ZCG

Model

CMG920-6

Omnidirectional mast mount

UHF / ISM collinear

2.5m

915-928 MHz

8.1 dBi

- Stainless steel mount tube, tapered fibreglass radome
- N-type female connector fitted to 530mm cable
- 20 Watts max power

INSTALLATION GUIDE

www.zcg.com.au

ANTENNA DESCRIPTION

With 8.1 dBi gain, the **CMG920-6** offers the maximum gain and reception range practical in a broadband omnidirectional ISM or UHF 915-928 MHz fixed position antenna.

The white fibreglass radome, aluminium cap and stainless steel mount tube stands 2.5 metres tall.

The N-type female connector fitted to external 530mm RG58 low loss is rated for up to 20 Watts input power.

All components used are of the highest quality to ensure long term survival and minimal maintenance in the harshest environments. The antenna will deliver reliable performance for many years.

Mounting clamps, feeder cable, connectors, cable ties and tape are available separately to complete the installation.

A detailed specification sheet is available to download from **www.zcg.com.au**

TUNING

The antenna has been tuned in the factory for the IoT/ISM or Lora frequency 915-928 MHz

VSWR has been optimised to better than 1.5:1 across the full frequency range.

This tuning cannot be altered.

SELECTING THE MOUNTING POSITION

To achieve best performance from your antenna, these are the important principles you should consider when selecting the mounting point:

1. ***Mount the antenna in as high a place as possible.***
2. ***Mount the antenna as far away from other antennas and metallic objects as possible to avoid interference and distortion of the 360^{o} omnidirectional pattern. At least 350 mm side clearance is desireable, preferably more.***
3. ***Mount the antenna vertical, not at an angle.***

MAST CLAMPS

2 x EB1-SS stainless steel parallel clamps are recommended for mounting to a round mast between 20 mm and 50 mm in diameter. Take care not to over-tighten the clamps beyond reason.

NYLON SIDE MOUNTS

NSM-218 Nylon Side Mounts are specifically designed to mount this antenna to any flat vertical structure.

Drill a 12.7 mm (½") diameter hole through the vertical surface for the stainless steel bolt. Then tighten the bolt to firmly secure the side mount in position.

Using two (2) of these nylon side mounts, the antenna mount tube is held tight by the M6 stainless steel clamp bolt.

GENERAL PRECAUTIONS

- At all times standard OH&S working conditions must be maintained. Use common sense during all installation work.
- Never install an antenna where contact with electrical power lines is possible. Serious injury or death may occur. Power lines, telephone lines and guy wires can look the same. Assume any wire or line can electrocute you.

FEEDER CABLE and CONNECTORS

- Signal loss can be high at ISM 900 frequencies. It is essential to select a good quality, low loss feeder cable according to the length of run required. Always keep the cable run to the shortest length necessary to reduce signal loss. **RG58 low loss solid core** will be the minimum standard of feeder cable necessary. Where the run length must exceed 5 metres, then **RU400 or RU600 low loss** will be necessary to reduce signal loss and maintain optimum antenna performance.
- Cable preparation trim dimensions for numerous connectors can be found in our product catalogue. This information is also available to download from the "Connectors" page of our website.
- ***The antenna feeder cable should be secured so as no stress is placed upon any connections or the cable itself.***
- ***If using cable ties, then we highly recommend the stainless steel type for the harsh marine environment. Minimum 1.0 metre spacing.***
- Ensure that connector mating surfaces are not damaged and are clean and dry. The male connector pin should be set so as to not damage the female connector pin. Tighten the connectors firmly and make sure they are seated correctly. ***The connection should be sealed with two layers of self-amalgamating tape to prevent ingress of moisture.***
- The feeder cable should be earthed to avoid a destructive power surge in the event of a lightning strike.

RETURN LOSS TEST

- Following installation of feeder cable, measure the return loss at the feeder cable input and check that there is no major departure from the factory specification.

INPUT POWER

- Only operate the antenna at the specified power levels. Exceeding the stated power levels will invalidate the warranty.

MAINTENANCE

- The antenna and it's components have been designed for high reliability and low maintenance. A routine annual mechanical inspection of the antenna, connections and feeder cable together with a check of the return loss is all that is required.

PO Box 7, Lindenow, Victoria, Australia, 3865
P: +61 3 5157 1203
F: +61 3 5157 1641
E: sales@zcg.com.au