

**Model Number: FDBL5003D4-S**

## PACKAGE CONTENTS

Please find the following products inside the box:

- (1) Wideband Diplexer
- (2) Clamps (For pole mounting – diameter 54-105mm)
- (1) Installation Instructions

## RECOMMENDED TOOLS

The following tools are needed for proper installation

- **8mm Socket Head or Wrench** – for fixation of the clamps
- **10 mm Wrench and 3 mm Allen Wrench** – for fixation of the grounding hardware
- **Torque Wrench**

## POLE MOUNTING INSTRUCTIONS

1. **Check that RF signals and DC power coming from the Base Station are OFF/disconnected.**
  2. Fix the clamps onto the Diplexer (See Figure 1).
  3. Mount the Diplexer to the pole by tightening the clamps with 10 Nm (7.5 ft-lb) torque.
  4. Attach a grounding cable to the grounding stud.
  5. Tighten the ground cable nut with 4 Nm (3 ft-lb) torque.
  6. Adjust the length of the ground cable and fix it onto the tower ground connection.
  7. Connect a jumper between the 4.3-10 connector of the antenna and the 4.3-10 connector of the Diplexer. Connect the jumper between the 4.3-10 connector of the Diplexer(s) and the 4.3-10 connectors of the feeder cables.
  8. When attaching the jumper cable 4.3-10 connector coupling nut to the Diplexer 4.3-10 female connector it is mandatory that the jumper cable meets with the 4.3-10 female connector of the Diplexer straight in line (See Figure 2). Press the inner part of the jumper cable connector into the Diplexer connector and maintain this pressure when turning the coupling nut. Hereby the coupling nut will fit the thread of the female connector correctly and it will run smoothly. Tighten the coupling nut by hand.
- Note:** No angular torque from the jumper cable is allowed at any time.
9. Tighten the connector assembly with 11 Nm (8 ft-lb) torque.
  10. Seal all connectors. The tape around the connectors must connect with the Diplexer top/bottom connector bosses for correct weather protection. See section "Connector Insulation" details.

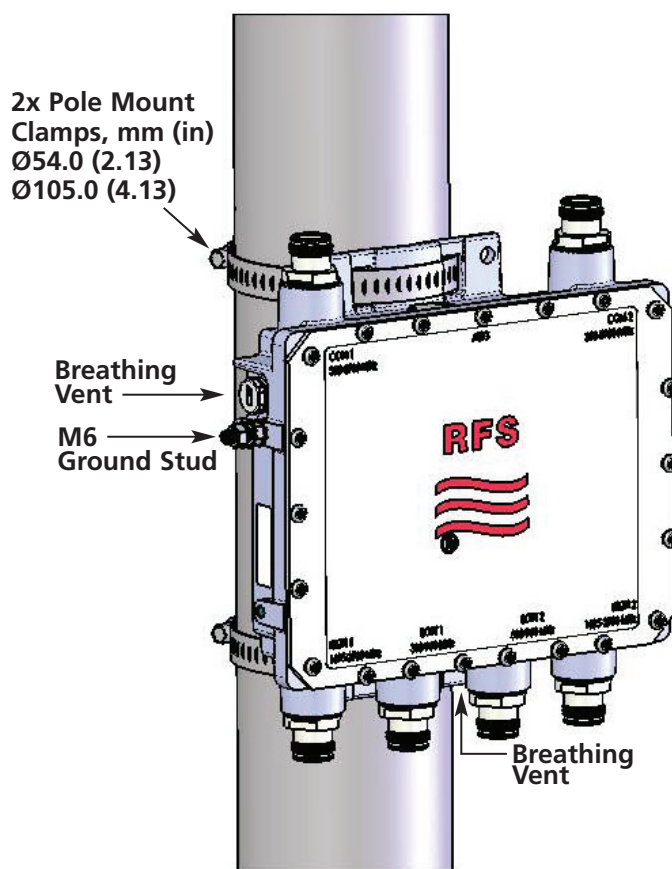
## WALL MOUNTING INSTRUCTIONS

1. Disconnect RF signals and DC power.
2. Mount the filter onto the wall using the holes provided in the brackets (see Mechanical dimensions in the drawing section of these instructions). Hardware is NOT included for wall mounting. Use mounting hardware appropriate to the material being mounted to and appropriate to the weight of the filter.

## IMPORTANT SAFEGUARDS

**IMPORTANT:** All national safety rules and regulations must be followed during installation and maintenance of the Diplexer.

- ! Make sure that the Base Station is sending the proper DC input voltage (10-30VDC) through the feeder cable. The DC input voltage **MUST** be applied on the BTS Port.
- ! It is important that no RF and DC power is floating in the associated RF feeder cable and, in general, that no power is radiated from the tower or site during the Diplexer installation.
- ! RFS recommends using the shortest jumper cable from the Diplexer ANT Port to the Antenna in order to optimize system performance.
- ! RFS recommends applying additional anti-corrosion protection and using best practices when products are installed in areas with high-salt concentration, on chimneys (SO<sub>2</sub>) or other extreme harsh environment, to lengthen the product lifetime.
- ! RFS recommends using RFS accessories and cables to ensure the best installation.



**Figure 1**

**WARNING:** Do **NOT** cover or paint breathing vent. Painting over breathing vents may result in water ingress and filter failure.

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### JUMPER CONNECTION DETAIL

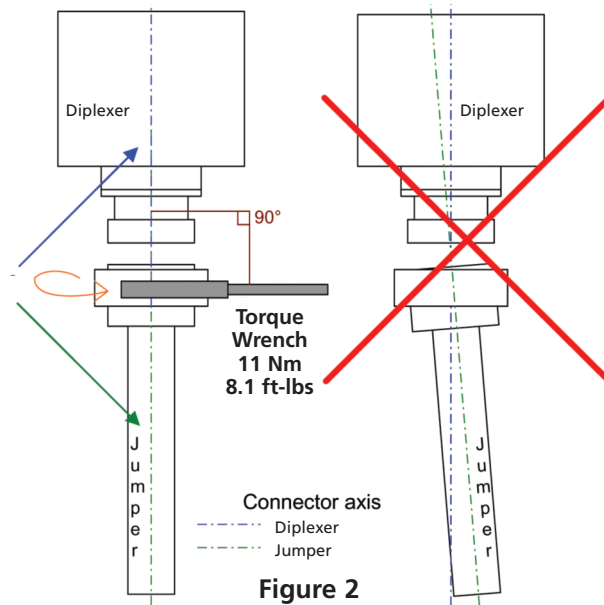
The torque wrench must be perpendicular to the diplexer connector flange and jumper cable connector coupling nut when tightening.

**Note:** No angular torque from the jumper cable is allowed at any time. Fluctuation between the diplexer and the jumper axes  $< \pm 2.5^\circ$  (Figure 2).

### CONNECTOR INSULATION

For additional protection against harsh environmental conditions, connector connections may be insulated using weather sealant. This insulation is performed after all 4.3-10 connector coupling nuts (from Antenna-to-Jumper, Jumper-to-Diplexer, Diplexer-to-Jumper and Jumper-to-Feeder Cable) have been tightened as specified in the instructions.

RFS offers a variety of solutions that can withstand extreme weather temperatures and conditions, offer UV protection and are available in a variety of colors for easy tower-top cable identification. Contact a sales representative for ordering information.



**Figure 2**

### DRAWINGS

