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Network Solutions

Connector Installation & Assembly Instructions

FASTCAM® APC SC Connectors

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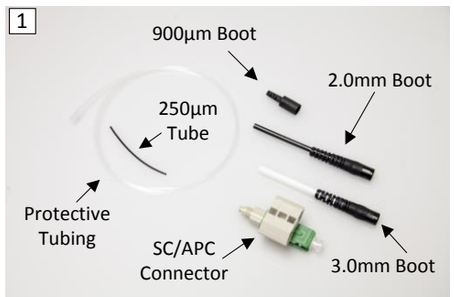


WARNING: Always wear eye protection when handling optical fibers. Dispose of any cut or cleaved ends properly.

NOTE: FastCAM Angled Polish Connectors (APC) require the use of a precision angled cleaver.

NOTE: If you are experiencing difficulty inserting your fiber into the connector review the following steps:

A. Never force a fiber into the connector. Verify that all acrylate coating is removed and the fiber is clean of debris.
B. Make sure the two wedge clips are properly engaged and the Cam is fully open (a bright light in window #1). It is recommended to reset the wedges prior to termination.
C. Gently twist the fiber as it is being inserted into the connector. While the light in window #1 may not fully disperse a noticeable dim will occur indicating a proper insertion.

FIBER TERMINATION- 250µm

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

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

3.0 Tools required for installation are a precision 8º angled cleaver, 99% isopropyl alcohol, lint free wipes, a fine-tipped felt pen, a fiber stripper and a millimeter ruler or this Instruction sheet marking template.

3.1 Slide the protective tubing, 250µm protective tube and 900µm boot (in order) onto the fiber. *(See **Figure 2**)*

Note: The 250µm protective tube should come attached to protective tubing.

3.2 A minimum of 35mm from the end of the 250um fiber, place three marks: an endpoint at 0mm, at 3.5 mm and 17 mm directly on the top (12 o'clock position) of the fiber *(See **Figure A1**)*

3.3 Strip the fiber to the 0mm mark by removing 5-10 mm at a time. *(See **Figure 3**)*
Clean the stripped fiber with an alcohol wipe to remove any debris. Check the fiber integrity by bending the stripped end slightly at 60 degrees.

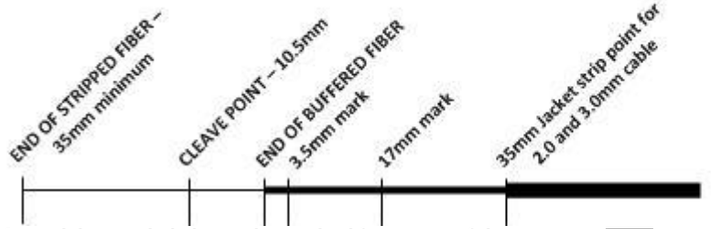
3.4 Set the stripped fiber onto the fiber holder such that the 3.5mm mark is at the entrance point of the fiber holder. *(See **Figure A2**)*

3.5 Secure the fiber with the fiber holder doors to prevent it from shifting and follow the cleaver manufacturer's instructions. **DO NOT ALLOW THE FIBER TO ROTATE DURING THE CLEAVING ACTION** *(See **Figure 4**)*

3.6 Press the cleaving anvil downward with steady even pressure. Hold for 0.5-1.0 second only. *(See **Figure 5**)*

3.7 Cleave the fiber and remove it from the cleaving device

A1



***A precision angled cleaver is required for successful termination.** Those with a guaranteed maximum 8º cleave angle for single-mode fibers provided acceptable results.

3.8 The wedge clips are engaged at shipment. If they have become dislodged, squeeze the top and bottom of the wedge clip, insuring it is inserted in the connector body. A click will be heard for each wedge. *(See **Figure 6**)*

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

3.10 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the fiber is fully inserted to the mark. Make a bend in the fiber to maintain connection. *(See **Figure 7**)*

3.10A OPTIONAL: Use the Visual Fault Locator (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly. (steps A.3 to A.4)

A.3 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 A3**)*

A.4 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. *(See **Figures A4 and 7**)*

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TEMPLATE/MODÈLE/PLANTILLA

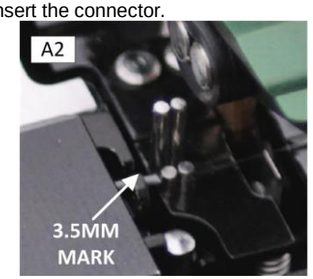
ACTUAL SIZE – DO NOT SCALE
TAILLE REELLE-NE PAS L'ECHELLE
TAMAÑO REAL-NO ESCALA

3.11 If used, remove the VFL. 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. Place the protective cap back onto the connector's ferrule. *(See **Figure 8**)*

3.12 Slide the boot up and over the rear of the connector body. Slide the clear 900um protective tubing - over the black 250um protective tubing - to the back of the connector's boot. Termination is complete. *(See **Figure 9**)*

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

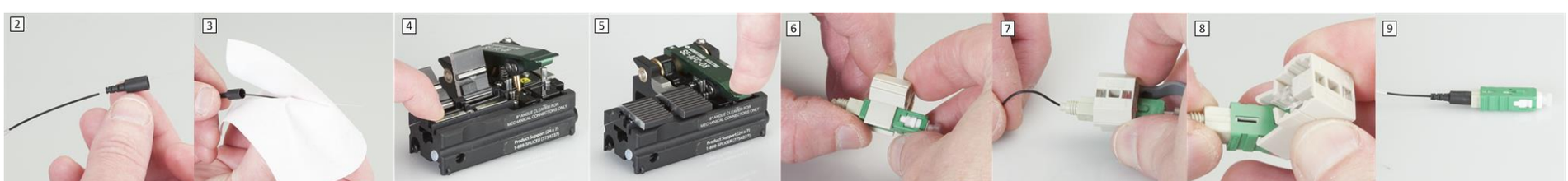
A2



A3

A4

2 3 4 5 6 7 8 9



Fiber Termination – 900µm

4.0 **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. Tools required for installation are a precision 8º angled cleaver, 99% isopropyl alcohol, lint free wipes, a fine-tipped felt pen, a fiber stripper and a millimeter ruler or this Instruction sheet marking template.

4.1 Slide the 900µm boot onto the fiber. *(See **Figure 10**)*

4.2 **On a flat, clean surface with any curvature of fiber pointing downward,** a minimum of 35mm from the end of the 900um buffered fiber, place three marks: an endpoint at 0mm, at 3.5 mm and 17 mm directly on the top (12 o'clock position) of the fiber. (*See **Figures A1 and 11***).

4.3 Strip the fiber to the 0mm mark by removing 5-10 mm at a time. *(See **Figure 12**)*

4.4 Check the fiber integrity by bending the stripped end slightly at 60 degrees. Clean the stripped fiber with an alcohol wipe to remove any debris. *(See **Figure 13**)*.

4.5 Set the stripped fiber onto the fiber holder such that the 3.5mm mark is at the entrance point of the fiber holder. *(See **Figure A2**)*

4.6 Secure the fiber with the fiber holder doors to prevent it from shifting and follow the cleaver manufacturer's instructions. **DO NOT ALLOW THE FIBER TO ROTATE DURING THE CLEAVING ACTION (***See **Figure 14**)*

4.7 Press the cleaving anvil downward with steady even pressure. Hold for 0.5-1.0 second only. *(See **Figure 15**)*

4.8 Cleave the fiber and remove it from the cleaving device

4.9 The wedge clips are engaged at shipment. If they have become dislodged, squeeze the top and bottom of the wedge clip, insuring it is inserted in the connector body. A click will be heard for each wedge. *(See **Figure 16**)*

4.10 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the connection is made. Make a bend in the fiber to maintain connection. *(See **Figure 17**)*

4.10A **OPTIONAL: Use the Visual Fault Locator (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly. (steps A.3 to A.4)**

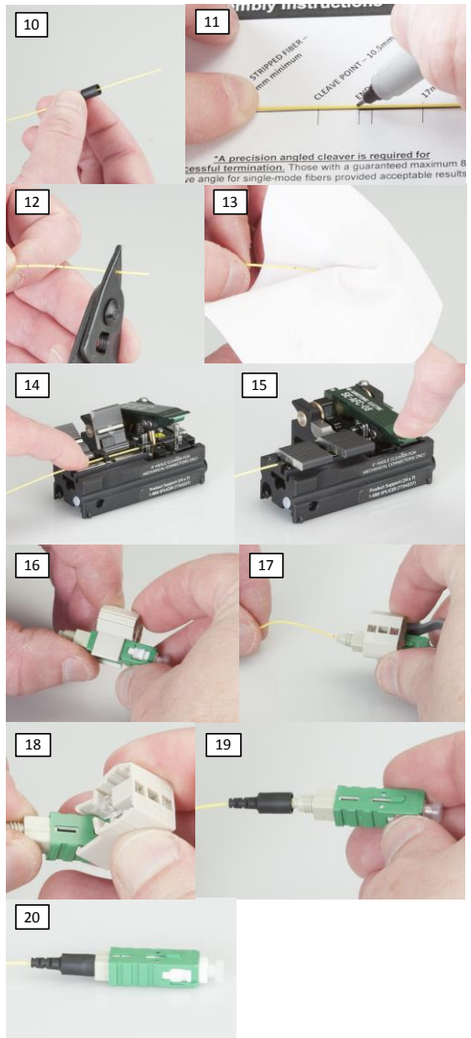
A.3 Remove the FastCAM connector dust cap and insert the connector into the VFL. Turn the VFL power on and there will be a red glow in Position 1 of the wedge clip. *(See **Figure A3**)*

A.4 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. *(See **Figures A4 and 17**)*

4.11 If used, remove the VFL. 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. *(See **Figure 18**)*

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

4.12 Slide the boot up and over the rear of the connector body. Termination is complete. *(See **Figures 19 and 20**)*



Fiber Termination – 2mm and 3mm

5.0 Tools required for installation are a precision 8º angled cleaver, 99% isopropyl alcohol, lint free wipes, a fine-tipped felt pen, a fiber stripper and a millimeter ruler or this Instruction sheet marking template.

5.1 Slide 2mm or 3mm boot onto cable. *(See **Figure 21**)*

5.2 Remove a minimum of 70mm of cable jacket. *(See **Figure 22**)*

5.3 **On a flat, clean surface with any curvature of fiber pointing downward,** a minimum of 35mm from the end of the 900um buffered fiber, place three marks: an endpoint at 0mm, at 3.5 mm and 17 mm directly on the top (12 o'clock position) of the fiber. *See **Figures A1 and 23***).

5.4 Strip the fiber to the 0mm mark by removing 5-10 mm at a time *(See **Figures 24 and 25**)*

5.5 Clean the stripped fiber with an alcohol wipe to remove any debris. Check the fiber integrity by bending the stripped end slightly at 60 degrees. *(See **Figure 26**)*

5.6 Set the stripped fiber onto the fiber holder such that the 3.5mm mark is at the entrance point of the fiber holder. *(See **Figure A2**).*

5.7 Secure the fiber with the fiber holder doors to prevent it from shifting and follow the cleaver manufacturer's instructions. **DO NOT ALLOW THE FIBER TO ROTATE DURING THE CLEAVING ACTION (***See **Figure 27**)*

5.8 Press the cleaving anvil downward with steady even pressure. Hold for 0.5-1.0 second only. *(See **Figure 28**)*

5.9 Cleave the fiber and remove it from the cleaving device

5.10 The wedge clips are engaged at shipment. If they have become dislodged, squeeze the top and bottom insuring the wedge clip is inserted into the connector body. A click will be heard for each wedge. *(See **Figure 29**)*

5.11 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the fiber is fully inserted to the mark. Make a bend in the fiber to maintain connection *(See **Figure 30**)*

5.11A **OPTIONAL: Use the Visual Fault Identifier (VFL) as an aid to determine the cleaved fiber and stubbed fiber are connected properly. (steps A.3 to A.4)**

A.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 A3**)*

A.2 Insert the cleaved fiber into the rear of the connector. Position the mark on the fiber parallel to the top center of the connector body. Continue insertion at this aligned position until the red glow dims in Position 1 of the wedge clip. Make a bend in the fiber to maintain connection. *(See **Figures A4 and 30**)*

5.12 If used, remove the VFL. 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. *(See **Figure 31**)*

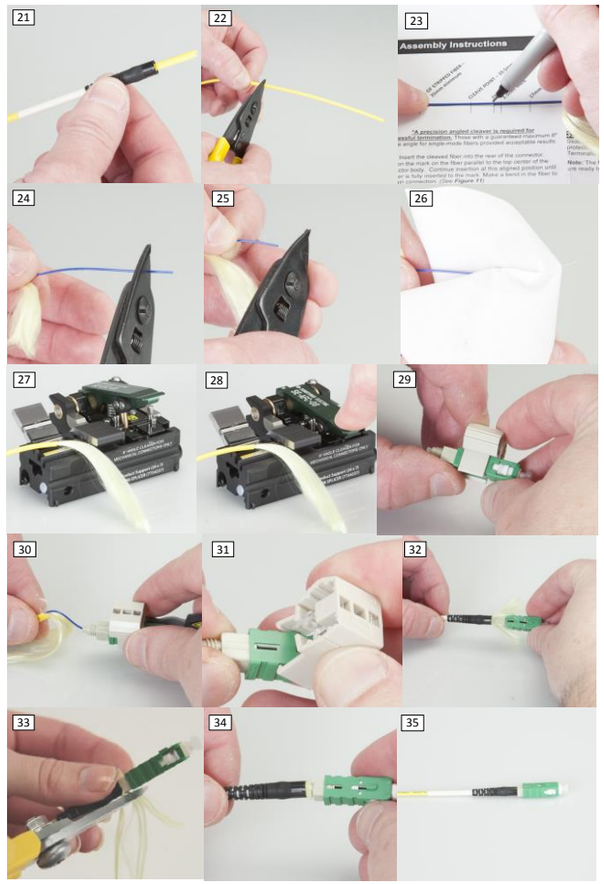
Note: The ferrule's dust cap should remain in place until you are ready to insert the connector.

5.13 Fan Kevlar around connector. *(See **Figure 32**)*

5.14 Grip Kevlar on both sides of the connector to maintain tension. Partially screw boot onto back of connector. Cut Kevlar from around the connector. *(See **Figure 33**)*

5.15 Complete threading the boot onto the connector. *(See **Figure 34**)*

5.16 Termination is complete. *(See **Figure 35**)*



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