ComNav®

VECTOR G2 and G2B

GPS Satellite Compasses

Affordable Vector G2 Provides Accurate Heading and Position Solutions

- Precise 2D heading and positioning data
- Heading accuracy of better than 0.5 degrees
- Rate of turn tracking rates up to 90º/sec
- Pitch and roll accuracy of better than 1 degree
- Fully compatible with on-board Autopilot, Radar, AIS, PC, Sonar
- Better than 1 meter differential position accuracy (DGPS/G2B)
- Differential Correction source options include SBAS (WAAS, EGNOS and MSAS) and RTCM SC-104 data (External Source)
- G2B can also use terrestrial DGPS Radio beacon signals
- Integrated Gyro & Tilt sensors provide heading during momentary loss of satellite signals and speed up GPS signal reacquisition
- Heading Position Updates up to 20 Hz
- Multiple BAUD rate selections: 4800/9600/19200/38400
- Pre-programmed default settings for Heading, Rate of Turn Course over Ground, Lat/Long Geographic position, Time & Date
- Two mounting bases, Pole or Fixed mount
- Heading solution for steel vessels
- Waterproof — commercial grade IP67 standards
- CE certified for EMI and RFI immunity
- Optional 15m or 30m cable
- IMO Compliant

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GPS Sensor Specifications

Receiver Type:	L1, C/A code, with carrier phase smoothing
Channels:	12-channel parallel tracking (10 channel when tracking SBAS / 2 for SBAS)
Update Rate:	Standard 5Hz, optional up to 20 Hz (position and heading)
Horizontal Accuracy:	< 1 m (DGPS)* < 2.5 m (autonomous, no SA)**
Heading Accuracy:	< 0.5º
Pitch / Roll Accuracy:	< 1º
Rate of Turn:	90º / sec max
Start-up Time:	< 60 sec typical
Heading Fix:	< 20 sec
Satellite Reacquisition:	< 1 sec

Beacon Receiver Specifications (G2B)

Channels:	2-channel, parallel tracking
Frequency Range:	283.5 to 325 kHz
Operating Modes:	Automatic (signal strength or range) and manual
Compliance:	IEC 61108-4 beacon standard

Communications

Serial Ports:	2 full duplex RS-232 and 2 half-duplex RS-422
Baud Rates:	4800 - 38400
Correction I/O Protocol:	RTCM SC-104
Data I/O Protocol:	NMEA 0183
Heading Warning I/O:	Open relay system indicates invalid heading
NMEA Heading Messages:	$GPHDT, $GPROT, $PSAT, $GPHDM, $GPHDG

Environmental

Operating Temperature:	-32ºC to +74ºC (-25ºF to + 165ºF)
Storage Temperature:	-40ºC to +85ºC (-40ºF to + 185ºF)
Humidity:	100% non-condensing

Power

Input Voltage:	10 to 36 VDC
Power Consumption:	< 5 W
Current Consumption:	< 360 mA @ 12 VDC
Isolation:	Power supply isolated from serial ports
Reverse Polarity Protection:	Yes

Mechanical

Dimensions:	(see figure)
Weight:	1.5 kg (3.3 lb)
Power/Data Connection:	18-pin, Environmentally sealed 15m or 30m cable (options)

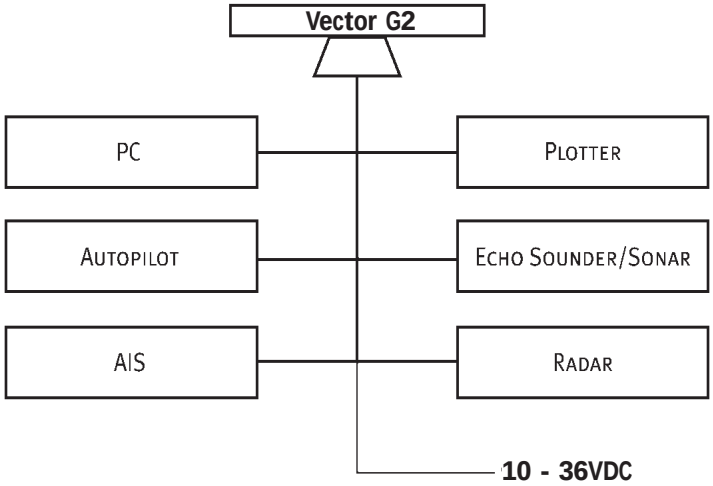
Aiding Devices

Gyro:	Single axis gyro provides reliable < 1º heading for periods up to 3 minutes when loss of GPS lock has occured
Tilt Sensor:	Assists in fast GPS Signal Reacquisition

* Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services), and ionospheric activity.

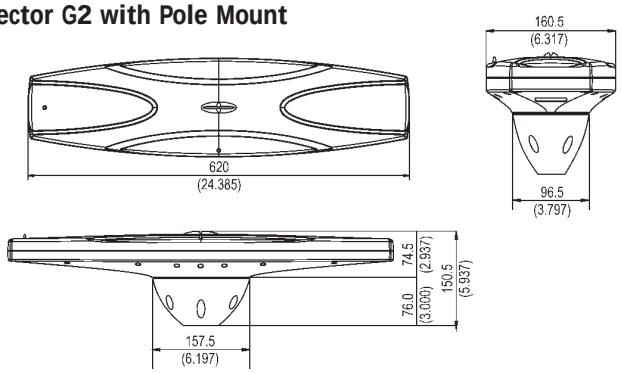
** Depends on multipath environment, number of satellites in view, and satellite geometry.

CONNECTIONS

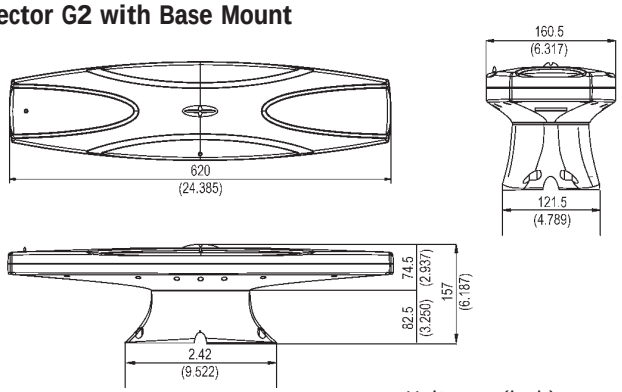


DIMENSIONS

Vector G2 with Pole Mount



Vector G2 with Base Mount



Unit: mm (inch)

Represented by:

Specifications subject to change without notice

ComNav®

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