VECTOR CARBON

Professional, robust and high performance GPS Compass

VECTOR CARBON is a GPS compass that gives a precise heading information, almost 100% of the time – at all courses. Systems such as radars, autopilots, sonars etc. in your boat which depends on compass information will improve its performance significantly. The smart antenna design simplifies installation (NMEA0183 or NMEA2000) and reduce the need for other equipment. VECTOR CARBON comprise two GPS receivers with integrated antennas and integrated electronics using RTK technology to provide accurate heading data.

By using a sophisticated algorithm VECTOR CARBON has a true rate accuracy of +/-1° that is much better than a regular fluxgate compass – but at similar cost. Taking into consideration that you get high accurate GPS data such as POS, SOG and COG the VECTOR CARBON system is a much better choice than a fluxgate compass with rate sensors!

VECTOR CARBON provides updated position information of up to 10 Hz and also heading rate update of up to 10 Hz. It has integrated DGPS capability (WAAS/EGNOS). VECTOR CARBON is equipped with a rate gyro, that supports the unit for quick changes in direction, giving an unprecedented accuracy. VECTOR CARBON has a position accuracy of + /-1 m with DGPS.

KEY FEATURES

- GPS compass with small dimensions
- SBAS for increased accuracy
- Heading accuracy: 0,75 degrees
- Position accuracy; 1m (SBAS)
- NMEA0183 and NMEA2000 interface
- 10 Hz update rate

True Heading AB tel: +46 08 622 26 60 email: info@trueheading.se www.trueheading.se

TRUE HEADING

TECHNICAL SPECIFICATIONS

GPS Sensor Specifications

Receiver Type:	L1, C/A code, with carrier phase smoothing
Channels:	Two 12-channel, parallel tracking (Two 10-channel when tracking SBAS)
SBAS Tracking:	2-channel, parallel tracking
Update Rate:	10 Hz standard 20 Hz optional (position and heading)
Horizontal Accuracy:	< 1.0 m 95% confidence (DGPS[1]) < 2.5 m 95% confidence (autonomous, no SA[2])
Heading Accuracy:	< 0.75˚ rms
Pitch/Roll Accuracy:	< 1.5˚ rms
Heave Accuracy:	30 cm [5]
Rate of Turn:	90˚/s maximum
Compass Safe Distance:	30 cm [4]
Cold Start:	< 60 s (no almanac or RTC)
Warm Start:	< 20 s typical (almanac and RTC)
Hot Start:	< 1 s typical (almanac, RTC and position)
Heading Fix:	< 10 s typical (valid position)
Maximum Speed:	1,850 kph (999 kts)
Maximum Altitude:	18,288 m (60,0000 ft)

Physical

Dimensions:	41.7 L x 15.8 W x 6.9 H cm (16.4" L x 6.2" W x 2.7" H)
Weight:	1.5 kg (3.3 lb)
Power/Data Connector:	12-pin, Female, IP67

Electrical

Input Voltage:	6 to 36 VDC
Power Consumption:	3 W nominal
Current Consumption:	250 mA @ 12 VDC
Power Isolation:	Isolated to enclosure
Reverse Polarity Protection:	Yes

Communications

Serial Ports:	2 full-duplex RS-232
Baud Rates:	4800 - 115200
Correction I/O Protocol:	RTCM SC-104
Data I/O Protocol:	NMEA 0183, Crescent binary[3], CAN

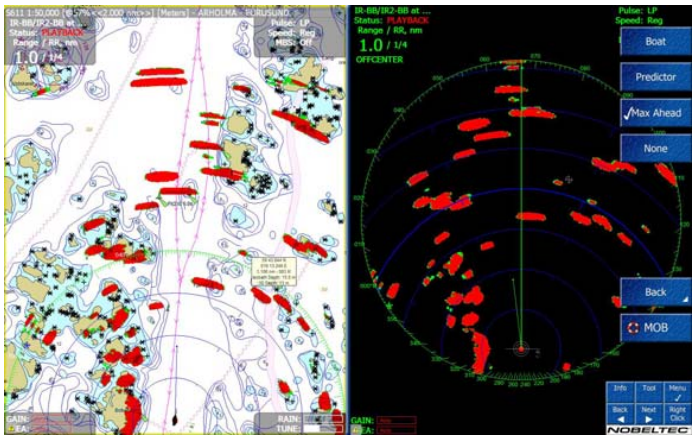
Environmental

Operating Temperature:	-30°C to + 70°C (-22°F to + 158°F)
Storage Temperature:	-40°C to + 85°C (-40°F to + 185°F)
Humidity:	100% non-condensing
Vibration:	IEC 60945
EMC:	FCC Part 15, Subpart B, CISPR22, CE

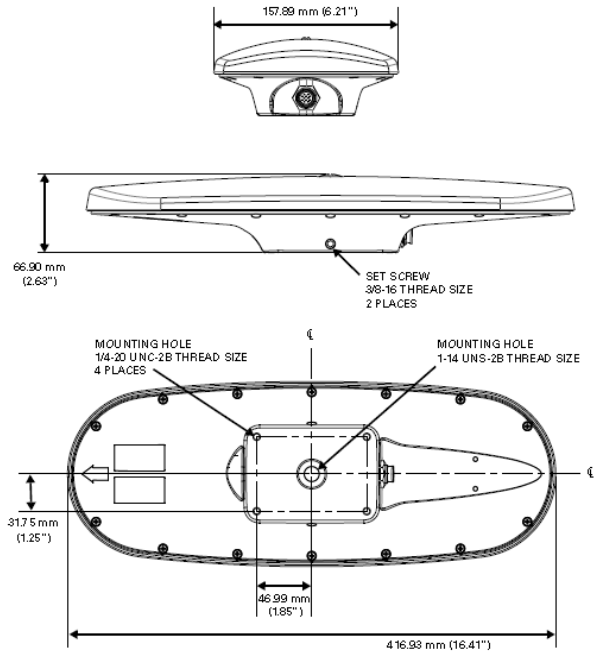
Aiding Devices

Gyro:	Provides smooth heading, fast heading reacquisition and reliable < 1° heading for periods up to 3 minutes when loss of GPS has occurred
Tilt Sensors:	Assists in fast startup of heading solution

1 Depends on multipath environment, number of satellites in view, satellite geometry, ionospheric activity and use of SBAS
2 Depends on multipath environment, number of satellites in view, satellite geometry and ionospheric activity
3 Hemisphere GPS proprietary
4 IEC 60945 Standard
5 Based on a 40 second time constant



The Vector Carbon GPS Compass gives invaluable support to radar overlay, sonar and autopilot performance so that full achievements can be obtained from all navigationsystems onboard.



True Heading Dealer

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