

# MiniRLG2



Underwater exploration and operations are pushing into deeper waters and harsher environments around the world, and they demand greater measurement accuracy. MiniRLG2 is a high grade inertial measurement unit that meets the ever increasing demands for accurate measurement of attitude, orientation, position, and navigation offshore. It uses ring laser gyro (RLG) technology giving a product that is highly accurate, stable, small and light, and has no moving parts.

It can provide a variety of functions from heading, pitch, and roll sensor, to the core of a sophisticated inertial measurement unit taking aiding inputs from Doppler log, GPS, velocity, and depth sensors.

MiniRLG2 has been designed to meet the demands of the offshore industry and provides a variety of data output formats. It is fully compatible with industry-standard acoustic and integrated sensor packages.

A preset output provides the fast, highly dynamic data needed for aided inertial applications. A further two data outputs are user-selectable for input to survey computers, multibeam sonar, ROV and AUV control systems.

Two variants of this product, MiniPOS2 and MiniPOS/NAV additionally give navigation outputs in real world WGS84 coordinates. Built into your vehicle control system, these products will allow you to implement functions such as auto-hover, waypoint navigation and remote docking.



## Features:

- Survey Gyrocompass
- Inertial measurement
- DVL, GPS aiding
- Heave surge sway o/p
- Highly rugged
- No moving parts
- Various data outputs
- USBL integration

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## Product Specification:

### IMU Specification:

Heading accuracy	0.169 degrees**
Pitch and roll	0.028 degrees*
Angle random walk	0.02 degrees/root hour
Bias repeatability	0.1 degrees/hour*
Scale factor repeatability	75 ppm
Axis alignment	20 arc-second
Heave, Surge, Sway	5% or 5cm

### Telemetry Interface:

Bi-Directional RS422 or RS232

### 4 Serial Ports:

115kbaud 50/100Hz inertial data with fixed format available on all ports

Up to 115kbaud, up to 50Hz ascii with a variety of user-selectable formats available on all ports

### Depth Rating:

3,000 metres (Standard)

4,000 metres (Optional)

6,000 metres (Optional)

### Power Requirements:

Consumption	Between 20 and 35W (depends on configuration)
Supply Voltage (AC and DC available as standard)	
AC	100-260Vac
DC	20-30Vdc

### Weights and Dimensions:

Subsea unit	177mm dia by 268mm	(7.0" dia. X 10.6")
Weight dry	9.8kg	(21.6lbs)
Weight in water	2.5kg	(5.5lbs)

### Mounting (4 holes):

M10 144 x 144 mm (M10 5.67 x 5.67")

### Settling Time:

10 minutes from switch on

\* RMS

\*\* RMS sec (latitude)

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