

MB WAVE 3

WAVE SENSOR



The **MB Wave 3** is an efficient, integral, versatile, compact, low energy consumption and low-cost sensor, that allows the characterization of the directional waves with high performance and wide range of measurement parameters for installation on floating devices such as buoys.

FEATURES

This unit provides data on the height, period, and direction of waves in real time as well as statistics of measurements as programmed by the user. This system is composed by a powerful and precise **AHRS** sensor with **3 accelerometers**, **3 gyroscopes** and **3 magnetometers**, as well as a **temperature sensor** to compensate the measurements. It also integrates a **GNSS** that brings a precise time and position for better statistical calculations.



ADVANTAGES

- High precision in data capture.
- Low power consumption.
- Robust configuration and design for its use in harsh marine conditions with IP67.
- Small size.
- Integrated with GNSS (56 channels, GPS/GLONASS, QZSS, Galileo and SBAS).
- Internal memory (SD card) to store raw data.
- Variety of available interface: RS232, RS422, SDI-12, USB and Bluetooth.

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SPECIFICATIONS

Sampling frequency: up to 10 KHz (programmable)
Measurement period for statistics: 10, 15, 20, 30 or 60 minutes, user programmable.
Other times can be programmed upon special order.

OUTPUT DATA:

Wave quantity:

Total wave number (n) in the programmed time.

Height:

Maximum height (Hmax)
Significant height in the n/3 highest waves (Hs or H/3)
Significant height in the n/10 highest waves
Average height

Period:

Maximum period (Tmax)
Peak period
Significant period of the n/3 highest waves (Ts)
Significant period of the n/10 highest waves
Average period

Direction

Average direction
Average dispersion of the direction

(Other parameters can be generated under special orders.)

INTERFACE

Port:	RS-232 (Option RS-422, RS-485, SDI- 12, USB and Bluetooth).
Format:	ASCII Format (Instant displacement data and summary data of each wave, and the statistical parameters of the waves in each measurement period).
AMP Connector	7 female pins.
GPS	Female N c onnector.

GENERAL

Power supply:	10 - 30 VDC (<400 mW). Protection against reverse polarity
Watertightness:	IP67.
Temperature range:	-40°C a 85°C in oper ation.
Enclosure:	Hard anodized aluminium (OEM module in MMB03 circuit).
MTBF:	50,000 h.
Weight:	1,020 gr.
Fixings:	4 x M5.
Micro-SD card:	32Gb.

Specifications subject to change without previous notice.

WAVE HEIGHT

Range:	+/-40 m.
Resolution:	1 mm.
Accuracy:	5 cm.

WAVE DIRECTION

Range:	0° - 360°.
Resolution:	Up to 0.001°.
Accuracy:	Typical 0.5°.
Reference:	Magnetic North

WAVE PERIOD

Range:	1 - 40 sec.
Resolution:	Up to 0.001 sec.
Accuracy:	1%

