

# SITEX<sup>®</sup>

## HDK-11

3 Axis Rate Compass



### **The Advantage is the Accuracy**

Whether you are offshore fishing or just enjoying family time on the water, feel confident and comfortable that the H2183 is your reliable source for heading information. The solid-state three-axis compass, combined with Airmar's additional advanced sensors and software provide unparalleled performance.

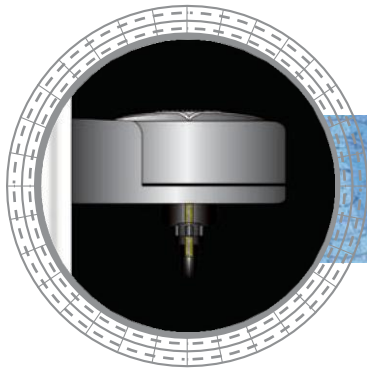
What sets the H2183 apart from the competition is its ability to maintain 2° of heading accuracy under dynamic motion conditions, such as steep heeling, hard turns, and rough seas. Heading integrated with the three-axis rate gyro and three-axis accelerometer data allows the H2183 to maintain 2° of accuracy even if the vessel is pitching and rolling up to 30°. This level of accuracy is perfect for interfacing with autopilots, chart plotters, and radar systems.

The H2183's innovative circular design easily mounts and aligns on ANY angled bulkhead. Designed for simultaneous use with NMEA 0183 and NMEA 2000® devices, the waterproof, easy-to-install sensor can be wired into both NMEA 0183 and NMEA 2000 networks on the vessel with just a single cable.

## Heading Sensor

### Features

- Better than 1° heading accuracy in static conditions
- Best-in-class 2° heading accuracy in dynamic conditions
- Three-axis solid-state compass provides heading data
- Three-axis accelerometer provides pitch and roll data
- Three-axis rate gyro provides rate-of-turn data
- Only recreational heading sensor that uses a three-axis rate gyro
- Compass calibration can be easily done on any display or PC
- Easily mounts on any angled bulkhead
- IPX6 waterproof enclosure
- Default 10 Hz update rate for heading (HDG)
- Outputs NMEA 0183 and NMEA 2000 data simultaneously



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## Technical Information

### SPECIFICATIONS

- Static Compass Accuracy: 1° RMS when level
- Dynamic Compass Accuracy: 2° RMS (Best-in-Class)
- Heading Display Resolution: 0.1°
- Settling Time: 1 second (adjustable)
- Heading Data Output Update Rate:
  - 10 Hz—NMEA 0183
  - Adjustable up to 20 Hz—NMEA 2000°
- Rate-of-Turn Range: 0° to 70° per second
- Rate-of-Turn Accuracy: 1° per second
- Rate-of-Turn Data Output Update Rate:
  - 2 Hz—NMEA 0183 (Adjustable up to 10 Hz)
  - Adjustable up to 20 Hz—NMEA 2000°
- Pitch and Roll Range: ±50°
- Static Pitch and Roll Accuracy: <1°
- Dynamic Pitch and Roll Accuracy: <3°
- Pitch and Roll Display Resolution: 0.1°
- Pitch and Roll Boat Alignment: Yes (with software)
- Pitch and Roll Data Output Update Rate:
  - 2 Hz—NMEA 0183 (Adjustable up to 10 Hz)
  - Adjustable up to 20 Hz—NMEA 2000°
- Supply Voltage: 9 VDC to 40 VDC
- Supply Current: <70mA
- Operating Temperature Range: -25°C to 55°C (-13°F to 131°F)
- Storage Temperature Range: -30°C to 70°C (-22°F to 158°F)
- NMEA 2000® Load Equivalency Number (LEN): 3
- Certifications and Standards: CE, IPX6, RoHS, IEC60945

### DATA OUTPUT PROTOCOL

- NMEA 0183 Sentence Structure**
- \$HCHDG..... Heading (Magnetic)
  - \$HCHDT..... Heading Relative to True North  
(Needs External GPS Input)
  - \$TIROT..... Rate of Turn
  - \$YXXDR..... Transducer Measurements: Vessel Attitude

**NMEA 2000® Supported PGNs**

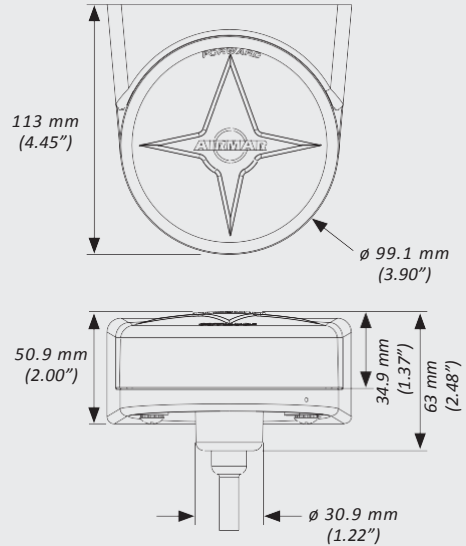
- 127250..... Vessel Heading
- 127251..... Rate of Turn
- 127257..... Attitude

Tel: 631-996-2690

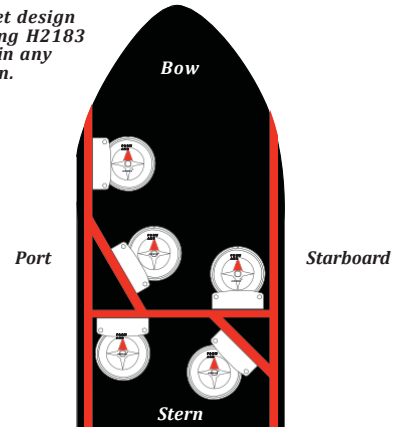
[www.si-tex.com](http://www.si-tex.com)

25 Enterprise Zone Drive, ste #2  
Riverhead, NY 11901

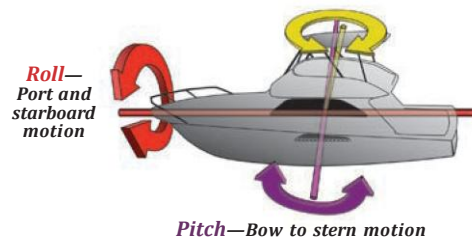
### DIMENSIONS



Adjustable bracket design allows for adjusting H2183 toward the Bow, in any mounting location.



**Yaw**—Left to right turning motion



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