

Application Guide #: AG005

Revision Date: 012518

Splicing 900 Micron Fiber to SCSplice-On-Connector

Splicers applicable to: KF4A All-in-one

Fiber types applicable to: SM, MM

Equipment needed:

Scissors, Sharpie, Metric Ruler, Soft Bristle Brush, Stiff Bristle Brush, Lint-free Wipe, Cleaning Fluid, Tweezers, Small Phillips Screwdriver, Small Swabs

Machine Preparation:

1. Ensure that the machine and material to be spliced has had a chance to acclimate to the surroundings.
2. Clean the cameras. Using the swabs and cleaning fluid, wipe the camera lenses as need be. Use the small Phillips screwdriver to remove the electrodes for better access. Replace the electrodes prior to operation.
3. Turn the machine on.
4. Select the proper settings on the machine for fiber type, stripper mode, and heater mode (corresponding to splice sleeve). For a splice on connector, the setting typically uses a prefix of "S09" or such.
 - a. These settings may need to be adjusted based on environmental conditions.
5. Run an arc calibration cycle (to ensure the machine is set to the environmental conditions present). If the machine is moved to a new location with different environmental characteristics (i.e. from inside to outside etc), the arc calibration must be run again.
6. Examine the machine for general cleanliness. Inspect stripper, heater, cleaver and splicing areas. If necessary, use soft bristle brush to brush away jacket remnants or small pieces of glass from the stripper, heater and cleaver sections. Use stiff bristle brush to clean v-groove area. Take care not to brush material into v-groove area, into cleaving blade area, or into camera area.

Connector Preparation:

1. Insert SC assembly into FU-SF holder.
2. Ensure that assembly is pushed as far forward within housing as possible to seat properly, then close magnetic doors.

Connector Stripping:

1. Open both doors of stripper. If necessary, use soft bristle brush to brush all stripper surfaces and ensure no jacket or acrylate remnants



remain that could interfere with stripper operation.

2. Insert holder loaded with SC Connector. Ensure that the protruding jacketed 900 micron fiber accurately lines up with the channel. Lightly run finger along jacketed fiber to ensure it lies within the stripping channel.
3. Close the doors of the stripper.
4. Check that the machine is set to "900 Micron" for stripper actuation.
5. If the stripper actuation button has been pushed previously, the stripper will activate automatically. If it does not, check the panel of the machine; open the right hand door of the stripper, press the stripper actuation button, and close the right hand door.
6. After the automatic stripper operation, open the left door of the stripper. Remove the holder from stripper and examine the fiber.
7. Using a lint free wipe and cleaning fluid, carefully wipe the exposed fiber to remove any remnants of coating.
8. Examine the fiber. If the fiber appears broken or jagged, it may be necessary to begin again.

Connector Cleaving:

1. Open door over the cleaving blade and the door over the disposal bin. If necessary, use tweezers to pick up glass remnants and place in bin. Try to avoid sweeping glass remnants into the cleaver machinery to prevent interference; if needed, use a swab and cleaning fluid to draw out material from cleaver assembly.
2. Insert connector holder into cleaver, aligning holder into guide channel.
3. Lightly flip disposal bin door shut.
 - a. DO NOT force door shut. Door should appear to be slightly raised in an intermediate position. Door will actuate shut during cleaving operation as part of the disposal process. Forcing the door shut at this point WILL DAMAGE the door.
4. Actuate the cleaver.
 - a. This may be done by closing the door only (on models) or pressing the cleaver actuation button (on other models).
5. Open the cleaver blade door.
 - a. The rotating cleaver blade will retract back to a home position. This is a precision blade and DOES NOT touch the fiber again as it retracts.



- Remove holder from cleaver position and place into splicer. Visually examine to ensure fiber falls into v-groove area properly. If necessary, remove holder and re-seat onto guide pins. Make sure that the dust cap does not protrude upward and interfere with the wind cover. It may be necessary to remove the dust cap, rotate until the dust cap handle does not interfere, and replace.

Fiber Preparation:

- For loose 900 micron fiber, insert fiber through loose SC connector components. First, slide rear boot assembly on, followed by splice sleeve.

- Using a ruler, measure back approximately 29 mm from end of fiber. Use Sharpie to apply mark.

- Using HS-900 holder, open all magnetic doors. Lay fiber within channel and hold using thumb. Align 29mm mark with edge of holder. Close both doors ensuring the fiber is not pinched.



Fiber Stripping:

- Open both doors of stripper. If necessary, use soft bristle brush to brush all stripper surfaces and ensure no jacket or acrylate remnants remain that could interfere with stripper operation.
- Insert holder into stripper, aligning holder within the guide channel. Lightly run finger along jacketed fiber to ensure it falls within stripper channel.
- Close the doors of the stripper.
- Check that the machine is set to "900 Micron" for stripper actuation.
- If the stripper actuation button has been pushed previously, the stripper will activate automatically. If it does not, check the panel of the machine; open the right hand door of the stripper, press the stripper actuation button, and close the right hand door.
- After the automatic stripper operation, open the left door of the stripper. Remove the holder from stripper and examine the fiber.
- Using a lint free wipe and cleaning fluid, carefully wipe the exposed fiber to remove any remnants of coating.
- If fiber has shifted in the holder (i.e. mark is not aligned with edge of holder), open the holder and realign mark to be flush with edge of holder.
- Examine the fibers. If fiber appears broken or jagged, it may be necessary to begin again.

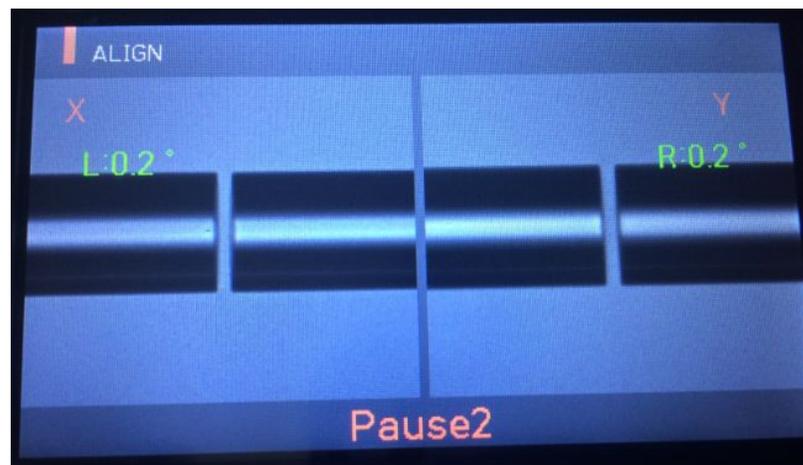
Fiber Cleaving and Holding:

1. Open door over the cleaving blade and the door over the disposal bin. If necessary, use tweezers to pick up glass remnants and place in bin. Try to avoid sweeping glass remnants into the cleaver machinery to prevent interference; if needed, use a swab and cleaning fluid to draw out material from cleaver assembly.
2. Insert connector holder into cleaver, aligning holder into the guide channel.
3. Lightly flip disposal bin door shut.
 - a. DO NOT force door shut. Door should appear to be slightly raised in an intermediate position. Door will actuate shut during cleaving operation as part of the disposal process. Forcing the door shut at this point WILL DAMAGE the door.
4. Actuate the cleaver.
 - a. This may be done by closing the door only (on models) or pressing the cleaver actuation button (on other models).
5. Open the cleaver blade door.
 - a. The rotating cleaver blade will retract back to a home position. This is a precision blade and DOES NOT touch the fiber again as it retracts.
6. Remove holder from cleaver position and place into splicer. Visually examine to ensure fiber falls into v-groove area properly. If necessary, remove holder and re-seat onto guide pins.



Arc Fusion Splicing:

1. After ensuring that both holders are in place, close the door of the splicer.
2. Splicer will align the fibers and display a visual representation.
 - a. If the Pause 2 setting is activated, the machine will pause for viewing of the splice

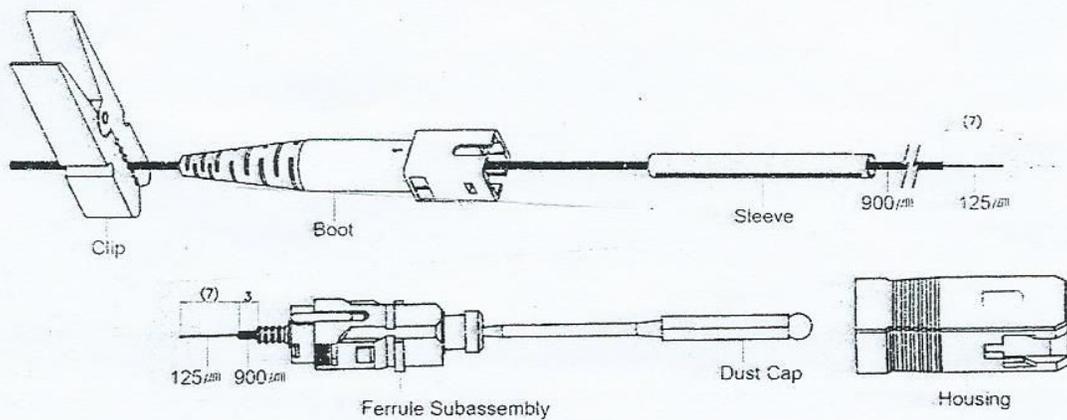


parameters. Press the Splice Continue button to proceed to splicing.

- b. If the Pause 2 setting is not activated, the machine will automatically splice when the door is shut.
3. Upon successful splicing, the screen will display results and estimated loss value. Up to 4 additional splice arcs may be performed
4. If satisfied with splicing, open the door of the splicer.
 - a. Splicer will automatically perform a tensile proof test on the fiber to ensure splice quality. DO NOT interrupt this test as it is important in verifying a correct splice.
5. Slide the splice sleeve close to the holder.
6. Attach the splice support clamp to the fiber and to the dust cap. Open the magnetic doors of the splice holders. Use the clamp to carefully lift the spliced assembly from the splicer.
 - a. Note: DO NOT force the splicer door shut at this time. If the magnetic holder doors are open, they will interfere with the splicer door. If necessary to shut, ensure splice holders are removed and then shut the splicer door.
7. Slide splice sleeve over the exposed splice, taking care to slide the sleeve up to the end of the SC barrel.
8. Open heater door.
9. Place sleeve within heater area, aligning right edge of sleeve with right edge of heater area.
 - a. Due to environmental conditions, it may be necessary to add heat, time, or both to adequately heat-shrink sleeves.
 - b. Use of a shorter sleeve (example, 25mm) with heater set on longer setting (example, 60 mm) may cause excessive heating of jacket material.
10. Close Heater Door.
 - a. Heater may be set to auto-activate upon closing of door.
 - b. If heater does not auto-activate, press the Heater activation button.
11. Remove assembly from heater area and allow to cool. Remove splice support clamp.
12. Slide SC components up fiber until reaching the spliced connector. Next, slide the rear boot up until snapped on the the back portion of the ferrule assembly. Slide the front shell over the dust cap. While ensuring that the red dot is up, snap the housing onto the connector. The red dot should be aligned with the housing key.



FTTH.
Swift Fusion Splice-on Connector
SC Type
Cable : 09



KOR PATENT NO. 10-1038195, 10-1203509

Made in INDONESIA

Application Guide #: AG008

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Splicing 3mm Fiber to SCSplice-On-Connector

Splicers applicable to: KF4A All-in-one

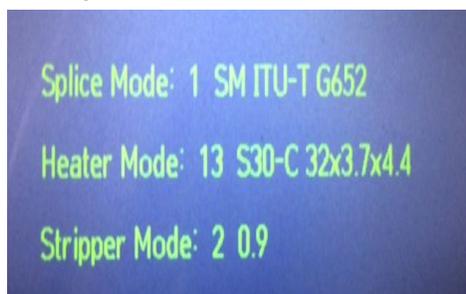
Fiber types applicable to: SM, MM

Equipment needed:

Scissors, Sharpie, Metric Ruler, Soft Bristle Brush, Stiff Bristle Brush, Lint-free Wipe, Cleaning Fluid, Tweezers, Small Phillips Screwdriver, Small Swabs, Jacket stripper

Machine Preparation:

1. Ensure that the machine and material to be spliced has had a chance to acclimate to the surroundings.
2. Clean the cameras. Using the swabs and cleaning fluid, wipe the camera lenses as need be. Use the small Phillips screwdriver to remove the electrodes for better access. Replace the electrodes prior to operation.
3. Turn the machine on.
4. Select the proper settings on the machine for fiber type, stripper mode, and heater mode (corresponding to splice sleeve).
 - a. These settings may need to be adjusted based on environmental conditions.
 - b. Settings used for this instruction sheet are as follows (KF4A shown):



5. Run an arc calibration cycle (to ensure the machine is set to the environmental conditions present). If the machine is moved to a new location with different environmental characteristics (i.e. from inside to outside etc), the arc calibration must be run again.
6. Examine the machine for general cleanliness. Inspect stripper, heater, cleaver and splicing areas. If necessary, use soft bristle brush to brush away jacket remnants or small pieces of glass from the stripper, heater and cleaver sections. Use stiff bristle brush to clean v-groove area. Take care not to brush material into v-groove area, into cleaving blade area, or into camera area.

Connector Preparation:

1. Insert SC assembly into FU-SF holder.
2. Ensure that assembly is pushed as far forward within housing as possible to seat properly, then close magnetic doors.

Connector Stripping:

1. Open both doors of stripper. If necessary, use soft bristle brush to brush all stripper surfaces and ensure no jacket or acrylate remnants remain that could interfere with stripper operation.
2. Insert holder loaded with SC Connector. Ensure that the protruding jacketed 900 micron fiber accurately lines up with the channel. Lightly run finger along jacketed fiber to ensure it lies within the stripping channel.
3. Close the doors of the stripper.
4. Check that the machine is set to "900 Micron" for stripper actuation.
5. If the stripper actuation button has been pushed previously, the stripper will activate automatically. If it does not, check the panel of the machine; open the right hand door of the stripper, press the stripper actuation button, and close the right hand door.
6. After the automatic stripper operation, open the left door of the stripper. Remove the holder from stripper and examine the fiber.
7. Using a lint free wipe and cleaning fluid, carefully wipe the exposed fiber to remove any remnants of coating.
8. Examine the fiber. If the fiber appears broken or jagged, it may be necessary to begin again.



Connector Cleaving:

1. Open door over the cleaving blade and the door over the disposal bin. If necessary, use tweezers to pick up glass remnants and place in bin. Try to avoid sweeping glass remnants into the cleaver machinery to prevent interference; if needed, use a swab and cleaning fluid to draw out material from cleaver assembly.
2. Insert connector holder into cleaver, aligning holder into guide channel.
3. Lightly flip disposal bin door shut.
 - a. DO NOT force door shut. Door should appear to be slightly raised in an



intermediate position. Door will actuate shut during cleaving operation as part of the disposal process. Forcing the door shut at this point WILL DAMAGE the door.

4. Actuate the cleaver.
 - a. This may be done by closing the door only (on models) or pressing the cleaver actuation button (on other models).
5. Open the cleaver blade door.
 - a. The rotating cleaver blade will retract back to a home position. This is a precision blade and DOES NOT touch the fiber again as it retracts.
6. Remove holder from cleaver position and place into splicer. Visually examine to ensure fiber falls into v-groove area properly. If necessary, remove holder and re-seat onto guide pins. Make sure that the dust cap does not protrude upward and interfere with the wind cover. It may be necessary to remove the dust cap, rotate until the dust cap handle does not interfere, and replace.

Fiber Preparation:

1. For 3mm cable, insert fiber through loose SC connector components. First, slide screw cap on, followed by rear boot assembly, and splice sleeve.
2. Using a ruler, measure back approximately 30 mm from end of fiber cable. Use Sharpie to apply mark.



3. Using a hand stripper, remove the outer 3mm jacket from the mark outward.
4. Using a holder for 3mm cable, open all magnetic doors. Lay fiber within channel and hold using thumb. Push cable until 3mm jacket seats against front edge of channel. Pull the Kevlar through the top of the holder next to the hinge (the holder is machined out to have room for the Kevlar to seat).



- Close both doors ensuring the fiber is not pinched. Cut the Kevlar tail approximately in half (leaving a tail of approximately 15 mm). Trim the protruding 900 micron - jacketed fiber to 29 mm.



Fiber Stripping:

- Open both doors of stripper. If necessary, use soft bristle brush to brush all stripper surfaces and ensure no jacket or acrylate remnants remain that could interfere with stripper operation.
- Insert holder into stripper, aligning holder within the guide channel. Lightly run finger along jacketed fiber to ensure it falls within stripper channel.
- Close the doors of the stripper.
- Check that the machine is set to "900 Micron" for stripper actuation.
- If the stripper actuation button has been pushed previously, the stripper will activate automatically. If it does not, check the panel of the machine; open the right hand door of the stripper, press the stripper actuation button, and close the right hand door.
- After the automatic stripper operation, open the left door of the stripper. Remove the holder from stripper and examine the fiber.
- Using a lint free wipe and cleaning fluid, carefully wipe the exposed fiber to remove any remnants of coating.
- If fiber has shifted in the holder (i.e. mark is not aligned with edge of holder), open the holder and realign mark to be flush with edge of holder.
- Examine the fibers. If fiber appears broken or jagged, it may be necessary to begin again.

Fiber Cleaving and Holding:

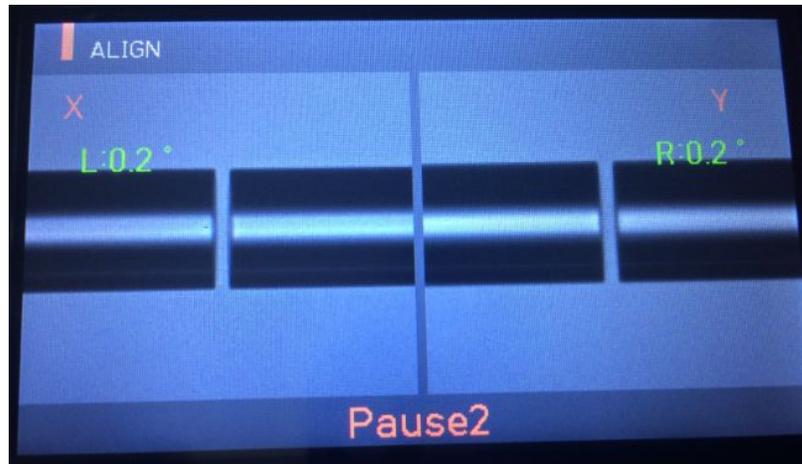
- Open door over the cleaving blade and the door over the disposal bin. If necessary, use tweezers to pick up glass remnants and place in bin. Try to avoid sweeping glass remnants into the cleaver machinery to prevent interference; if needed, use a swab and cleaning fluid to draw out material from cleaver assembly.
- Insert connector holder into cleaver, aligning holder into the



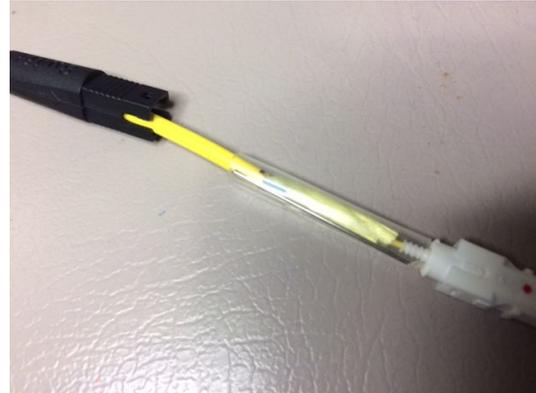
- guide channel. Ensure that Kevlar tail is pulled to the side and does not fall within the cleave area.
3. Lightly flip disposal bin door shut.
 - a. DO NOT force door shut. Door should appear to be slightly raised in an intermediate position. Door will actuate shut during cleaving operation as part of the disposal process. Forcing the door shut at this point WILL DAMAGE the door.
 4. Actuate the cleaver.
 - a. This may be done by closing the door only (on models) or pressing the cleaver actuation button (on other models).
 5. Open the cleaver blade door.
 - a. The rotating cleaver blade will retract back to a home position. This is a precision blade and DOES NOT touch the fiber again as it retracts.
 6. Remove holder from cleaver position and place into splicer. Visually examine to ensure fiber falls into v-groove area properly. If necessary, remove holder and re-seat onto guide pins.

Arc Fusion Splicing:

1. After ensuring that both holders are in place, close the door of the splicer.
2. Splicer will align the fibers and display a visual representation.
 - a. If the Pause 2 setting is activated, the machine will pause for viewing of the splice parameters. Press the Splice Continue button to proceed to splicing.
 - b. If the Pause 2 setting is not activated, the machine will automatically splice when the door is shut.
3. Upon successful splicing, the screen will display results and estimated loss value. Up to 4 additional splice arcs may be performed
4. If satisfied with splicing, open the door of the splicer.
 - a. Splicer will automatically perform a tensile proof test on the fiber to ensure splice quality. DO NOT interrupt this test as it is important in verifying a correct splice.
5. Slide the splice sleeve close to the holder.
6. Open the magnetic doors of the splice holders. Carefully lift the spliced assembly from the splicer.



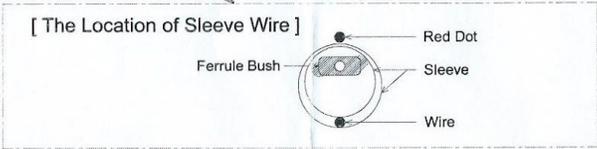
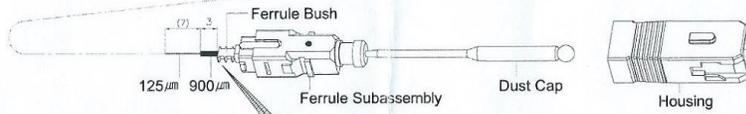
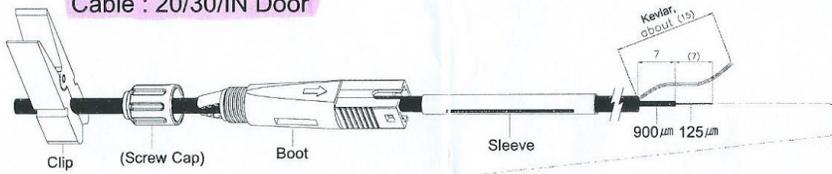
- a. Note: DO NOT force the splicer door shut at this time. If the magnetic holder doors are open, they will interfere with the splicer door. If necessary to shut, ensure splice holders are removed and then shut the splicer door.
7. Slide splice sleeve over the exposed splice, taking care to slide the sleeve up to the end of the SC barrel. Ensure that the Kevlar is under the splice sleeve.
8. Open heater door.
9. Place sleeve within heater area, aligning right edge of sleeve with right edge of heater area.
 - a. Due to environmental conditions, it may be necessary to add heat, time, or both to adequately heat-shrink sleeves.
 - b. Use of a shorter sleeve (example, 25mm) with heater set on longer setting (example, 60 mm) may cause excessive heating of jacket material.
10. Close Heater Door.
 - a. Heater may be set to auto-activate upon closing of door.
 - b. If heater does not auto-activate, press the Heater activation button.
11. Remove assembly from heater area and allow to cool.



12. Slide SC components up fiber until reaching the spliced connector. Next, slide the rear boot up until snapped on the the back portion of the ferrule assembly. Tighten the threaded cap over nose of the rear housing. Slide the front shell over the dust cap. While ensuring that the red dot is up, snap the housing onto the connector. The red dot should be aligned with the housing key.



FTTH
Swift Fusion Splice - on Connector
SC Type
Cable : 20/30/IN Door



KOR PATENT NO. 10-1038195, 10-1203509

Made in KOREA