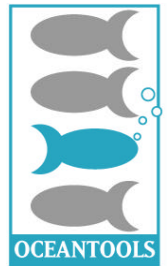


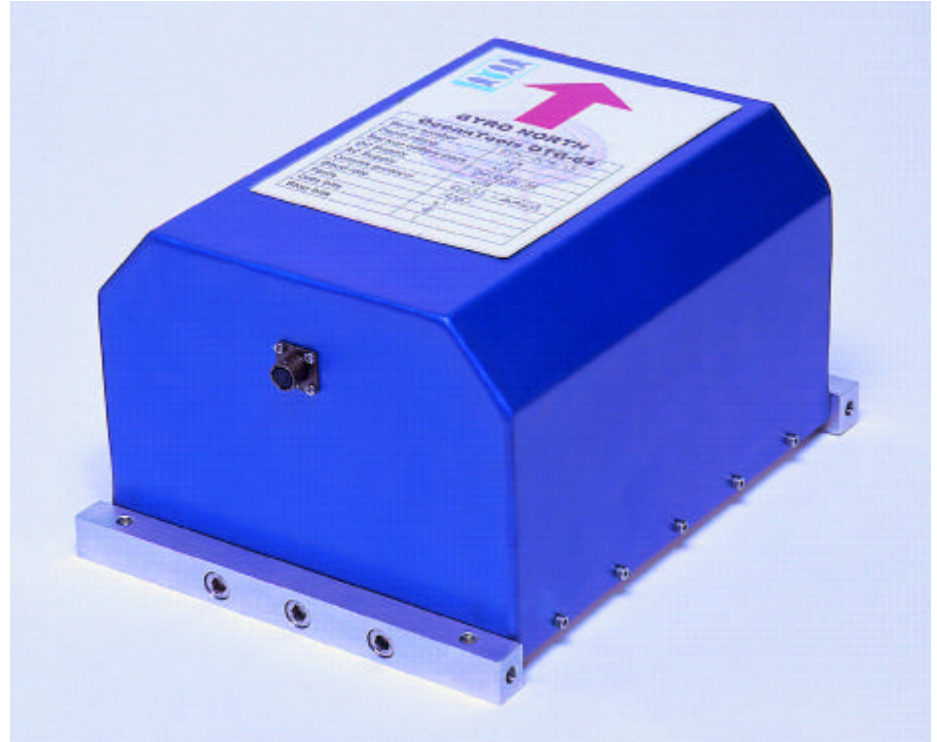
# OceanTools ROV-FOG

## Subsea Heading & Attitude Reference Unit



### Key features....

- Strapdown inertial technology with no moving parts
- Useable data within 5 minutes of power-up
- Very accurate heading, pitch & roll measurements
- Never requires recalibration
- No scheduled maintenance
- Simple to install and operate
- Proven in offshore applications throughout the world
- Superb dynamic performance
- Available in surface, subsea and ROV mount configurations
- Powerful Windows™ interface software
- Emulates all the popular subsea and survey gyros
- 24VDC power input
- RS232, RS485 and Analogue data outputs
- Soon to include fully integrated optional 3 axis motion sensor pack for heave measurement



The OceanTools ROV-FOG is a highly accurate true-north seeking fibre-optic gyro compass and attitude reference unit designed for direct integration into a customer's ROV or AUV system. The ROV-FOG is not affected by any external magnetic or ferrous influences of any kind, making it ideal for use in applications where the underwater host system might be close to structures such as pipelines, platforms or other subsea metalwork. As the system has no moving parts, it is extremely reliable, totally solid state and maintenance free and - importantly - recalibration is never required. In addition the units have a very fast run-up time and are normally within better than 99% of the true heading within 5 minutes of power-up.

ROV-FOG outputs serial RS232 [with optional RS485 and RS422 outputs] with the data taken directly into the vehicle control system. Available data includes Heading, Pitch & Roll; Rate of Change of Heading, Pitch & Roll & Gyro Status. The serial data may also be taken to the surface and used as a survey-grade heading output.

The unit may also be supplied with analogue outputs in addition to the serial digital outputs with the analogue outputs emulating those of other gyro compasses. Typical analogue outputs include:

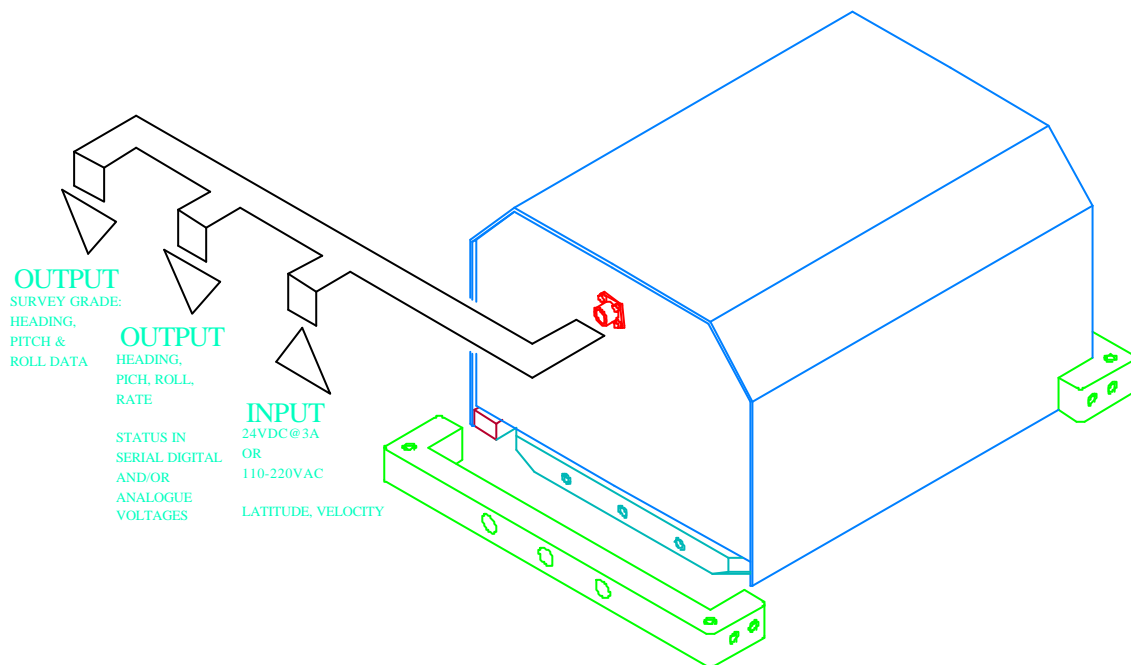
- 0 - 3.599 VDC = 0° - 359.9°
- +5VDC to -5 VDC = 0 - 359.9°
- Analogue rate outputs

Other analogue outputs may be configured to customer's individual requirements.

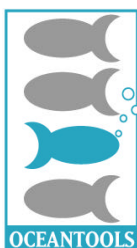
ROV-FOG can emulate the output of virtually all competitive gyro compasses which makes it simple to integrate to existing survey packages and ROV control systems. The system may be controlled via a very simple ASCII command set thus making it very easy for customers to write their own interface software if they don't wish to use the supplied OceanTools WinFOG 2000 control software.

# Specifications

<b>Heading accuracy</b>	<i>Typical accuracy, static or dynamic</i>	<b>0.2° - 0.3° x Secant latitude</b>
	<i>Worst-case</i>	0.7° x Secant latitude
	<i>Resolution</i>	0.1°
	<i>Maximum latitude</i>	75° North & South
<b>Pitch &amp; roll accuracy</b>	<i>Typical accuracy</i>	<b>Better than 0.02°</b>
	<i>Worst-case</i>	0.2°
	<i>Resolution</i>	0.01°
	<i>Range</i>	±45°
<b>Run-up time</b>	<i>Typical useable run-up time</i>	<b>3 - 5 minutes</b>
	<i>Worst case, static</i>	20 minutes
	<i>Worst case, dynamic</i>	30 minutes
<b>Dimensions</b>	<i>Length</i>	340mm inc. mounting brackets
	<i>Min. diameter of customer housing</i>	288mm
	<i>Weight</i>	12kg
<b>Power requirements</b>	<i>DC Supply</i>	24VDC @ 2.2 Amps max.
<b>Environmental</b>	<i>Maximum shock loading</i>	Up to 9g for 11mSec in all axes
	<i>Maximum vibration</i>	5-12.5Hz amplitude 1.6mm
	<i>Operating temperature</i>	-15°C to +55°C
	<i>Storage temperature</i>	-35°C to +73°C
<b>Data outputs</b>	<i>Data communications</i>	RS232, optional RS422, RS485
	<i>Data protocol</i>	Configurable but typically 19200 Baud, 8 data, no parity, 1 stop
	<i>Update rate</i>	Up to 32Hz
	<i>Analogue resolution</i>	12 Bit
<b>Connector</b>		10 Way Amphenol
<b>MTBF</b>		In excess of 25,000 hours



All specifications subject to change without prior notice being given.



**OceanTools Ltd**  
**Unit 11 The Technology Centre**  
**Aberdeen Offshore Technology Park**  
**Aberdeen AB23 8GD. UK.**  
**Tel + 44 1224 709606**  
**Fax + 44 1224 709616**  
**sales@oceantools.ltd.uk**  
**www.oceantools.ltd.uk/**

**Represented by:**