



ROVINS

INERTIAL NAVIGATION SYSTEM FOR SUBSEA VEHICLES

ROVINS is a combined survey-grade full featured Inertial Navigation System (INS) for water depths up to 3,000m. Designed specifically for offshore survey and construction works, ROVINS improves the efficiency of all operations where accurate position, heading and attitude are key benefits.

FEATURES

- All-in-one 3D positioning with heading, roll, pitch and heave
- Fiber Optic Gyroscope (FOG), unique strap-down technology
- Multiple aiding options (DVL, USBL, LBL, RAMSES, GPS, depth sensor)
- DVL Ready option available
- RAMSES Synthetic Baseline Positioning System option available
- OCTANS footprint compatible

BENEFITS

- Accurate georeferenced position and attitude for all subsea vehicles at high frequency
- No spinning element hence maintenance free
- Flexible and scalable configuration for all deployment scenarios
- Immediate availability and performance for all vehicles
- Ultimate sub-metric performance using sparse array transponders and on-the-fly calibration
- Immediately compatible



APPLICATIONS • ROV/AUV positioning • Multibeam sonar motion reference • Subsea construction

ROVINS

TECHNICAL SPECIFICATIONS

PERFORMANCE

Position accuracy⁽¹⁾

With USBL/LBL

With DVL

No aiding for 1 min/2 min

Three times better than USBL/LBL accuracy

0.2% of travelled distance

1.5 m/6 m

Heading accuracy⁽²⁾⁽³⁾

With GPS/USBL/LBL/DVL

Roll and Pitch accuracy⁽²⁾

Heave accuracy

0.05 deg secant latitude

0.01 deg

5cm or 5% (Whichever is greater)

OPERATING RANGE / ENVIRONMENT

Operating / Storage Temperature

Rotation rate dynamic range

Acceleration dynamic range

Heading / Roll / Pitch

MTBF (computed/observed)

No warm-up effects

Shock and Vibration proof

-20 to 55 °C / -40 to 80 °C

Up to 750 deg/s

± 15 g

0 to +360 deg / ±180 deg / ±90 deg

40,000 hours/80,000 hours

PHYSICAL CHARACTERISTICS

Depth rating (m)	Material	Weight in air/water [kg]	Housing dimensions (Ø x H mm)	Connector	Mounting
3000	Titanium	14,63/5,86	213 x 374	3 x 12 pin 1 x 19 pin 1 x 26 pin SEACON MINI-CON	6 Ø 6.6 holes
3000 « DVL Ready »	Titanium	32.6/16.3 (WHN300K3,WHN600K3) 29.2/13.6 (WHN1200K3)	255 x 595	3 x 12 pin 1 x 19 pin 1 x 26 pin SEACON MINI-CON	6 Ø 11 holes

INTERFACES

Serial RS232/RS422 port

Ethernet port⁽⁴⁾Pulse port⁽⁵⁾

Sensors supported

Input/Output formats

Baud rates

Data output rate

Power supply

Power consumption

5 inputs / 5 outputs / 1 configuration port

UDP / TCP Client / TCP server

3 inputs / 2 outputs

GPS, USBL, RAMSES, LBL, DVL, DEPTH, CTD/SVP

Industry standards: NMEA0183, ASCII, BINARY

600 bauds to 115.2 kbaud

0.1 Hz to 200 Hz

24 VDC

15 W

(1) CEP: 50 % circular Error Probability. DVL aiding position accuracy is dependent on DVL performances.

(2) RMS values

(3) Secant latitude = 1 / cosine latitude

(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 ROVINS

Specifications subject to change without notice