

Type MACX675B-25-(1, 2, 3, 6) and MACX450-25-(1, 2, 3, 6)

Inner Conductors for MACXLine® Rigid Coaxial Transmission Lines



Description

MACXLine® inner conductors are factory trimmed according to the specified outer conductor length. No field cutting is required. Install inner conductors with the bellows and captivated inner connector toward the antenna.

Notice

The installation, maintenance, or removal of antenna systems requires qualified, experienced personnel. ERI installation instructions have been 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 or unsafe installation practices.

Determine Mating Outer Length

Determine the correct mating outer conductor length by measuring the inner conductor length (with the bellows compressed) and adding 1.44 inches.

Take the measurement from the end of the inner conductor to the center of the connector insulator. See Figure 1 for measurement points.

Type Numbers	Outer Length, in	Inner Length, in
MACX675B-25-1, MACX450-25-1	240.00	238.56
MACX675B-25-2, MACX450-25-2	237.00	235.56
MACX675B-25-3, MACX450-25-3	234.00	232.56
MACX675B-25-6, MACX450-25-6	228.00	226.56

Note: To obtain the accurate length of the inner conductor, the bellows must be fully compressed to its mechanical stop position (the bellows must have a travel of approximately 0.3 inches). The measurement can be done by placing one end of the inner conductor against a wall, running a tape measure to the opposite end and taking the measurement while pushing in on the end of the inner conductor with approximately 50 pounds of force.

Assemble the Inner Conductor

Handle the inner conductor with care to avoid damage to the bellows and copper tube assemblies. The inner conductor and insulators should be kept free of dirt, moisture, and grease.

MACX675B Disk and Collar Installation (See ①), two required.

1. Slide disk insulators to groove locations in inner conductor.
2. Slip collar insulators into grooves with tapered ends toward bellows.
3. Push disk insulator over tapered end of collar insulator until it locks in place.

MACX450 Disk Installation (See ①), three required.

1. Fan one piece insulator and push into groove on inner conductor.
2. Fan insulator in opposite direction and release until insulator returns to original flat condition.

Connection Check

Check the connection between the bellows and inner conductor tube to ensure a good electrical connection.

The torque value for this connection is 21 ± 2 lb-ft (See ②). The $3/8$ " bolt at the end of the inner connector (bullet) has a torque value of 20 ± 2 lb-ft (See ③). Optional tool kits, Types MACX675-TK and MACX450-TK, are available for tightening bellows to the inner conductor and the connector bolt.

Note: Using a pipe wrench, channel locks, vise grips, or pliers to tighten the inner conductor tube to the bellows can cause damage to the inner conductor.

After completing the above procedures, carefully insert the inner conductor assembly into the outer conductor with the bellows end toward the antenna end of the outer conductor. Push the inner conductor into the outer conductor until the connector insulator is fully seated into the flange.

