OceanFOG Subsea, Surface and ROV Gyrocompass

The OceanTools OceanFOG is an Inertial Reference System (IRS) based on latest-generation fibre optic gyrocompasses (FOGs) and micro-mechanical (MEMS) accelerometers in a single, compact, package. The OceanFOG provides highly accurate Heading, Pitch, Roll, Heave, Rate, Acceleration and Geographical Position. OceanFOG is available in several variants:

- OceanFOG-3K Horizontal housing
- OceanFOG-S Surface Gyro
- OceanFOG-R RovFOG

OceanFOG may be used in a wide variety of subsea and surface applications including Survey, ROV navigation, AUV navigation and for Metrology applications.

When used in static survey operations OceanFOG does not require any external latitude inputs. If used on a moving vessel then a GPS derived external latitude will be required.

OceanFOG features a rapid realignment mode. If the unit has not been moved significantly from its last location then re-alignment will be completed within 90 seconds.

OceanFOG has two output datastreams: one is a “Simple” RS232 output that is non-adjustable and which can be used to configure the “Flexible” output. The “Flexible” output is user-selectable between RS232 and RS485.

**KEY FEATURES**

- Outputs heading, pitch, roll, heave, latitude, longitude, rates & accelerations
- Simultaneous twin serial outputs
- Rapid run-up time
- RS232 and RS485 outputs
- 3000m standard depth rating for subsea versions
- Never requires recalibration
SPECIFICATIONS

Heading accuracy, typical: better than 0.1° x sec lat
Pitch & Roll accuracy, typical: better than 0.01°
Pitch & Roll measurement range: ±180°
Heave accuracy, worse case: 0.1m
Heave accuracy, typical: 0.05m
Heave measurement model: True heave,
Acceleration accuracies: 0.2mS²
Static alignment time, latitude <45°: <3min
Static alignment time, latitude >45°<78°: <10min
Dynamic alignment time: <30min
Operating voltage range: 18-36VDC
Power consumption: <30Watt
Interfaces: RS232, RS485
Interface protocol: OceanTools OceanFOG, MiniFOG, various others
Update rates: Up to 50Hz
Operating temperature range: -15°C to 55°C
Maximum operational shock: 6g for 11mSec in 3 axes
MTBF: >20000hours
Maximum latitude: 78°N/S
Length (3000m): 390mm
Diameter (3000m): 205mm
Weight in air (3000m): 19kg
Weight in water (3000m): 7kg
Depth ratings: 3000m standard
Depth options: 300m - 6000m
Data transmission: RS232, RS485

OceanFOG-R RovFOG

All specifications subject to change. E&OE. Revision 5a. December 2012.