



# **G1**GNSS Satellite Compass

## Accurate Heading, Position and Rate of Turn

- New: Supports both GPS and GLONASS satellites for complete redundancy
- New: Heading accuracy < 0.5° rms
- New: Position accuracy < 1.0m 95% confidence (DGPS)</li>
- New: An integrated 9 Axis Inertial Measurement Core (IMC technology)
  provides enhanced roll, tilt and heading stability even during momentary
  loss of satellite signals
- New: G3 color display system (optional)
- New: Engineered enhancements to exceed sealed IP67 rating
- New: Extended 2 year warranty
- NMEA 0183 and NMEA 2000® interface
- Heave, Pitch, Roll and Rate of Turn as standard output
- Heading updates 1 to 20 Hz
- BAUD Rate selectable: 4800, 9600, 19200, 38400,115200
- Fully compatible with on board NMEA 0183 and NMEA 2000® RADAR, ECDIS, AIS, Cameras, SONAR, PC and Autopilots
- Compact integrated surface mounting and pole mount
- Pre-programmed default settings for Heading, Rate of Turn,
   Course over Ground, Lat/Long position, Time & Date
- 15 meter serial cable standard (30 meter optional)
- 6 meter NMEA 2000® Cable (Optional)
- CE certified for EMI and RFI immunity
- Worldwide service

### **SPECIFICATIONS:**

Receiver Type: L1, C/A code, with carrier phase smoothing
Channels: Two x 32 parallel tracking GPS, GLONASS, SBAS
Update Rate: Standard 10 Hz, Selectable up to 20 Hz

(position and heading)

**Horizontal Accuracy:** < 0.5m 95% confidence (DGPS)\*

< 2.5m 95% confidence (autonomous, no SA)\*\*

Heading Accuracy: < 0.50° rms

Pitch / Roll Accuracy: < 1° rms

Heave Accuracy: < 30 cm rms

45° / sec max

Start-up Time: < 60 sec typical

Heading Fix: < 10 sec

Satellite Reacquisition: < 1 sec

**COMMUNICATIONS** 

Serial Ports: 1 full duplex R2-232 and 1 full duplex RS-422

**Baud Rates:** 4800 - 115200 **Correction I/O Protocol:** RTCM SC-104

**Data I/O Protocol:** NMEA 0183, NMEA 2000®, CAN **NMEA Heading Messages:** \$GPHDT, \$HEHDM, \$GPROT,

\$GHEROT, \$GPGGA, \$GPGSV, \$GPVTG,

\$GPRMC, \$GPZDA, \$PASHR

**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)

95% non-condensing

Humidity: POWER

Input Voltage: 10 to 36 VDC

Power Consumption: ~ 2.8 W nominal

Current Consumption: ~ 240 mA @ 12 VDC

**Power Isolation:** Power supply isolated from serial ports

**Reverse Polarity Protection:** Yes

Power/Data Connection: 18-pin female circular, IP67 sealed 15m cable

**AIDING DEVICES** 

Ionospheric activity.

Tilt Sensor:

**Gyro:** Provides reliable < 1° Heading for up to 3

minutes when loss of GPS has occurred Assists in fast start-up of heading solution

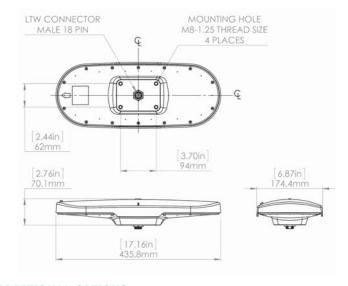
\* Depends on multipath environment, number of satellites in view, satellite geometry, baseline length (for local services), and

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



**DIMENSIONS:** 435.8mm x 70.1mm x 174.4mm / 17.16" x 2.76" x 6.87" LxHxW

WEIGHT: 1.1 kg (2.5 lb)



## **ADDITIONAL OPTIONS:**

- 30m NMEA 0183 Serial Data Cable
- 6m NMEA 2000® Cable
- Color LCD Sunlight G3 Instrument Display

Represented by:





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