



HYDRINS

HYDROGRAPHIC SURVEY / MULTIBEAM SURVEY

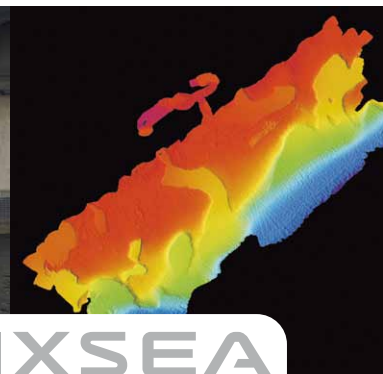
HYDRINS is a high performance Inertial Navigation System optimised for hydrographic survey using multibeam echosounders. HYDRINS comprises a single compact unit and delivers highly accurate real time position, attitude and velocity data. In addition to the real-time options, HYDRINS raw data can be post-processed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

FEATURES

- 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

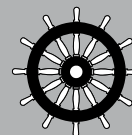
- Reliable and accurate motion, speed, position and heave data
- Fast and reliable installation on all vessels
- A complete solution packed with easy to use yet powerful post-processing tools
- Motion and heading not affected by GPS outages, position remains valid for minutes
- Network ready, intuitive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