



## ATTITUDE AND MAGNETIC HEADING REFERENCE AND NAVIGATION SYSTEM

### Main Features

- Real-time reliable data in marine dynamic environments
- Drift free attitude data
- Proprietary Kalman filter algorithm based on cutting-edge data fusion
- Compact / lightweight
- Engine magnetic field compensation

*Ideal for:*

**Marine stabilization systems**

**Unmanned surface platforms**

**Compact underwater ROV**



MRS-011 is an attitude measurement system based on high quality MEMS sensors, integrating GEM proprietary algorithms based on Kalman Filters for platform attitude over time, the calculation of heading and the routing of navigation data coming from the GPS/DVL/USBL.



# MRS-011

Standalone attitude measurement system based on high-quality MEMS sensors

## Attitude

|                                 |                        |
|---------------------------------|------------------------|
| Roll and Pitch Accuracy [RMS]   | < 0.25 °               |
| Magnetic heading Accuracy [RMS] | < 1° after calibration |
| Roll Range                      | ± 180°                 |
| Pitch Range                     | ± 90°                  |
| Resolution                      | 0.01°                  |

## Linear Acceleration

|             |                             |
|-------------|-----------------------------|
| Range X/Y/Z | ± 10 m/ sec <sup>2</sup>    |
| Resolution  | 0.00036 m/ sec <sup>2</sup> |
| Bandwidth   | 40 Hz                       |

## Angular Rate

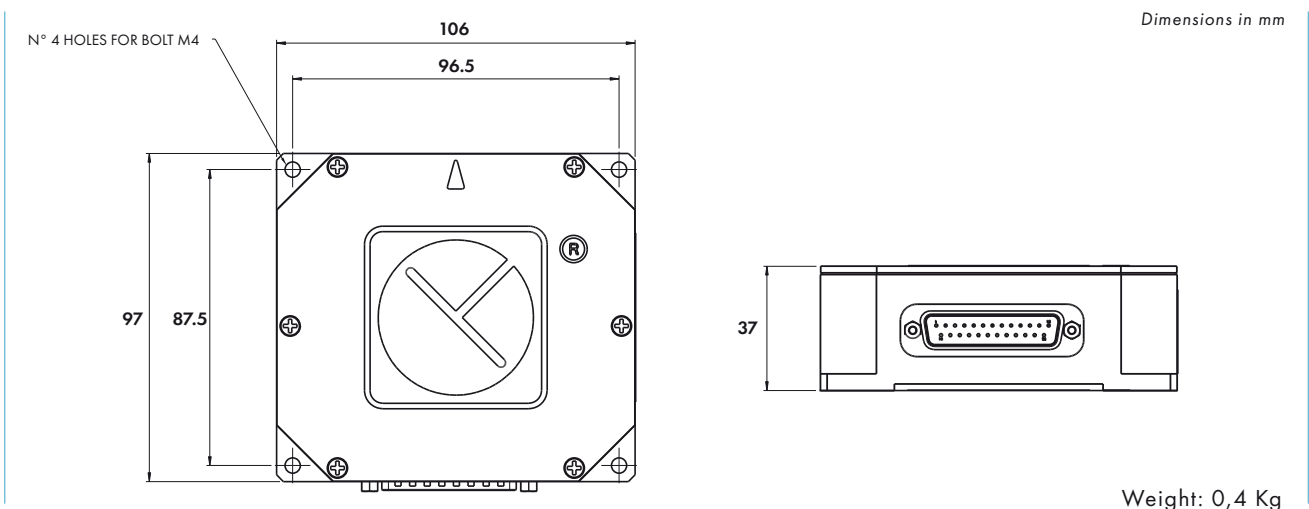
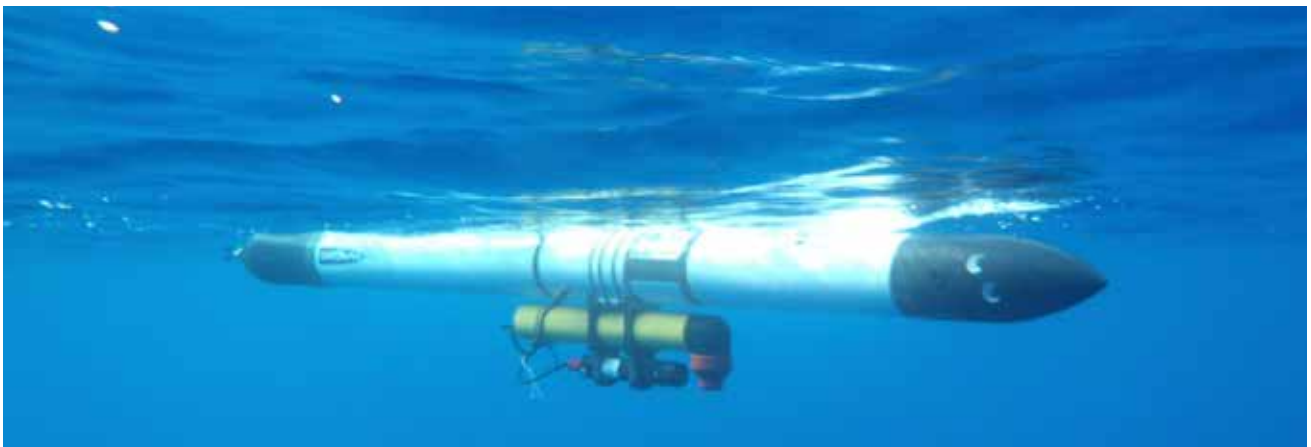
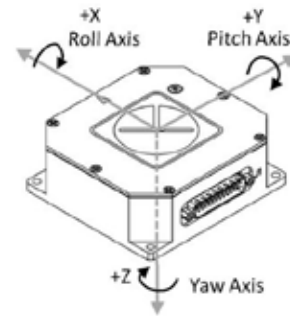
|                      |             |
|----------------------|-------------|
| Range Roll/Pitch/Yaw | ± 300°/sec  |
| Resolution           | 0.008 °/sec |
| Bandwidth            | 40 Hz       |

## Start-up Time

|                          |        |
|--------------------------|--------|
| Start-up Time Valid data | 5 sec  |
| Fully stabilized data    | 30 sec |

## Other

|                        |              |
|------------------------|--------------|
| Update Rate            | 100 Hz       |
| Operating Temperatures | -0/+50° C    |
| Storing Temperatures   | -40/+70° C   |
| Input Power Supply     | 12 to 32 VDC |



Weight: 0,4 Kg

