

QWIK-FUSE SPLICE-ON CONNECTOR

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1 General

These installation instructions provide termination procedures for Qwik-Fuse LC and SC connectors on 250µm fiber, 900µm loose buffer or fanout tubing, 900µm tight buffered fiber, and 1.6/2.0/3.0 mm cordage. These instructions focus on the use of the Qwik-Fuse termination kit with the Qwik-Fuse Installer. A basic understanding of fiber handling, stripping, and cleaning will be helpful. Use the tight buffer fiber holder for tight buffered 900µm fiber and cordage. Conversely, use the loose buffered fiber holder for 250µm fiber, breakout tubing, and loose buffered fiber. See section 7 for detailed instructions on it's use.

Notes:

- **Wear safety glasses** when handling optical fibers.
- **Never touch the fiber on the factory stub.** It comes from the factory clean and properly cleaved.
- **Keep the parts clean.** Use a clean working area and keep the parts in the package until use.
- **Do not remove the dust cap** until the connector assembly is complete
- **Keep the tools clean.** Buildup of fragments on the strip tool, or cleaver will result in poor performance.

Tools:



1. Cord Tool



2. Marker



3. Kevlar Shears



4. Fiber Stripper



5. Cleaning Fluid



6. Cleaning Wipes



7. Fiber Holder. Loose buffer (top) and tight buffer (bottom).

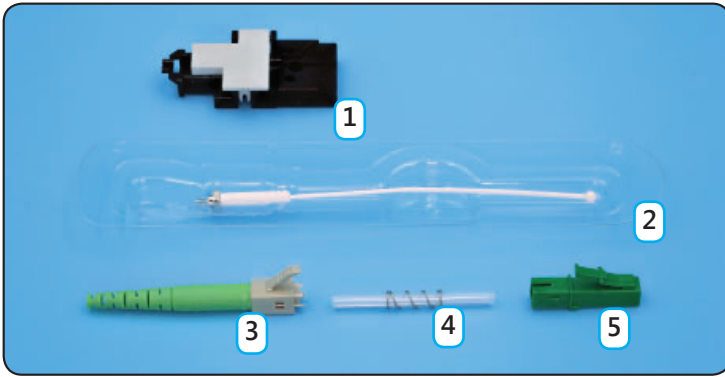


8. Cleaver



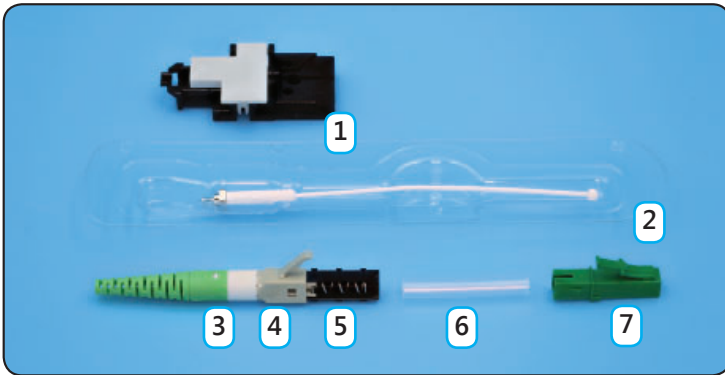
9. Qwik-Fuse Installer

Components:



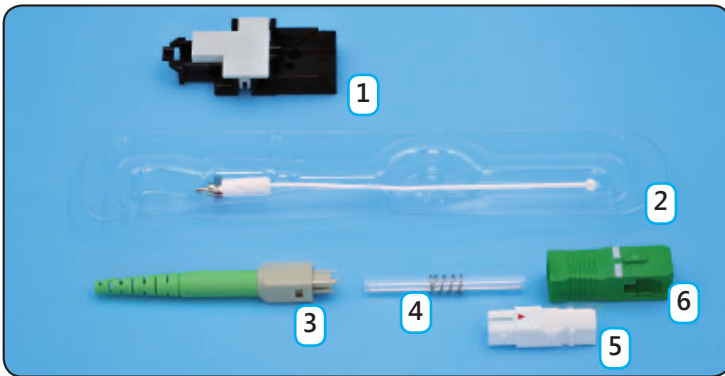
250µm/900µm LC Kit

1. Ferrule Holder used with Sumitomo or AFL splicers.
2. Ferrule Subassembly
3. Boot and Rear Body
4. Protective Sleeve and Spring
5. Front Housing



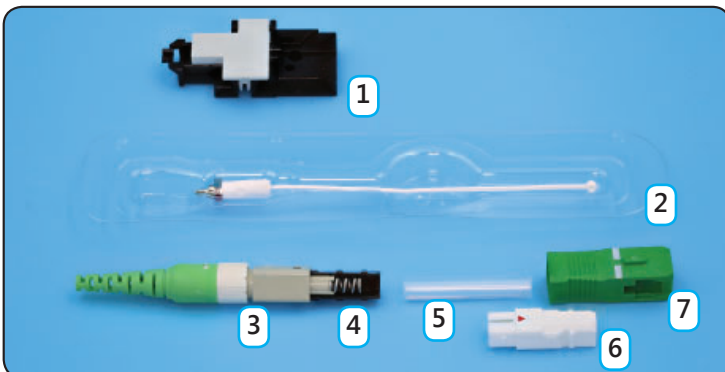
1.6/2.0mm LC Kit

1. Ferrule Holder used with Sumitomo or AFL splicers.
2. Ferrule Subassembly
3. Boot
4. Rear Body
5. Spring and Spring Holder
6. Protective Sleeve
7. Front Housing



250µm/900µm SC Kit

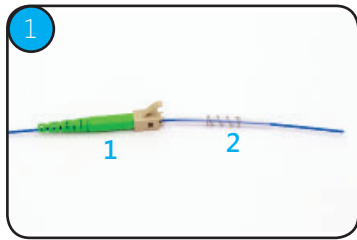
1. Ferrule Holder used with Sumitomo or AFL splicers.
2. Ferrule Subassembly
3. Boot and Rear Body
4. Protective Sleeve and Spring
5. Inner Housing
6. Outer Housing



1.6/2.0/3.0mm SC Kit

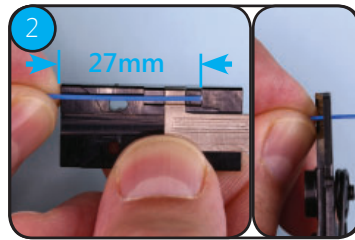
1. Ferrule Holder used with Sumitomo or AFL splicers.
2. Ferrule Subassembly
3. Boot and Rear Body
4. Spring and Spring Holder
5. Protective Sleeve
6. Inner Housing
7. Outer Housing

2 Qwik-Fuse LC, 900µm



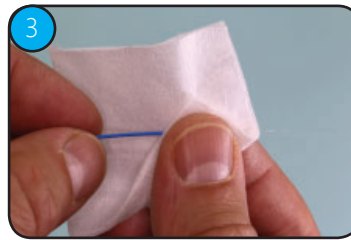
Load the parts.

Slide rear body (1) and protective sleeve with spring (2) onto the cable. Make sure the fiber passes through the inner tube in the protection sleeve.



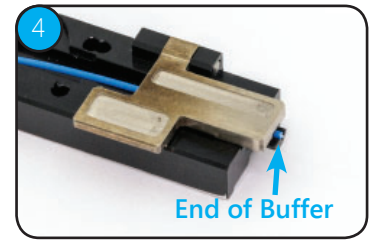
Strip the fiber.

Use the fiber holder as a guide to strip approximately 27mm (25-30mm) of buffer. Strip the 250µm primary coating as well.



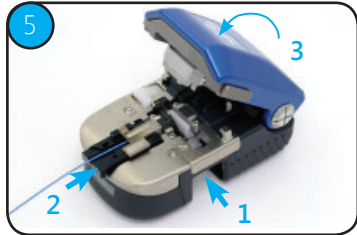
Clean the fiber.

Clean the fiber with a lint free wipe moistened with fiber optic cleaning fluid.



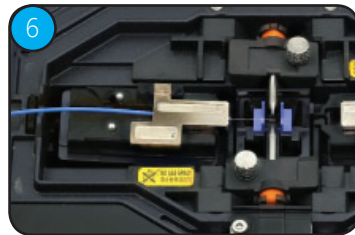
Load the fiber in the fiber holder.

Make sure the buffer is flush with the end of the fiber holder.



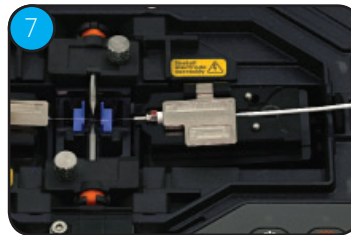
Cleave the fiber.

Unlock the cleaver and push the carriage with the wheel to its starting point (1). Place the fiber holder in the cleaver, making sure it is all the way forward (2). Push down on the lid to cleave the fiber (3).



Load the fiber holder into the Qwik-Fuse Installer.

Place the fiber holder over the two pins on the left side. Make sure the fiber lays in the groove next to the electrodes. Do not touch the fiber.



Load the ferrule subassembly into the Qwik-Fuse Installer.

Open the right side clamp. Lay the fiber in the groove with the ferrule in the pocket under the clamp. Close the clamp. Use the white handle to move the ferrule subassembly. Never touch the fiber stub.



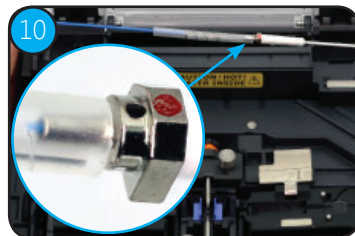
Splice.

Gently close the lid on the Qwik-Fuse Installer to complete the splice. Make sure the cable comes out the hole in the lid and is not pinched. The splice routine starts and shows "Pass" when complete. If it shows "Fail" discard the connector and start again.



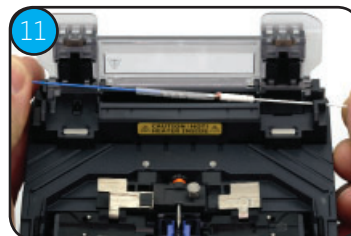
Remove the splice from the clamps.

First slide the protective sleeve and spring up to the fiber clamp on the Installer. Open the left clamp, then the right, and carefully remove the splice from the clamps. Keep the splice straight with a small amount of tension on the fiber.



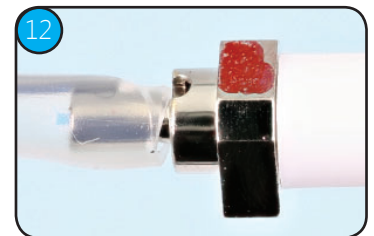
Position the protective sleeve.

While keeping tension on the splice, slide the protective tube over the fiber until it covers the smaller diameter on the ferrule hub. Do not twist. Do not touch the splice.



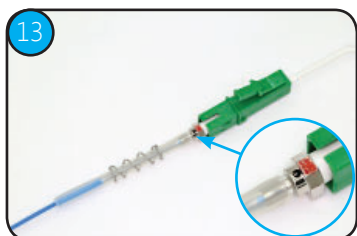
Heat the protective sleeve.

Place the assembly in the heater. Right side first, then left. Keep tension on the splice. Make sure the protective tube does not move. Closing the heater will start the cycle. The red light by the heater button goes off when it is finished.



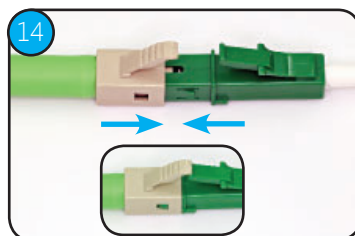
Check the sleeve.

Verify that the sleeve is positioned correctly on the smaller diameter of the ferrule hub and shrank down uniformly against the hub.



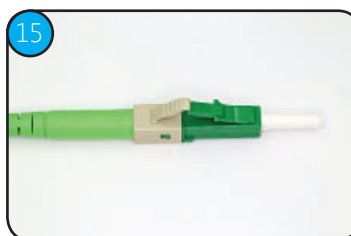
Slide the housing over the ferrule hub.

Orient the ferrule hub so that a flat surface is in line with the latch. If the connector is APC, make sure the red dot is in line with the latch.



Push rear body onto housing.

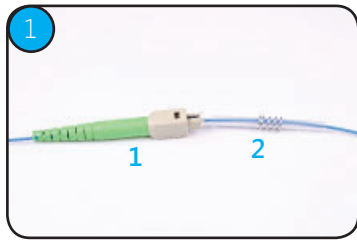
Slide spring and rear body toward housing until the rear body latches into the housing.



Cut the plastic handle.

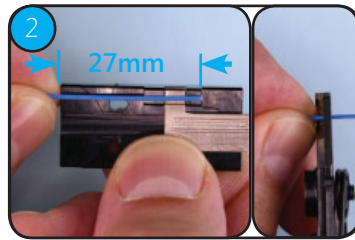
Cut the plastic handle from the dust cap to complete the connector installation.

3 Qwik-Fuse SC, 900µm



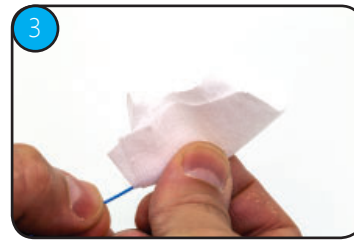
Load the parts.

Slide rear body (1) and protective sleeve with spring (2) onto the cable. Make sure the fiber passes through the inner tube in the protection sleeve.



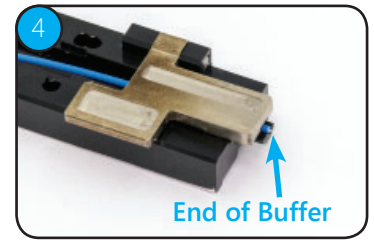
Strip the fiber.

Use the fiber holder as a guide to strip approximately 27mm (25-30mm) of buffer. Strip the 250µm primary coating as well.



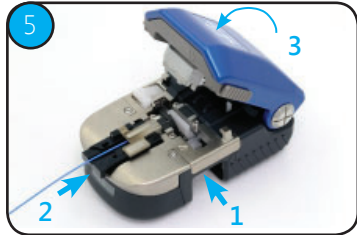
Clean the fiber.

Clean the fiber with a lint free wipe moistened with fiber optic cleaning fluid.



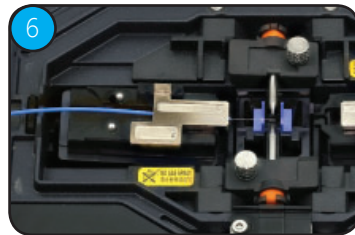
Load the fiber in the fiber holder.

Make sure the buffer is flush with the end of the fiber holder.



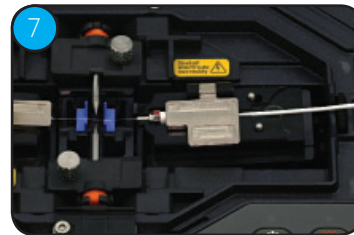
Cleave the fiber.

Unlock the cleaver and push the carriage with the wheel to its starting point (1). Place the fiber holder in the cleaver, making sure it is all the way forward (2). Push down on the lid to cleave the fiber (3).



Load the fiber holder into the Qwik-Fuse Installer.

Place the fiber holder over the two pins on the left side. Make sure the fiber lays in the groove next to the electrodes. Do not touch the fiber.



Load the ferrule subassembly into the Qwik-Fuse Installer.

Open the right side clamp. Lay the fiber in the groove with the ferrule in the pocket under the clamp. Close the clamp. Use the white handle to move the ferrule subassembly. Never touch the fiber stub.



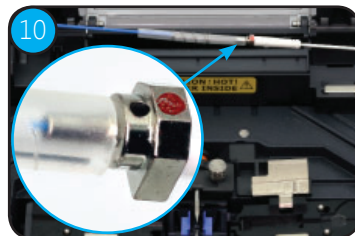
Splice.

Gently close the lid on the Qwik-Fuse Installer to complete the splice. Make sure the cable comes out the hole in the lid and is not pinched. The splice routine starts and shows "Pass" when complete. If it shows "Fail" discard the connector and start again.



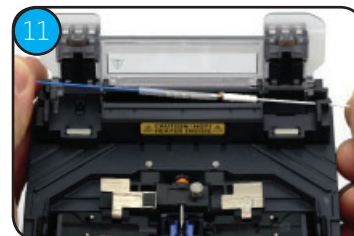
Remove the splice from the clamps.

First slide the protective sleeve and spring up to the fiber clamp on the Installer. Open the left clamp, then the right, and carefully remove the splice from the clamps. Keep the splice straight with a small amount of tension on the fiber.



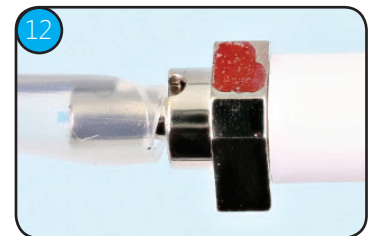
Position the protective sleeve.

While keeping tension on the splice, slide the protective tube over the fiber until it covers the smaller diameter on the ferrule hub. Do not twist.



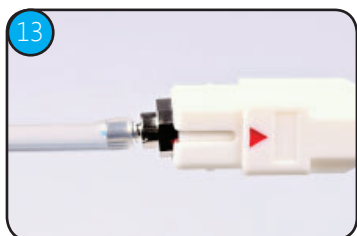
Heat the protective sleeve.

Place the assembly in the heater. Right side first, then left. Keep tension on the splice. Make sure the protective tube does not move. Closing the heater will start the cycle. The red light by the heater button goes off when it is finished.



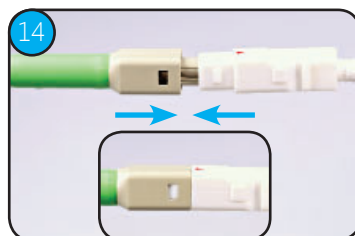
Check the sleeve.

Verify that the sleeve is positioned correctly on the smaller diameter of the ferrule hub and shrank down uniformly against the hub.



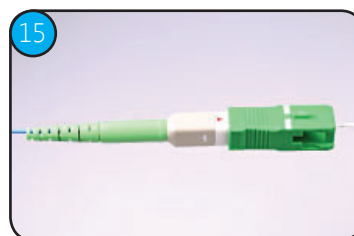
Slide the inner housing over the ferrule hub.

If the connector is APC, make sure the red dot on the ferrule hub is in line with the red mark on the inner housing.



Push rear body onto inner housing.

Slide spring and rear body toward housing until the rear body latches into the housing.



Attach the outer housing.

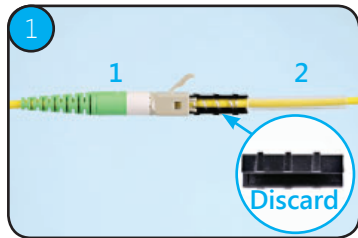
Align the outer housing with the inner housing and slide it into place. If the connector is an APC, make sure the red triangle on the inner housing aligns with the key on the outer housing.



Cut the plastic handle.

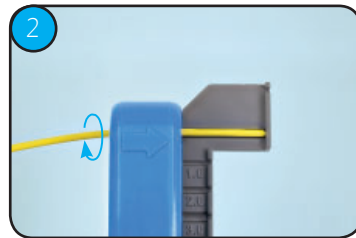
Cut the plastic handle from the dust cap to complete the connector installation.

4 Qwik-Fuse LC, 1.6/2mm



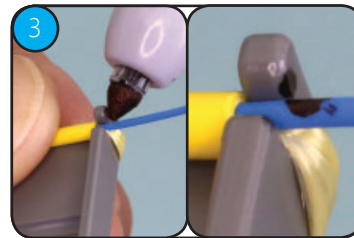
Load the parts.

Slide rear body with spring (1) and protective sleeve (2) onto the cable. Then remove and discard the spring holder.



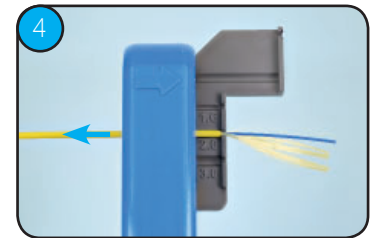
Strip the jacket.

Open the tool and insert the cable in the groove with the end of the cable touching the stop. Close the tool and rotate the cable to cut the jacket. Remove the jacket.



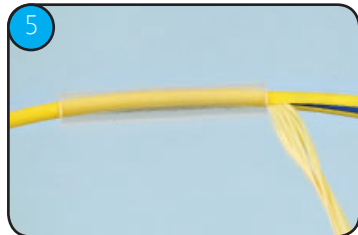
Mark the buffer.

Place the cable on the cord tool as shown. Wrap the aramid around the back of the tool and mark the buffer on the right side of the stop as shown.



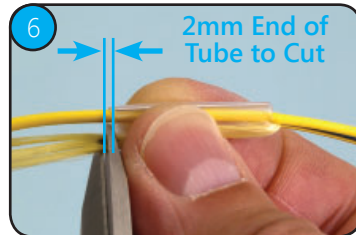
Slit the jacket.

Open the cord tool and insert the cable in the 2mm groove with the jacket end against the stop. Squeeze the tool jaws together and pull the cable through the tool to slit the jacket.



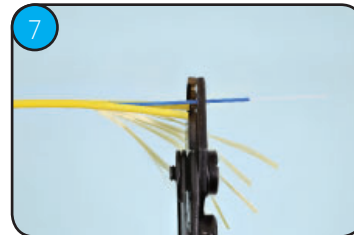
Position the protective sleeve.

Pull the aramid between the jacket split and position the protective sleeve against the aramid.



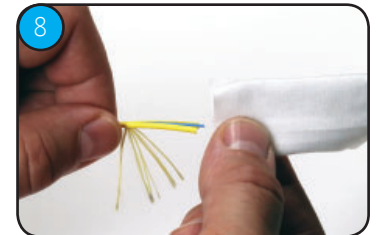
Cut the aramid.

Keeping the protective tube aligned with the end of the jacket slit, fold the aramid back over the protective tube. Use the aramid shears to cut the aramid so that it is approximately 2mm longer than the length of the tube.



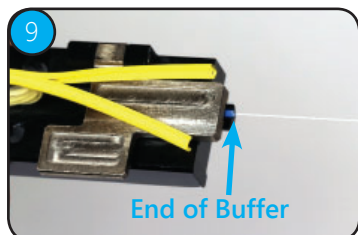
Strip the fiber.

Strip the buffer to the mark made in Step 3 (including the mark). Strip the 250µm primary coating as well.



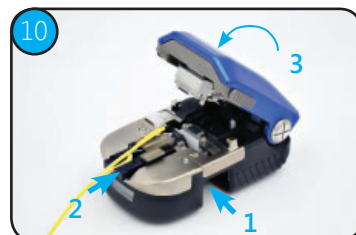
Clean the fiber.

Clean the fiber with a lint free wipe moistened with fiber optic cleaning fluid.



Load the fiber in the fiber holder.

Make sure the buffer is flush with the end of the fiber holder.



Cleave the fiber.

Unlock the cleaver and push the carriage with the wheel to its starting point (1). Place the fiber holder in the cleaver, making sure it is all the way forward (2). Push down on the lid to cleave the fiber (3).



Load the fiber holder into the Qwik-Fuse Installer.

Place the fiber holder over the two pins on the left side. Make sure the fiber lays in the groove next to the electrodes. Do not touch the fiber.



Load the ferrule subassembly into the Qwik-Fuse Installer.

Open the right side clamp. Lay the fiber in the groove with the ferrule in the pocket under the clamp. Close the clamp. Use the white handle to move the ferrule subassembly.

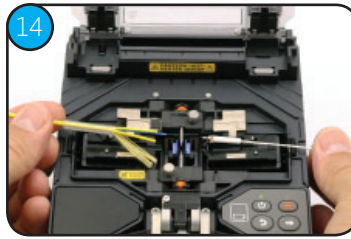
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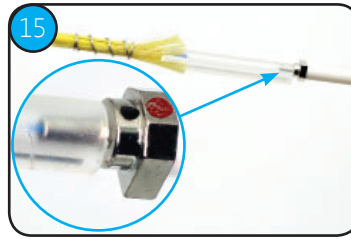
Splice.

Gently close the lid on the Qwik-Fuse Installer to complete the splice. Make sure the cable comes out the hole in the lid and is not pinched. The splice routine starts and shows "Pass" when complete. If it shows "Fail" discard the connector and start again.



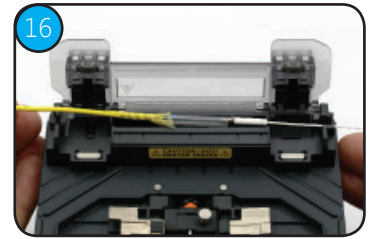
Remove the splice from the clamps.

First slide the protective sleeve and spring up to the fiber clamp on the Installer. Open the left clamp, then the right, and carefully remove the splice from the clamps. Keep the splice straight with a small amount of tension on the fiber.



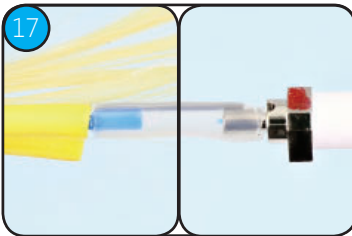
Position the protective sleeve.

While keeping tension on the splice, slide the protective tube over the fiber until it covers the smaller diameter on the ferrule hub. Do not twist. Pull the aramid and jacket from the tube. Use the spring to hold the aramid and jacket together. Do not twist.



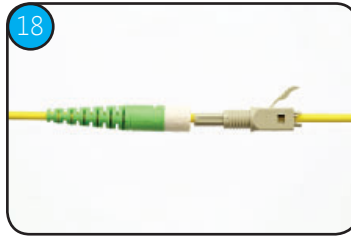
Heat the protective sleeve.

Place the assembly in the heater. Right side first, then left. Keep tension on the splice. Make sure the protective tube does not move. Closing the heater will start the cycle. The red light by the heater button goes off when it is finished.



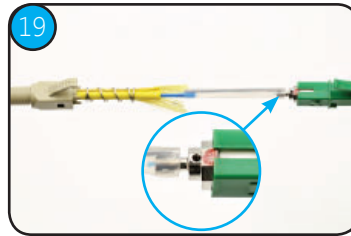
Check the sleeve.

Verify that the jacket stops at the end of the protective sleeve. Trim if necessary. Verify that the sleeve is positioned correctly on the smaller diameter of the ferrule hub and shrank down uniformly against the hub.



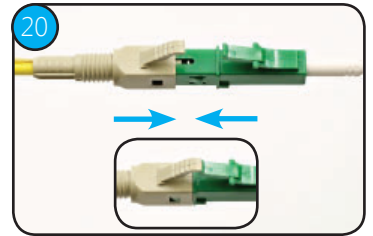
Unscrew the boot from the rear body.

Turn the boot counterclockwise to remove the boot from the rear body.



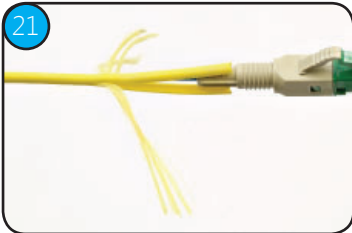
Slide the housing over the ferrule hub.

Orient the ferrule hub so that a flat surface is in line with the latch. If the connector is APC, make sure the red dot is in line with the latch.



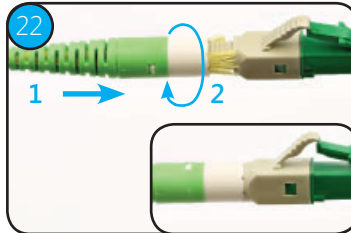
Push rear body onto housing.

Slide the spring and rear body toward the housing until they latch together.



Split the aramid.

Pull the jacket and aramid from the rear body. Split the aramid into two groups that come out between the jacket halves.



Screw the boot onto the rear housing.

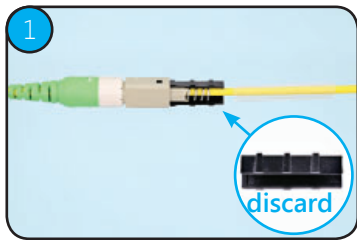
Push the boot against the rear housing, then turn it clockwise to screw it into place. Make sure the boot is tightened the whole way to the rear body.



Cut the plastic handle.

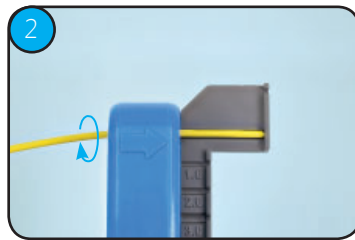
Cut the plastic handle from the dust cap to complete the connector installation.

5 Qwik-Fuse SC, 1.6/2.0/3.0mm



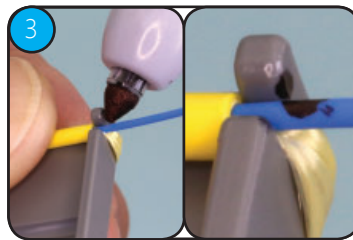
Load the parts.

Slide rear body with spring and protective sleeve onto the cable. Then remove and discard the spring holder.



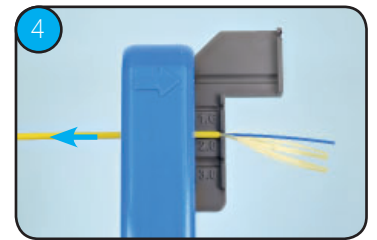
Strip the jacket.

Open the cord tool and insert the cable in the groove with the end of the cable touching the stop. Close the tool and rotate the cable to cut the jacket. Remove the jacket.



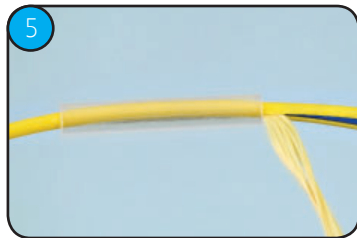
Mark the buffer.

Place the cable on the cord tool as shown. Wrap the aramid around the back of the tool and mark the buffer on the right side of the stop as shown.



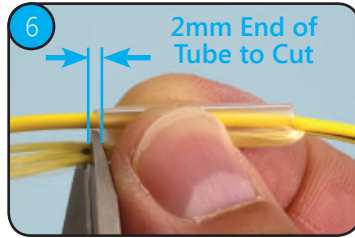
Slit the jacket.

Open the cord tool and insert the cable in the appropriate groove with the jacket end against the stop. Squeeze the tool jaws together and pull the cable through the tool to slit the jacket.



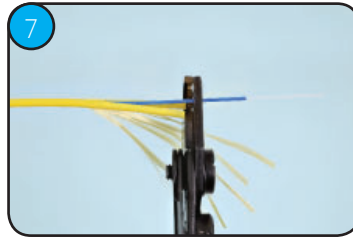
Position the protective Sleeve.

Pull the aramid between the jacket split and position the protective sleeve against the aramid.



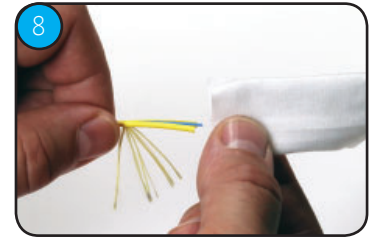
Cut the aramid.

Keeping the protective tube aligned with the end of the jacket slit, fold the aramid back over the protective tube. Use the aramid shears to cut the aramid so that it is approximately 2mm longer than the length of the tube.



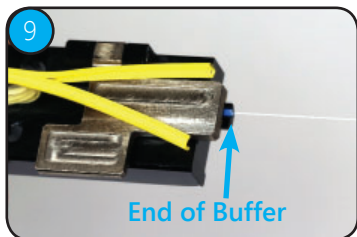
Strip the fiber.

Strip the buffer to the mark made in Step 3 (including the mark). Strip the 250µm primary coating as well.



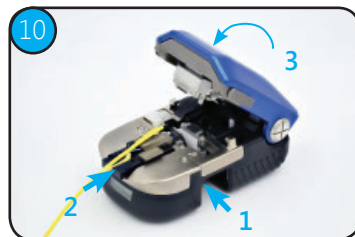
Clean the fiber.

Clean the fiber with a lint free wipe moistened with fiber optic cleaning fluid.



Load the fiber in the fiber holder.

Make sure the buffer is flush with the end of the fiber holder.



Cleave the fiber.

Unlock the cleaver and push the carriage with the wheel to its starting point. Place the fiber holder in the cleaver. Make sure it is all the way forward. Push down to cleave the fiber.



Load the fiber holder into the Qwik-Fuse Installer.

Place the fiber holder over the two pins on the left side. Make sure the fiber lays in the groove next to the electrodes. Do not touch the fiber.



Load the ferrule subassembly into the Qwik-Fuse Installer.

Open the right side clamp. Lay the fiber in the groove with the ferrule in the pocket under the clamp. Close the clamp. Use the white handle to move the ferrule subassembly.

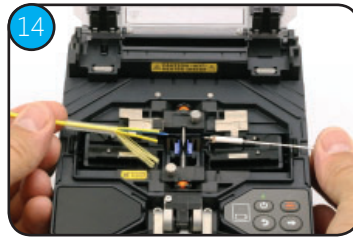
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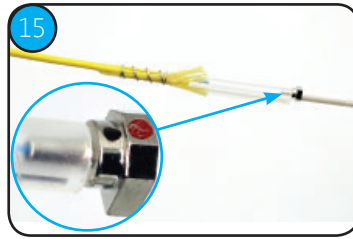
Splice.

Gently close the lid on the Qwik-Fuse Installer to complete the splice. Make sure the cable comes out the hole in the lid and is not pinched. The splice routine starts and shows "Pass" when complete. If it shows "Fail" discard the connector and start again.



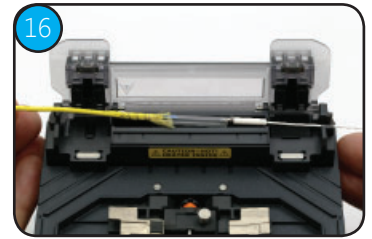
Remove the splice from the clamps.

First slide the protective sleeve and spring up to the fiber clamp on the Installer. Open the left clamp, then the right, and carefully remove the splice from the clamps. Keep the splice straight with a small amount of tension on the fiber.



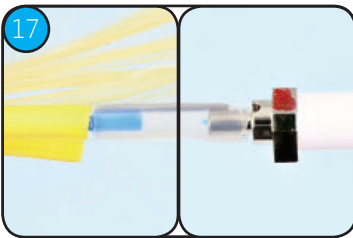
Position the protective sleeve.

While keeping tension on the splice, slide the protective tube over the fiber until it covers the smaller diameter on the ferrule hub. Do not twist. Pull the aramid and jacket from the tube. Use the spring to hold the aramid and jacket together.



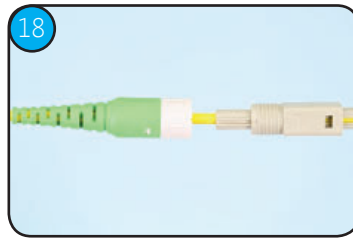
Heat the protective sleeve.

Place the assembly in the heater. Right side first, then left. Keep tension on the splice. Make sure the protective tube does not move. Closing the heater will start the cycle. The red light by the heater button goes off when it is finished.



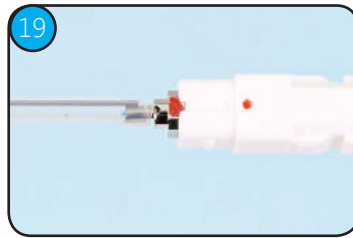
Check the sleeve.

Verify that the jacket stops at the end of the protective sleeve. Trim if necessary. Verify that the sleeve is positioned correctly on the smaller diameter of the ferrule hub and shrank down uniformly against the hub.



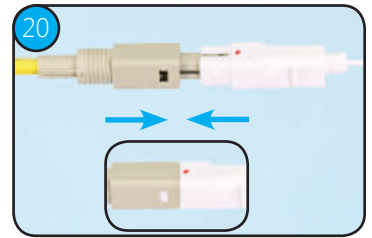
Unscrew the boot from the rear body.

Turn the boot counterclockwise to remove the boot from the rear body.



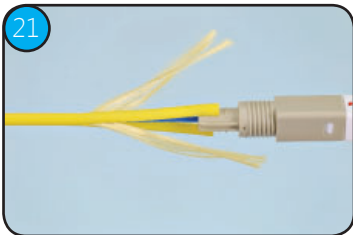
Slide the inner housing over the ferrule hub.

Orient the ferrule hub so that a flat surface is in line with the red dot on the inner housing. If the connector is APC, make sure the red dots on the ferrule and housing are aligned.



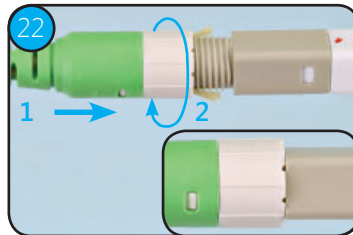
Push rear body onto inner housing.

Slide spring and rear body toward housing until the rear body latches into the housing.



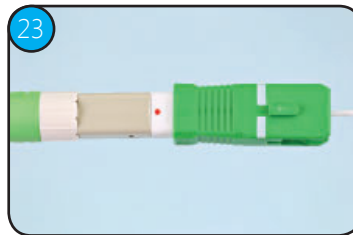
Split the aramid.

Pull the jacket and aramid from the rear body. Split the aramid into two groups that come out between the jacket halves.



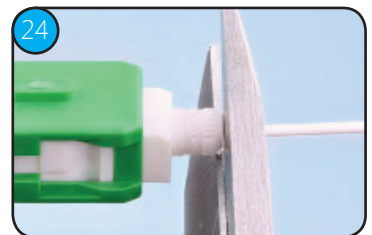
Screw the boot onto the rear housing.

Push the boot against the rear housing, then turn it clockwise to screw it into place. Make sure the boot is tightened the whole way to the rear body.



Attach the outer housing.

Align the outer housing with the inner housing and slide it into place. If the connector is an APC, make sure the red triangle on the inner housing aligns with the key on the outer housing.

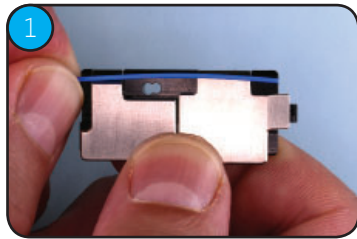


Cut the plastic handle.

Cut the plastic handle from the dust cap to complete the connector installation.

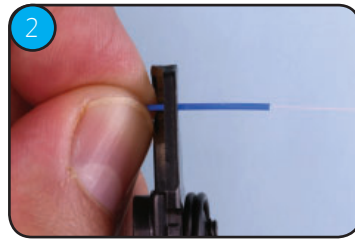
6 Using the Loose Buffer Fiber Holder

The loose buffer fiber holder is used with breakout tubing, loose buffered fiber, or 250µm fiber. The following steps show how to use the loose buffer fiber holder.



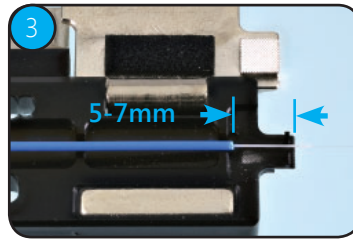
1 Buffer strip length.

Use the length of the fiber holder to determine the length of buffer to be stripped.



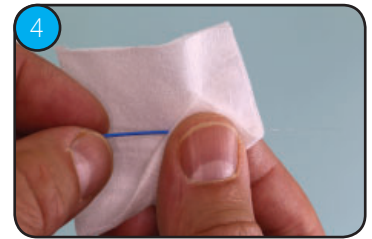
2 Strip the buffer.

Strip the 900µm buffer to the length from step one.



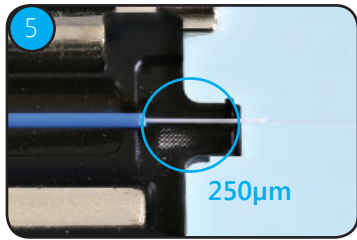
3 Strip the 250µm as shown.

Strip the 250µm buffer leaving 5-7mm that will be under the 250µm area of the fiber holder.



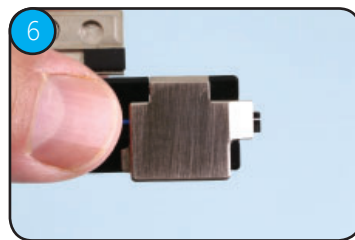
4 Clean the fiber.

Clean the fiber with a lint free wipe moistened with alcohol.



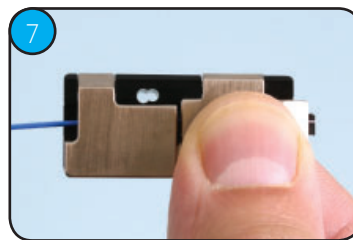
5 Position the fiber.

Place the fiber in the holder with the 250µm fiber under the 250µm area of the clamp.



6 Close the right clamp.

Hold the fiber in position and close the right clamp.

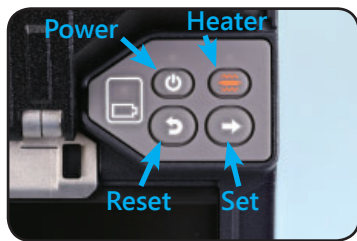


7 Close the left clamp.

Grasp the right side of the fiber holder and close the left clamp.

7 Using the Qwik-Fuse Installer

The Qwik-Fuse Installer is designed to quickly and easily terminate Qwik-Fuse connectors. The Installer can run on its internal battery or on 110 Volts AC with the included power adapter.



Control Panel.

The power button has a light above it to show when the unit is powered on. The heater has a light to show when the heating cycle is in progress.



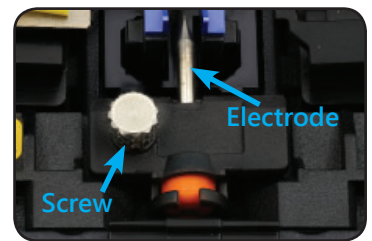
Change the fiber type.

Hold the Set and Reset button at the same time to change between singlemode and multimode fiber.



Charging.

Use only the AC adapter that comes with the unit. A green LED illuminates during charging. Charging temperature: 0-40°C (32-104°F). A battery level indicator is located on the upper right corner of the screen.



Electrodes.

Replace the electrodes after 3,000 times of arc discharge. The following message will be shown on the screen: "Arc Count Warning : Arc Count has exceeded 3,000. Replace the electrodes. Failure to do so will result in high splice losses and poor splice strength". The screw shown here holds each electrode in place.