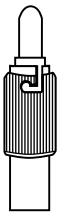
ST® and FC Thread-Lock® Connector Assembly Instructions

ST Thread-Lock Multimode Connector	49882-MST
ST Thread-Lock Singlemode Connector	49882-SST
FC Thread-Lock Multimode Connector	49883-MFC
FC Thread-Lock Singlemode Connector	49883-SFC
Universal Fiber Optic Tool Kit	49800-UTK
Universal Fiber Optic Tool Kit Plus With Thread-Lock Versa-Cleave™	49800-UTP
Universal Fiber Optic Consumable Kit	49800-CON
ST/SC Combination Tightening Tool	49886-CTT
FC Tightening Tool	49883-FCT
Thread-Lock Versa-Cleave	49886-TVC

COMPONENT PARTS INCLUDED INSIDE THE POLYBAG



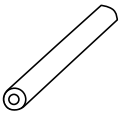
1 Each ST or FC Thread-Lock Connector with Dust Cap

1 Each Bare Fiber Protective Boot

1 Each Jacketed Fiber Protective Boot

1 Each Short 900µm Build-up Sleeve (BUS) (5/16" Long)

1 Each Long 900µm Build-up Sleeve (BUS) (5/8" Long)



1 Each 250 µm Build-up Sleeve (BUS) (15/16" Long)

2 Each Retention Sleeve

NOTE: 3 Build-up Sleeves sold separately as Leviton PN#: 49885-SBS

A. 2.0mm, 2.5mm & 3.0mm JACKETED CABLE

1. Place jacketed fiber protective boot on cable and slide back. **(Figure 1)**

NOTE: Distances in all drawings are not to scale.

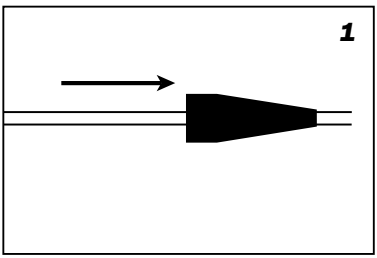
NOTE: To help avoid tool, buffer and fiber contamination, clean 4-6 inches of jacket first with a 99% alcohol wipe, then with a lint-free wipe.

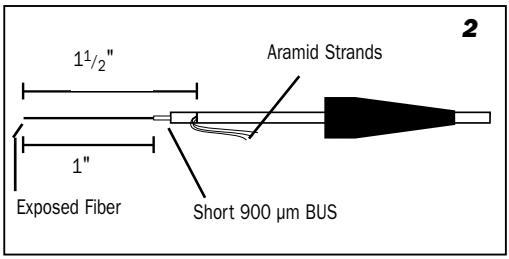
2. Remove jacket $1^{1}/_{2}$". Clean with a 99% alcohol wipe followed by a lint-free wipe to remove any contaminants. Strip the 900µm buffer back 1". Strip about $^{1}/_{4}$" at a time. Gently snap the shorter length 900µm Build-up Sleeve (BUS) onto fiber, butting it up against the jacket. **(Figure 2)**

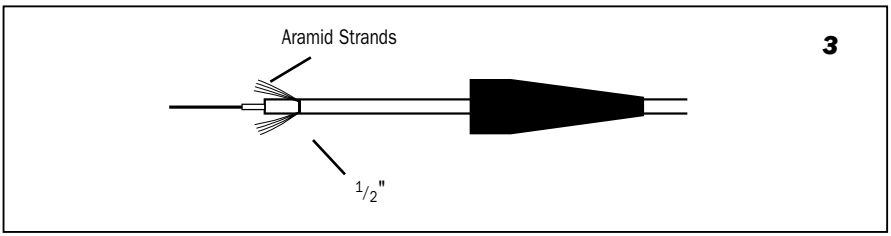
3. Trim aramid strands back even with the end of the tight buffer that surrounds the fiber (approximately $^{1}/_{2}$"). Clean fiber with 99% isopropyl alcohol and a lint-free wipe to remove coating. **(Figure 3)**

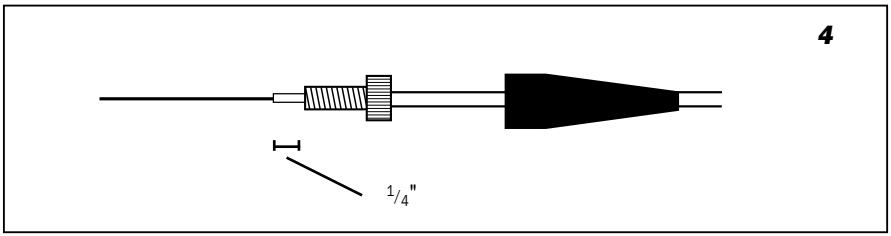
4. Distribute aramid strands evenly over the outer surface of the 900µm BUS. Fold the retention sleeve over the BUS and the distributed aramid strands. Align end of the BUS with threaded end of the retention sleeve. Leave $^{1}/_{4}$" of buffered fiber exposed and complete assembly and polishing process as described in section D. **(Figure 4)**

Refer to Assembly and Polishing Process, Page 5, Section D.









B. 900 µm BUFFERED FIBER

1. Place bare fiber protective boot on cable and slide back. **(Figure 5)**

NOTE: To help avoid tool, buffer and fiber contamination, clean 4-6 inches of jacket first with a 99% alcohol wipe, then with a lint-free wipe.

2. With indelible marker (Leviton PN# 49886-SMP), mark the buffer 1" and 1 1/4" from the end of the 900µm tight buffer. **(Figure 5)**

NOTE: Use Leviton's Strip Length Gauge (PN# 49886-SLG), or ruler on red handled, 900µm Buffer Remover (PN# 49886-BR9).

3. Using red handled buffer remover, strip and remove buffer in four 1/4" increments, until the fiber is stripped back to first mark on the buffer. **(Figure 6)**

4. Clean exposed fiber with 99% isopropyl alcohol and wipe with lint-free wipe to remove any debris. When cleaning, pull on fiber gently, but with firm pressure; this tests for damaged fiber.

5. Line up the longer, 900µm BUS with the second mark (at 1 1/4") from the end of the fiber. Then snap it into place. **(Figure 7)**

6. Fold threaded retention sleeve over BUS even with the end and complete the assembly and polishing process as described in Section D. **(Figure 8)**

Refer to Assembly and Polishing Process, Page 5, Section D.

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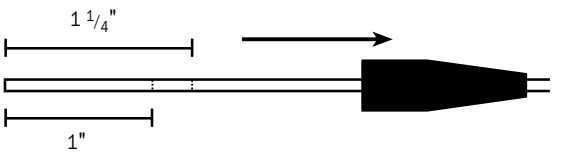

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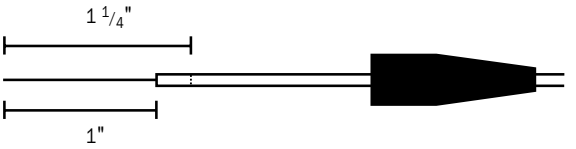

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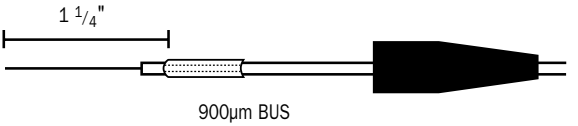

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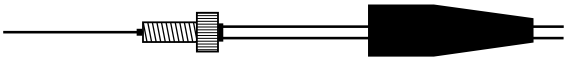
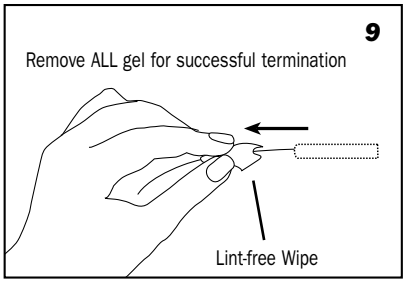
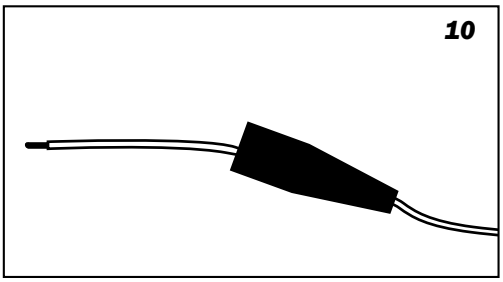


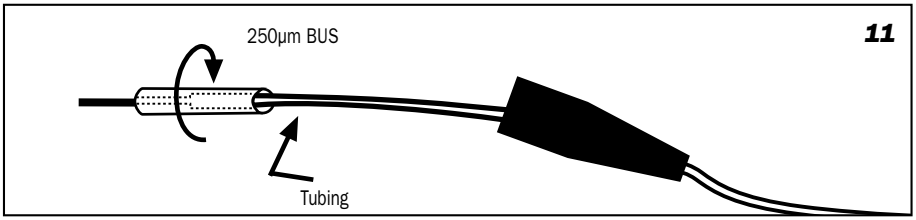
C. 250 µm LOOSE TUBE GEL FILLED FIBER

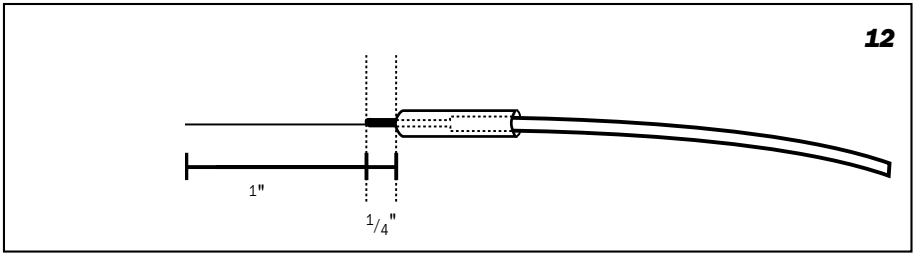
1. Remove all gel from fiber with industrial strength solvent pad such as a"D-Gel™" pad. Follow with a lint-free wipe, an alcohol wipe, and another lint-free wipe. **(Figure 9)**
2. Install 900 µm fan-out kit per manufacturer's instructions and place bare fiber protective boot on assembly and slide back **(Figure 10)**. Clean 3-4 inches of buffer and fan-out kit with 99% isopropyl alcohol wipe.
3. Gently rotate BUS down on tubing, then slide bare fiber into 250 µm BUS and move BUS back until it securely fits over tubing. **(Figure 11)**
4. Grasp the BUS firmly, and strip fiber coating back about 1" and leave $^1/_4$" of 250 µm coating exposed **(Figure 12)**. Clean exposed fiber with 99% isopropyl alcohol wipes.
5. Fold retention sleeve over BUS so it is even with the end **(Figure 13)**. Complete the assembly and polishing process as described on Page 5, Section D.

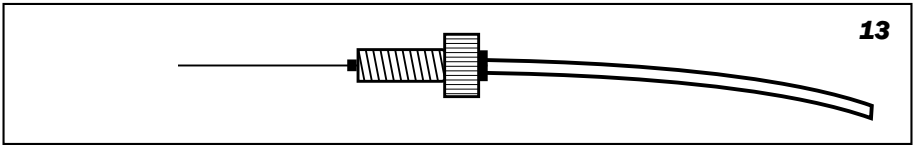
Refer to Assembly and Polishing Process, Page 5, Section D.







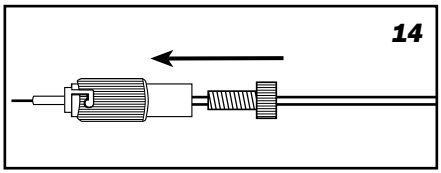


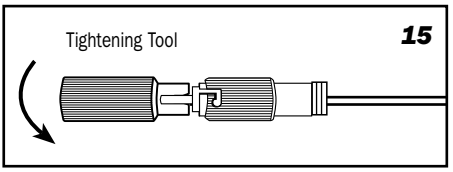


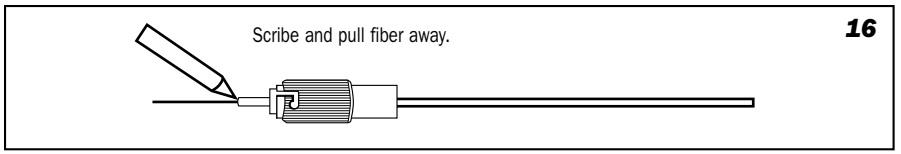
D. ASSEMBLY AND POLISHING PROCESS

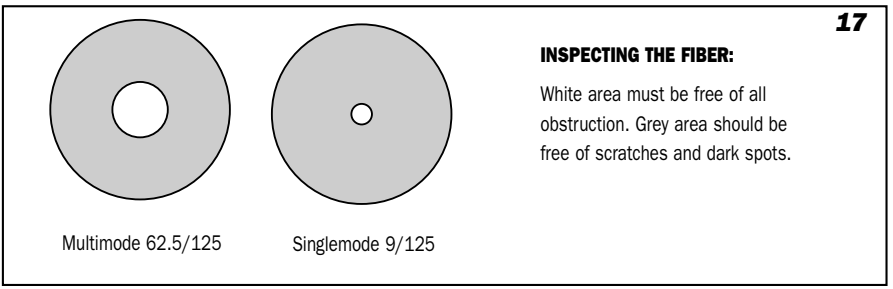
1. Insert connector into tightening tool and then while firmly holding the threaded sleeve together, insert fiber into connector housing **(Figure 14)**. Rotate connector housing down over threaded sleeve. To rotate, use the tightening tool and grip the sleeve head with pliers. Rotate connector housing, not threaded sleeve **(Figure 15)**. Trim away any exposed aramid strands.
2. Tighten down connector housing until flush with threaded sleeve head.
3. Cleave fiber by use of the Versa-Cleave or scribing tool. **(Figure 16)**
4. 12 µm "AIR POLISH" FOR SINGLEMODE AND MULTIMODE FIBER - Begin by "Air Polishing" the connector with 12 µm polishing film. Hold film at the edge with thumb and forefinger. Gently touch connector to film and rotate using 18-20 one-inch circles to remove fiber stub. The 12µm film is dark pink in color.

   3 µm POLISH FOR SINGLEMODE AND MULTIMODE FIBER - Wipe the bottom surface of the polishing puck and the surface of the connector with a 99% alcohol wipe. Place 3µm film on the polishing pad, dull side up, and set polishing puck on the film. Gently insert the connector into the puck, and trace 15-20 Figure 8's on the film, using very light pressure and proceeding to firmer pressure as you progress. Repeat the same procedure with the .3µm film. The 3µm film is yellow in color and the .3µm is light blue in color.
5. Slide protective boot over retention sleeve.
6. Inspect the fiber using the 200x inspection scope, to be sure the fiber is not scratched, cracked or broken. Also check to ensure that fiber is polished flush by dragging gently across lint-free wipe. Fiber should not snag. If fiber snags, continue polishing. Remove any debris using a lint-free wipe. **(Figure 17)**









These are the tools included in both the 49800-UTK and 49800-UTP Fiber Optic Tool Kits which are necessary to complete a termination:

Jacket Stripper
900/250 µm Buffer Remover
Electrician Scissors (for cutting aramid yarn)
Scribing Tool (49800-UTK Only)
Versa-Cleave (49800-UTP Only)
Polishing Pad
Universal Polishing Puck
200X Inspection Scope
Safety Glasses
Universal Polishing Puck
Music Wire

These are the supplies included in the Universal Consumable Kit, which are necessary to complete a termination:

Polyester Wipes
Alcohol Pads
12 micron Polishing Film
3 micron Polishing Film
0.3 micron Polishing Film
Swabs
Music Wire

IMPORTANT INSTRUCTIONS

1. Read and understand all instructions.
2. Follow all warnings and instructions marked on the product.
3. SAVE THESE INSTRUCTIONS.

SAFETY INFORMATION

1. Always wear safety glasses when working with fiber optic cable.
2. Never look directly into a laser light source.
3. Always dispose of fiber debris properly.
4. No food or beverages in the vicinity.
5. Thoroughly wash face and hands prior to terminating fiber.

TIPS & RECOMMENDATIONS

1. It is important to clean the exposed fiber and even the buffer repeatedly with isopropyl alcohol, to ensure no dust, oil or debris will remain on the fiber.
2. Do not lay ferrule dust covers on a dirty or dusty surface.
3. When using tightening tools, insert the connector into the tool before inserting the fiber into the connector.
4. To maintain proper end radius of fiber, always use the Leviton polishing pad, polishing puck, and lapping films as instructed in the polishing process (see Page 5 Section D).