

Anritsu

K Connector[®] Male Connector for 0.085 inch Outer Diameter Semi-Rigid Coaxial Cable Models: K101M-085/ K101M-085-HT

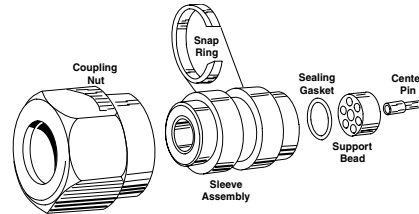


Figure 1. Male K Connector

1. Tools And Materials

The following tools and materials are needed to install K101M-085/ K101M-085-HT connector on the V085 semi-rigid coaxial cable. Equivalent tools may be used if recommended tools are not available.

Name	Vendor and Model/Part Number
Resistance Soldering Unit, with Tweezers	American Beauty Model 10501
Tool Kit Cable Assembly	SC5296 Anritsu Co.
Solder, 62% tin, 0.50 mm diameter rosin core	SN62 Kester Co.
Rosin Flux	135 Kester Co.
Cleaning Fluid	isopropyl alcohol
Soldering Fixture	01-107M Anritsu Co.

2. Fabrication Instructions

Fabrication instructions for the cable assembly are given below. Refer to Figures 1 and 2 to identify the connector parts referenced in the procedure.

a. Remove approximately 6.5 mm of the outer conductor from one end of the cable. The outer conductor should be cut square and be free of burrs. A suggested method using the multipurpose tool in the SC5296 tool kit follows:

- (1) Clamp the multipurpose tool in a vise with the hole facing up.
- (2) Insert the end of the semi-rigid cable into the hole as far as it will go.
- (3) While pressing the cable against the bottom of the hole and rotating it, cut a deep groove around the circumference of the outer conductor using a razor blade or saw.
- (4) Break off the outer conductor and remove it from the cable.

- c. Cut, trim, and carefully—so as not to nick or otherwise damage the center conductor—debur the exposed center conductor to 2.3 ± 0.15 mm. The end of the SC5296 multipurpose tool marked “M” can be used to measure this distance.
- d. Clamp the cable, and, using a soldering iron, tin the exposed center conductor.
- e. Set the Resistance Soldering Unit to 1.
- f. Heat the center pin and slide it onto the center conductor, locating it so that there is a 0.10 ± 0.025 mm gap between it and the Teflon dielectric. Avoid getting solder on the outside of the pin.
- g. Clean the center pin with a solvent-dampened swab to remove all flux residue.

CAUTION

Avoid cleaning fluids containing halogenated and aromatic hydrocarbons (Freon[®]). These compounds may soften or dissolve the PPO/Teflon bead material.

- h. Clean the end of the cable with a solvent dampened swab to remove any oils due to handling.
- i. Apply a small amount of flux to the end of the cable.
- j. Orient the sleeve assembly so that the smaller end is positioned over the end of the cable.

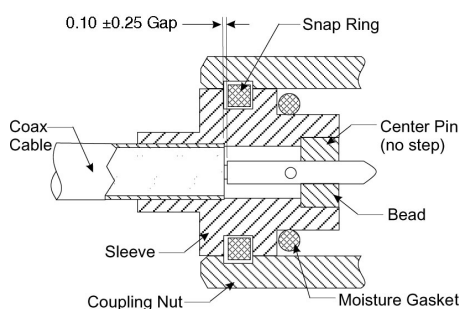


Figure 2. Male K Connector, Assembled

b. Trim the Teflon[®] away from the center conductor, taking care not to cut into the center conductor. The trimming of the Teflon must be flush with the outer conductor to properly install the center pin later in this procedure.

- k. Slide the sleeve assembly onto the cable until it reaches the bottom limit of the sleeve. When properly positioned, the center pin will protrude as shown in Figure 2, and the sleeve will cover approximately 4.76 mm of the cable. Check pin extension.
- l. Install the 01-107M Soldering Fixture onto the end of the cable. This will hold the sleeve assembly secure and will also keep it square while it is being soldered onto the cable.
- m. Set the Resistance Soldering Unit to 4.
- n. Grasp the sleeve assembly with the soldering tongs and apply solder to the back end of the sleeve to solder it to the cable. Ensure that the sleeve assembly does not move on the cable during this operation.
- o. Inspect the connection to ensure that there are no solder gaps and that the sleeve assembly is square with the cable.
- p. Remove the 01-107M Soldering Fixture.
- q. Clean any residue flux from the Teflon interface located on the inside of the connector housing. A small piece of cotton, dampened in solvent and held by tweezers, works best for this cleaning operation.
- r. Inspect the inside of the connector to ensure that the solder seam has no gaps. A 30X microscope is best for this inspection.
- s. Spread the snap-ring and slip it onto the groove of the sleeve assembly.
- t. Place the sealing gasket over the large end of the sleeve assembly. It should fit snugly against the shoulder of the sleeve assembly.
- u. Using the snap-ring pliers—or other suitable pliers—compress the snap-ring and slip the assembly into the coupling nut. When the assembly is positioned properly, the snap-ring will “click” into place as it fits into the groove inside the coupling nut.
- v. Carefully slide the bead over the center pin, and press it into the end of the sleeve assembly. The multi-purpose tool in the 01-118 tool kit should be used to press the bead into place. The center pin should not be pushed back during this operation.
- w. Inspect the cable assembly to ensure the following:
 - (1) That the support bead is flush with or slightly recessed from the end of the sleeve assembly.
 - (2) That the center pin extends out from the bead as shown in Figure 2. For best performance, purge residue solvent by placing the completed cable assembly in an oven and baking at 65°C for 8 hours, minimum.

CAUTION

If solvent is allowed to remain, it may cause increased transmission loss.

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