



INSTALLATION INSTRUCTIONS

OPTINID® MAX OPTICAL DEMARCATION CLOSURE



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GENERAL

AFL's OptiNID (OPN) MAX Optical Demarcation Enclosure is the latest entry in the OptiNID fiber optic demarcation family of products. The OPN MAX is designed with flexibility in mind with the capability to house up to 12 SC simplex or LC duplex adapters, along with the ability to house up to 24 single fiber splices. The OPN MAX is also optimized for the use of AFL's FASTConnect® or FUSEConnect® field-installable connectors. The base of the enclosure houses an insert which incorporates fiber routing, adapter plate, and cable retention features. The OPN MAX also has several optional features such as a hinged splice tray to separate/protect bare fiber from cable slack, or a grounding plate for grounding toneable drop cables. The OPN MAX is available with two different base cable entry options, either a pair of U-shaped "drop-in" style grommets, or two half-inch ports allowing for a variety of different entry accessories.

SPECIFICATIONS

Parameter	Value
Dimensions – H x W x D	11.57 x 10.7 x 3.84 inches (29.39 x 27.18 x 9.75 cm)
Material	Polycarbonate
UV Resistance (Days Exposed)	1000 hrs per ASTM G154 (Cycle 1)
Flammability	UL 94-5VA
Impact Test	0°F and 104°F (-18°C and 40°C) 10 ft-lbs on Top, Front, and Sides
Chemical Resistance	Resistant from cracking when subject to WD-40 Water Displacing Lubricant, No. 02005, 10% IGEPAL, Cable Filling compound (as used in the field), Splice Encapsulating Compound, Isopropyl Alcohol Grade HPLC, Wasp and Hornet Spray
Drop Test	0°F and 104°F (-18°C and 40°C) from 30 in. (75 cm)
Rain	Wind-driven rain MIL-STD-810E Method 506.3
Temperature Cycling with Humidity	30 day cycling from -40°F to 149°F (-40°C to 65°C) with 95% RH

PACKAGE CONTENTS

- A. OptiNID Max Optical Demarcation Closure with pre-installed fiber demarcation insert
- B. 2-hole Base or U Grommet Base
- C. Closing Screw (Optional)
- D. Demarcation Cover (Optional)
- E. Splice Tray – as ordered
- F. Hose Clamp with Spur Bracket



PACKAGE CONTENTS: ACCESSORIES

- Mounting Screws (2x)
- Installation overview
- Entry grommet kits

RECOMMENDED TOOLS

- 216-Style Socket Tool

ADD-ON COMPONENTS

- Compression Fitting Kit
- Splice Module Kit
- 1m Pigtail Kit
- Demarcation Cover
- Pin in Hex security screw
- Flat cable retention clip
- Ground plate with nuts

CLOSURE MOUNTING

1. Using local engineering practices, determine the mounting position of the enclosure on the wall. **(Figure 1)**
2. Using the provided mounting screws or alternative mounting screws, secure the closure to the wall.

 **Note:** When mounting to a pole, the two mounting tabs are designed to accept a Del Tec strap or steel band if necessary.

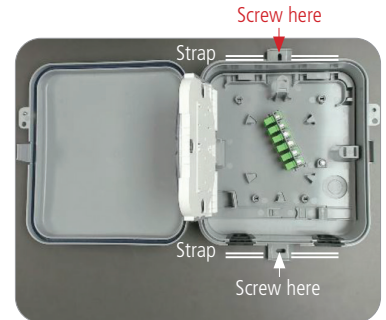


Figure 1

LOCK AND UNLOCK EXTERIOR DOOR

1. If equipped, use a standard 216 style tool, or similar, to loosen the optional closing screw located on the right side of the closure door. Do not remove this screw from the enclosure door.
2. Press the tab in, located below the hex screw, to open the enclosure. **(Figure 2)**

 **Note:** A padlock or lock tag, not provided, may be utilized if additional security is desired.

Note: If a closing screw is not used, a zip tie can to be used as an additional security method for the door.



Figure 2

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 the fiber bundles or loose buffer tubes are free from unintentional cuts, nick or bends to avoid potential fiber damage.

1. Mark the cable to have a 61" (154.9 cm) opening. **(Figure 3)**
2. Use accepted local practice to remove the cable sheath.

 **Note:** If grounding is required, mark and separate the tone wire to 6" (15.3 cm) from the sheath opening.

3. Use wire cutters to cut the strength member 3" (7.62 cm) from the cable sheath.
4. Mark the buffer tube to have a 42" (106.7 cm) opening.
5. Use accepted local practice to remove the buffer tube and clean the fiber.

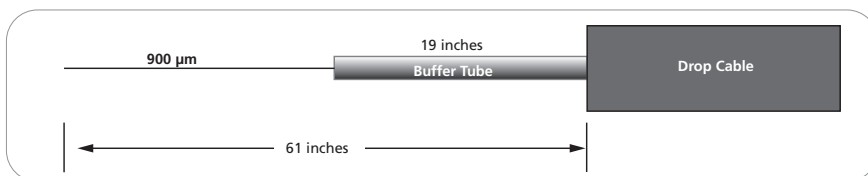


Figure 3

-  **Note:** If a service loop is desired in the base, mark the cable for an 82" (208.3 cm) opening and the buffer tube for a 41" (104.1 cm) opening. (Figure 4).

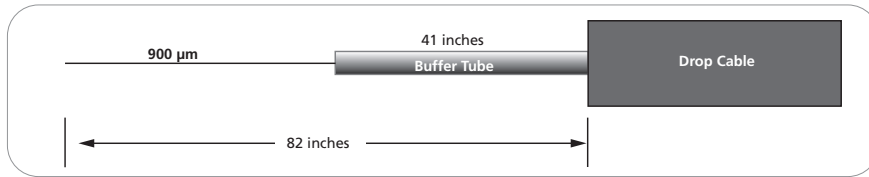


Figure 4

CABLE INSTALLATION

The OPN Max comes with standard 2 cable entry ports located at the bottom of the enclosure. Based on the configuration ordered, these ports will accept Slip in grommets, Push in place grommets, NPT conduit fittings, and/or Compression fittings. When facing the enclosure, the right-side port is designated as the input, and the left-side port is designated as the output. (Figure 5)

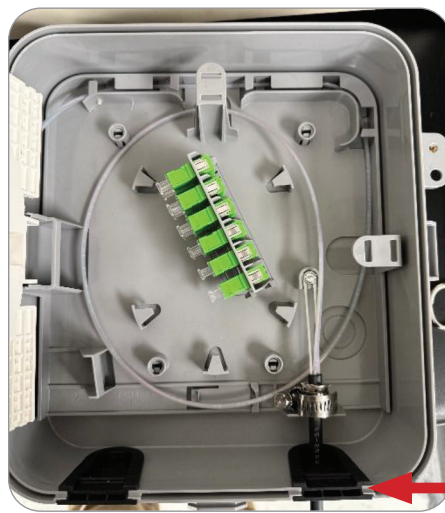


Figure 5

-  **Note:** The spur bracket is a metal cable retention bracket located at the base of the enclosure adjacent to the cable entry ports. It is used with the hose clamp to provide strain relief by securing the cable jacket and preventing axial movement. The spur bracket **MUST** be installed completely under the hose clamp ring at the top of the cable and are the same for all cable entry port types.

⚠ Caution: To avoid micro bends or fiber damage do not over-tighten the tie wraps around the fiber bundles.

1. Secure the cable to the base using the provided hose clamp and spur bracket. **(Figure 6a)**
2. Secure strength members under retention bolt without trapping or pinching tubes. **(Figure 6a)**
3. Where applicable, use accepted local practice to ground the tone wire to the grounding stud located at the bottom of the enclosure. A common ground will be established.
4. Route the buffer tube into the splice chamber. **(Figure 6b)**

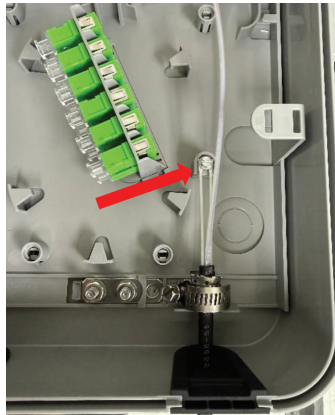


Figure 6a



Figure 6b

GROUND BAR INSTALLATION

1. The Ground Bar can easily be removed and reinstalled as needed.
2. Locking tabs hold the Ground Bar in place.
3. Secure until snaps engage if installing Ground Bar in the field.
4. Secure Ground Bar by sliding to the right until snaps engage if installed in the field
5. Attach tone wire or ground per local practices. **(Figure 7)**



Figure 7

DROP PIGTAIL INSTALLATION

⚠ Caution: To avoid micro bends or fiber damage do not over-tighten the tie wraps around the fiber bundles. It may be necessary to figure-8 the pigtail fibers to prevent violation of minimum bend radius. (Figure 8)

When installing 1 or 6 pigtails, the connectors must be installed in the top row of the adapter. (Figure 9)

When installing 12 pigtails, install 1-6 on bottom, then continue 7-12 to the top row. This placement ensures proper fiber routing, bend-radius compliance, and strain relief within the splice chamber. (Figure 10)

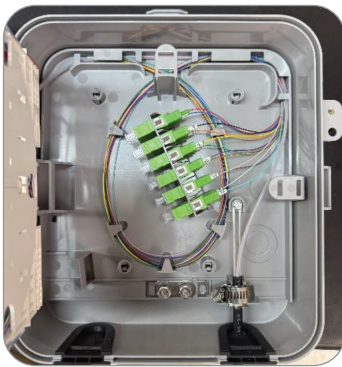


Figure 8

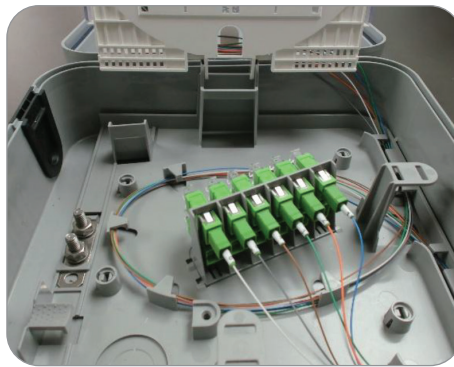


Figure 9

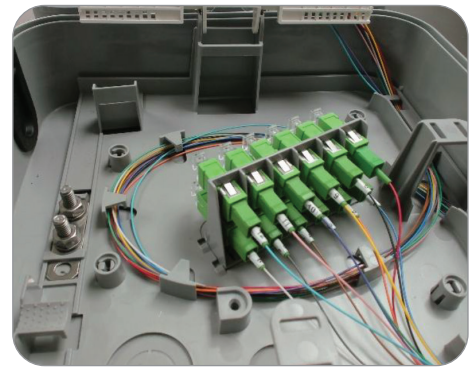


Figure 10

⚙ Note: A short boot 900 µm pigtail is required.

1. Use accepted local practice to clean and inspect the connector end face.
2. Plug the pigtail assembly into the specified adapter row (top or bottom) based on the total number of pigtails being installed, per the guidance above and local engineering practice.
3. Repeat steps 1-2 for each additional pigtail assembly to be installed.
4. Route the pigtail assemblies through the splice chamber. (Figure 11)

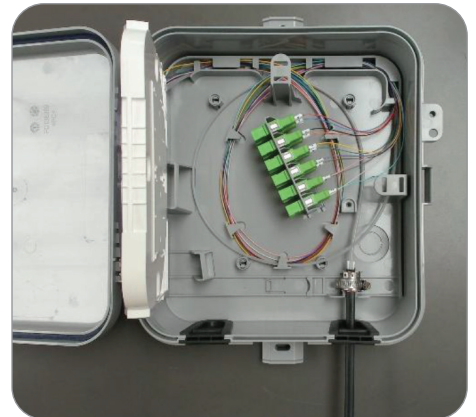


Figure 11

⚙ Note: A field-installable connector, such as FASTConnect® Mechanical Connector or FUSEConnect® Splice-On Connector, may be installed onto a non-connectorized drop or distribution cable. Reference the installation instructions provided with the FASTConnect Mechanical Connector or FUSEConnect Splice-On Connector. The document will include the following:

- Fiber Preparation
- Fiber Termination
- Connector Assembly

SPLICE MODULE INSTALLATION

1. The Splice Module can easily be installed or removed as needed in the field.
2. The Splice Module can be installed by inserting the four tabs of the module into the corresponding open tabs in the base, then sliding right to left while maintaining pressure on the module against the base.
3. Secure until snaps engage if installing Splice Module in the field. **(Figure 12)**
4. Install splice tray by engaging hinge pin onto yoke and rotating tray into place. **(Figure 13)**



Figure 12

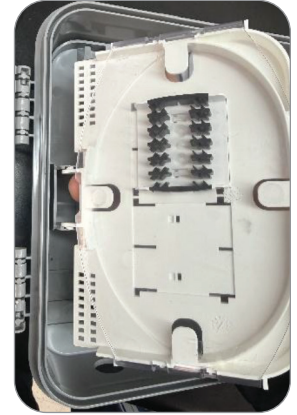


Figure 13

SPLICING

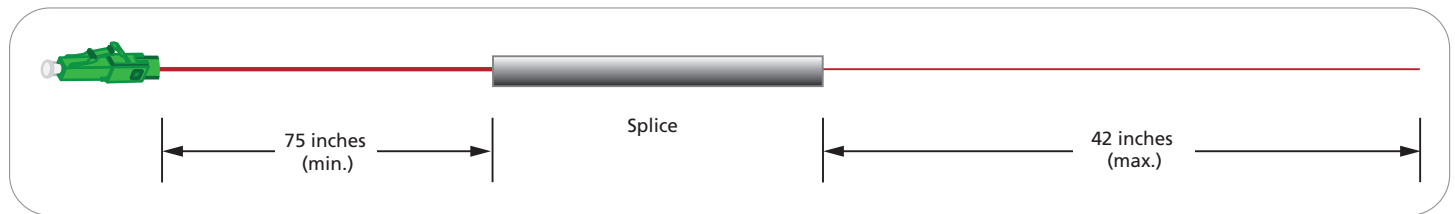


Figure 14

1. Cut drop fiber to 42" from buffer tube opening and 900 μ m pigtail to 75" to connector body for splicing. **(Figure 14)**
2. Prepare and clean the individual fibers per accepted local practice using an approved fiber cleaner.
3. Splice and protect the splice with 60 mm or 40 mm splice sleeves.
4. Route the input fibers and the pigtails to the splice module using the tabs of the splice chamber to help retain the fibers.
5. Follow accepted local practice for preparing and splicing express fibers and pigtail fibers. A figure-8 type routing may be needed to preserve proper bend radius. **(Figure 15)**



Note: The tabs on the chamber may be used to help organize loose tube bare fibers within the splice module.

6. Close the demarcation cover, if applicable. Ensure fibers are not pinched or microbends are induced.
7. Secure optional Pin in Hex security screw if present.

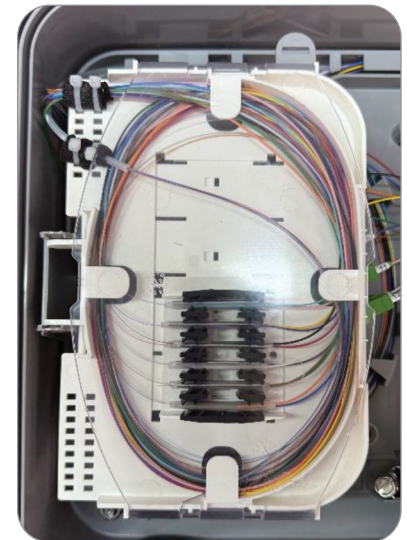


Figure 15

DEMARICATION COVER INSTALLATION

1. The Demarcation Cover can easily be removed and reinstalled as needed. **(Figure 16)**
2. Secure until snaps engage if installing Demarcation Cover in the field.
3. Locking tabs hold the Demarcation Cover in place when closed.
4. Secure optional Pin in Hex security screw if present.

 **Ensure no fibers are pinched or damaged when closing Demarcation Cover.**



Figure 16

DISTRIBUTION CABLE INSTALLATION — PLUG AND PLAY

 **Caution: In order to avoid micro bends or fiber damage, do not over-tighten the tie wraps around the fiber bundles.**

1. Use accepted local practice to clean the connector end face.
2. Plug the distribution cable into the adapter plate as specified by the local engineering practice.
3. Route the distribution cable with one turn around the closure ensuring to install the cable through the left port. **(Figure 17)**
4. Repeat steps 3-6 for each additional distribution cable to be installed.
5. Secure the cable to the retention bracket using foam tape and a tie wrap.
6. If using a compression fitting, tighten the sealing nut **hand-tight**.

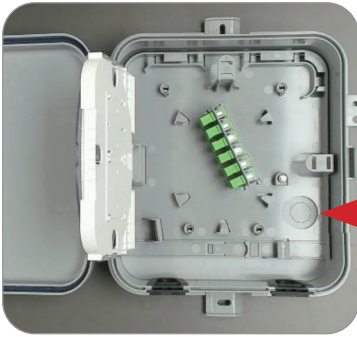


Figure 17

 **Note: Be sure not to violate the minimum bend radius of the drop cables when routing.**

 **Note: A FASTConnect® Mechanical Connector or FUSEConnect® Splice-On Connector may be installed onto a non-connectorized drop or distribution cable. Reference the installation instructions provided with the FASTConnect Mechanical Connector or FUSEConnect Splice-On Connector. The document will include the following:**

- **Fiber Preparation**
- **Fiber Termination**
- **Connector Assembly**



Optional drill point for multiple size
rear pass through premise cable entrances

Figure 18

DISTRIBUTION CABLE INSTALLATION – SPLICE ONLY

For splice-only applications, reference the Cable Preparation and Cable Installation sections of this documents for the distribution cable before continuing to the Splicing section of this document to complete the installation.

CLOSE AND SECURE OPTINID MAX

1. Follow all local practices for testing, record-keeping and labeling.
2. Ensure gasket is fully seated and no fibers are pinched under demarcation cover, if applicable, and that none will be pinched by the closure cover.
3. Ensure no fiber cables are kinked or coiled below the minimum bend radius of the cable.
4. Close the closure cover until snap latch engages.
5. Tighten optional closing screw with 216 tool.
6. Add lock tag or padlock if desired (not included).