

CresFiber® 8G Multimode Fiber Termination

Using CRESFIBER-CONN-SC50UM-12 and CRESFIBER-TK

Laser Safety



The CRESFIBER-TK termination kit conforms to the requirements contained in IEC 60825-1:2007-03 and complies with 21 CFR 1040.10 and 1040.11.

WARNING: Viewing the laser output with certain optical instruments (for example, eye loupes, magnifiers, and microscopes) may pose an eye hazard.

Handling Guidelines

When terminating and splicing fiber:

- Always wear safety glasses as part of the termination and splicing process.
- Work in a well-lit and well-ventilated area.
- Avoid eating and drinking near work area.
- Always wash hands after termination work is completed.

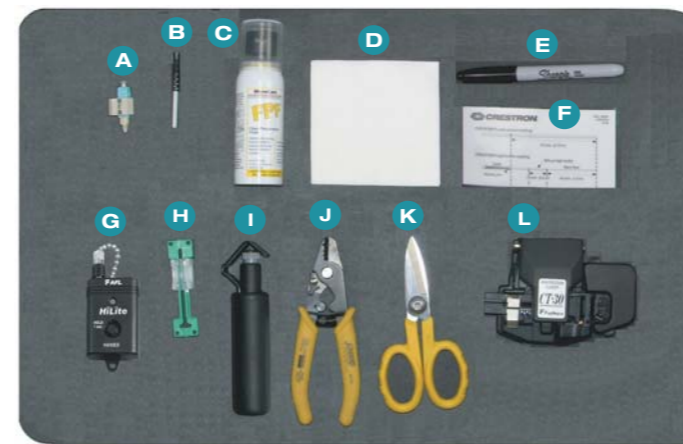
WARNING: The broken ends and scraps of fiber created during termination and splicing can be dangerous. These scraps are dangerous if ingested and are also difficult to flush from your eyes. Dispose of all scraps properly.

1 Introduction

Termination of Crestron® CresFiber® 8G multimode fiber optic cable requires the use of Crestron CRESFIBER-CONN-SC50UM-12 connectors and the CRESFIBER-TK termination kit (all sold separately):

- The CRESFIBER-CONN-SC50UM-12 connector is an SC type fiber optic cable connector (sold in quantities of 12 including attached wedge clip and 12 strain relief boots).
- The CRESFIBER-TK termination kit provides the tools necessary to terminate CresFiber 8G cable.

The items required to terminate CresFiber 8G multimode fiber optic cable are shown below.



From the CRESFIBER-CONN-SC50UM-12 Package:

- A CRESFIBER-CONN-SC50UM-12 connector (wedge clip attached)
- B Strain relief boot (3 mm)

From the CRESFIBER-TK Termination Kit¹:

- C Fiber preparation fluid²
- D Lint-free fiber wipes³
- E Marker pen
- F CRESFIBER-TK Cable Card
- G Visual Fault Identifier (VFI)⁴
- H Cable clamp (3 mm)
- I Jacket stripper
- J Fiber stripper
- K Kevlar shears
- L CT-30A cleaver

1. Instructional DVD, Carrying Case, and this Quickstart Guide not shown
2. CRESFIBER-TK-CLEAN-SOLVENT fiber preparation fluid also sold separately
3. CRESFIBER-TK-CLEAN-WIPES fiber wipes also sold separately
4. 2.5 mm (for SC ferrule) and 1.25 mm (for LC ferrule) universal adapters included (not shown)

2 Fiber Preparation

1. Remove at least 12 inches (~300 mm) of the outer jacket to expose the four individual fiber cables of the CresFiber 8G cable. The ripcord located under the outer jacket can be used to tear the insulation for easy removal. To avoid damage to the fibers, be careful not to bend the cable sharply.
2. Remove the inner wrapping, and then remove the center fiberglass rod.
3. Select one of the fiber cables and attach the included 3 mm cable clamp approximately 10 inches (254 mm) from the end of the cable. Using the included marker pen, mark a point 70 mm from the end of the cable.

NOTE: For precise dimensions, refer to the latest version of the included CRESFIBER-TK Cable Card (Doc. 6962).

4. Using the largest notch (1.6-3 mm) in the included fiber stripper, strip off the 3 mm loose buffer from the 70 mm mark.
5. Slide one of the included strain relief boots onto the cable. The boot slides over the Aramid yarn and helps to keep the Aramid yarn out of the way.



6. Using the included marker pen, mark 40 mm from the end of the cable and a second point 15.5 mm from the 40 mm mark.

NOTE: For precise dimensions, refer to the latest version of the included CRESFIBER-TK Cable Card (Doc. 6962).

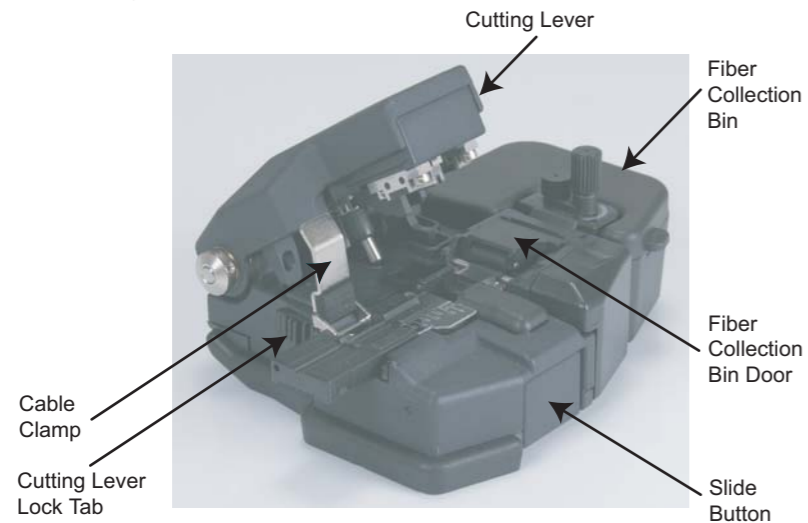
7. Using the middle notch in the fiber stripper, remove the 900 µm tight buffer from the 40 mm point. To avoid damaging or breaking the fiber, remove the 900 µm tight buffer in two or three small segments.
8. Using the smallest notch in the fiber stripper, remove the 250 µm outer coating from the 40 mm point.
9. Using the handle of the fiber stripper, gently bend the fiber 60 degrees to verify that the fiber is not damaged.
10. Dampen one of the included fiber wipes with the included fiber preparation fluid (CRESFIBER-TK-CLEAN-WIPES fiber wipes and CRESFIBER-TK-CLEAN-SOLVENT fiber preparation fluid also sold separately). Clean the bare fiber with two or three passes of the wipe. A squeak indicates that the fiber is clean. Do not touch the bare fiber after this cleaning.

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3 Fiber Cleaving

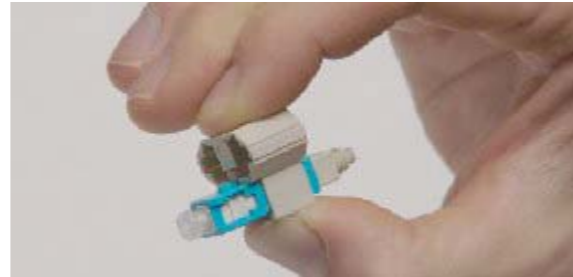
Fiber cleaving is performed using the included CT-30A cleaver (shown below with cable clamp and cutting lever in upright position and with fiber collection bin attached).



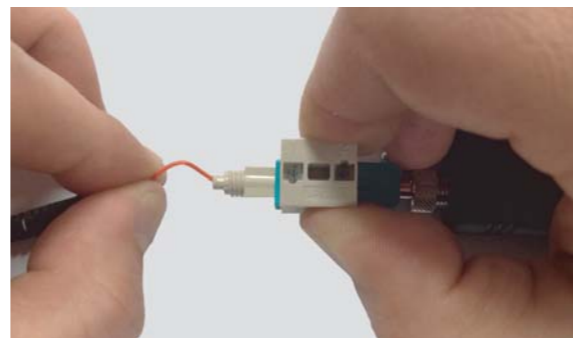
1. Ensure that the included CT-30A cleaver is clean and free of fiber.
2. (Recommended) Attach the included fiber collection bin according to the instructions included with the cleaver.
3. If the cutting lever is locked, slide the cutting lever lock tab forward to release the cutting lever.
4. Lift the cable clamp on the cleaver to an upright position.
5. Push the slide button in until it locks.
6. Insert the end of the bare fiber under the open fiber collection bin door.
7. Lay fiber in the 900 trough so that the end of the 900 μ m tight buffer reaches the 11 mm mark.
8. Close the cable clamp to secure the fiber in position.
9. Press the cutting lever down to cleave the fiber.
10. If the optional fiber collection bin is not installed, remove cleaved piece of fiber and dispose of carefully.
11. Lift the cable clamp to release the cable.

4 Connector Termination

1. Squeeze the top and bottom of the wedge clip to ensure that it is inserted into the connector body. A click indicates that a dislodged wedge clip is now inserted.



2. Using the included Visual Fault Identifier (VFI), ensure that the cleaved fiber is connected properly by doing the following:
 - a. Attach the included 2.5 mm ferrule adapter to the VFI.
 - b. Remove the connector dust cap and insert the connector into the VFI. Turn on the VFI. A red glow appears in position 1 of the wedge clip.
 - c. Insert the cleaved fiber into the rear of the connector until the red glow in position 1 of the wedge clip dims. The 15.5 mm mark should touch the end of the connector.
3. Maintaining slight pressure on the fiber, release the wedge clip by squeezing both sides until the wedge clip disconnects from the connector.



4. Turn off the VFI, and then remove the connector from the VFI.
5. Place the dust cap back onto the connector's ferrule.

5 Connector Completion

1. Pull the Aramid yarn up over the connector body, being sure to maintain tension on the Aramid yarn and not on the fiber cable.



2. Slide the strain relief boot up to the connector and screw it onto the connector.
3. Using the included Kevlar shears, trim the Aramid yarn.



The specific patents that cover Crestron products are listed at patents.crestron.com.

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