACE FloSI (ModBus/SDI-12) telemetry cards</td>
<td>Yes</td>
</tr>
<tr>
<td>1. FloSI Outputs - Flow rate and Total ONLY</td>
<td>Yes</td>
</tr>
<tr>
<td>2. FloSI Outputs - All logged channels</td>
<td>Yes</td>
</tr>
</tbody>
</table>

40 years of innovation from the inventors of solid state data logging

DFR-77 DATA LOGGER

1977 - The world’s first commercial EPROM data loggers, the MACE DFR-77 were delivered. Hundreds of these instruments were used throughout Australia and Papua New Guinea working under the harshest imaginable conditions. The EPROM data recording technique proved to be the most reliable method of electronic data storage.

HYDROMACE TRS

1984 - MACE introduced the Hydromace system which gave environmental field stations the combined capabilities of data logging, control, telemetry via telephone, radio or satellite and intelligent response to both computer or human interrogation.

HYDROMACE 2000

1992 - The Hydromace 2000 data logger provided multi-channel logging and control in water catchments, sewer treatment plants and industrial pollution applications. A leader in its time, many are still in use in catchment management and flood warning networks across Australia.

Measure water quantity & quality upgrade to FloPro Series3

- Integrated solution - includes logger, solar regulator and battery all in one weather proof enclosure.
- Powerful easy to use windows software for painless configuration
- Measure up to five flows with MACE Doppler Ultrasonic Technology
- Supports up to four input / Output (IO) cards

Mace USA LLC
PO Box 7144
Overland Park, KS 66207
United States of America
Phone: 888 440 4215
Fax: 888 440 6999
Email: sales@maceusa.com
www.maceusa.com