Vector Sensor

Vector Sensor

- Delivers accurate 2D GPS heading data (heading and roll or pitch) with better than 0.1 degree rms accuracy with a short 2 m antenna separation
- Computes accurate heading at rates of up to 10 Hz and position at rates of up to 5 Hz
- Includes internal SBAS demodulator for differential positioning
- Beacon DGPS source available with the Vector Sensor Pro
- LED indicators located on the front panel provide a quick indication of system status
- Fast heading fix is in less than 20 s after initial position for 0.5 m separation
- Dual RS 232 serial ports offers flexibility for data configuration
- High performance, professional GPS compass

Hemisphere GPS®

www.hemispheregps.com

Vector Sensor

General Specifications

Receiver Type:	L1, C/A code with carrier phase smoothing
Channels:	12-channel, parallel tracking (10-channel when tracking SBAS)
Update Rate:	5Hz position max, 10Hz heading max
Horizontal Accuracy:	<1 m 95% (DGPS)* <5 m 95% (autonomous, no SA)**
Heading Accuracy:	<0.25° rms @ 0.5 m antenna sep. <0.15° rms @ 1 m antenna sep. <0.1° rms @ 2 m antenna sep.
Pitch / Roll Accuracy:	<1°rms @ 0.5m antenna sep.
Rate of Turn:	25°/s max
Start Up Time:	< 60 s typ.
Heading Fix:	< 20 s
GPS Reacquisition:	< 1 s
Antenna Input Impedance:	50 Ω

Beacon Sensor Specifications (PRO version only)

Channels:	2-channel, parallel tracking
Frequency Range:	283.5 to 325 kHz
Operating Modes:	Automatic and manual
Sensitivity:	2.5dB µV for 6 dB SNR @ 200 bps
Dynamic Range:	100 dB
Adjacent Channel Rejection:	61 dB @ f_o ± 400 Hz

Communications

Serial ports:	2 full duplex RS-232
Isolation:	All serial ports optically isolated from power suppply.
Baud Rates:	4800, 9600, 19200
Correction I/O Protocol:	RTCM SC-104
Data I/O Protocol:	NMEA 0183, SLX binary
Timing Output:	1 PPS (HCMOS, active high, rising edge sync, 10 kΩ, 10 pF load)
IPPS Accuracy:	50 ns
NMEA Heading Messages:	$HEHDT, $HEROT, $PSAT, HPR

Environmental

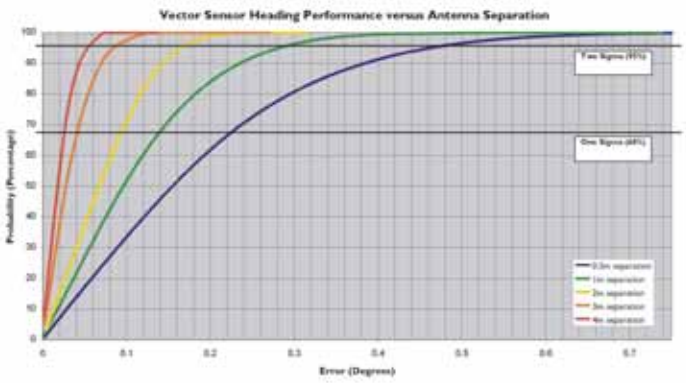
Operating Temperature:	-30°C to +70°C
Storage Temperature:	-40°C to +85°C
Humidity:	95% non-condensing

Power

Input Voltage:	8.0 to 40 VDC
Reverse Polarity Protection:	Yes (but not reverse polarity operaition)
Power Consumption:	< 4.5 W
Current Consumption:	< 360 mA @ 12 VDC
Antenna Voltage Output:	5 VDC
Antenna Short Circuit Protection:	Yes

Mechanical

Dimensions:	203 mm L x 139 mm W x 64 mm H (8.00" L x 5.47" W x 2.52" H)
Weight:	<1000 g (<2.2 lb)
Status Indication:	Power, GPS lock, differential lock, DGPS position, and heading indication
Power Switch:	Miniature push-button
Data Connector:	2-pin circular miniature
Data Connector:	DB9 female
GPS Antenna Connectors:	TNC female
Beacon Antenna Connector:	TNC female



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

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Hemisphere GPS® Dealer

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