Siemon OptiFuse SC Instructions

**Safety Precautions**

- **Wear safety glasses** to protect your eyes when handling optical fiber.
- **Never look into** the end of a microscope or optical cable connected to an optical output device that is operating. Laser radiation is invisible, and direct exposure can severely injure the human eye.
- **Alcohol is flammable**, causes irritation and is harmful if swallowed or inhaled. Keep alcohol away from heat, sparks, skin, and avoid contact with eyes.

**Handling Precautions**

1. Improper assembly will result in a loss of performance. Please read instructions given in this operation manual and the operation manual of the fusion splicer.
2. **Never touch the fiber stub.** It has been inspected at the factory.
3. The product is sensitive to dirt or dust. Do not take out any parts from the package until it is to be used.
4. The quality of the splice will be effected by the fiber cleaved surface condition. Use of a high quality cleaver is critical to a quality fiber splice.
5. Do not remove the dust cap until the connector has been completely assembled in order to avoid end face contamination and high insertion loss.

Below are examples of the tools used to terminate the connectors, typically the cleaver, buffer remover and other support items are included in Fusion Splicer kit.

<table>
<thead>
<tr>
<th>Fusion Splicer</th>
<th>Fiber Cleaver</th>
<th>Buffer Stripper</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Fusion Splicer" /></td>
<td><img src="image" alt="Fiber Cleaver" /></td>
<td><img src="image" alt="Buffer Stripper" /></td>
</tr>
</tbody>
</table>

Note: Compatible Fusion splice models are listed on page 6.

**Tools and Equipment**

Following the specific instructions provided by the fusion splice manufacturer, set fiber type to be spliced and the splice sleeve heater setting.

Next, utilizing the specific instructions provided by the fusion splice manufacturer perform an arc test.

*Fiber for arc testing is not provided with the connector and should match the fiber setting on the splicer.*

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Slide Rear Stopper, Boot and Furcation Tube onto the fiber.

Slide Protection Sleeve and Spring onto the fiber.

Insert fiber into this hole

Remove approx. 35mm of buffer coating from the 900 micron 1B, or plastic coated 250 micron fiber with buffer strippers. Ensure that the plastic coating (acrolite) is removed from the fiber.

Moistened with alcohol
Clean the fiber with a lint free cleaning wipe. Note: Fiber should only be cleaned before cleaving operation.

Set the fiber in the holder with the tight buffer or plastic coating flush with the end of the holder

Do not touch bare fiber

Set the fiber in the holder with buffer tube 5-7mm from the holder end and the plastic coating flush with the end of the holder.

Carefully close the cover to the holder to secure the fiber in place.

Utilizing a fusion splicing quality precision cleaver (typically included with fusion splicer kit), place fiber holder into cleaver and cleave fiber. Cleave length must be 10mm.

Grasp here to pick up

Do not touch bare fiber

Carefully pick up Ferrule Subassembly by the plastic stub and place into connector holder and close the cover to secure connector in place.

Note: Compatible Fusion splice fiber holders are listed on page 6.

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10 Place connector holder into the right side of the fusion splicer.

11 Activate fusion splicer.

12 Carefully open the left side of the fiber holder and then repeat on the connector holder on the right side.

13 Maintain light tension to prevent bending. Carefully pick up the spliced fiber and connector.

14 Carefully slide the heat shrink protection sleeve up to the step of the metal flange as shown above. Ensure it does not cover the step.

15 Note: Buffer (900 um tight buffer 900 fan out kit) or plastic coating(250um) should be under heat shrink sleeve.

16 Then left side. Lightly maintaining tension on fiber. Do not twist. Continue placing the fiber into the left side while lightly maintaining tension on the fiber.

17 Sleeve at center of heater. Button to start heating. Confirm the position of the fiber in the heater before activating heater.

18 Activate the fusion splice sleeve heater.

19 Carefully remove the fiber from the heater.

Note: connector assembly may be hot even after the cooling by fan has completed its cycle.
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**Align flat surface with the housing slit for UPC and align red dot with red triangle for APC.**

**Carefully push the fiber slice assembly through the inner housing insuring the cap with tether protrudes as shown above.**

**Cut the tether off of the dust cap.**

**Insert the inner housing into the outer housing aligning the key with the red triangle as shown above.**

**With the outer housing installed the connector is complete.**

**Check the fiber position on V-groove.**

**Fiber should be aligned along the V-groove.**

**Do not place the fiber outside of V-groove or the fiber may break.**

**Hold the cover with both hands and close gently.**

**Do not slam the cover or the fiber may break.**

**Legend**

- **Caution**: Use extra care when performing this action.
- **Prohibited**: Refrain from performing, can result in damage.

**Troubleshooting guide**
Below are some common causes of termination problems.
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Protection sleeve position

- Raise the fiber end up so that the protection sleeve slides toward the ferrule.
- Do not shake!
- Do not twist!
- The fiber will break from stress.

Ensure the splice sleeve is over the step and up against the flange, if necessary carefully guide the sleeve into position.

Protection sleeve position in heater

- Set the heat shrink protection sleeve at center of heater.
- If protection sleeve is not centered in the heater uneven shrinking of sleeve can result in a bubble. This in turn will cause stress on the fiber resulting in a fracture.

Good.
- After heating
- No bubble

Bad.
- Bubble (did not shrink)

Post heating protection sleeve problems

- Gap at flange step before heating process
- Gap at flange step after heating process
- If no gap is present at flange step, glue can become stuck to the flange. This in turn will cause stress on the fiber resulting in a fracture.

If Protection Sleeve exhibits any of the above mentioned conditions. Please retry using another new connector.

Siemon Holders

- FT-FHLDL-29M Cable holder, 900 micron tight buffered, metal
- FT-FCHLDU-29M Cable holder, 900 micron breakout kit, 250 micron coated fiber, metal
- FT-FHLDU-LSP Ferrule holder, SC, LC plastic (performs 100 splices)
- FT-FHLDU-LSM Ferrule holder, LC, SC, metal
- FT-FHLDF-LSM Fitel, ferrule holder, LC, SC, metal
- FT-FHLD-LSM Ferrule Holder (right side)
- FT-FHL-LSM Fiber Holder (left side)

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## Fusion Splicer Compatibility Chart

<table>
<thead>
<tr>
<th>Manufacturer Fusion Splicer</th>
<th>Manufacturer Fusion Splicer Model #</th>
<th>Fiber Cable Holder</th>
<th>Siemon Ferrule Holder</th>
<th>Slice Sleeve Heater Setting</th>
</tr>
</thead>
<tbody>
<tr>
<td>AFL</td>
<td>70S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFL</td>
<td>62C+</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>AFL</td>
<td>21S</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FUSE900</td>
</tr>
<tr>
<td>Fitel S153</td>
<td>S153</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>OFS</td>
<td>N001 M4</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>INNO</td>
<td>View 5</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>Fiber Fox</td>
<td>Mini 65</td>
<td>Splicer manufacturer holder</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>40mm other</td>
</tr>
<tr>
<td>Sumitomo</td>
<td>TYPE-Q102-CA and T36</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>LYNX</td>
</tr>
<tr>
<td>Sumitomo</td>
<td>T-4005 , lynx Connectorizer</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>LYNX</td>
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<tr>
<td>Sumitomo</td>
<td>TYPE-Q102-M12</td>
<td>Splicer manufacturer holder or Siemon FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>FT-F-HLDA-LSP or FT-F-HLDA-LSM</td>
<td>LYNX</td>
</tr>
</tbody>
</table>

Splice Sleeve Heater settings shown were validated with splicers shown in initial testing, any manufacturer changes to splice settings are at the discretion of the fusion splicer manufacturer and may not be reflected in this chart.

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To assist safe installations, comply with the following:

A. Use caution when installing or modifying telecommunications circuits.
B. Never touch uninsulated wire terminals unless the circuit has been disconnected.
C. Never install this device in a wet location.
D. Never install wiring during a lightning storm.

**Lors de l’installation, respectez les consignes de sécuritésuivantes:**

A. Utiliser avec prudence lors de l’installation ou de la modification circuits de télécommunications.
B. Ne jamais toucher les bornes de fil métallique non isolés sauf si le circuit a été débranché.
C. Ne jamais installer cet appareil dans un endroit humide.
D. Ne jamais installer pendant un orage.