

Octans Nano

Compact subsea gyrocompass and attitude sensor

Octans Nano is the smallest and most adept state-of-the-art 6,000 m depth rated Attitude and Heading Reference System (AHRS). It is built on Exail's renowned Fiber-Optic Gyroscope (FOG) technology and offshore instrumentation expertise. Octans Nano offers an outstanding price/performance solution, with rugged titanium housing, meeting the most challenging requirements of subsea applications.



FEATURES

- Smallest all-in-one subsea gyrocompass and attitude sensor
- Leading FOG strap-down technology
- Ethernet and serial interfaces with sensor input rebroadcast capability

BENEFITS

- High-performance sensors with real-time computation of true heading, roll, pitch and rates of turn, in a compact six-liter housing
- High reliability and low maintenance
- Reduced cabling for advanced architectures and maintaining flexibility for older designs
- Free of ITAR components

APPLICATIONS

- ROV navigation
- Fish, Plow, Trencher navigation
- Attitude monitoring of subsea structures

TECHNICAL SPECIFICATIONS

Performance

Heading dynamic accuracy

With GNSS and/or speed	0.5 deg secant latitude RMS
Roll and pitch dynamic accuracy (no aiding)	0.1 deg RMS

Operating range/Environment

Operating/storage temperature	-20 to 55°C / -40 to 80°C
Rotation rate dynamic range	Up to 250° /Sec
Acceleration dynamic range	±5 g
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	6,000 m

Physical Characteristics

Material	Titanium
Weight in air/water	11.33 kg / 6.6 kg
Mounting (Ø in mm)	8 Ø 6.5 holes
Dimensions (Ø x H in mm)	Ø178 x 266 mm
Connector	1 x 26 pins SEACON

Interfaces

Sensors	GNSS, Speed sensor (NMEA)
Serial	2 ports : RS422 or RS232
Ethernet	10/100 Mbits, UDP/TCP (client / server) / web server (GUI)
Pulse	1 input for PPS
Input/output	Configurable 4i / 5o Industry standards: NMEA, ASCII, EXAIL 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) / < 14 W

(1) RMS values

(2) Secant latitude = 1 / cosine latitude

(3) Typical value @24V and ambient temperature