



Octans

FIFTH GENERATION SURVEY-GRADE SURFACE GYROCOMPASS AND MOTION SENSOR

The fifth generation Octans is an all-in-one gyrocompass and motion sensor for diverse challenging applications. The new Octans raises the industry standard in measurement accuracy for roll, pitch, heave, and heading while making available inertial navigation system (INS) product upgrade path and IMO-HSC certification. Octans is built on iXblue's trusted and unique ultimate-performance fiber-optic gyroscope (FOG) technology (thousands of units manufactured).

Applications

Survey (MBES/Lidar) – DP (Dynamic Positioning) – Motion monitoring
Platform stabilization – Safe robust navigation, including environments without GPS (e.g. tunneling, defense)

Features

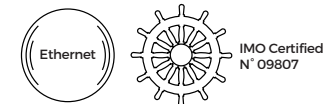
- New generation of algorithms, including heading, Smart Heave™ and real-time heave (30sec period)
- State-of-the-art iXblue FOG, strap-down technology
- Ethernet, web-based GUI and compatibility with survey software suites
- IMO and IMO-HSC certification
- ITAR free (CJ) and O&G license eligibility

Benefits

- Highly accurate real-time output for roll, pitch, true heading, heave, surge, sway, acceleration and rate of turn, even under no GPS/GNSS environment
- Industry's best performance-value offering with unrivaled reliability, backed by 5 year warranty
- Ease-of-use and integration
- Robust heading performance for high-speed vessel with high rate-of-turn
- Ease of export

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Technical specifications



Performance

Heading Accuracy ⁽¹⁾ ⁽²⁾ ⁽⁴⁾	0.1° seclat (Autonomous)/0.05° seclat (with GPS input)
Settling time (typical)	5mn
Resolution	0.01 deg
Heave/Surge/Sway Accuracy	5cm or 5% (whichever is greater)
Delay Heave/Surge/Sway Accuracy	2.5cm or 2.5% (whichever is greater)
Heave periods	up to 30sec
Roll/Pitch/Yaw Dynamic accuracy ⁽²⁾	0.01 deg
Resolution	0.001 deg

Operating range/environnement

Rotation rate dynamic range	Up to 750 deg/s
Acceleration dynamic range	±15 g
MTBF	100,000 hours
Operating/storage temperature	-20 °C to +55 °C/-40 °C to +80 °C
Heading/roll/pitch	0 to +360 deg/±180 deg/±90 deg
Shock and vibration proof	

Physical characteristics

Dimensions (L x W x H)	275 x 136 x 150mm
Weight in air	4.5kg
Water proof	IP66 & IPx7
Material	Aluminum
Same footprint & dimensions as	
4 th generation OCTANS	

Interfaces

User interface	Web-based Graphical User Interface
Serial RS232/RS422 port	3 outputs/2 inputs/1 configuration port
Ethernet port ⁽⁵⁾	5 outputs/4 inputs flow: UDP/TCP Client/TCP server
Pulse port	PPS input for < 100µs time synchronization
Input/Output formats	Industry standards: NMEA0183, ASCII, BINARY
Data output rate	0.1Hz to 200Hz real measurements
Timing	Fix latency 2.35ms, < 200µs jitter
Power supply	24 VDC
Power consumption ⁽⁵⁾	18W
Same connectors and protocols as previous generation Octans	

(1) Secant latitude = 1/cosine latitude

(2) RMS values

(3) All input /output serial ports can be duplicated on Ethernet ports

(4) Maximum error = 3RMS err

(5) Typical value @24V and ambient temperature