



INSTALLATION INSTRUCTIONS

Installing Pigtail Kits in LL-5D Optical Splicing & Distribution Enclosure

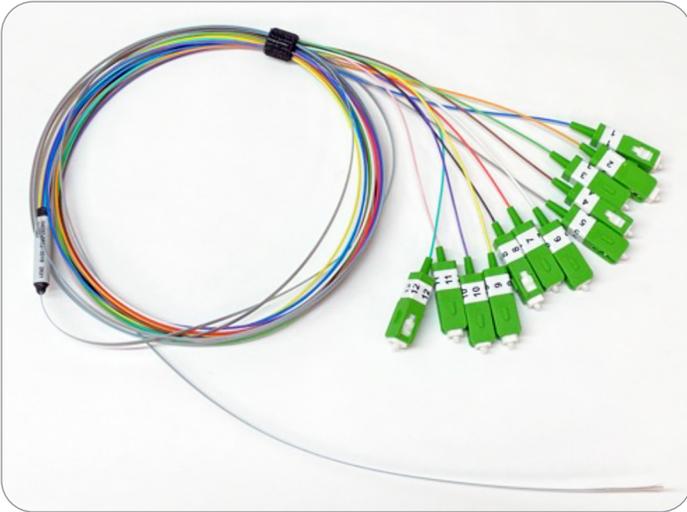


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PACKAGE CONTENTS

12-fiber pigtail kit
Tie wraps & non-adhesive foam pieces
2 feet of Velcro
LC Adapter Insert (with LC Kit)

REQUIRED TOOLS

Scissors
Measuring tape (if using mesh)
Vinyl tape (if using mesh)

ORDERING INFORMATION

DESCRIPTION	AFL NO.
12 Fiber Ribbon Pigtail Kit with 12 ASC Connectors – ASC, XXX, CR, 012, SM, 0100IN, for LL Enclosure with 12 ASC Adapters (CS017528-0100IN and (12) CS009394)	LL5D-KIT-ASCR
12 Fiber Tight Buffered Pigtail Kit with 12 ASC Connectors – ASC, XXX, JH, 012, Q,002.9, for LL Enclosure with 12 ASC Adapters (CS018630-002.9-NP and (12) CS009394)	LL5D-KIT-ASCT
12 Fiber Ribbon Pigtail Kit with 12 ULC Connectors – ULC, XXX, CR, 012, SM, 0100IN, for LL Enclosure with 12 ULC Adapters	LL5D-KIT-ULCR
12 Fiber Tight Buffered Pigtail Kit with 12 ULC Connectors – ULC, XXX, JH, 012, Q, 002.9, for LL Enclosure with 12 ULC Adapters	LL5D-KIT-ULCT

ADDITIONAL KITS – OPTIONAL

DESCRIPTION	AFL NO.
Apex® AFRS Kit 3 – V-Clip bulk kit. Includes: V-Clips (120 ea.) and Mesh Inserts (120 ea.)	AX-KIT-AFRSVC-120
Apex AFRS Kit 4 – Mesh bulk kit. Includes: Clean Cut Gray Mesh (100 ft.)	AX-KIT-AFRSMESH-100FT
Silicone Spiral Wrap, 5.5 Foot Length	FC001657
Velcro, 75ft length roll	FC001759
SWR® Bundle Foam Retention Kit (25 non-adhesive foam pieces)	HW000406

* For installing the LL-5D Enclosure, reference the [LL-5D Splicing and Distribution Enclosure Installation Instructions](#).

INSTRUCTIONS

NOTE: If using LC connectors and the adapter plate is not pre-installed, an LC adapter plate can be easily installed by inserting the plate and pressing it down into the adapter insert as shown in **Figure 1**.

1. Use locally-accepted practices to clean and inspect the connector end faces prior to inserting each connector.
2. Insert the connectors into their respective adapters. It is recommended to insert the connectors in their numerical order to reduce tangling and unnecessary strain on the fibers (**Figure 2**).

****For adding to an empty LL-5D (No existing connections)****

- 3a. Route the fibers down the interconnect tray and use Velcro to attach the group of fibers to the tie off points on the interconnect tray.

For the Tight-Buffer version pigtail kit, routing should look similar to **Figure 3** for proper fiber slack.

For the Ribbon version pigtail kit, place the transition piece in the splice module on the interconnect tray. To allow for proper fiber slack, the fiber should be looped and routed similar to **Figure 4**.

NOTE: If the interconnect tray does not have the Apex® Splice Module pre-installed, an Apex Splice Module can easily be added by aligning the latch tabs (**Figure 5**) and sliding the chip to engage it (**Figure 6**).

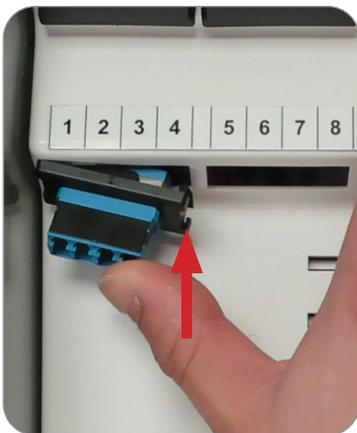


Figure 1

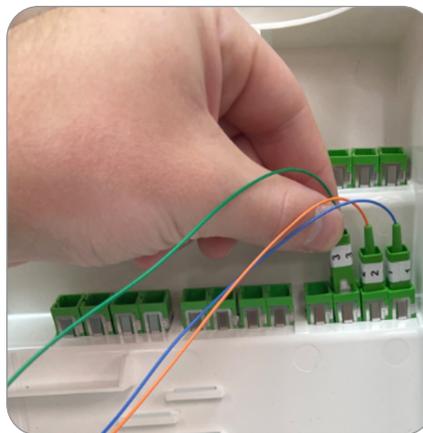


Figure 2

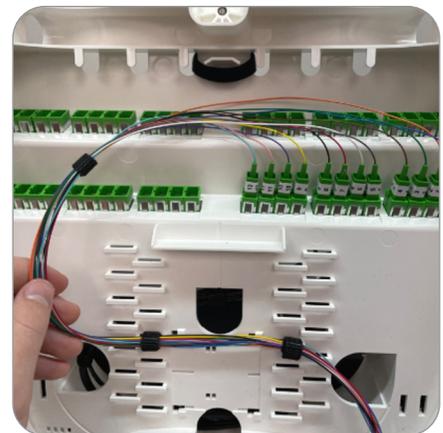


Figure 3

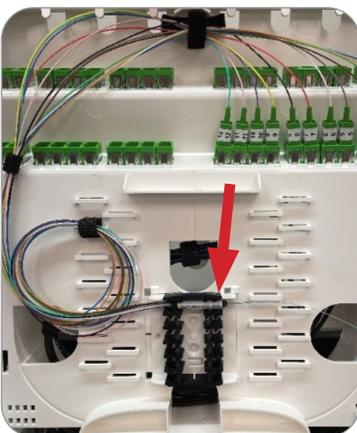


Figure 4

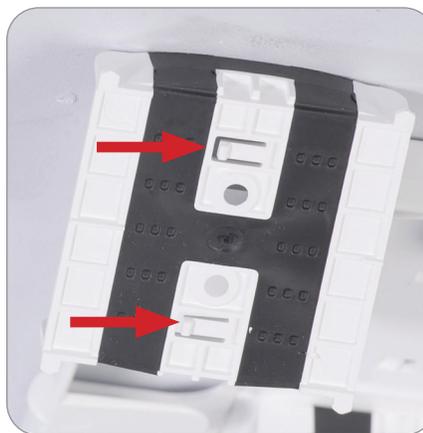


Figure 5

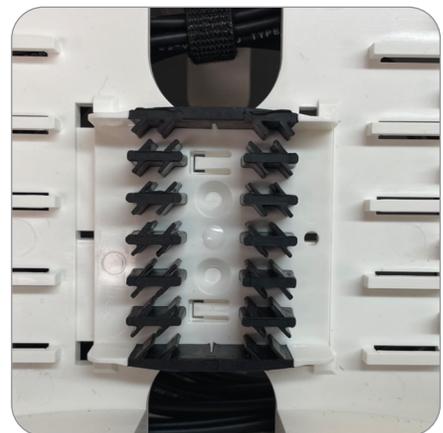


Figure 6

INSTRUCTIONS

****For adding to LL-5D with existing pigtail kits****

3b. Route the fibers down the interconnect tray on the side OPPOSITE of the existing pigtail kits and use Velcro to attach the group of fibers to the tie off points on the interconnect tray.

For the Tight-Buffer version pigtail kit, routing should look similar to **Figure 7** for proper fiber slack.

For the Ribbon version pigtail kit, routing should look similar to **Figure 8** for proper fiber slack.

4. Attach the group of fibers to the top Velcro piece on the interconnect tray by looping a second piece of Velcro through it (**Figures 9 and 10**).
5. Secure the fiber to the base of the interconnect tray with tie wraps and a non-adhesive foam piece (**Figure 11**).
 - a. Ensure the tie wraps are not pulled too tight and the fiber still has the ability to move.
 - b. If using mesh and the AFRS V-clip, measure and cut 45" of mesh. This will be enough for the fiber to make one slack loop in the box and reach the splice tray.

Follow the V-clip installation instructions included with the AFRS kit to properly install on the interconnect tray, as if it were being installed on the Apex splice tray.

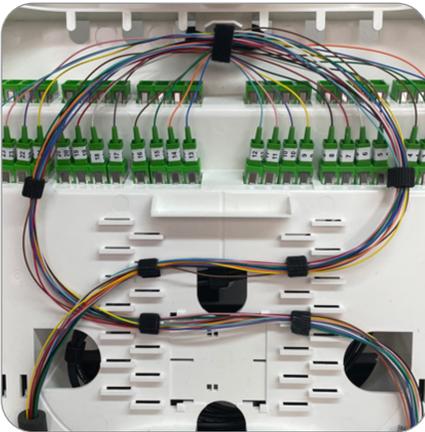


Figure 7

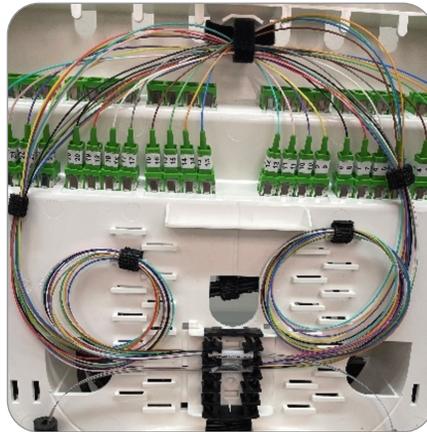


Figure 8



Figure 9

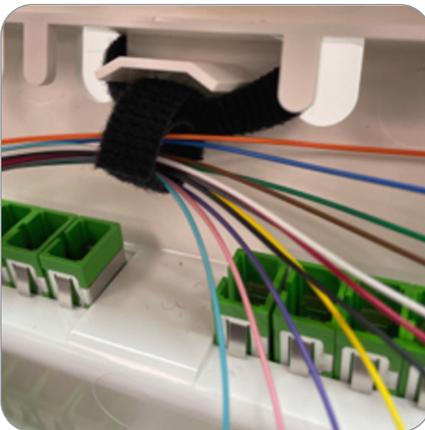


Figure 10



Figure 11

INSTRUCTIONS

6. The non-terminated fiber end can be fed through the mesh easier by wrapping a piece of vinyl tape on the end of the fibers (Figure 12).
7. Make sure the mesh insert is facing the right direction, with the tapered end towards the mesh (Figure 13) and is properly inserted inside the mesh (Figure 14).

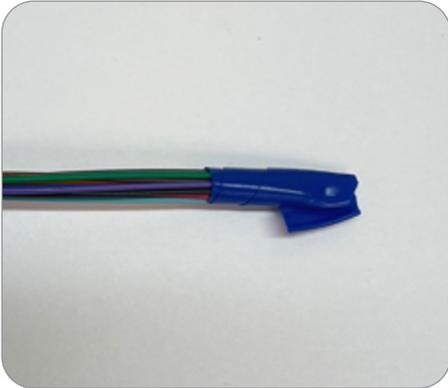


Figure 12

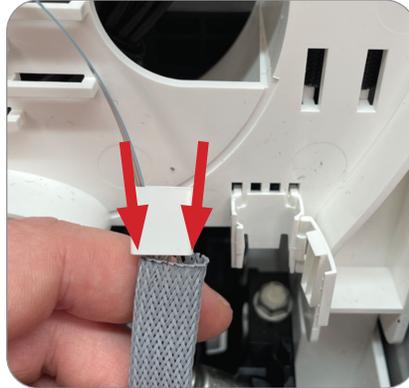


Figure 13

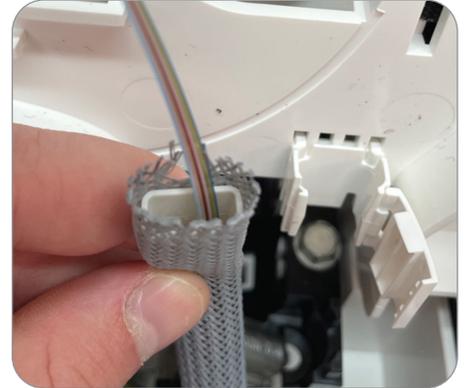


Figure 14

The mesh and AFRS kit are installed the same way for both the Ribbon and Tight-buffer versions (Figures 15 and 16).



Figure 15

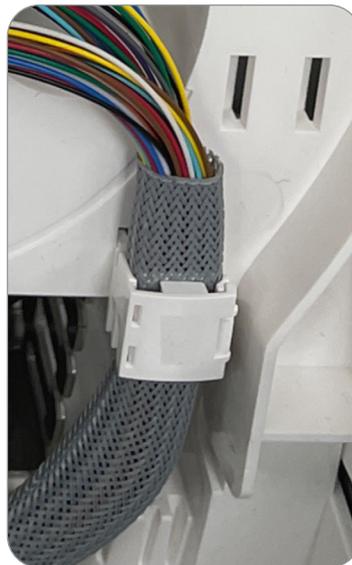


Figure 16

NOTE: Silicone spiral wrap can also be used to add protection around the fibers.

INSTRUCTIONS

8. Route fiber with one slack loop in the box before going to splice tray (Figure 17). Move fiber under the Cable Attachment Unit if one is installed (Figure 18).
9. Bring fiber to splice tray and secure at splice tray entrance (Figure 19).
 - a. For ribbon version, secure using non-adhesive foam and tie wraps.
 - b. For tight-buffer version, adhesive foam can be used.
 - c. If using mesh or spiral wrap, place the non-adhesive foam and tie wraps over the mesh or spiral wrap (Figure 19).

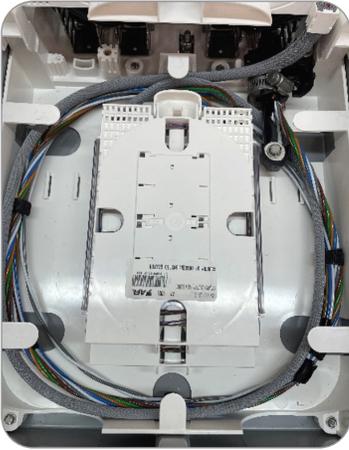


Figure 17

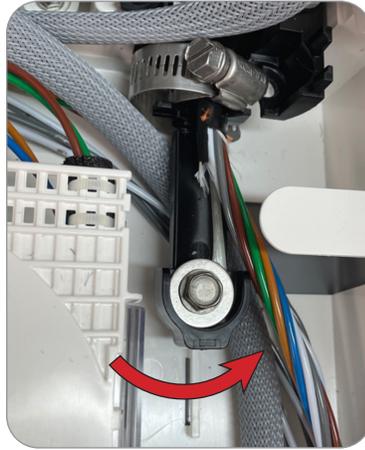


Figure 18

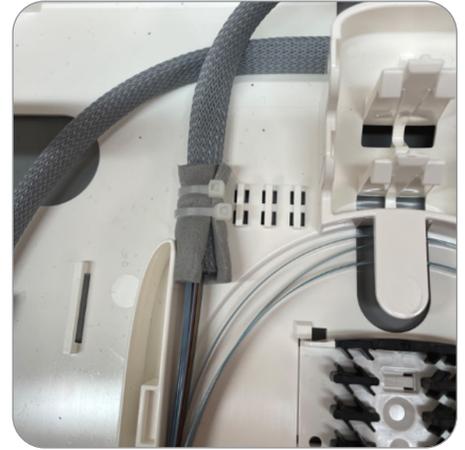


Figure 19