# Reducers

## *For Rigid Coaxial Transmission Line*

### Type RLA150-050, RLA450-350, RLA650B-350, RLA650-450,RLA775-675, RLA875-675, and RLA875-775

### Notice

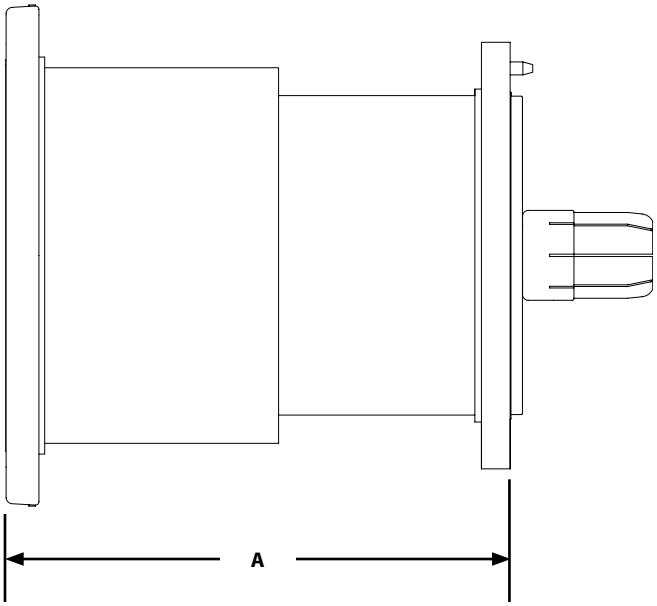
The installation, maintenance, or removal of antenna systems requires qualified, experienced personnel. ERI installation instructions are written for such personnel. Antenna systems should be inspected once a year by qualified personnel to verify proper installation, maintenance, and condition of equipment. ERI disclaims any liability or responsibility for the results of improper installation practices.

**READ THE INSTRUCTIONS THOROUGHLY BEFORE ASSEMBLY**

### Description

Reducers are designed to join transmission lines or cables with flanges of different diameters.

| Type Number | Connection 1 | Connection 2 | Flange-to-Flange Length, 'A' | |
|---|---|---|---|---|
| | | | in. | mm |
| RLA150-050 | 1-5/8 inch 50 ohm EIA | 7/8 inch 50 ohm EIA | 3.344 | 85 |
| RLA450-350 | 4-1/16 inch 50 ohm | 3-1/8 inch 50 ohm EIA | 6.625 | 168 |
| RLA650B-350 | 6-1/8 inch 50 ohm EIA | 3-1/8 inch 50 ohm EIA | 7.125 | 181 |
| RLA650-450 | 6-1/8 inch 50 ohm EIA | 4-1/16 inch 50 ohm | 7.250 | 184 |
| RLA775-675 | 6-1/8 inch 75 Ohm EIA | 7-3/16 inch 50 Ohm EIA | 9.625 | 244 |
| RLA875-675 | 8-3/16 inch 75 ohm | 6-1/8 inch 75 Ohm EIA | 12.000 | 305 |
| RLA875-775 | 8-3/16 inch 75 ohm | 7-3/16 inch 50 Ohm EIA | 12.000 | 305 |




1. Remove and discard protecting end covers from flanges. See that the reducer, inner connectors, and O-rings are kept clean. Insert the larger inner connector into the inner conductor on the larger side of the reducer using twisting motion to ensure full engagement. When properly engaged, the inner connector insulator will be seated in the reducer flange groove so only half of the insulator remains exposed.
2. Seat the large O-ring into the reducer flange gasket groove. Be sure the gasket and groove are clean, as any foreign matter may prevent assembly from being pressure tight. A thin coating of silicone grease on the O-ring and in the flange groove will help to hold the O-ring in place during assembly.

3. Join the reducer to the transmission line by inserting the inner connector (extending from the reducer) into the inner conductor of the transmission line. Align the pins with the alignment holes in the flanges. Push the assembly together, making sure the O-ring remains in place. Add connecting hardware and bolt the flanges. Finger tighten nuts. When the transmission lines are properly aligned, fully tighten the nuts. Perform the final tightening sequence in the size pattern table below. For 5/16 inch hardware torque to 12 lbf·ft (16 N·m); For 3/8 inch hardware torque to 21 lbf·ft (28 N·m). The gap between the flanges must be uniform. Do not over-tighten.

| Holes | Nut Tightening sequence * |
|---|---|
| 4 | 1, 3, 2, 4 |
| 6 | 1, 4, 2, 5, 3, 6 |
| 8 | 1, 5, 3, 7, 2, 6, 4, 8 |
| 12 | 1, 5, 9, 3, 7, 11, 2, 6, 10, 4, 8, 12 |
| 14 | 1, 8, 4, 11, 3, 10, 5, 12, 7, 14, 9, 2, 6, 13 |
| 16 | 1, 9, 5, 13, 3, 11, 7, 15, 2, 10, 6, 14, 4, 12, 8, 16 |

4. Repeat the above steps for connection to the smaller end of the reducer using the procedure and precautions mentioned.



For Technical Support call 877 ERI-LINE or +1 812 925-6000,
or visit our website at www.eriinc.com