

Octans Subsea

High-performance subsea gyrocompass and motion sensor

Octans Subsea is a subsea survey-grade gyrocompass and complete motion sensor for water depths up to 3,000 m. Based on iXBlue's FOG technology it outputs heading, roll, pitch, heave, rate of turn and acceleration. Octans Subsea can be easily upgraded to full INS mode (i.e. Rovins).



FEATURES

- Complete gyrocompass and motion sensor
- Smart Heave™
- Fiber-optic gyroscope (FOG), unique strap-down technology
- Ethernet, web-based man-machine interface (MMI)
- Titanium made, small, portable plug and play system
- Optional full featured inertial navigation system

BENEFITS

- High-performance real-time outputs of true heading, roll, pitch, heave, surge, sway, acceleration and rate of turn
- No spinning element hence maintenance free
- Lightweight corrosion free housing for water depth up to 3,000 m, easy to integrate and interface, saves valuable mobilization time
- Obtain INS-class system with simple software upgrade

APPLICATIONS

- ROV and offshore survey
- MBES and sonar motion reference
- Dredging
- Marine construction

TECHNICAL SPECIFICATIONS

Performance

Heading

Accuracy ⁽¹⁾⁽²⁾	0.1 deg secant latitude
Resolution	0.01 deg
Full accuracy settling time (all conditions)	< 5 min
Heave accuracy ⁽⁵⁾	2.5 cm or 2.5% (whichever is greater)

Roll / Pitch

Dynamic accuracy ⁽²⁾	0.01 deg
Resolution	0.001 deg

Operating range / Environment

Operating / storage Temperature	-20 °C to +55 °C / -40 °C to +80 °C
Follow-up speed	Up to 750 deg/s
Acceleration dynamic range	±15 g
Heading / roll / pitch	0 to +360 deg / ±180 deg / ±90 deg
MTBF (computed/observed)	40,000 hours / 80,000 hours
No warm-up effects, insensitive to thermal shocks	
Shock and vibration proof	

Physical characteristics

Depth rating (m)	3,000
Material	Titanium
Weight (air / water) kg	15 / 6.2
Housing dimensions (Ø x H mm)	213 x 375
Connector	5 x SEACON MI-CON
Mounting	6 Ø 6.6 holes

Interfaces

Serial RS232 / RS422 port	5 inputs / 5 outputs / 1 configuration port
Ethernet port ⁽⁵⁾	UDP / TCP client / TCP server
Pulse port ⁽⁶⁾	3 inputs / 2 outputs
Sensors supported	GPS, speed log
Input / output formats	Industry standards: NMEA0183, ASCII, BINARY
Baud rates	600 bauds to 115.2 kbaud
Data output rate	0.1 Hz to 200 Hz
Power supply	24 VDC
Power consumption	< 20 W

(1) secant latitude = 1 / cosine latitude - (2) RMS values - (3) Smart Heave™ - (4) All input /output serial ports are available and can be duplicated on Ethernet ports - (5) Input of GPS PPS pulse for accurate time synchronization of Octans 3000 - (6) Maximum error = 3 or RMS error