49991-xSC
49991-xLC
49991-xST

LEVITON
Network Solutions

Connector Installation & Assembly Instructions

FASTCAM® SC, LC, & ST Connectors

WARNING: Read and understand all instructions. Follow all warning and instructions marked on the product.

- Disconnected optical components may emit invisible optical radiation that can damage your eyes. Never look directly into an optical component that may have a laser coupled to it. Serious and permanent retinal damage is possible. If accidental exposure to laser radiation is suspected, consult a physician for an eye examination.

CAUTIONS

- Isopropyl alcohol is flammable, and can cause eye irritation on contact. If eye contact occurs, flush with water for at least 15 minutes. In case of ingestion, consult a physician. Use only in well ventilated areas.
- Wearing safety glasses during installation of this device is recommended. Although standard safety glasses provide no protection from potential optical radiation, they offer protection from accidental airborne hardware and cleaning solvents.
- Fiber optic cable is sensitive to excessive pulling, bending, and crushing forces. Do not bend the cable less than recommended bend radius. Do not use more pulling force on the cable than specified. Do not kink or crush the cable.

1.0 Tools required for installation are the Flat or CT-30A Cleaver*, a fiber/buffer stripper and Kevlar scissors.
*A precision cleaver performing a 90 degree cleave +/- 0.5 degrees must be used.

1.1 Consumables required are 99% isopropyl alcohol and lint free wipes.

2.0 The following installation instructions describe the assembly procedure for FastCAM connectors which allow termination on 250um, 900um, 2.0mm, and 3.0mm fiber/cable.

2.1 Identify components of the connector kit. *(See **Figure 1**)*

FIBER TERMINATION-
Fiber Termination – 900µm

NOTE: Steps 3.2 to 3.11 are common and used in all three termination types

3.0 **Note:** When using a 900µm Fan-out/Breakout kit to unjacketed 250µm fiber, follow the manufacturer's instructions. After the kit is installed properly, the following procedures for FastCAM termination are applicable.

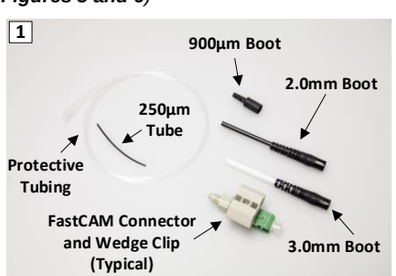
3.1 Slide the 900µm boot onto the fiber. *(See **Figure 2**)*.

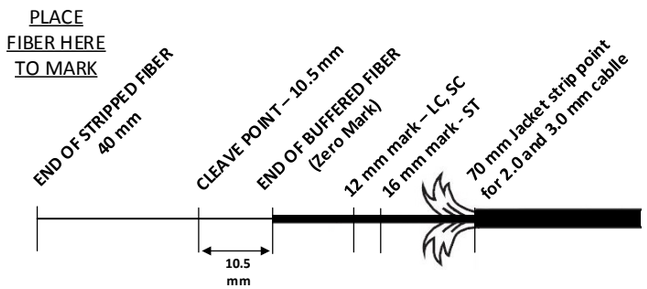
3.2 Place a mark 35-40mm from the end of the fiber (Zero Mark). From the Zero Mark, place a mark at 16mm for SC or ST or at 12 mm for LC. *(See **Template and Figure 3**)*

3.3 Strip the fiber to the Zero Mark by removing 10 mm at a time. *(See **Figure 4**)*

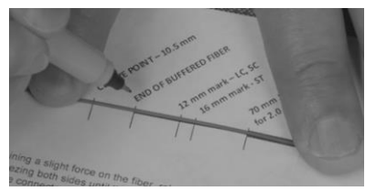
3.4 Clean the stripped fiber with an alcohol wipe to remove any debris.

3.5 Set the stripped fiber onto the cleaver such that the 900µm buffered fiber's edge is at the 10.5mm position and cleave. *(See **Figures 5 and 6**)*





TEMPLATE/MODÈLE/PLANTILLA
ACTUAL SIZE – DO NOT SCALE
TAILLE REELLE-NE PAS L'ECHELLE
TAMAÑO REAL-NO ESCALA



3.6 OPTIONAL: (SEE SECTIONS B.1 to B.3): Use the Visual Fault Locator (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly.

3.7 Insert the cleaved fiber into the rear of the connector until the connection is made and the mark is at the entrance to the connector body. *(See **Figure 7**)*

3.8 If there is any resistance roll the fiber between your thumb and forefinger while inserting. *(See **Figure 8**)*.

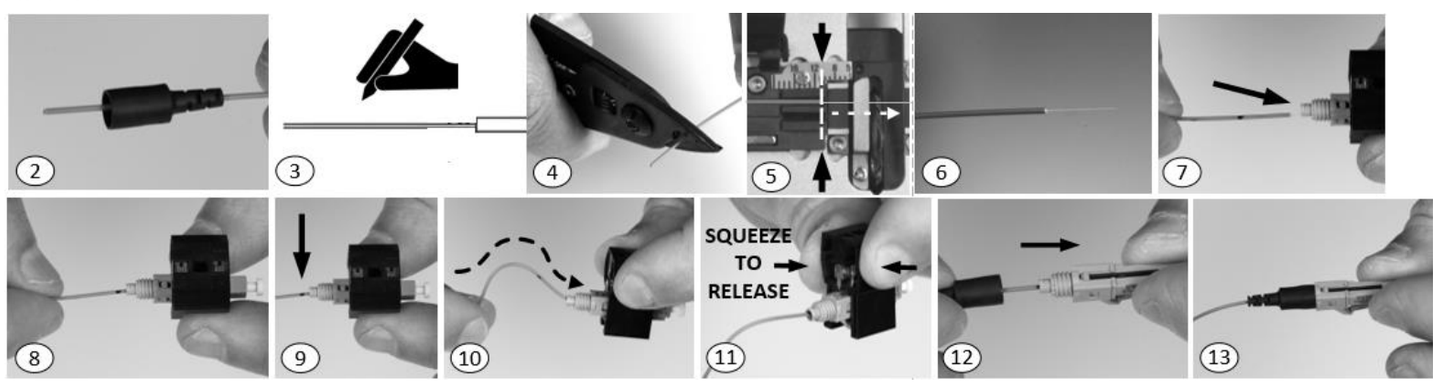
3.9 Insert the fiber until mated with the fiber in the connector. The mark on the fiber will be just outside the body of the connector. *(See **Figure 9**)*

3.10 Maintaining a slight force on the fiber *(See **Figure 10**)*, release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. *(See **Figure 11***

3.11 Slide the boot up and over the rear of the connector body. Termination is complete. *(See **Figures 12, 13**)*

3.12 ST Connector ONLY: Install the connector housing onto the connector. *(See **Figure 21**)*

Note: The ferrule's dust cap should remain in place until you are ready to insert the connector.



Fiber Termination – 2mm and 3mm

4.0 Slide 2mm or 3mm boot onto cable. *(See **Figures 14 and 15**)*

4.1 Remove 70mm of cable jacket. *(See **Figure 16**)*

4.2 Place a mark 35-40mm from the end of the fiber (Zero Mark). From the Zero Mark, place a mark at 16mm for SC or ST or at 12 mm for LC. *(See **Template and Figure 3**)*

4.3 Strip the fiber to the Zero Mark by removing 10 mm at a time *(See **Figure 4**)*.

4.4 Clean the stripped fiber with an alcohol wipe to remove any debris.

4.5 Set the stripped fiber onto the cleaver such that the 900µm buffered fiber's edge is at the 10.5mm position and cleave. *(See **Figures 5 and 6**)*

4.6 OPTIONAL: (SEE SECTIONS B.1 to B.3): Use the Visual Fault Locator (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly.

4.7 Insert the cleaved fiber into the rear of the connector until the connection is made and the mark is at the entrance to the connector body. *(See **Figure 7**)*

4.8 If there is any resistance roll the fiber between your thumb and forefinger while inserting. *(See **Figure 8**)*.

4.9 Insert the fiber until mated with the fiber in the connector. The mark on the fiber will be just outside the body of the connector. (*See **Figure 9***)

4.10 Maintaining a slight force on the fiber *(See **Figure 10**)*, release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. *(See **Figure 11**)*

4.11 Fan Kevlar around connector. *(See **Figure 18**)*

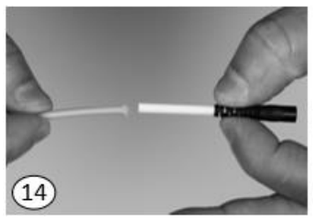
4.12 Grip Kevlar on both side of the connector to maintain tension. Screw boot onto back of connector to fix Kevlar family. *(See **Figure 19**)*

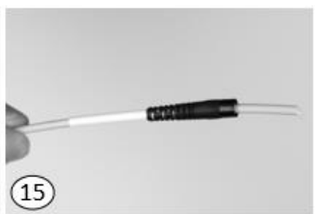
4.13 Cut Kevlar from around the connector. *(See **Figure 20**)*

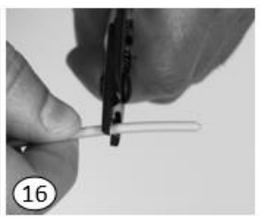
4.14 Termination is complete.

4.15 ST Connector ONLY: Install the connector housing onto the connector. (*See **Figure 21**)*

Note: The ferrule's dust cap should remain in place until you are ready to insert the connector.







SEE STEPS 3.3 TO 3.11

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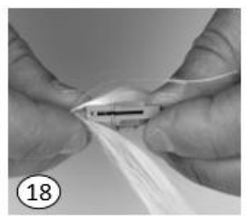

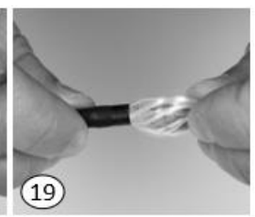

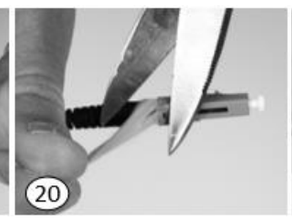

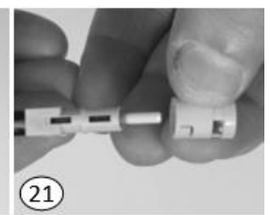

Fiber Termination – 250µm

5.1 Slide the protective tubing, 250µm protective tube and 900µm boot (in order) onto the fiber. *(See **Figure 22**)*

5.2 Strip the acrylate coating back 35-40mm from the end of the fiber (Zero Mark). *(See **Figure 23 and Template**)*

5.3 Clean the stripped fiber with an alcohol wipe to remove any debris.

5.4 Set fiber onto cleaver such that 250µm coating edge is at 10.5mm position and cleave. *(See **Figure 5**)*

5.5 Slide the 250µm protective tubing towards the end 250µm coating.

5.6 OPTIONAL: (SEE SECTIONS B.1 to B.3): Use the Visual Fault Locator (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly.

5.7 Insert the cleaved fiber into the rear of the connector until the connection is made. Maintain a slight bend to the fiber *(See **Figure 7**)*.

5.8 If there is any resistance during insertion, roll the fiber between your thumb and forefinger while inserting. *(See **Figure 8**)*.

5.9 Maintaining a slight force on the fiber *(See **Figure 10**)*, release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. *(See **Figure 11**)*

5.10 Slide the boot up and over the rear of the connector body. If using, slide the clear 900um protective tubing - over the black 250um protective tubing - to the back of the connector's boot. Termination is complete. *(See **Figures 12, 13**)*

5.11 ST Connector ONLY: Install the connector housing onto the connector. *(See **Figure 21**)*

Note: The ferrule's dust cap should remain in place until you are ready to insert the connector.

SEE STEPS 3.4 TO 3.12

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TOOL KIT

Kit Consisting of Flat Cleaver, Stripping tool & Consumable	49800-MSK
Kit Consisting of Flat Cleaver, Stripping tool, LED, Tray & Consumable	49800-LAK
Kit Consisting of CT-30A Cleaver, Stripping tool & Consumable	49800-SMK
Visual Fault Locator, with 1.25 and 2.5 mm adapters	49886-VFL

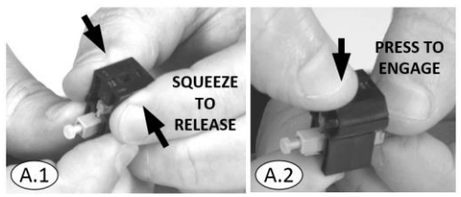
For Technical Assistance Call:
1-800-722-2082
www.leviton.com/ns

Termination Videos available at:
http://www.leviton.com/en/support/documents-and-resources/videos

RESETTING THE WEDGE CLIPS

A.1 The wedge clips are engaged at shipment. If they have become dislodged, disengage the wedge clips **(See Figure A.1)** squeeze the top and bottom of the wedge clip over each window, insuring it is inserted in the connector body. A click will be heard for each wedge. *(See **Figure A.2**)*

STEPS A.1 to A.2
RESETTING THE WEDGE CLIP



USING A VFL (Visual Fault Locator)

B.1 Remove the FastCAM connector dust cap and insert the connector into the VFL. Turn the VFL power on and there will be a red glow in Position 1 of the wedge clip. *(See **Figure B.1**)*

B.2 Insert the cleaved fiber into the rear of the connector until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. *(See **Figure B.2**)*

B.3 Maintaining a slight force on the fiber, release the wedge clip by squeezing both sides until the wedge clip dislocates itself from the connector body. Remove the wedge clip. Remove the VFL from the connector and place the dust cap back onto the connector's ferrule. *(See **Figure B.3**)*

STEPS B.1 to B.3 WHEN USING A VISUAL FAULT LOCATOR