Installation Instructions – SW3-704 LP[G]AM Series

SW3-704 - Document Version 1

A. Introduction

The LP[G]AM antenna series is designed for M2M / IOT applications requiring MiMo / diversity support. The antenna has a rugged, low profile housing with two elements supporting 4G/3G and 2G bands and has integral 3m length RG174 coaxial cables. The LG version incorporates an active GPS /GNSS antenna.

Electrical Safety Note

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

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

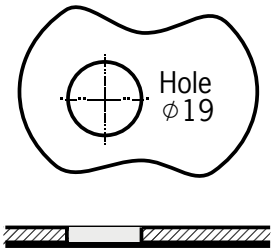
B. Mounting requirements and selecting location

Select a mounting location. Ensure that there is adequate under panel clearance. Measure to check for central position if applicable.

If the antenna will be co-located with other antennas or roof mounted equipment please try to ensure at least 30cm (12") of clearance around the L[P]GAM antenna in order to avoid de-tuning and interference issues.

Ground plane requirement. This antenna range does not require a conductive ground plane in order to operate. Performance will vary slightly depending on whether a ground plane is present or not.

C. Prepare and drill hole



Mask panel area around hole position to protect paintwork and headliner. Drill a pilot hole, and then increase to 19mm (3/4"), ensuring that drill/cutter bit does not contact headliner. Clean area around the hole, carefully removing all swarf. Remove paint and primer from under panel surface to ensure adequate earth contact by washer and nut. Apply some petroleum jelly or paint around the hole to prevent corrosion.

D. Fitting the antenna

Remove the protective backing from the underside of the antenna and feed the coaxial cables through the panel. Position the antenna over the hole ensuring correct orientation and stick the antenna to the panel by applying firm downward pressure. Assemble the nut and washer from underside and tighten – the maximum recommended mounting torque is 5Nm (3.7ft/lb).

E. Routing and terminating coaxial cable(s)

Route the coaxial cables to the radio equipment, taking care to avoid running them adjacent to any existing wiring or fouling any moving components. When installing the antenna on a vehicle, the cables must not be routed in front of any airbag device SMA plug connectors are fitted as standard, which should suit most devices, if not, use an adaptor or change connector(s) as required.

F. Commission and test

Check the GPS/GNSS cable (if applicable):

- 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.

Check the comms cables:

- Carry out VSWR check, the VSWR on all feeds should measure <2.5:1 in transmit band.
- Connect the Cellular/LTE cables.

G. Notices

CAUTION

To comply with FCC RF Exposure requirements in section 1.1310 of the FCC Rules, antennas used with this device must be installed to provide a separation distance of at least 20 cm from all persons to satisfy RF exposure compliance.

DO NOT

- operate the transmitter when someone is within 20 cm of the antenna.
- operate the equipment in an explosive atmosphere.

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.

Directive 2011/65/EU (RoHS 2)

This product is fully compliant with the RoHS 2 directive

Models of this product incorporating an active GPS antenna are compliant with the following requirements: **DIRECTIVE 1999/5/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL** of 9 March 1999 on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. According to: **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

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