



# INSTALLATION INSTRUCTIONS

IDEAA® Interior Distribution Cabinet 144F



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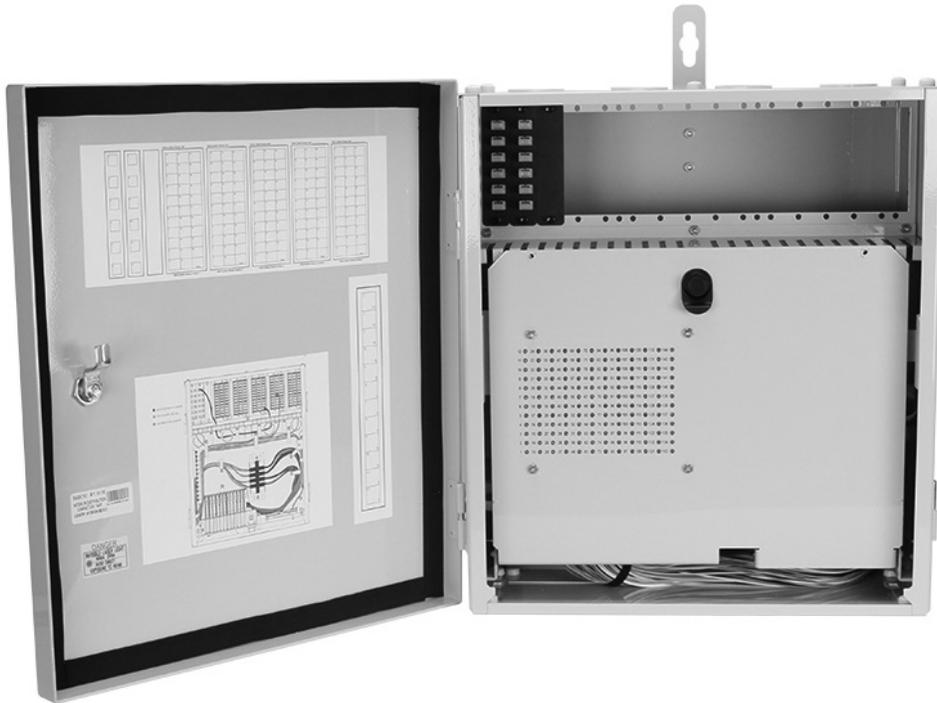
## GENERAL

The IDEAA Interior Distribution Cabinet (IDC) provides a convenient modular approach to centralized fiber distribution in medium to large Multiple Dwelling Units (MDU). All sizes of the IDC utilize the IDEAA splitter module to enable versatility across the platform. The IDC utilizes innovative jumper routing to enable efficient fiber management utilizing equal length pigtailed for the entire cabinet. The IDEAA IDC provides MDU fiber distribution in an extremely compact size.

## SPECIFICATIONS

Parameter	Value
Splitter Capacity	Up to 5 Modules
Input/Pass Through Ports	12
Dimensions - (L x W x H) in. (cm)	21.7 x 19.0 x 12.5 (55.12 x 48.26 x 31.75)

## PACKAGE CONTENTS



- A. IDEAA Interior Distribution Cabinet
- B. Fiber Input Pigtail
- C. Input Splice Tray
- D. Fiber Distribution Jumpers

### PACKAGE CONTENTS: ACCESSORIES

Wall Mounting Hardware Kit  
LGX-118 Mounting Bracket Kit  
Replacement Door Label Kit  
Input Compression Fitting Kit

### REQUIRED TOOLS

216 style Socket Tool  
Phillips Head Screwdriver

### ADD-ON COMPONENTS

SC IDEAA Module – 1 x 32  
Universal Splice Tray  
Compression Fitting Kit  
FUSEConnect® MPO Splice-On Connector  
FASTConnect® Mechanical Connectors  
MPO Pigtail Kit  
One-Click® SC Cleaner  
One-Click® MPO Cleaner

### CABINET MOUNTING – WALL MOUNT BRACKET ATTACHMENT

1. Locate the three bracket mounting positions on the back of the 144F IDC. **(Figure 1)**
2. Using a standard 216 style tool, or similar, attach the three wall mount brackets included in the Wall Mounting Hardware Kit. **(Figure 2)**

### CABINET MOUNTING – WALL MOUNT

1. Using local engineering practices, determine the mounting position of the cabinet on the wall.
2. Mark the three mounting points to be pre-drilled for cabinet placement.
3. Using local accepted practices and approved hardware, insert a lag screw into each of the three pre-drilled mounting holes. Screw the lag screws half-way into the wall.

**\* Note: For best practice, it is recommended that the lag screws hex head is wider than the key slots of the cabinet mounts. Also, ensure that the shaft of the screws is smaller than the actual mounting slots for ease of installation.**

4. Mount the cabinet over the pre-installed lag screws.
5. Secure the cabinet to the wall by tightening the three lag screws. Before the lag screws are completely tightened a level may be used to ensure that the cabinet is in the desired position.

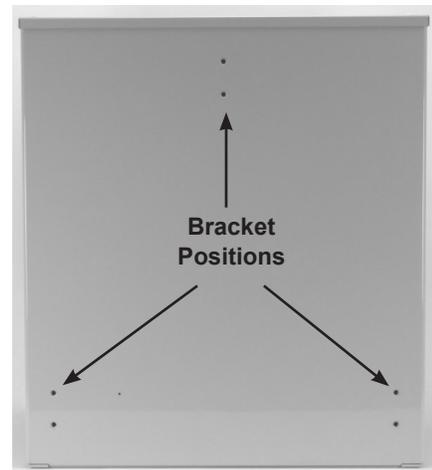


Figure 1



Figure 2

### LOCK AND UNLOCK EXTERIOR DOORS

1. Using a standard 216 style tool, or similar, turn the locking bolt located at the center of the IDC door a ¼ turn clockwise to unlock and counter clockwise to lock the cabinet..

**\* Note: A pad lock, not provided, may be utilized if additional security is desired.**

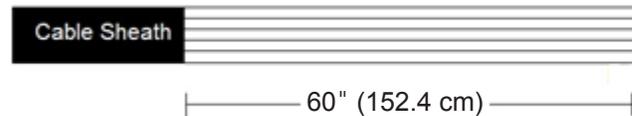
### DOOR REMOVAL AND RE-INSTALLATION

The IDC was designed so that the door may be installed on either side of the cabinet for applications where there are space restrictions.

1. Lift up on the cabinet door to release it from the hinge pins.
3. Using local engineering practices determine which side of the cabinet the door is to be placed. Install the enclosure door over the appropriate hinge pins.
3. Review the label and diagram orientation on the IDC door. If necessary, apply the included Replacement Door Label Kit in the appropriate positioning.
4. Using a standard 216 style socket tool, or similar, lock the cabinet.

### CABLE PREPARATION

**⚠ Caution: Fiber optic cable is susceptible to damage from excessive bending, pulling or crushing forces. At every stage of the installation process ensure that loose buffer tubes, ribbon or Wrapping Tube Cable (WTC) with Spider Web® Ribbon (SWR) fibers are free from unintentional cuts, knick or bends to avoid potential fiber damage.**



1. Mark the cable to have a minimum 60" (152.4 cm) opening.
2. Use local accepted practice to remove the cable sheath.
3. Using wire cutters cut the central strength member back to the sheath opening.

**\* Note: For best practice, when working with WTC it is recommended accepted local practices be used to protect the SWR fiber before continuing to the cable installation.**

### CABLE INSTALLATION

1. Using a standard 216 style tool, or similar, remove the shipping screws from each side of the swing down tray. A total of two screws will be removed. **(Figure 3)**
2. Using a standard 216 style tool, or similar, loosen the shipping screw from the swing down splice tray holder in order to begin splicing. Do not remove this screw from the swing down splice tray holder. **(Figure 4)**
3. Determine the appropriate compression fitting for the application.
4. Located at the lower right side of the cabinet, knock out the appropriate mounting hole to accommodate the compression fitting. **(Figure 5)**
5. Install the compression fitting, reference the **Compression Fitting Installation** section of this document. **(Figure 6)**
6. Using local engineering practices determine which fibers will be unused for the input splicing and separate the bundles from the fibers that will be routed to the splice tray.
7. Route the unused buffer tubes through the fiber management rings located on the side wall of the IDC. **(Figure 7)**



Figure 3

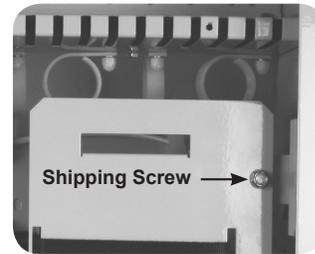


Figure 4



Figure 5



Figure 6



Figure 7

### COMPRESSION FITTING INSTALLATION

**⚠ Caution:** In order to avoid micro bends or fiber damage do not over-tighten the compression fitting around the fiber cable.

1. Ensure that the mounting hole is free from burrs and that the cabinet surface is smooth and free of debris.
2. Place the hex portion on the body (not the sealing nut) into the mounting hole.
3. Insert the cable through the fitting to the desired position.

**⊗ Note:** For best practice, it is recommended that when working with the 9-port compression fitting that the multi-port grommet be removed from the fitting body. Slit each of the application appropriate ports and align the grommet around the cables. Once all required cables are seated in the grommet, insert both the cables and grommet back into the fitting body.

4. Tighten the sealing nut to hand-tight.
5. Using a wrench hold the body hex stationary while tightening the sealing nut with a second wrench. Tighten until the cable is held securely in place.
6. Check to ensure that the fitting body is still screwed tightly into the panel.

### DISASSEMBLE COMPRESSION FITTING – CABLE REPLACEMENT

1. To disassemble for cable replacement, loosen the sealing nut.
2. Grip the disconnected cable and pull while turning the cable in the counter-clockwise direction.

### SPLICING

1. Prior to splicing, ensure that adequate slack for both the feeder fiber and the input pigtail fiber is stored within the splice tray. Mark fibers for splicing.
2. Clean the individual fiber per accepted local practice using an approved fiber cleaner.
3. Follow accepted local practice for preparing and splicing feeder fibers and input pigtail fibers.
4. Once all splicing is complete, route the exposed fibers inside the splice tray. **(Figure 8)**

**\* Note: Thick foam pads may be used to help organize loose tube bare fibers within the splice tray.**

5. Replace the splice tray cover.
6. Secure the splice tray to the swing down splice tray holder with the hook and loop band.
7. The fiber management rings on the side wall of the IDC may be used for slack storage. **(Figure 9)**
8. Return the swing down splice tray holder to the upright position and secure the shipping screw.

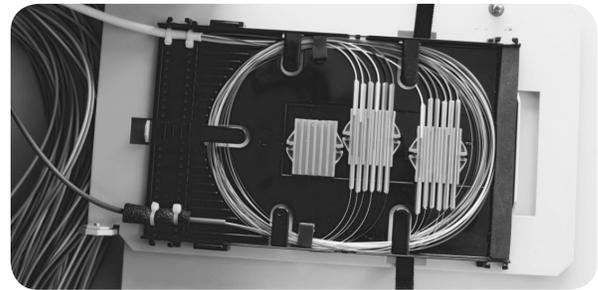


Figure 8



Figure 9

### DISTRIBUTION CABLE INSTALLATION - MPO DISTRIBUTION CABLE

The top plate of the 144F IDC may be removed to aid in the distribution cable installation process.

**\* Note: For distribution cable entry from the bottom of the cabinet, reference the *Cable Installation* section of this document before continuing on to Step 7.**

1. Remove the five caps to expose the nuts on the top of the 144F IDC.
2. Using a standard 216 style tool, or similar, remove the five nuts that secure the top plate to the cabinet body. **(Figure 10)**

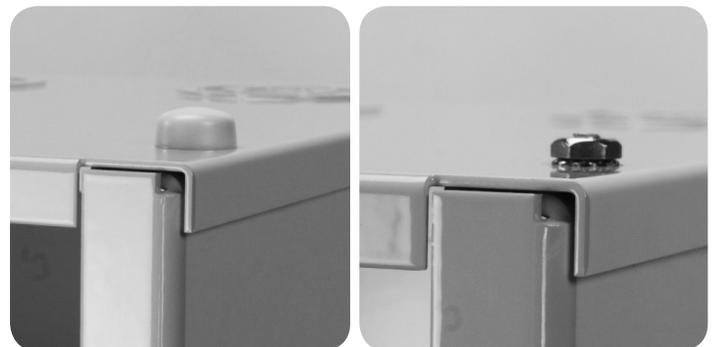


Figure 10

3. Remove the top plate.
4. Determine the appropriate compression fitting for the application.
5. Knock out the appropriate mounting hole to accommodate the compression fitting.
6. Install the appropriate compression fitting. Reference the **Compression Fitting Installation** section of this document.
7. Using local engineering practices, determine the port to be used on the MPO field for the MPO distribution cable.
8. Use local accepted practices to clean the connector end face and plug the connector into the appropriate port. (Figure 11)
9. Use the fiber management rings to route the MPO distribution cable through the back side of the 144F IDC. (Figure 12)

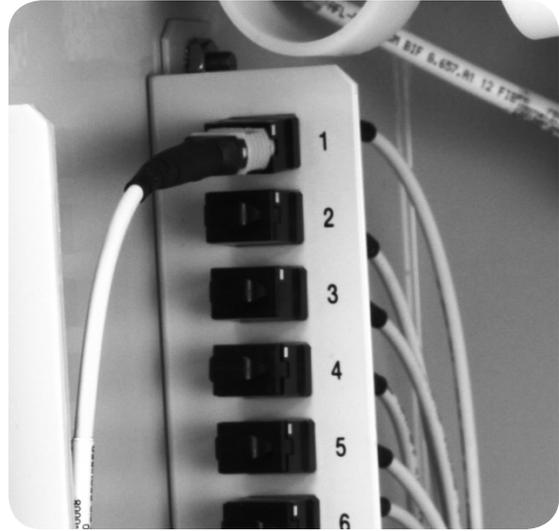


Figure 11

**\* Note: A FUSEConnect® MPO Splice-On Connector may be spliced onto a non-connectorized distribution cable. The FUSEConnect® MPO Splice-On Connector application will utilize the same cable installation and routing techniques outlined in steps 1-7. Reference the installation instructions provided with the FUSEConnect® MPO Splice-On Connector. The document will include the following:**

- Fiber Preparation
- Fiber Splicing
- Connector Assembly

10. Use local accepted practices to label the MPO distribution fiber connection in the appropriate space on the door label, as applicable.
11. Repeat Steps 7 – 10 for each MPO distribution cable to be installed.

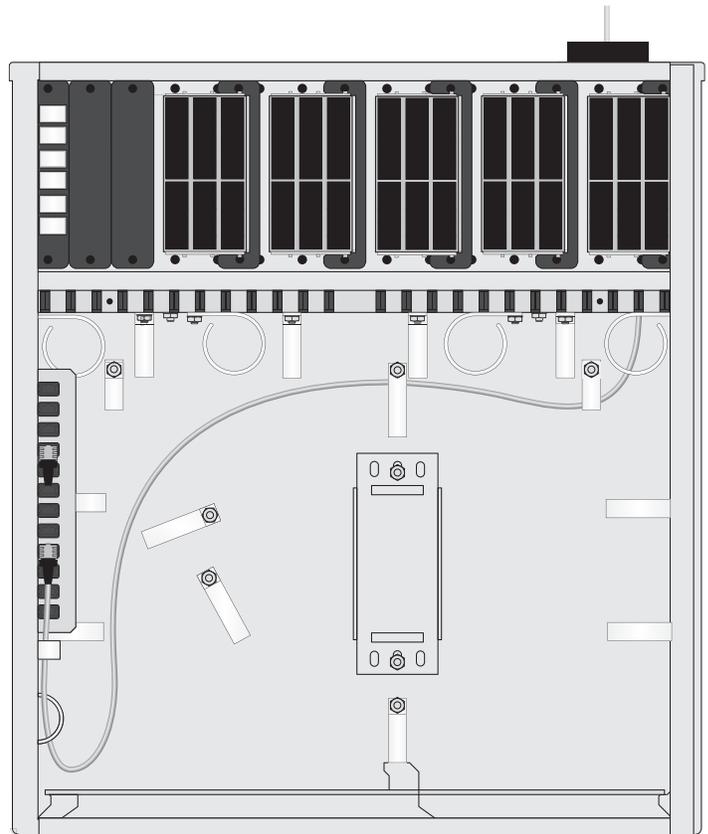


Figure 12

## DISTRIBUTION CABLE INSTALLATION - MPO PIGTAIL SPLICING

When a non-connectorized distribution cable is utilized a MPO pigtail may be spliced onto the distribution cable.

**Note:** For distribution cable entry from the bottom of the cabinet, reference the *Cable Installation* section of this document before continuing on to step 7.

1. Remove the five caps to expose the nuts on the top side of the 144F IDC.
2. Using a standard 216 style tool, or similar, remove the five nuts that secure the top plate to the cabinet body. **(Figure 10)**
3. Remove the top plate.
4. Determine the appropriate compression fitting for the application.
5. Knock out the appropriate mounting hole to accommodate the compression fitting.
6. Install the appropriate compression fitting. Reference the *Compression Fitting Installation* section of this document.
7. Using a standard 216 style tool, or similar, loosen the shipping screw from the swing down splice tray holder in order to begin splicing. Do not remove this screw from the swing down tray holder. **(Figure 4)**
8. Prior to splicing, ensure that adequate slack for both the distribution fiber and the MPO pigtail fiber is stored within the splice tray. Mark fibers for splicing.
9. Clean the fiber per accepted local practice using an approved fiber cleaner.
10. Follow accepted local practice for preparing and splicing distribution fibers and MPO pigtail fibers.
11. Once all splicing is complete, route the exposed fibers inside the splice tray. **(Figure 8)**
12. Replace the splice tray cover.
13. Secure the splice tray to the swing down splice tray holder with the hook and loop band.
14. The fiber management rings on the side wall of the IDC may be used for slack storage. **(Figure 9)**
15. Using local engineering practices, determine the port to be used on the MPO field for the MPO distribution cable.
16. Use local accepted practices to clean the connector end face and plug the connector into the appropriate port. **(Figure 11)**
17. Use the fiber management rings to route the MPO pigtail fiber through the back side of the 144F IDC. **(Figure 13)**
18. Return the swing down splice tray holder to the upright position and secure the shipping screw.

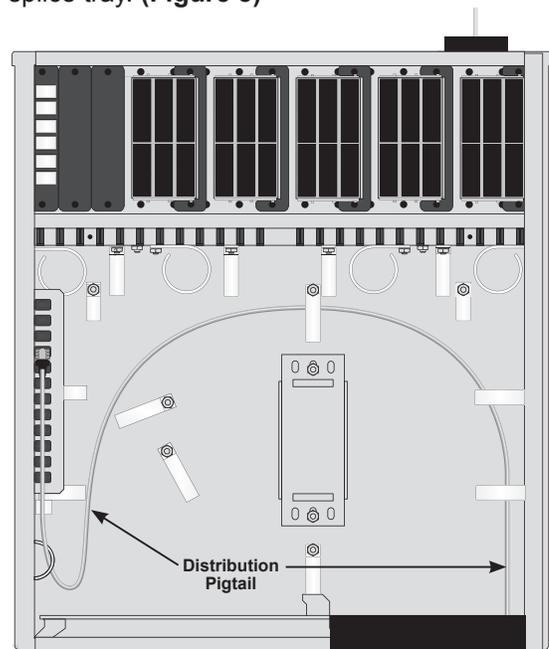


Figure 13

# IDEAA SPLITTER MODULE INSTALLATION

## MOUNT IDEAA SPLITTER MODULE

1. Using local engineering practices, determine the location of the IDEAA Splitter Module to be installed within the IDC.
2. Using the provided hex-head screws, attach the mounting bracket to the bottom side of the IDEAA Splitter Module. **(Figure 14)**
3. Install the IDEAA LGX-118 Rack Mount Bracket into the LGX-118 mounting fixture by pressing in the two nylatch plungers. **(Figure 16)**
4. Repeat Steps 1 – 3 for each IDEAA Splitter Module to be mounted.



Figure 14

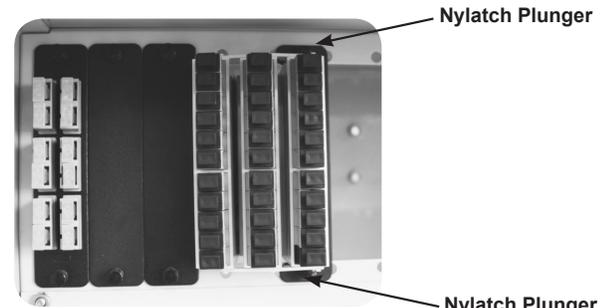


Figure 15

## ACTIVATE IDEAA SPLITTER MODULE

An IDEAA Splitter Module that has been mounted into the IDC is not active until it has been connected to the Input Field.

- ⚠ Caution: When working with fiber optics, do not look directly into the end of the fiber cable or adapter port. A power meter may be used to determine if the cable or port is dark. Or use locally accepted fiber optic safety practices.**
1. Use local accepted practices to clean the connector end face at both ends of the jumper provided with the IDEAA Splitter Module.
  2. Plug the jumper cable into the black input port on the IDEAA Splitter Module. Use the foam fiber relief to route the jumper cable to the fiber routing section of the IDC. **(Figure 16)**
- ⊛ Note: When mounted on the LGX-118 mounting fixture the black input port will be located in the bottom right corner of the module adapter field.**

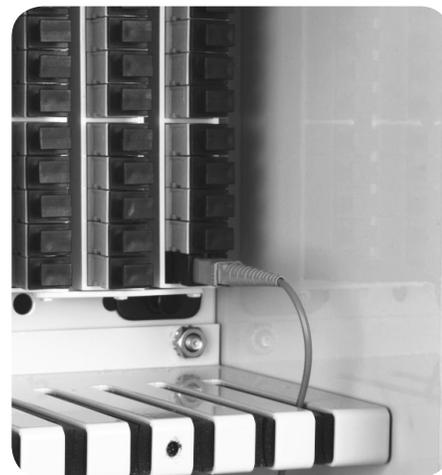


Figure 16

3. Using local engineering practices, determine the port to be used on the input panel for activating the IDEAA Splitter Module. Plug the opposite end of the jumper into the desired port on the input panel. Use the foam fiber relief to route the jumper cable to the fiber routing section of the IDC. **(Figure 17)**
4. Route the remaining jumper slack through the fiber routing section of the IDC. **(Figure 18)**
5. Use local accepted practices to label the input fiber connection in the appropriate space on the door label, as applicable.
6. Repeat Steps 1 – 5 for each IDEAA Splitter Module that needs to be activated.



Figure 17

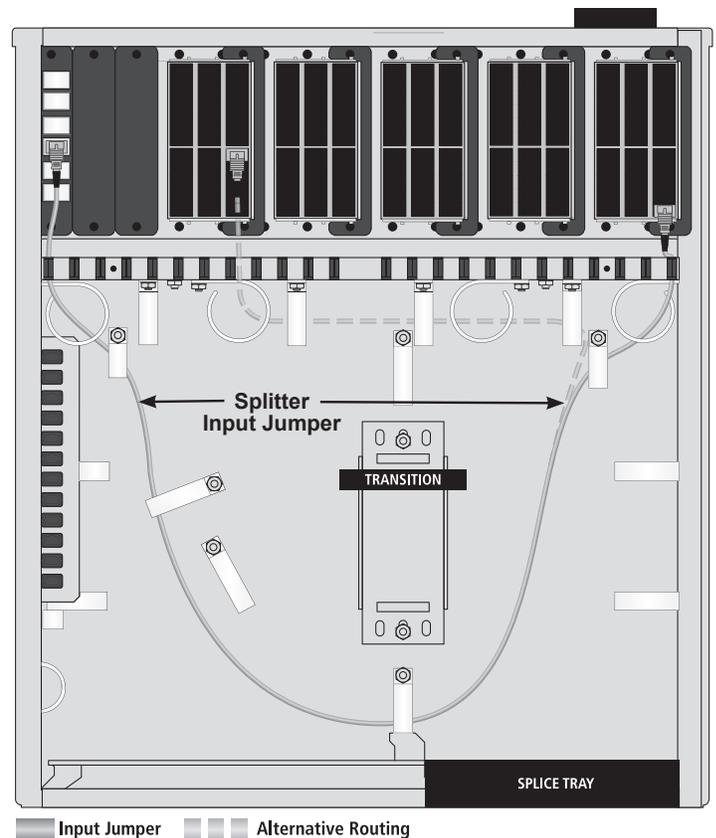


Figure 18

### CONNECT DISTRIBUTION FIBER

1. If not already removed, remove the shipping screws from each side of the swing down tray. A total of two screws will be removed. **(Figure 3)**
2. Using local engineering practices, determine the appropriate distribution fiber to be connected. Remove the corresponding fiber storage cartridge from the swing down tray by pushing in and pulling up on the cartridge arms. **(Figure 19)**

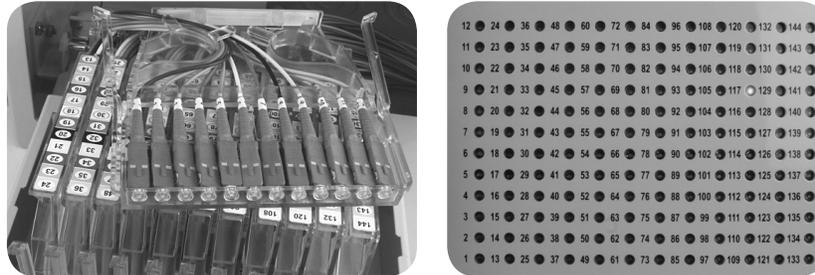


Figure 19

**\* Note: The cartridges and distribution fibers are numbered to assist in fiber identification. Additionally, distribution fibers may be identified by placing a red light on the customer side of the fiber and locating the fiber on the swing down tray. (Figure 19)**

3. Remove the desired distribution fiber from the cartridge by sliding the connector out of the housing location and continue to route the cable out of the cartridge.
4. For best practice, it is recommended that the distribution fiber be removed from all Velcro and routed back to the cable transition. Ensuring the distribution fiber has a clear path to the fiber routing section of the IDC.
5. Use local accepted practices to clean the distribution fiber connector end face.
6. Connect the distribution fiber to the appropriate port on the IDEAA Splitter Module. Use the foam fiber relief to route the distribution fiber to the fiber routing section of the IDC, employing a similar technique to that used with the input jumper cable. **(Figure 20)**

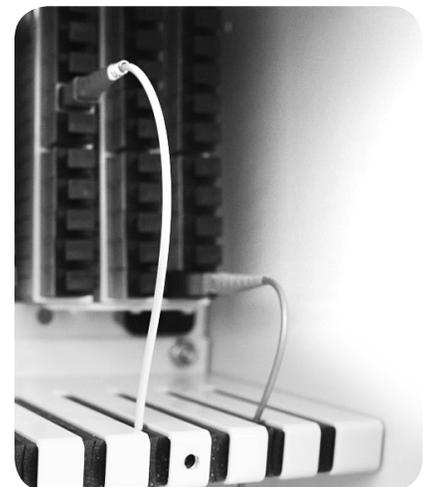


Figure 20

7. Route the remaining distribution fiber slack through the fiber routing section of the IDC. **(Figure 21)**
8. Use local accepted practices to label the distribution fiber connection in the appropriate space on the door label, as applicable.
9. Repeat Steps 2 – 8 for each addition distribution fiber needing to be connected.

**\* Note: Unused fibers should remain in the fiber storage cartridge until needed.**

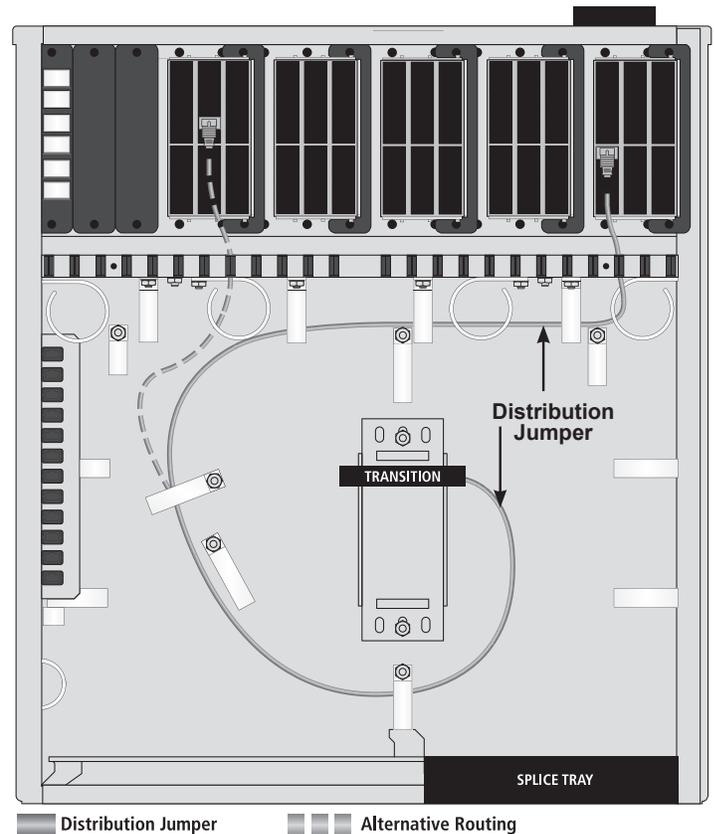


Figure 21

### MDU DROP CABLE INSTALLATION - 4.8MM CABLE

The 144F IDC is capable of supporting up to (72) direct connections to the living unit through the use of a MDU drop cable for applications in which the interconnect panel will be bypassed.

**⚠ Caution: Fiber optic cable is susceptible to damage from excessive bending, pulling or crushing forces. At every stage of the installation process ensure that the fibers are free from unintentional cuts, nick or bends to avoid potential fiber damage.**

1. Remove the two caps to expose the nuts on the MDU drop access plate, located in the lower left corner of the cabinet.
2. Using a standard 216 style tool, or similar, remove the two nuts that secure the MDU drop access plate to the cabinet body. **(Figure 22)**
3. Remove the MDU drop access plate. **(Figure 23)**
4. Use local accepted practices to remove the cable sheath.

- ⊛ **Recommendation:** For best practice no more than 35" (88.9 cm) of 900 μm fiber be exposed for the MDU drop cable installation process. This length will optimize the routing capability within the IDC and prevent excessive lengths of 900 μm fiber from collecting within the cabinet.

5. Insert the 4.8mm jacket into the drop retention bracket. **(Figure 24)**

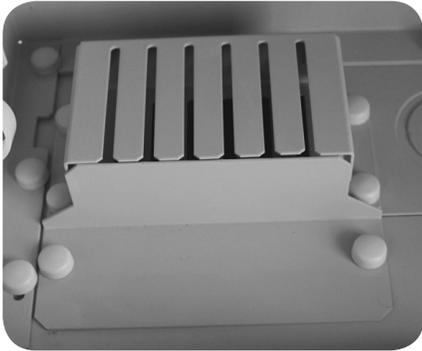


Figure 22

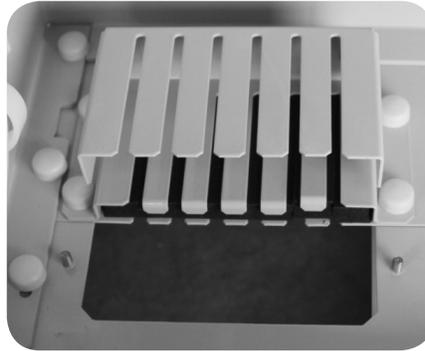


Figure 23

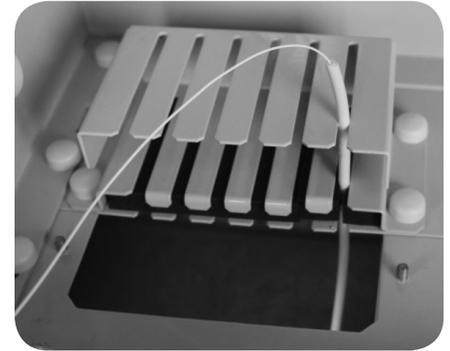


Figure 24

6. Slide the 4.8 mm drop cable to the backmost position within the drop retention bracket.
7. Ensure that the exposed 900 μm fiber is long enough to reach the desired IDEAA Splitter Module port.
8. Repeat steps 4 – 7 for all desired MDU drop cables.
9. Once all MDU drop cables have been installed, replace the drop access plate.
10. Using a standard 216 style tool, or similar, replace the two nuts that secure the MDU drop access plate to the cabinet body and cover with caps. **(Figure 25)**
11. Install FASTConnect® Mechanical Connector. Reference the installation instructions provided with the FASTConnect® Mechanical Connector. The document will include the following:

- Fiber Preparation
- Fiber Termination
- Connector Assembly

12. Using local engineering practices, determine which port on the IDEAA Splitter Module will be used for the MDU drop connection.
13. Use local accepted practices to clean the distribution fiber connector end face.
14. Connect the distribution fiber to the appropriate port on the IDEAA Splitter Module. Use the foam fiber relief to route the distribution fiber to the fiber routing section of the IDC, employing a similar technique to that used with the input jumper cable. **(Figure 26)**

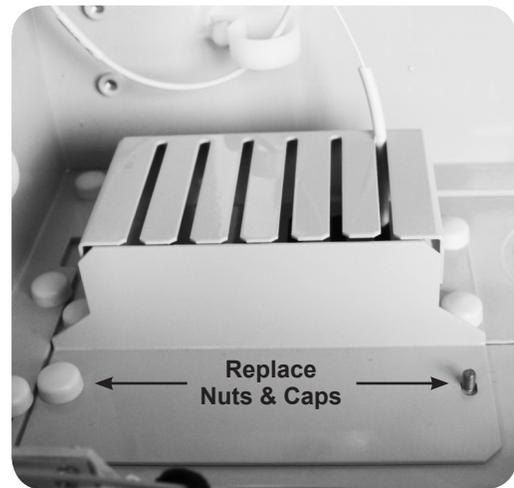


Figure 25

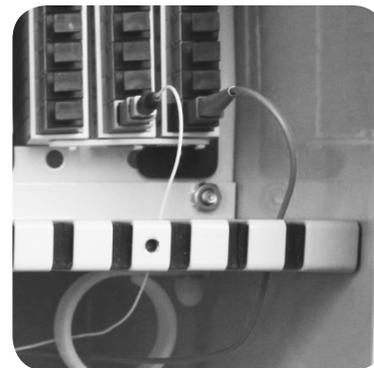


Figure 26

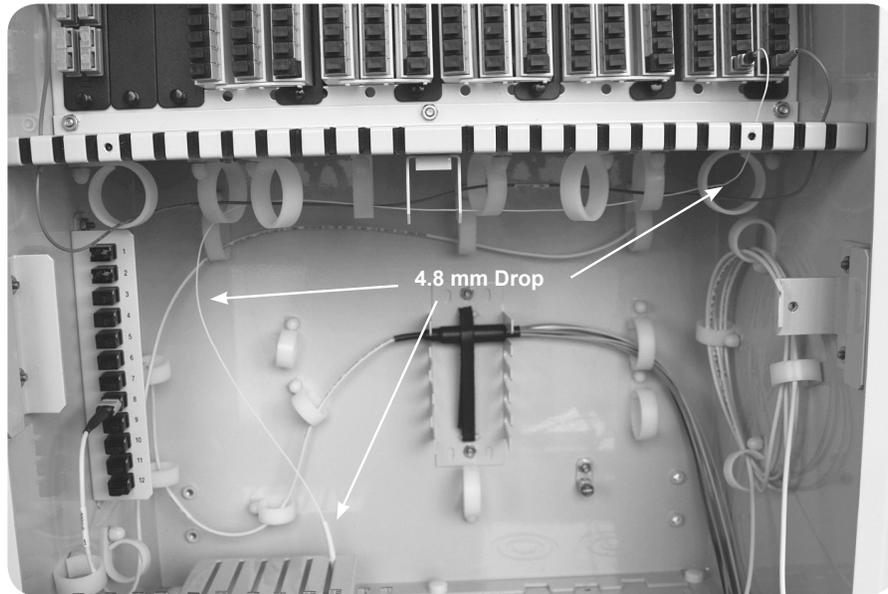


Figure 27

15. Route the remaining distribution fiber slack through the fiber routing section of the IDC. **(Figure 27)**
16. Use local accepted practices to label the distribution fiber connection in the appropriate space on the door label, as applicable.
17. Repeat Steps 10 – 16 for each addition distribution fiber needing to be connected.

## PASS THROUGH CONNECTION

1. Using local engineering practices, determine the appropriate distribution fiber to be used for a pass through connection. Remove the corresponding fiber storage cartridge from the swing down tray by pushing in and pulling up on the cartridge arms.
2. Remove the desired distribution fiber from the cartridge by sliding the connector out of the housing location and continue to route the cable out of the cartridge.
3. For best practice, it is recommended that the distribution fiber be routed back to the cable transition. Ensuring the distribution fiber has a clear path to the fiber routing section of the IDC.
4. Use local accepted practices to clean the distribution fiber connector end face.
5. Connect the distribution fiber to the appropriate port on the input field.
6. Use the foam fiber relief to route the distribution fiber to the fiber routing section of the IDC. Employing a similar technique to that used with the jumper cable.
7. Route the remaining distribution fiber slack through the fiber routing section of the IDC.
8. Repeat Steps 1 – 7 for each addition pass through connection.

**\* Note: Unused fibers should remain in the fiber storage cartridge until needed.**