Installation Instructions

MA1044 Series

GNSS, SDARS AM/FM and Wi-Fi Permanent Mount Combination

A Introduction

The Taoglas MA1044 is an external combination antenna designed for mounting on the roof of a vehicle. The MA1044 can accomodate up to 4 combination in one sleek housing. Two holes are required when installing this antenna as one hole feeds the cables and the other secures the antenna to the surface. The MA1044 is ideal for mounting on vehicle panels of up to 6mm(0.23") thick with a threaded boss length of 16mm(0.63"). The MA1044 is IP65 rated and includes a rubber base to seal from any water ingress.

Electrical Safety

The Sharkfin contains active GNSS, SDARS & AM/FM antennas.

Rated voltage: 3-5VDC Rated current: 30mA maximum for GNSS, 110mA maximum for SDARS and 50mA maximum for AM/FM

The supply to this device must be provided with over-current protection of 1A maximum.

The Input Voltages are as follows:

GNSS: 3.5~5V

SDARS: 4.5~5.5V

AM/FM: 10~16V

B Mounting & Location

For prime performance, the MA1044 is recommended to be fitted on a conductive metal panel. When fitting on a non-metallic panel, a conductive metal ground plane of suitable size should be fitted underneath the mounting panel to achieve a better level of performance. Optimum ground plane size is 300 x 300mm(11.8 x 11.8"). When mounting on a vehicle roof panel ensure that it is mounted on a flat surface, and installed in a central position of the vehicle roof. Care should be taken to mount the MA1044 antenna as far as possible from other roof-mounted features such as the aircon unit, light bar etc.

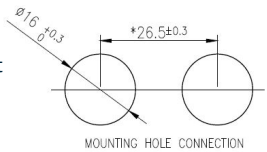
Mount on a flat surface

Sealing

In order to ensure that the installation is properly sealed against the mounting surface care must be taken regarding curvature of the mounting panel. It is highly recommended to install the antenna on a clean, flat and level surface. After installation the compression of the rubber boot against the mounting panel should be checked and a small bead of neutral cure silicone sealant can be applied around the periphery of the mounting boot if required.

C Mounting Holes

When preparing to drill the holes, mask the area around the hole position to protect the surface. Drill two pilot holes through the panel (up to 6mm thickness can be used) and increase both hole sizes to 16mm (0.63") diameter. Keep a space of 26.5mm between the centre point of both holes. Remove paint and primer from under panel surface to ensure adequate earth contact with the washer and nut. Apply petroleum jelly or paint around exposed edge of the hole to prevent corrosion



D Installation of the Antenna

The nut is attached from the underside of the panel. It should easily twist onto the thread and only a final tighten by spanner is required. Only one nut is provided as the cable feed does not use a nut.

Maximum Mounting Torque: 13Nm

Recommended Mounting Torque: 10Nm

E Routing and Connection of the Cables

The cables supplied are RG-174 for all feeds (excluding the power cable) through a heatsrink cover to protect from damage. The labels will denote each antenna feed for ease of installation. Connect each individual connector to the correct port of the system. If any cable is unused please fit a 50Ω terminator to the individual connection.

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.

Warning
Do not Operate the transmitter when someone is within 20 cm of the antenna.
Do not operate the equipment in an explosive atmosphere.