

IXSEA PHINS INERTIAL NAVIGATION SYSTEM



GENERAL DESCRIPTION

PHINS 6000 with DVL Ready Option, is a subsea inertial navigation system providing subsea vehicles with position, true heading, attitude, speed and heave. The high accuracy inertial measurement unit is based on FOG technology coupled with an embedded digital signal processor that runs an advanced Kalman filter.

FEATURES

- All-in-one 3D positioning with heading, roll and pitch
- Fibre Optic Gyroscope (FOG), unique strap-down technology
- Multiple interfaces (DVL, USBL, LBL, GPS and depth sensor)
- DVL Ready option also available

BENEFITS

- Gain time and accuracy for all subsea projects
- No spinning element hence maintenance free
- Smooths and extends the capability of surface based USBL positioning systems (IXSEA's GAPS system) into even deeper water



**Making
technology
work for you!**

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Accredited to BS EN ISO 9001:2000

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TECHNICAL SPECIFICATIONS

PHINS 6000

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PERFORMANCE

Position accuracy⁽¹⁾	
With stand-alone GPS aiding	5 to 15 m
With differential GPS aiding	0.5 to 3 m
With RTK differential GPS aiding	2 to 5 cm
With DVL aiding	0.1% of traveled distance (3 m/hr at 2 knots)
No aiding for 2 minutes	3 m
No aiding for 5 minutes	20 m
Pure inertial mode	0.6 NM/hr
Heading accuracy⁽²⁾	
With GPS aiding	0.01 deg secant latitude ⁽³⁾
With DVL aiding only	0.02 deg secant latitude ⁽³⁾
No aiding	0.05 deg secant latitude ⁽³⁾
Roll and Pitch accuracy⁽²⁾	0.01 deg
Heave accuracy	5 cm or 5% (whichever is highest) Setup free: SAFE HEAVE™

OPERATING RANGE / ENVIRONMENT

Operating / Storage Temperature	-10 to 50 °C / -40 to 80 °C
Calibration interval	None required
MTBF	30,000 hours
Angular dynamic range	< 500 deg/s
Acceleration dynamic range	± 5 g
Attitude range	No limitation

PHYSICAL CHARACTERISTICS

Dimensions (Ø x H)	255 x 271 mm
Weight in air / water	20 kg / 14.5 kg
Material	Titanium
DVL Ready option (WHN series compatible)	
Dimensions (Ø x H)	30 x 525 mm
Weight in air / water	45 kg / 30 kg
Material	Titanium

INTERFACES

RS 232/ RS 422	6 inputs, 6 outputs
Data output rate	0.1 Hz to 100 Hz
Output format	Based on industry standards (NMEA0183, ASCII, hexa or binary)
Power consumption	< 12 W
Power supply	24 V nominal (from 20 to 30 V)

(1) CEP: Circular Error Probability 50 % - (2) Heading, Roll, Pitch figures are RMS values - (3) Secant Latitude = 1 / cosine latitude



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