PANORAMA ANTENNAS

Installation Instructions

LPA[P]-7-42 Series

SW3-1029 - v1

1. Introduction

The LPA[P]-7-42 antenna series is a range of low profile, high performance SiSo IOT antennas covering 698-960/1427-4200MHz. Designed for situations where a highly efficient antenna is needed the LPA[P]-7-42 can be installed on conductive or non-conductive surfaces.

The LPA-7-42 version can be wall or panel mounted via an adhesive pad and/or mounting screws or mast mounted using the supplied cable ties. The LPAP-7-42 version is designed for panel mounting using the mounting bush on the base plate.

Both versions of the antenna are supplied with integral flame retardant RG174 cable (compliant to UN ECE R118), and are suitable for many installation environments.

2. Mounting requirements and selecting location

The antenna can be mounted in a horizontal or vertical orientation. If the LPA-7-42 version is mounted vertically, the antenna cable exit should be orientated facing downwards.

If utilising the adhesive pad it is recommended that the installation is carried out when the temperature is higher than 50°F (10°C) - the ideal temperature for the pad bonding is in the range of 70°F (21°C) to 100°F (37°C).

For the panel mount version, or if using the mounting screw positions, ensure that there is adequate under panel clearance and that there are no objects or obstructions under the panel where you need to drill. Measure to check for central position if applicable.

For optimal performance the antenna should, if possible, be mounted at least 300mm (1ft) away from other conductive objects on the mounting panel.

3. Panel mounting (LPAP-7-42 variant)

The LPAP-7-42 version can mount to panels 1-15mm (0.03-0.59”) thick via a 12mm (1/2”) mounting hole (Fig 1.) and to panels 15-25mm (0.69-1”) thick via an 18mm (3/4”) hole (Fig 2.).

Mask panel area around hole position to protect the surface. Drill a pilot hole, and then increase to 12mm (1/2”) or 18mm (3/4”), ensuring that drill/ cutter bit does not contact any objects under the panel. Clean area around the hole, carefully removing any swarf.

If also using the mounting screw positions then drill two additional pilot holes to suit No.8 (4.2mm) screws. The antenna can be used as a drilling template.

Remove protective backing from underside of antenna and feed coaxial cable through panel. Position the antenna over the hole and stick to panel by applying firm downward pressure. Assemble top hat nut from underside in correct orientation for mounting hole size and tighten.

If also using the mounting screw positions then make sure to position the supplied sealing washers in the screw mount recesses before tightening the screws. Do not over-tighten the screws as this may damage the antenna housing.

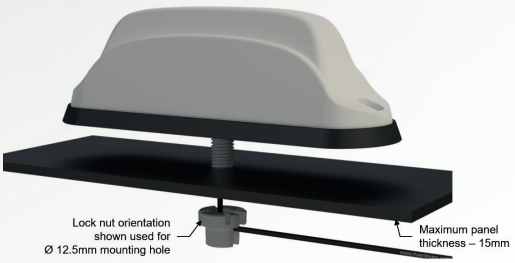

Fig 1. Panel mounting to 1-15mm panel

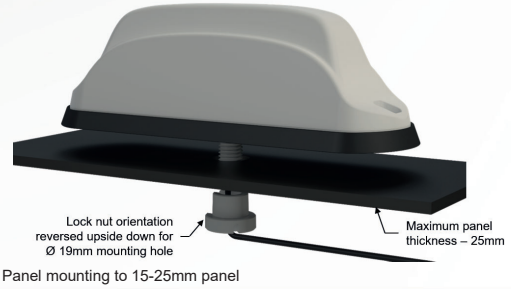

Fig 2. Panel mounting to 15-25mm panel

4. Adhesive mounting (LPA-7-42 variant)

When using the screw positions (Fig 3.), drill two pilot holes to suit No.8 (4.2mm) screws. The antenna can be used as a drilling template.

Make sure that the selected mounting surface is clean and dry. De-grease suface with 70% isopropyl alcohol (allowing time to dry) if required. Remove protective backing from supplied adhesive pad and adhere to underside of antenna, position the antenna over desired location, remove remaining protective backing and stick to panel by applying firm downward pressure.

If also using the mounting screws, ensure that the supplied sealing washers are positioned in the hole recesses before inserting the screws. Do not over-tighten the screws as this may damage the antenna housing.

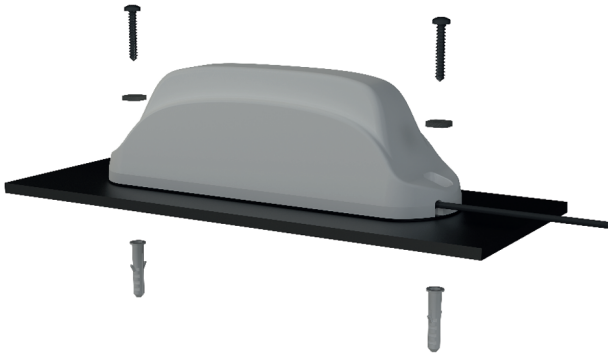

Fig 3. Installing mounting screws

5. Pole / mast mounting (LPA-7-42 variant)

The antenna can be mounted to poles up to 25mm (1") diameter using the supplied cable ties (Fig 4.). First feed the cable ties through the slots in the screw mounting recesses. Next position the antenna in the desired location on the pole with the cable exiting downwards, engage and pull the cable ties tight. It may be advisable to take additional measures to ensure that the antenna cannot slide down the pole.

If alternative cable ties are used to secure the antenna, then please ensure that they are made of UV resistant material.

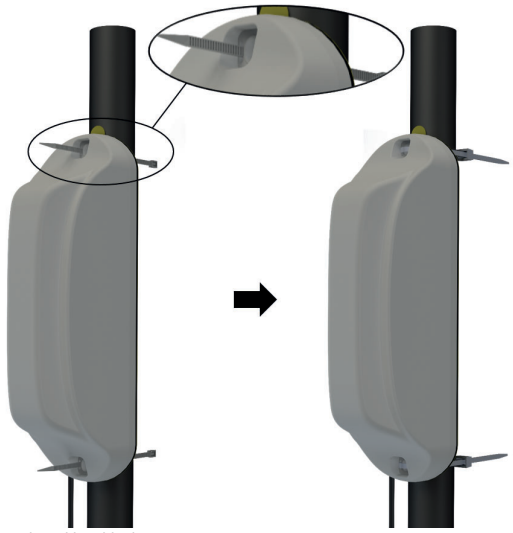

Fig 4. Pole mounting with cable ties

6. Routing and terminating coaxial cables

Route the coaxial cable to the equipment, ensuring that the cable is secured and protected from subsequent damage during access. The cable should be routed observing the minimum bend radius of 13mm (1/2").
If cable ties are used, they should not be overtightened, as this could distort the cable profile and affect the antenna performance.

7. Commission and test

- Check the VSWR measures as per specifications on relevant datasheet.

8. Notices

DO NOT
- operate the equipment in an explosive atmosphere.
- attempt to install the antennas without the proper safe equipment to access the install location.
- install the antenna in such a way that it may fall and cause injury.
- chew parts or put them in mouth, keep away from unsupervised children.

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.