Rovins Nano

Compact and cost-effective inertial navigation system for ROV navigation

Rovins Nano merges the established high-grade iXblue inertial navigation system with our competitive IMU. It is built on iXblue's renowned FOG solid state technology and offshore instrumentation expertise. Rovins Nano offers the unbeatable stability and accuracy of the inertial position while simplifying the operation with its autonomous external sensor management. Rovins Nano is the navigation solution you can rely on, bringing an additional level of safety in case of deficient aiding sensors.

Key Features

True north, roll & pitch, rotation rates
DVL & Depth sensor available as options
Optimised interface withRamses for extending operations
Web GUI and legacy serial control commands
Stand-alone, small and light weight

Benefits

Inertial position & velocity, available with and without DVL
Open architecture; for all 3rd party sensors brands: DVL, USBL, LBL, Depth sensor
Sparse Array enhancement to your existing LBL network
Identical interfacing to Rovins, Phins, Octans ITAR-free, fast export under O&G regulations
Cost effective: better ROI, lower TCO

Performance / characteristics

Position accuracy	
With GNSS/USBL/LBL	Three times better than GNSS / USBL / LBL
DVL-Aided straight line performance	0.20 %TD (CEP 50)
DVL-aided optimal performances in typical conditions	0.04 %TD (CEP 50)
Heading accuracy	0.6m / 2.2m (CEP50)
With GNSS (or USBL/LBL) & DVL	0.10 deg secant latitude RMS
With GNSS or DVL or USBL/LBL	0.15 deg secant latitude RMS

Operating range

Operating / storage temperature	-20 to 55°C/-40 to 80°C
Rotation rate dynamic range	Up to 250° /Sec
Acceleration dynamic range	+/-5g
Heading /roll/ pitch ranges	0 to +360 deg / ±180 deg / ±90 deg
MTBF	150,000 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	4,000 m

Material Titanium

Weight in air /water	10 / 5.5 kg
Mounting (Ø in mm)	8 Ø 6.5 holes
Dimensions (Ø x H in mm)	Ø178 x 266 mm
Connector	3 x 12 pins, 1 x 26 pins SEACON

Interfaces

Sensors	GNSS / USBL / LBL / DVL / EMLOG / DEPTH / CTD / SVP
Serial	5 ports : RS422 or RS232
Ethernet	10/100 Mbits, UDP/TCP (client / server) / web server (GUI)
Pulse	1 input for PPS
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) / < 14 W