Installation Instruction – SW3-683 GPSC Series

SW3-683 - Document Version 1.0

A. Introduction

The GPSC Series is a line of internal mount LTE/Cellular, and GPS/GNSS Antennas. The standard GPS/GNSS LNA gain is 26dB.

Electrical Safety Note

This product contains an active GPS/GNSS antenna (part number SR8-HG26-04FJ). Rated voltage: 3-5VDC Rated current: 20mA maximum

The supply to this device must be provided with overcurrent protection of 1A maximum.

B. Mounting requirements and selecting location

The GPSC antenna is designed to be fitted on or under a vehicle dashboard, located as far forward as possible to optimise view to the sky. When fitting under the panel, a position should be selected to ensure there is no metal close to the antenna inside the panel.

The optimum orientation for the antenna is to be fitted flat and the UP side must be facing towards the sky. It can also fitted on or under any other non-metallic panel in a position that allows an adequate view of the sky to enable satellite acquisition.

The antenna can be fitted to a vehicle window, but it is important to note that GPS/GNSS performance will be reduced on a window that has a small angle of incline or is vertical. The UP side must be facing the outside of the window.

Note that the antenna should not be fitted to a fine wire mesh type heated window or heat reflective type glass The antenna location should ensure that the front curved face of the antenna is a minimum 10cm (2") away from any metal structure.

The antenna must not be fitted adjacent to or in near proximity of one of the vehicle electronic control units (ECU).

C. Mounting the antenna

Note: It is recommended that the installation is not carried out if the temperature is less than 50°F (10°C) as the ideal temperature for the pad bonding is 70°F (21°C)to 100°F (37°C).

Before fitting, ensure that both the antenna face and mounting surface are clean and free of grease – use the supplied alcohol swab and allow the cleaned surfaces to dry before proceeding to fit the adhesive pad.
Remove the protective backing from the adhesive pad, place on correct face of the antenna, to enable the UP side to face the sky and apply adequate pressure to adhere.

Remove the protective backing from the antenna pad, position the antenna and apply adequate pressure to ensure that it has adhered correctly.

D. Routing and terminating coaxial cable(s)

Route the coaxial cables away from the antenna, taking care that the cables do not apply stress to the antenna mounting. It is advisable to observe a minuimum bend radius of 15mm when installing the twin RG174 cables. The cables should be routed so that they do not obstruct a moving vehicle component.

The cables must not be routed in front of any airbag devices – note that these may be located behind the windscreen pillar trim and the side of the roof head lining, depending on vehicle specification.

E. Commission and test

Check LTE/Cellular cable:

- Carry out VSWR check which should measure <2.5:1.

Check GPS/GNSS cable:

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

F. Notices

European Waste Electronic Equipment Directive 2002/96/EC

Please ensure that your old Waste Electricals and Electronics are recycled do not throw them away into standard waste.

RF Safety Note

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

CE

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.

R&TTE: DIRECTIVE 1999/5/EC of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. Compliance is declared according to: **EN 301 489-1 V1.9.2** Electromagnetic compatibility and radio spectrum matters (ERM); Electromagnetic compatibility (EMC) standard for radio equipment and services; Part 1: Common technical requirements -Referencing EN 301 489-3 V1.6.1 and EN 300 440-1 V1.6.1 (2010-08) – Electromagnetic compatibility and radio spectrum matters (ERM); short range devices; radio equipment to be used in the 1GHz to 40GHz frequency range; Part 1: Technical characteristics and Test methods in accordance with EN 300 440-2 V1.4.1 (2010-8) - Electromagnetic compatibility and radio spectrum matters (ERM); short range devices; radio equipment to be used in the 1GHz to 40GHz frequency range; Part 2: Harmonised EN covering the essential requirements of article 3.2 of the R&TTE Directive.

Low Voltage Directive: Directive 2006/95/EC (Electrical Equipment designed for use within certain voltage limits) of August 2007. Compliance is declared according to:

EN60950-1: Safety of information technology equipment – according to test specification EN 60950-1:2006 +A11:2009 +A1:2010 +A12:2011.