HydroMace 3000

From the inventors of solid state data logging

- Flexible monitoring and control
- Painless point 'n' click configuration
- Telemetry ready
- Low cost of ownership

The flexible, economical, ready to use data logging solution

40 1968-2008 YEARS
Water Monitoring Solutions
mace

www.macemeters.com

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How does it work?

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 quality sensors
  - pH
  - Conductivity
  - Dissolved oxygen
- Multi-channel data logging (2Mb RAM)
- Use multiple 3rd party water quantity 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

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

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

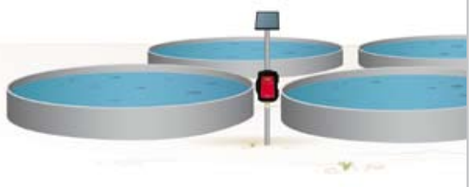
Weir and Flume look-up table
- In-built equations for all major types:
  - Parshall flumes
  - V-notch weir (30˚, 45˚, 60˚, 90˚)
  - Cipoletti weir
  - Replogle flume
  - Rectangular weir (contracted / suppressed)

Plug 'n' play expansion

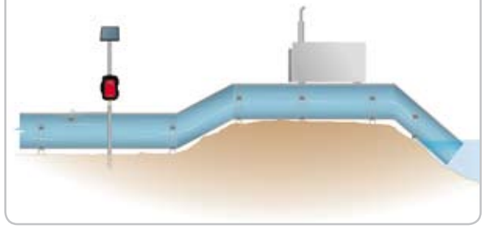
- MACE CardBus system with five slots
- Standard I/O card supports seven sensor inputs and four outputs
- MACE FloSI telemetry interface
  - ModBUS, SDI-12
- HydroMace 3000 is expandable to a maximum of five I/O cards.

Where can I use it?

Aquaculture Monitoring

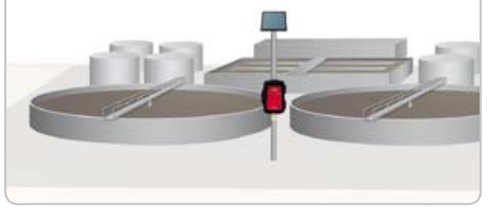


Flow Measurement

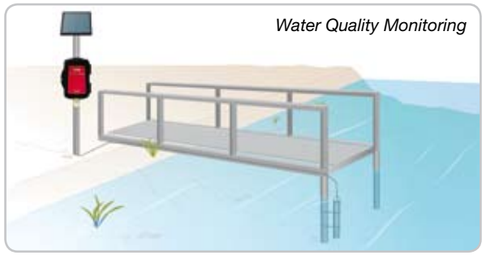


Where can I use it?

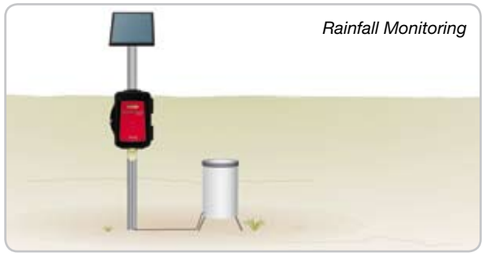
Sewer Wet Well Monitoring



Water Quality Monitoring

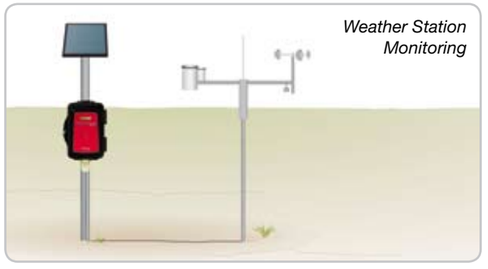


Rainfall Monitoring

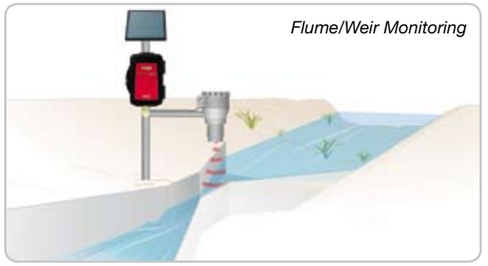


Industrial Monitoring

Weather Station Monitoring



Flume/Weir Monitoring



HYDROMACE 3000 SPECIFICATIONS

General

Weight	5kg
Dimensions	360mm (H) x 260mm (W) x 170mm (D)
Enclosure rating	IP66
Enclosure material	UV stabilized poly carbonate
Operating temperature (with internal battery installed)	-15 to +50 degrees Celsius
Operating temperature (with internal battery removed and external power used)	-20 to +65 degrees Celsius
Flow display	16 character x 2 line alphanumeric LCD with backlight
Program memory	2 Mb flash
Power	Internal 12Volt 7.2Ah battery with external solar panel or mains charger
Units of measure	User definable (metric/US)
Application software	FloCom+ PC software for system configuration, calibration and data downloading. Minimum system requirements – Windows XP
Factory backup	HydroMace 3000 is backed by a 24 month parts and labour guarantee

Telemetry Options

Telemetry options	Optional MACE FloSi card supports MODBUS, SDI-12, RS232, RS485. Optional MACE data modem card

Inputs/Outputs per Card

One I/O Card Standard. Expandable to maximum of five I/O cards

Analogue inputs (per card)	2 X 4-20mA inputs, 12 bit resolution, accuracy 0.5% of full scale 2 X Voltage inputs (0-2.5V or 0-30V)
Analogue outputs (per card)	2 X 4-20mA outputs, 12 bit resolution, accuracy 0.5% of full scale
Digital inputs (per card)	2 X Frequency inputs, 16 bit resolution, range 0 – 16383Hz 2 X Counter inputs, range 0 – 10Hz
Digital outputs (per card)	2 X digital/pulse outputs, open collector referenced to GND, range 0 – 10Hz
Power Outputs (per card)	12Volt switched power output for 3rd party sensor power

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?

	HydroMace 3000	AgriFlo Series 3	FloPro Series 3
Log ONLY Flow rate and total	No	Yes	No
Log ALL configured channels *(e.g depth, velocity, total, pH etc.)*	Yes	No	Yes
Accepts MACE Doppler flow sensor cards	No	Yes *(up to 3)*	Yes *(up to 5)*
Accepts MACE Input/Output cards	Yes *(up to 5)*	No	Yes *(up to 4)*
Accepts MACE FloSI *(ModBus/SDI-12)* telemetry cards	Yes	Yes	Yes
1. FloSI Outputs - Flow rate and Total ONLY	No	Yes	No
2. FloSI Outputs - All logged channels	Yes	No	Yes

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

Part No. 825-314 Rev. 1.0

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