



INSTALLATION INSTRUCTIONS

OptiNID® 500 Optical Demarcation Closure



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GENERAL

The OptiNID 500 Optical Demarcation Closure (OPN-500) is designed for installation in either indoor or outdoor environments. The closure is equipped with an integrated splice tray which will hold up to six single fusion splices. The closure will house one LGX® 118 adapter plate allowing for up to six bulkhead connections. The OPN-500 may be either wall or pole mounted and the small form factor makes it ideal for FTTx demarcation applications.

SPECIFICATIONS

Parameter	Value
Dielectric Strength	Minimum 2500Vrms for 1 minute
High Temperature Storage/Mold Stress °F (°C)	14 Days at 159 (70.55)
Temperature Cycling with Humidity °F (°C)	150 Days Cycling from 40 - 140 (4.44 - 60) with 95% RH
Impact Test °F (°C)	-40 (-40), 5ft/lbs on all external surfaces
Drop Test °F (°C)	-40 (-40), 5ft onto concrete surface four times
Rain	24 hours at 10 psi
UV Resistance (Days Exposed)	60 per ASTM-G26-84
Salt Fog (Days Exposed)	60 per ASTM-BLL-90
Flammability	UL95-5V
Chemical Resistance 30 Days at 100°F and 95% RH	Resists chipping and/or cracking when subjected to house paint, wasp spray, sulfuric acid, kerosene and sodium hydroxide
Material	UL® Listed Flame Retardant Thermoplastic Alloy
Dimensions (H x W x D) in. (cm)	6.3 x 7.8 x 2.0 (15.7 x 19.7 x 5.0)
Cable Entrance in. (cm) diameter - Input	1 x 3/4" NPT (1.130"); 2 x 1/2" NPT (0.875")
Covers	Standard, molded-in snap finger and "F" termination

PACKAGE CONTENTS



- A. OPN-500 Optical Demarcation Closure
- B. Adapter Plate (Optional)

PACKAGE CONTENTS: ACCESSORIES

Single Fusion Splice Chip Kit

Security Cover

Mounting Screws

REQUIRED TOOLS

216-Style Socket Tool

Flat head Screwdriver

ADD-ON COMPONENTS

Compression Fitting Kit

Splice Chip Kit

Pigtail Kit

CLOSURE MOUNTING

1. Using local engineering practices, determine the mounting position of the closure on the wall.
2. Using the provided mounting screws, secure the closure to the wall.

⊛ **Note: When mounting to a pole, the two mounting tabs located on the back of the closure are designed to accept a Del Tec strap.**

LOCK AND UNLOCK EXTERIOR DOOR

1. Using a standard 216 style tool, or similar, loosen the screw located on the right side of the closure door. Do not remove this screw from the closure doors.
2. Press the tab located above the hex screw in to open the closure. (Figure 1)

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

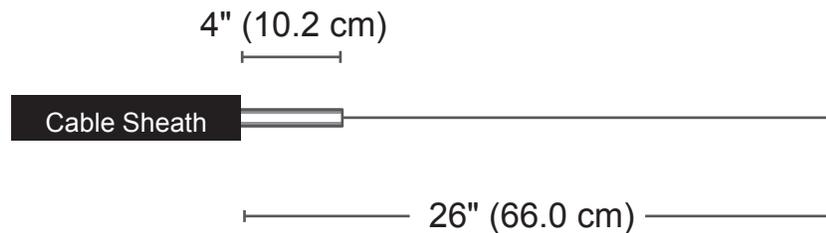


Figure 1

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

1. Mark the cable to have a 26" (66.0cm) opening.
2. Use accepted local practice to remove the cable sheath.
- * Note: If grounding is required, mark and cut the tone wire to 6" (15.3cm) 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" (56.0cm) opening.
5. Use accepted local practice to remove the buffer tube and clean the fiber.



CABLE INSTALLATION

The OPN-500 comes standard with three cable entry ports located at the bottom of the closures. Based on the application needs these ports will accept both NPT conduit fittings and compression fittings.

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

1. For application that utilized the Compression Fitting Kit, determine the appropriate compression fitting for the application.
2. Install the compression fitting, reference the **Compression Fitting Installation** section of this document.
3. Secure the cable to the retention bracket using a tie wrap. **(Figure 2)**
4. Use accepted local practice to ground the tone wire to the grounding stud located at the bottom left side of the closure. A common ground will be established.
5. Route the buffer tube into the splice tray.

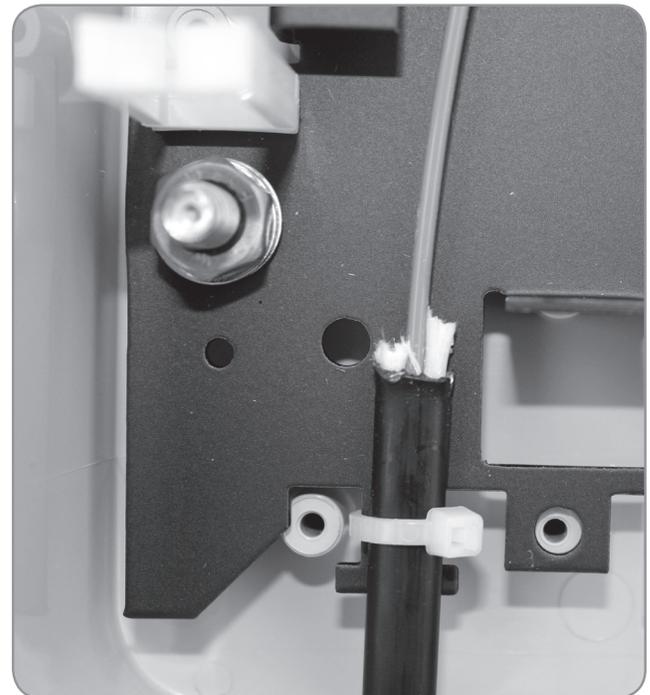


Figure 2

CABLE INSTALLATION (CONTINUED)

6. Place one wrap of a foam spacer around the buffer tube.
7. Secure the buffer tube to the splice tray using a tie wrap. (Figure 3)

PIGTAIL INSTALLATION

⚠ 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 pigtail assembly into the adapter plate 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 to the splice tray.

*** Note:** For best practice it is recommended that the pigtail assemblies be routed through protective transport tubing for mounting into the splice tray.

5. Place one wrap of a foam spacer around the tubing
6. Secure the tubing to the splice tray using a tie wrap. (Figure 4)

COMPRESSION FITTING INSTALLATION

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

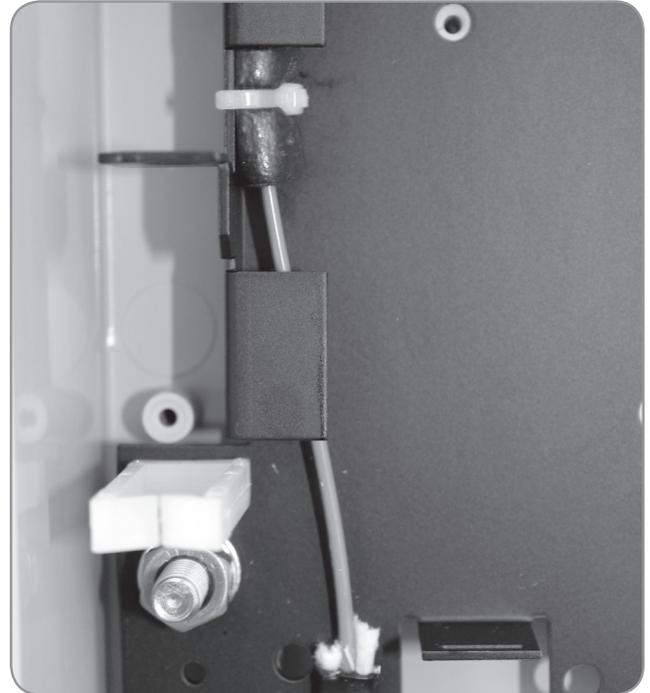


Figure 3

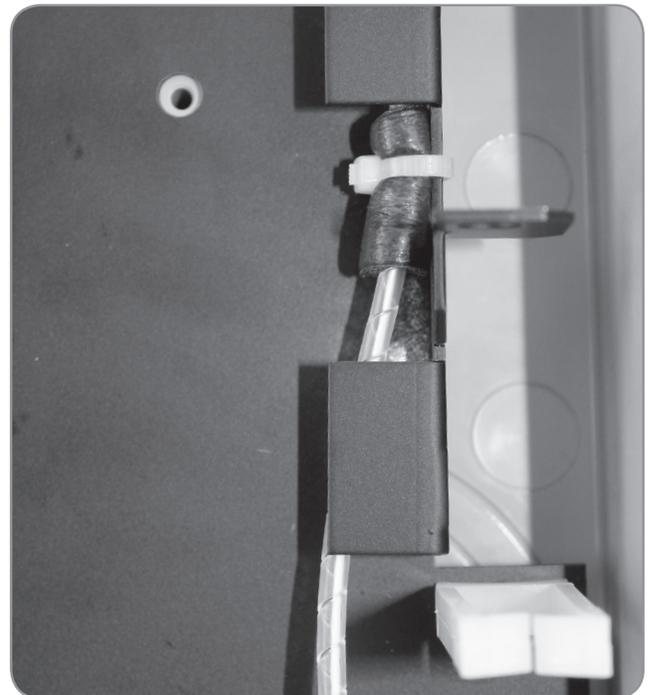


Figure 4

COMPRESSION FITTING INSTALLATION (CONTINUED)

1. Ensure that the mounting hole is free from burrs and that the enclosure 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 end 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

Determine the location of the splice chip within the splice tray.

1. Remove the paper backing from the splice chip to expose the adhesive and place the chip at the desired location within the splice tray.
2. Prior to splicing, ensure that adequate slack for both the expressed fiber and the pigtail fiber is stored within the splice tray. Mark fibers for splicing.
3. Clean the individual fiber per accepted local practice using an approved fiber cleaner.
4. Follow accepted local practice for preparing and splicing express fibers and pigtail fibers.
5. Once all splicing is complete, route the exposed fibers inside the splice tray. **(Figure 5)**

*** Note: The tab on the splice chip may be used to help organize loose tube bare fibers within the splice tray.**

6. Replace the splice tray cover.

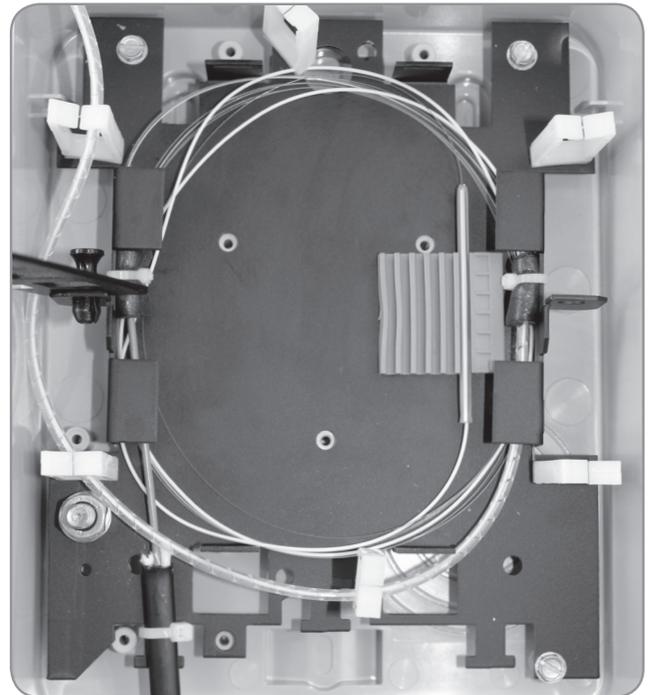


Figure 5

ADAPTER PLATE INSTALLATION

1. Attach the adapter plate to the mounting bracket by pressing in the nylatch plungers.
2. Route the pigtail assembly around the splice tray. Use the routing rings located on the outer edge of the tray to help manage the cable. (Figure 6)

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. For application that utilized the Compression Fitting Kit, determine the appropriate compression fitting for the application.
2. Install the compression fitting, reference the **Compression Fitting Installation** section of this document.
3. Secure the cable to the retention bracket using a tie wrap. (Figure 2)
4. Route the distribution cable with one turn around the splice tray. Use the routing rings located on the outer edge of the tray to help manage the cable.
5. Use accepted local practice to clean the connector end face.
6. Plug the distribution cable into the adapter plate as specified by the local engineering practice.
7. Repeat steps 3-6 for each additional distribution cable to be installed. (Figure 7)

Note: A FASTConnect® Mechanical Connector or FUSEConnect® Splice-On Connector may be installed onto a non-connectorized 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

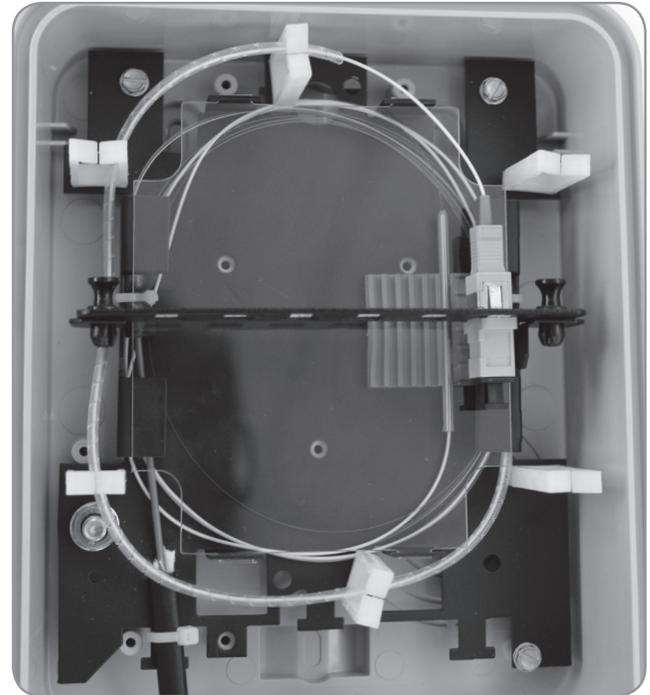


Figure 6

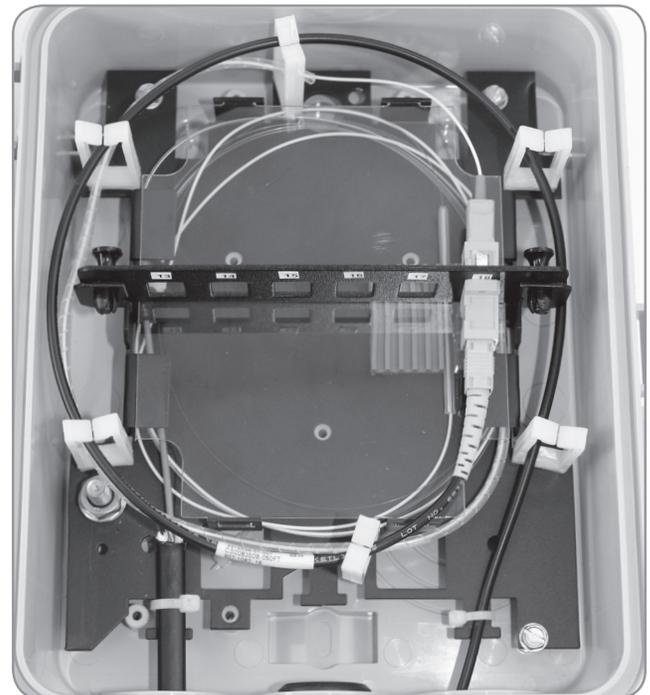


Figure 7

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.