

Introduction

This document contains information about the Model 631 Triax Connector including electrical specifications along with instructions to assemble the Model CS-631 with a suitable triax cable.

NOTE The recommended triax cable type is Keithley part # SC-22.

WARNING To avoid possible shock hazards, do not exceed the maximum voltage and current ratings listed below.

Electrical specifications

Working Voltage:	600V peak, center conductor to inner shield 1300V peak, center conductor and inner shield to outer shell
Maximum Current:	1A
Operating Environment:	0° to 50°C, up to 35°C at 70% R.H.
Contact Resistance:	< 0.5Ω
Insulation Resistance:	10 ¹⁵ Ω, center conductor to inner shield (500V test voltage, 23°C at < 40% R.H.)
Breakdown Voltage:	1200V DC, center conductor to inner shield 4114V DC, center conductor and inner shield to outer shell

Assembly instructions

Refer to Figure 1 on the following page, and follow the steps listed below. The step numbers correspond to those shown in Figure 1. Letter references in the procedure correspond to letters identifying connector components at the top of Figure 1.

1. Cut off the end of the cable square and remove 1-1/2" from the end taking care not to nick the braid.
2. Pull the outer braid back and cut 1/4" off the end of the cable.
3. Pull the outer braid forward, and taper the slide nut (A), gasket (B), and clamp (C) over the tapered shield, making sure the inner shoulder of the clamp is positioned tightly against the end of the outer jacket. Using clean needle nose pliers to hold the clamp, carefully slide the clamp (C) over the coax braid where it stops at the end of the jacket strip.
4. Trim the outer braid to 5/32" as shown and comb both out.
5. Flair back the outer braid over the clamp (C), and then use solvent to clean off all of the graphite and any loose braid.
6. Place the bushing (D) in position, and remove the outer dielectric 1/8" as shown.
7. Place the gasket (E) in the position shown, making sure the counterbore is facing away from the bushing (D). Place the O-Ring (F) into counterbore of the gasket. Pull back the inner braid, and cut 1/4" off the end of the cable.
8. Pull the inner braid forward and taper the slide clamp (G) over the braid, making sure the inner shoulder of the clamp is positioned tightly against the end of the outer dielectric.
9. Comb out the inner braid, fold it back over the clamp (G), and then trim it as shown. Use solvent to clean the braid.
10. Place the small bushing (H) in position shown, and push it firmly against the braid.
11. Trim the inner dielectric to the dimension shown taking care not to nick the center conductor.
12. Trim the center conductor to dimension shown. Add the insulator (I) and solder the contact (J) to the conductor with RMA solder, then clean it with solvent. Place the insulator (K) in the position shown.
13. Install the sleeve contact (L) and insulator (M) as shown, and then insert the assembly into body (N). Tighten the nut (A) to the body (N), applying a torque of 30 ± 2 in-lbs.

After assembly, allow the connector to dry in a low-humidity environment for at least 12 hours, then re-torque the nut to 30 in-lbs.

Figure 1
Connector assembly



