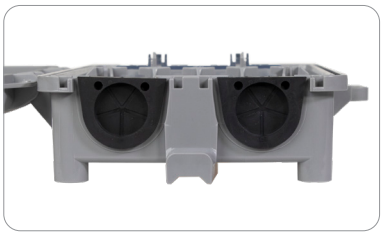
INSTALLATION INSTRUCTIONS

OPTINID® DUO OPTICAL DEMARCATION CLOSURE



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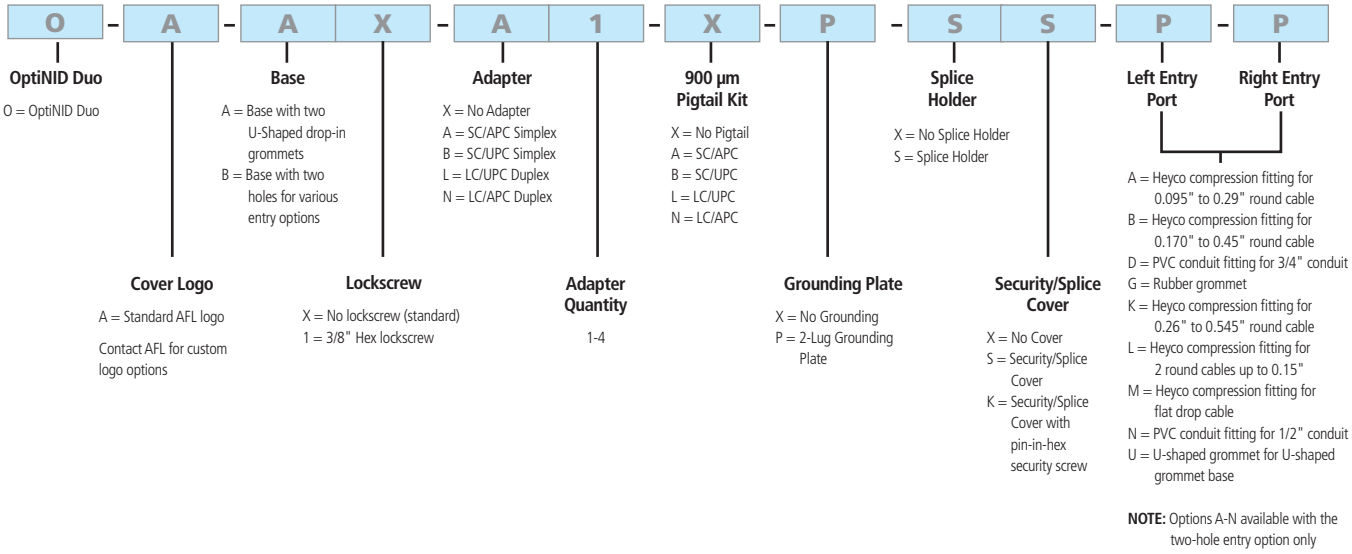
GENERAL

AFL's OptiNID (OPN) Duo Optical Demarcation Enclosure is designed with the capability to house up to 4 SC simplex or LC duplex adapters, along with the ability to house up to 18 single fiber or 6 mass fusion splices. The OPN Duo 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, splice tray, adapter plate, and cable retention features. The OPN Duo also has several optional features such as a clear splice/security cover for protecting provider-side connectors or a grounding plate for grounding armored or toneable drop cables. The OPN Duo 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.

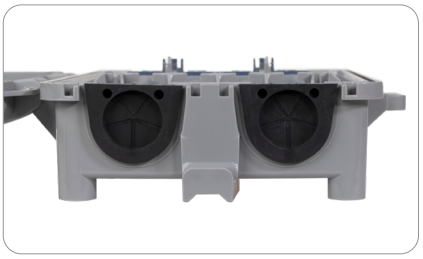
SPECIFICATIONS

Parameter	Value
Dimensions – H x W x D	9.6 x 7.0 x 2.7 inches (24.4 x 17.7 x 6.8 cm)
Material	UL® listed flame retardant thermoplastic alloy
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Flammability	UL94-5VA
Impact Test	-40°F (-40°C), 10 ft-lbs. on all external surfaces
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subject to house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Drop Test	-40°F (-40°C), 3 ft. onto concrete surface 4 times
Rain	24 hours at 10 psi
Temperature Cycling with Humidity	30 day cycling from -40°F to 140°F (-40°C to 60°C) with 95% RH



PACKAGE CONTENTS

A. OptiNID Duo 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)



"U-Grommet" Entry Option

1/2" Hole Entry Option

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.

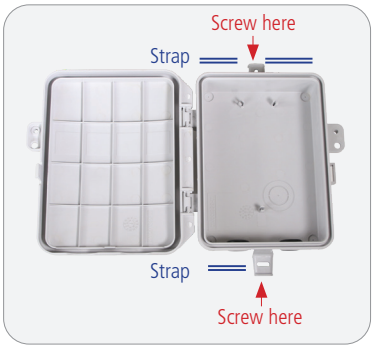


Figure 1

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, located below the hex screw, in to open the enclosure. **(Figure 2)**

Note: A padlock, 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 25" (63.5 cm) opening.
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 central strength member (CSM) back at the cable sheath.
4. Mark the buffer tube to have a 22" (55.8 cm) opening.
5. Use accepted local practice to remove the buffer tube and clean the fiber.

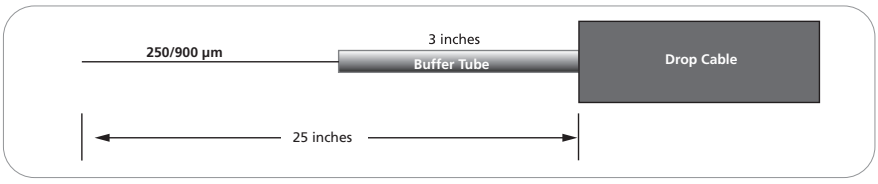


Figure 3

CABLE INSTALLATION

The OPN Duo comes standard with 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.

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

1. Secure the cable to the retention bracket using ½ tab of supplied adhesive foam and tie wraps. **(Figure 4a)**
2. 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.
3. Route the buffer tube into the splice chamber. **(Figures 4b and 4c)**

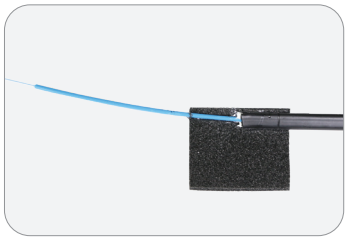


Figure 4a

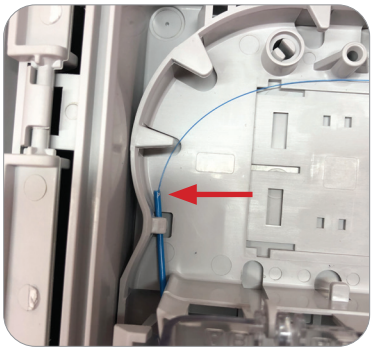


Figure 4b

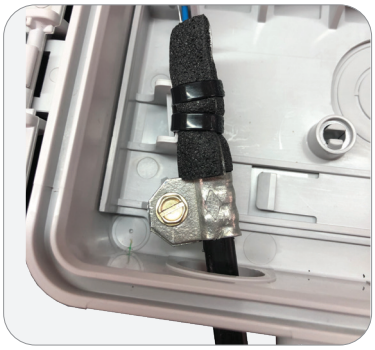


Figure 4c

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. Attach tone wire or ground per local practices. **(Figure 5)**

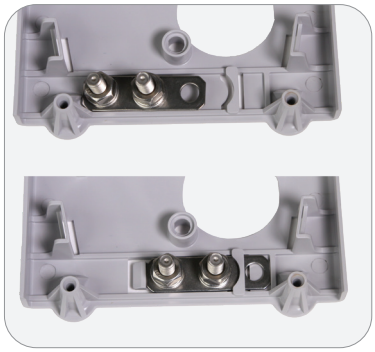


Figure 5

DROP PIGTAIL INSTALLATION

Caution: In order 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.

Note: * A short boot 900 µm or 250 µm pigtail is required.

1. Use accepted local practice to clean the connector end face.
2. Plug the pigtail assembly into the top side of the adapter as specified by the 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.
5. If additional SC or LC Duplex adapters need to be installed, they must be inserted from the base into the splice chamber. This protects the adapter mounting tabs under the optional demarcation cover. **(Figure 6)**

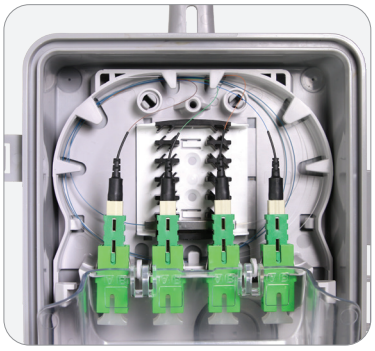


Figure 6

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**

SPLICE MODULE INSTALLATION

1. The Splice Module can easily be installed 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 7)**

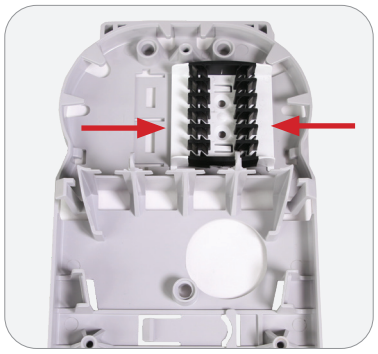


Figure 7

SPLICING

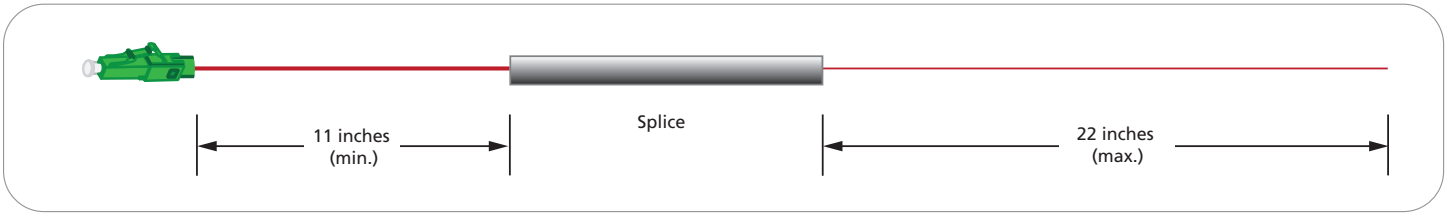


Figure 8

1. Cut drop fiber to 22" from buffer tube opening and 900 µm pigtail to 11" to connector body for splicing. **(Figure 8)**
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 9)**

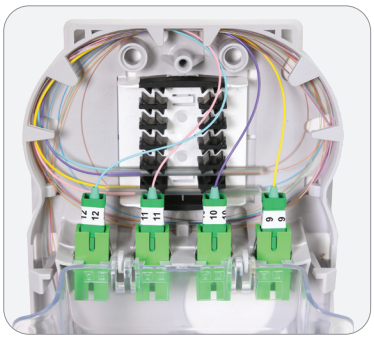


Figure 9

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.

DEMARCATION COVER INSTALLATION

1. The Demarcation Cover can easily be removed and reinstalled as needed.
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 10 – Optional demarcation cover and optional security screw.

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. **(Figure 11)**
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. **(Figure 12)**
6. If using a compression fitting, tighten the sealing nut **hand-tight**.

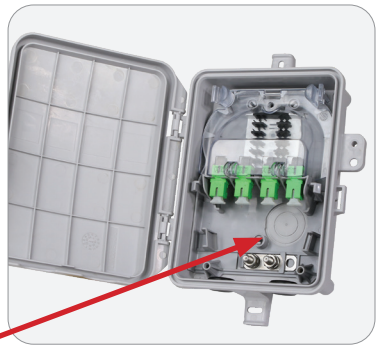
Figure 11 – Clean and install premise drop connector

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

Figure 12 – Attach foam and tiewrap to secure premise drops

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 13

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 DUO

1. Follow all local practices for testing, recordkeeping and labeling.
2. Ensure 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 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).