PANORAMA ANTENNAS

Installation Instructions

GPS[G]P & GPSK Series

SW3-570 - v4

1. Introduction

The GPS(G)P antenna and GPSK combi antenna bases incorporate an active GPS/GNSS antenna module which supports GPS, GLONASS, Galileo and BeiDou in L1 Band.
As supplied, the base can be mounted on panels up to 6mm thick in a single 15mm (0.6") hole.
An extender kit is available as an option for use when fitting to a thick mounting panel.

Electrical Safety Note

This product contains an active GPS/GNSS antenna (part number SR8-HG30). Rated voltage: 3-5VDC Rated current: 20mA maximum **The supply to this device must be provided with overcurrent protection of 1A maximum.**

2. Mounting Requirements and Selecting Location

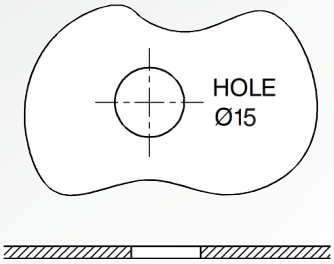
The antenna should be fitted on a conductive ground plane of adequate size. For GPS/GNSS only, the recommended size is 10cm (3.9”) diameter. For GPSK type, the target* ground plane size required will be dictated by the lowest frequency used by the comms whip. This is based on a half wave diameter, and can be calculated by 150/Freq. (MHz). Examples for common applications are shown below.

Diameter for: 150MHz = 1m (3.3’); 400MHz (TETRA) = 38cm (1.4’); 800MHz (GSM) = 19cm (7.5”)

When fitting the antenna to a non-metallic panel, a ground plane plate of suitable size should be fabricated and fitted to the underside of the mounting panel. The securing washer and nut must make a low resistance electrical contact with the metal panel or ground plane plate (less than 0.2 ohm).

Select a mounting location to ensure that there is adequate under panel clearance and that there is no double skin panel or cross brace present. Measure to check for central position if applicable.

*Target refers to achieving the recommended size or as close as possible for optimum performance.



3. Making the Hole and Fitting the Antenna

Mask the chosen location to avoid damage to surrounding panel area, drill a pilot hole, then increase to 15mm (0.6"). Deburr the hole and apply protective primer to the cut metal to prevent corrosion. Remove any paint or primer from the underside around the hole, to enable a low resistance contact for the nut and washer.

Remove the protective backing from the underside of the antenna, feed the coaxial cable(s) through panel. Position the antenna over the hole ensuring correct orientation and stick to panel by applying firm downward pressure. Assemble the nut and washer from underside and tighten to 4Nm.

4. Routing and Terminating Coaxial Cable(s)

Connect the extension coaxial cables to the antenna and route them to the equipment, taking care to avoid running the cables adjacent to any existing vehicle wiring or fouling any moving vehicle component. The cable(s) must not be routed in front of any airbag device. Fit the correct coaxial connector or adaptor to the cable(s) as required.

5. Commission and Test

Check GPS (GPS/GNSS) cable:

- Check the GPS cable with DC to measure high resistance.
- Connect the GPS cable to the GPS receiver and check for satellite acquisition.

Check communications cable (GPSK only):

- Earth continuity test: The connector body to the vehicle ground should measure <0.2Ω;
- The connector body to the connector centre pin should measure open circuit.
- Carry out a VSWR check, the VSWR should measure as detailed on the relevant datasheet.

Connect the GPS and communications cables or stow the unused pigtails.

6. Notices

European Waste Electronic Equipment Directive 2002/96/EC
Waste electrical products should not be disposed of with household waste. All electronic products with the WEEE logo must be collected and sent to approved operators for safe disposal or recycling. Please recycle where facilities exist. Many electrical/electronic equipment retailers facilitate "Distributor Take-Back scheme"for household WEEE. Check with your Local Authority or electronic retailers for designated collection facilities where WEEE can be disposed of for free.

RF Safety Note
This antenna should be mounted in such a way that no person is within 20cm (8") of the antenna during use.

RoHS 2: Directive 2011/65/EU and its subsequent amendments. Homogeneous materials composing parts that are compliant with this legislation have less than 0.1% by weight each of lead, mercury, hexavalent chromium, PBB, and PBDE, and 0.01% by weight of cadmium. Exemption 6.c applies to this product.

Waiver: This document represents information compiled to the best of our present knowledge. It is not intended to as a representation or warranty of fitness of the products described for any particular purpose. This document details guidelines for general information purposes only. Always seek specialist advice when planning installations and ensure that antennas are always installed by a properly qualified installer in compliance with local laws and regulations.