



MARINS

INERTIAL NAVIGATION SYSTEM

MARINS, the state-of-the-art naval inertial navigation system, designed to meet the demands of the navy for more accurate INS. Its performance and reliability have passed the space quality grading standards.

FEATURES

- Fiber Optic Gyroscope (FOG), unique strap-down technology
- High-accuracy sensors
- Milspec approved standard
- Low consumption
- Multiple interfaces such as GPS and log
- Fast alignment time algorithm

BENEFITS

- No spinning element hence maintenance free
- 1 nautical mile in 24 hours CEP
- Standardized for all types of international military vessels
- High reliability
- Versatile



APPLICATIONS • Corvettes • Submarines • Frigates • Aircraft carriers • Navy test vessels

MARINS

TECHNICAL SPECIFICATIONS

PERFORMANCE

Position accuracy ⁽¹⁾	
for 8 hours	0.5 NM
for 24 hours	1 NM
Velocity ⁽²⁾ no aiding	0.6 knot
Heading accuracy ⁽²⁾⁽³⁾	0.01 deg secant latitude
Roll/Pitch accuracy ⁽²⁾	0.01 deg

OPERATING RANGE / ENVIRONMENT

Operating / Storage Temperature	0°C to 40 °C / -40 to 80 °C
Heading / Roll / Pitch	0 to +360 deg / ±180 deg / ±90 deg
Environment	Qualified to MIL STD 810 E / 461 D

PHYSICAL CHARACTERISTICS

Weight	24 kg
Calibration interval	none required
MTBF	40,000 hours
Dimensions (L x W x H)	433 x 324 x 316 mm

INTERFACES

Serial RS232/RS422 port	5 inputs / 5 outputs / 1 configuration
Ethernet port ⁽⁴⁾	UDP / TCP client / TCP server
Pulse port ⁽⁵⁾	4 inputs and 2 outputs
Sensors supported	GPS, USBL, LBL, DVL, DEPTH, CTD/SVP, EM LOG
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	18 W

(1) CEP: 50 % circular Error Probability, with EM Log

(2) RMS values

(3) Secant latitude = $1 / \cosine \text{ latitude}$

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

(5) Use GPS PPS pulse for accurate time synchronization of PHINS

Specifications subject to change without notice