OmniSplice™ Fusion Splice Connector Installation Instructions

⚠CAUTIONS

- **Caution: Laser light can be invisible, and direct exposure can severely injure the eyes.** Never peer into the end of a microscope or optical cable connected to an optical output device.
- **Caution: Wear safety glasses when handling optical fiber.** Properly dispose of any pieces of bare fiber.
- **Caution: Follow proper safety protocols for any fiber cleaning solutions or alcohol, e.g.** allow for proper ventilation, avoid contact with eyes and skin, keep away from heat or flame, and do not ingest fiber cleaning solutions or alcohol, etc.

TECHNICAL INFORMATION

Recommended Use:

- With most ***Sumitomo***, ***Fujikura***, ***Fiber Fox, and Swift*** active-alignment splice machines using the OmniHolder (included in each pack of OmniSplice connectors)
    - Contact a Panduit Sales Representative for questions regarding OmniSplice compatibility with other splice machines.
- Optimal Splicer Settings:
    - Sleeve length: ~ 40mm
    - Heat Temperature: ~ 311° F (155° C)
    - Heat Time: ~ 30 Seconds
    - Cool Time: ~ 30 Seconds

It is vital to read and follow the instructions for individual splice machines, including splicer maintenance, arc tests, etc. Failure to do so can result in bad or underperforming terminations, which are costly and may need to be scrapped. Panduit is not responsible for the results or performance of the individual splice machines used to terminate these connectors, only the connectors themselves. The above list of compatible splice machines is not complete and can change at any time depending on developments by the splice machine manufacturers.

Connectors:

- For use on 900µm tight buffered fiber, 250µm loose tube fiber, or 250µm fiber with 900µm build-up tubing (or “fanout kit”)
    - Singlemode LC-UPC (blue housing/blue boot), Multimode LC-PC (black/aqua), Singlemode LC-APC (green/green)
    - Singlemode SC-UPC (blue housing/blue boot), Multimode SC-PC (black/aqua), Singlemode SC-APC (green/green)

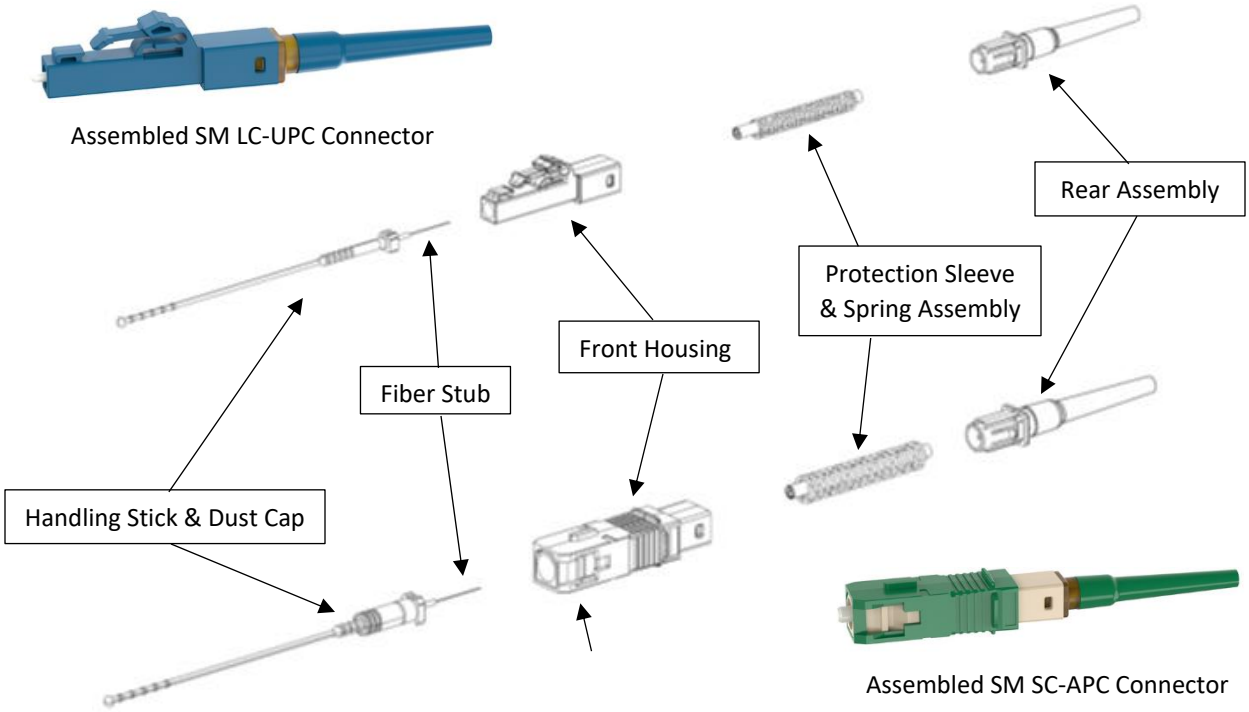
Applicable Standards: FOCIS-10 (for LC) and FOCIS-3 (for SC); ANSI/TIA-568; GR-326-CORE; GR-1081-CORE

Insertion Loss: Singlemode fiber is 0.15dB IL average, 0.25dB IL maximum; multimode fiber is < 0.10dB IL average, 0.15dB IL maximum

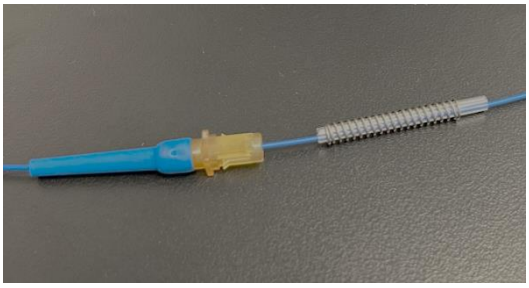
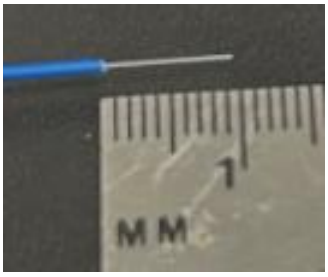
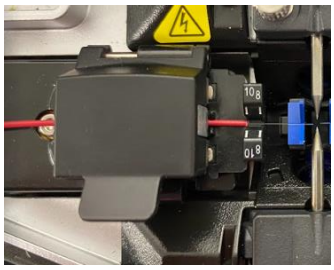
Return Loss: Singlemode fiber is 55dB (UPC) or 65dB (APC); multimode fiber is 20dB (PC)

Operating Temperature: -40° F to +167° F (-40° C to +75° C)

Product Overview



Step 1: Gently push the tray bottom tab down, while lifting the tray lid tab up. **Open the blister pack carefully.** Remove the connector assembly by the handling stick rather than the fiber stub end. **Note:** Follow appropriate safety protocols when dealing with bare fiber.	Tray Bottom Tab  Tray Lid Tab

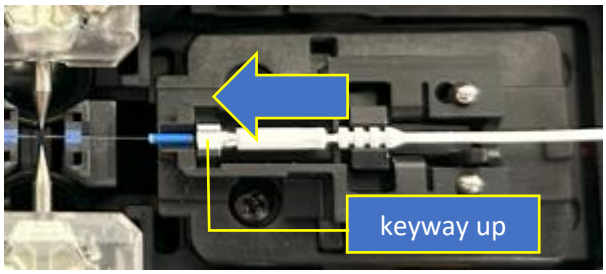
Step 2: Place the connector rear assembly onto the field fiber, narrow end first. Next, place the splice protection sleeve onto the field fiber. **Note**: The spring is not fixed in place and may shift. **Do not lose the spring, it is vital for connector function.**	
Step 3: Mark and strip approximately 35mm of buffer and acrylate from the fiber.	
Step 4: Clean the bare fiber with lint-free wipes and fiber cleaning solution, following proper safety precautions necessary when dealing with bare optical fiber. **Note:** Do not use pre-moistened wipes.	
Step 5: Cleave the bare fiber to **10mm**. **Tip:** If the fiber does not cleave, make sure all of the acrylate coating has been removed.	
Step 6: Place the cleaved fiber into the left-side fiber holder, according to the instructions specific to the splice machine. **Note:** Set up will vary by specific splicer brand & fiber type.	

Step 7: Place the OmniHolder on the right side of the splice stage.

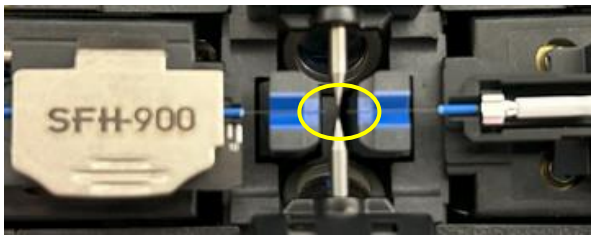
Note: Some machines may require removal of the embedded right-side holder.

Step 8: Place the connector assembly into the OmniHolder with the fiber stub protruding to the left, and the handling stick protruding to the right. Make sure the keyway faces up

Note: Make sure the metal portion of the connector assembly is completely flush up against the holder.



Tip: For most splice machines, the field fiber and stub fiber should both be about 1mm apart, with the electrodes centered between them. Be sure to review the instructions for the specific machine being used.

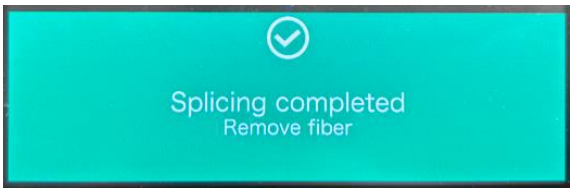


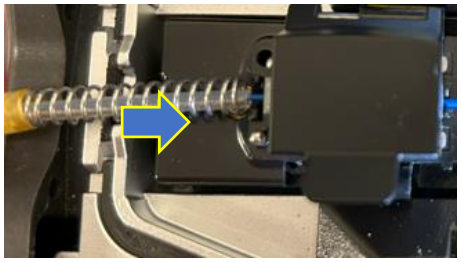
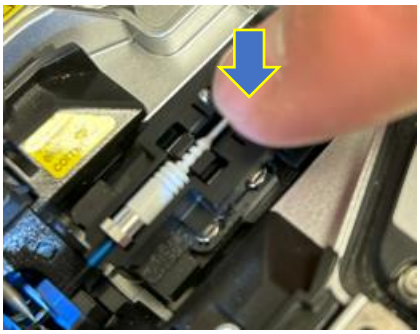
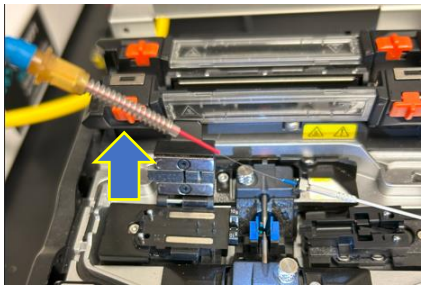
Step 9: Close the wind cover of the splice stage. Depending on the machine's individual settings the splice process may begin automatically, while some machines may require pressing a start button. The machine will typically analyze the cleaved field fiber and stub fiber on the X and Y axis.

Any error messages on the machine should be remediated as per the manufacturer's instructions.

Step 10: After the splice is completed, the machine will provide an estimated insertion loss value. Typically, when opening the wind cover, machines will do a brief tension test.

Do not touch the fiber or connector assembly until this test is complete.



Step 11: Gently slide the splice protection sleeve up to the rear of the fiber holder. Once this is in place, open the fiber holder.	
Step 12: Gently press down on the holder lever to lift the ferrule assembly out of the OmniHolder for ease of handling.	
Step 13: Grasp the field fiber with the left hand then raise the left side slightly, so that the splice protection sleeve slides flush up against the metal part of the connector subassembly. **DO NOT twist or bend the spliced fibers.**	
Step 14: Place the splice point in the heater of the splice machine, trying to keep the splice protection sleeve centered in the heating area as much as possible. Close the heater cover.	
Step 15: Depending on the settings of the machine, the heating process may start immediately or may require pressing a start button.	

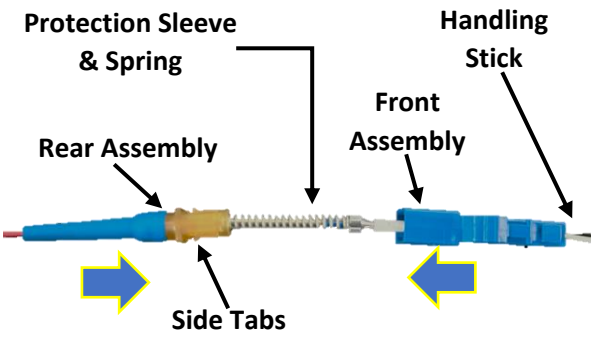
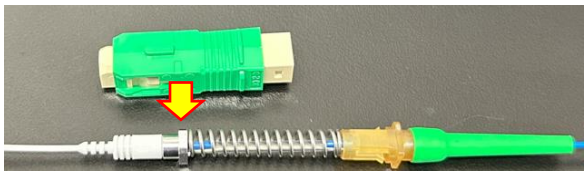
Step 16: Carefully remove the assembly from the heating area once the heating/cooling cycle is done. **Allow a 30-second cool time before assembling the connector.** Slide the rear assembly up, align the side tabs, then snap the front housing together with the rear housing. *Some force may be needed (to counter the spring strength) when snapping the connector halves together.*	
IMPORTANT: When assembling APC-style connectors, it is important to make sure that the small key feature on the top of the connector assembly faces up when assembling the connectors.	
Step 17: Cut off the handling stick to remove it from the dust cap if desired.	

Figure 1: Fully assembled FSOCLC9 singlemode LC OmniSplice connector