

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 Exail'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 dynamic accuracy

With GNSS and/or speed	0.1 deg secant latitude RMS
Roll and pitch dynamic accuracy (no aiding)	0.01 deg RMS

Operating range / Environment

Operating / storage temperature	-20 to 55°C/-40 to 80°C
Rotation rate dynamic range	Up to 750° /Sec
Acceleration dynamic range	+/-30g
Heading /roll/ pitch ranges	0 to +360 deg / ±180 deg / ±90 deg
MTBF	100,000 hours (System observed) 500,000 hours (FOG + Accelerometers)
Robust to harsh environment, shock and vibration proof	Robust to harsh environment, shock and vibration proof
Depth rating	3,000 m

Physical characteristics

Material	Titanium
Weight in air /water	15 / 6.2 kg
Mounting (Ø in mm)	6 Ø 6.5 holes
Dimensions (Ø x H in mm)	Ø 213 x 375 mm
Connector	3 x 12 pins, 1 x 19 pins, 1 x 26 pins SEACON

Interfaces

Sensors	GNSS, Speed sensor (NMEA)
Serial	5 ports : RS422 or RS232
Ethernet	10/100 Mbits, UDP/TCP (client / server) / web server (GUI)
Pulse	3 inputs / 2 outputs
Input/ output	Configurable 7i / 5o Industry standards: NMEA, ASCII, IXBLUE STD BIN etc... more than 130 output protocols
Baud Rate	Up to 460 kbaud
Data output rate	0.1 Hz to 200 Hz
Power supply / consumption ⁽⁵⁾	24 VDC (20 - 32 V) / < 18 W

(1) secant latitude = $1 / \cosine \text{ latitude}$ - (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