

# IXSEA OCTANS 3000M FIBRE OPTIC GYRO & MOTION SENSOR



## GENERAL DESCRIPTION

The technological heart of OCTANS is the Fibre-Optic Gyroscope (FOG), the only truly-solidstate answer to rotation sensing. Over 15 years, IXSEA has brought this technology to the highest industry standards through a large number of projects and applications.

- No Limitations  
With no spinning devices, the system has no service limitation on roll and pitch.
- Maintenance Free  
OCTANS has no gimbals and because it experiences no mechanical fatigue or breakdown, no maintenance is needed.
- Versatile  
OCTANS is an IMO-certified survey-grade gyrocompass and also a complete motion sensor that outputs Roll, Pitch, Surge, Sway, Heave, Speeds, Accelerations in addition to True Heading.
- High Performing  
OCTANS is the 2nd generation of gyro-compass developed by Photonetics and features improved performances in all sea-conditions:
  - 1-minute settling time
  - 0.1° Heading accuracy
  - 0.01° on Roll and Pitch



**Making  
technology  
work for you!**

**OCEANSCAN LIMITED**  
DENMORE ROAD, BRIDGE OF DON, ABERDEEN,  
SCOTLAND, U.K., AB23 8JW  
TEL: +44(0)1224 707000, FAX: +44(0)1224 707001  
Email: [rental@oceanscan.co.uk](mailto:rental@oceanscan.co.uk), Website: [www.oceanscan.co.uk](http://www.oceanscan.co.uk)  
Accredited to BS EN ISO 9001:2000

# IXSEA OCTANS 3000M FIBRE OPTIC GYRO & MOTION SENSOR

## TECHNICAL SPECIFICATIONS

### GYROCOMPASS

#### Heading

Dynamic accuracy	+/- 0.2°	Secant latitude
Settle point error	+/- 0.1°	Secant latitude
Repeatability	+/- 0.025°	Secant latitude
Resolution	0.01°	
Settling time static conditions	< 1 minute (full accuracy)	
Settling time (at sea)	< 3 minutes (full accuracy)	
Speed compensation	No limitation	
Latitude range	No limitation	

#### Roll and Pitch

Dynamic accuracy	0.01°	
Range	No limitation	(-180° to 180°)
Follow-up speed	Up to 500°/s	

### MOTION SENSOR

#### Heave/Surge/Sway

Accuracy	5 cm or 5% (whichever is highest)
Heave motion periods	0.03 to 1000 s (tunable)

#### Roll and Pitch

Dynamic accuracy	0.01°	
Range	No limitation	(-180° to 180°)
Follow-up speed	Up to 500°/s	

### INERTIAL MOTION UNIT

	Accelerometers	Fibre-optic gyroscopes
In-room bias stability (rms)	20 ug	0.005°/h
Bias stability over temperature range	+/-500 ug	+/-0.05°/h
Resolution	10 ug	0.2 Arc second

### ENVIRONMENT (FOG unit only)

Vibration	1 g sine (5 to 50 Hz)
Shocks operating	30 g 6 ms
Shocks (survival)	50 g 11 ms
MTBF	30,000 hours
Operating temperature	-40 °C to 60 °C
Storage temperature	-40 °C to 80 °C

### SUBSEA HOUSING

Material	Duplex Steel
Depth rating	3000 metres
Dimensions (Ø x H)	179 x 308 mm
Weight (in air)	25 Kgs.
Weight (in water)	17 Kgs.
Mounting/Connector	6 off M6 Holes/16 Pin MCBH16M Subconn
Input	1 serial
Output	1 serial / 4 analog (14 bits / +/- 10 V)
Power Supply / Consumption	24V DC / 12W

Modified for Serial B Option

Marketed By



**Making  
technology  
work for you!**