



HYDRINS

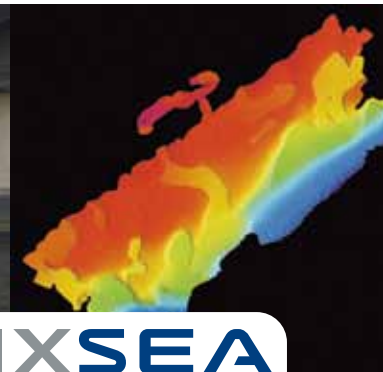
HYDROGRAPHIC SURVEY / MULTIBEAM SURVEY

HYDRINS is a high performance Inertial Navigation System optimised for hydrographic survey using multibeam echosounders. HYDRINS comprises a single compact unit and delivers highly accurate real time position, attitude and velocity data. In addition to the real-time options, HYDRINS raw data can be post-processed using IXSEA DELPH INS.

- Proven high performance IXSEA INS technology inside
- Compact, uses any kind of GPS (only one GPS required)
- DELPH INS (Windows based) post processing package included
- GPS drop-out / multipath management
- Ethernet, WEB-based MMI (Man Machine Interface)

BENEFITS

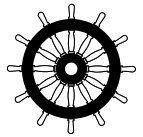
- Reliable and accurate motion, speed, position and heave data
- Fast and reliable installation on all vessels
- A complete solution packed with easy to use yet powerful post-processing tools
- Motion and heading not affected by GPS outages, position remains valid for minutes
- Network ready, intuitive user interface



APPLICATIONS • Multibeam survey • Hydrographic survey • Harbours and inland waterways

HYDRINS

TECHNICAL SPECIFICATIONS



IMO Certified
N° 19111/A1 EC
N° 19184/A1 EC

PERFORMANCE

Position accuracy Real Time ⁽¹⁾ With GPS No aiding for 1 min / 2 min	3 times better than GPS 0.8 m / 3.2 m
Position accuracy Post Processed ⁽¹⁾ With GPS No aiding for 1 min / 2 min	4 times better than GPS 0.2 m / 1m
Heading accuracy ^{(2) (3)}	0.02 deg secant latitude
Roll and Pitch dynamic accuracy ⁽²⁾ Heave accuracy (Smart Heave) ⁽⁴⁾	0.01 deg 2.5cm or 2.5%

OPERATING RANGE / ENVIRONMENT

Operating / Storage Temperature	-20 to 55 °C / -40 to 80 °C
Rotation rate dynamic range	Up to 750 deg/s
Acceleration dynamic range	± 15 g
Heading / Roll / Pitch	0 to +360 deg / ±180 deg / ±90 deg
MTBF (computed/observed)	40,000/80,000 hours
No warm-up effects	
Shock and Vibration proof	

PHYSICAL CHARACTERISTICS

Dimensions (L x W x H)	180 x 180 x 160 mm
Waterproof	IP66
Weight	4.5 kg
Material	Aluminium

INTERFACES

Serial RS232 or RS422	5 inputs / 5 outputs / 1 configuration port
Ethernet Port ⁽⁵⁾	UDP / TCP Client / TCP server
Pulse port ⁽⁶⁾	4 inputs and 2 outputs
Sensors supported	GPS
Input / Output formats	Industry standards: NMEA0183, ASCII, BINARY
Baud rates	600 bauds to 115.2 kbaud
Data output rate	0.1 Hz to 200 Hz
Power supply	24 VDC
Power consumption	15 W

(1) CEP: 50 % circular Error Probability

(2) Heading, Roll, Pitch figures are RMS values

(3) Secant latitude = $1 / \cosine\ latitude$

(4) Whichever is greater for periods up to 30 seconds. Smart Heave is delayed by 100 s fixed value.

Real time heave accuracy is 5 cm or 5% whichever is greater

(5) All input/output serial ports are available and can be duplicated on Ethernet ports

(6) Use GPS PPS pulse for accurate time synchronization of HYDRINS

Specifications subject to change without notice