

GH2183



The patented Airmar GH2183 combines GPS positioning and highly accurate heading information in one compact antenna. The GH2183 eliminates the need to install a GPS antenna above deck and a heading sensor below deck. Only one above-deck installation is required, saving installation time and money. The waterproof housing protects the internal components—all of which are solid-state (no moving parts). This means the GH2183 can withstand almost any condition that exists in the marine environment.

Heading Sensor With GPS

The Best Performance in ANY Sea Condition

What sets the GH2183 apart is our 2° heading accuracy in dynamically changing conditions including rough seas, hard turns, and steep heeling. Airmar's unique dynamic motion correction software is the key difference, allowing the GH2183 to maintain 2° of accuracy even if the vessel is pitching and rolling up to 30°. Also unique to the GH2183 is that the three-axis accelerometer and three-axis rate gyro are temperature compensated across the entire operating range, resulting in precise tilt and rate of turn data. The fast 10 Hz update rate, along with best-in-class heading and GPS data, make it the best choice for interfacing with autopilots, chartplotters, navigation software, and radar systems.

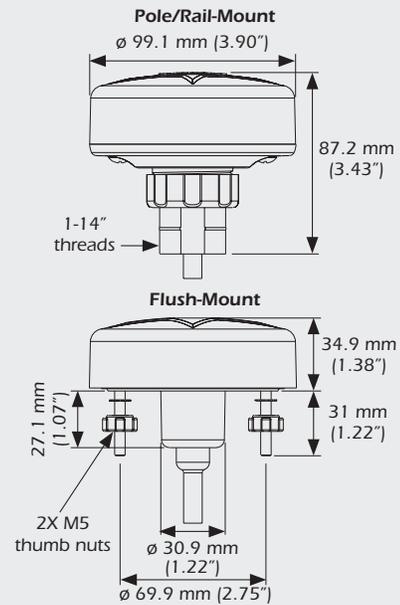
Features

- GPS and heading combined into one housing
- Better than 1° heading accuracy in static conditions
- Best-in-class 2° heading accuracy in dynamic conditions
- Three-axis, solid-state compass with dynamic stabilization
- Only recreational heading sensor that uses a three-axis rate gyro for rate-of-turn data
- Three-axis accelerometer for best-in-class pitch and roll information
- Compass calibration can be done easily on any display or PC
- WAAS GPS provides latitude, longitude, COG, SOG, time and date, and magnetic variation data
- Outputs NMEA 0183 and NMEA 2000® data simultaneously
- IPX6 waterproof housing
- Optionally available as GPS only model, G2183

SPECIFICATIONS

Certs And Standards	CE, IPX6, RoHS, IEC60945
GPS Cold-start Acquisition	52 s
GPS Fix Update Rate	1 time/s
GPS Position Accuracy	3 m (10') with WAAS (95% of the time, SA off)
GPS Satellites Tracked	14-channel (maximum)
GPS WAAS/EGNOS Satellites Tracked	any channel available
Heading Variation	Yes
NMEA 2000 LEN	1
Operating Temp Range	-25 to 55°C (-13 to 131°F)
Pitch and Roll Data-output Update Rate - NMEA 0183	2 Hz (adjustable up to 10 Hz)
Pitch and Roll Dynamic Accuracy	<3°
Pitch and Roll Range	±50°
Pitch and Roll Static Accuracy	<1°
Power Supply Current	<55 mA (<0.7 W) at 12 VDC
Power Supply Voltage	9 to 40 VDC
Rate of Turn Accuracy	1°/s
Rate of Turn Range	0 to 70°/s
Temperature Storage Range	-30 to 70°C (-22 to 158°F)
Three-axis Compass Data-output Update Rate - NMEA 0183	10 Hz
Three-axis Compass Data-output Update Rate - NMEA 2000	Adjustable up to 20 Hz
Three-axis Compass Display Resolution	0.1°
Three-axis Compass Dynamic Accuracy	2° RMS (Best-in-Class)
Three-axis Compass Settling Time	1 s (adjustable)
Three-axis Compass Static Accuracy	1° RMS when level
Pitch and Roll Data-output Update Rate - NMEA 2000	Adjustable up to 20 Hz
Pitch and Roll Display Resolution	0.1°
Rate of Turn Data-output Update Rate - NMEA 0183	2 Hz (adjustable up to 10 Hz)
Rate of Turn Data-output Update Rate - NMEA 2000	Adjustable up to 20 Hz

DIMENSIONS



DATA OUTPUT PROTOCOL

NMEA 0183 Sentence Structure

\$GPDTM	Datum Reference
\$GPGGA	GPS Fix Data
\$GPGLL	Geographic Position—Latitude and Longitude
\$GPGSA	GNSS DOP and Active Satellites
\$GSGSV	GNSS Satellites in View
\$GPRMC	Recommended Minimum Specific GNSS Data
\$GPVTG	Course Over Ground and Ground Speed
\$GPZDA	Time and Date
\$HCHDG	Heading, Deviation, and Variation
\$HCHDT	Heading Relative to True North
\$TIROT	Rate of Turn
\$YXXDR	Transducer Measurements: Vessel Attitude

NMEA 2000* Supported PGNs

127250	Vessel Heading
127251	Rate of Turn
127257	Attitude
127258	Magnetic Variation
129025	Position and Rapid Update
129026	COG and SOG, Rapid Update
129029	GPS Position Data
129033	Time and Date
129044	Datum
129538	GNSS Control Status
129539	GNSS DOPs
129540	GNSS Sats in View
129541	GPS Almanac Data



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GH2183_r5 02/21/24

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