tyco Electronics

FOSC 450 D6 Closure

INSTALLATION INSTRUCTION

Fiber Optic Splice Closure

TELECOM OUTSIDE PLANT

1. General Product Information

The FOSC 450 D closure is used to repair and upgrade existing fiber optic splice closures, as well as new construction. For repair or upgrade, the closure can accommodate FOSC 400 A, FOSC 400 B, FOSC 100 A, and 100 B closure trays, as well as certain AT&T, 3M, Keptel, ACT, and Windsor fiber organizer trays (maximum length=14", maximum width=4.5") through the base end-piece. The closure has a capacity of six "D" trays plus the storage basket or 8 "D" trays without storage basket.

Note: Cable blocking is not recommended in this closure due to space constraints.

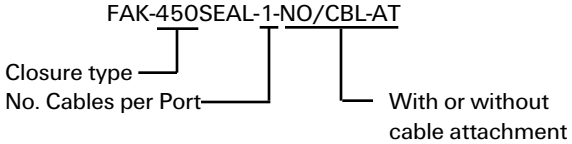
2. Kit Components

- Dome and clamp
- Base and o-ring
- Tray bracket support or metal slack basket
- Gel end-piece
- 2 - Velcro fastener straps (one short, one long)
- 4 - Gel end-piece plugs
- 6 - Cable strain relief holders and clips/6 hose clamps
- 6 - Small strength member attachment brackets
- 2 - Large strength member attachment brackets
- 4 - Velcro fastener pieces
- 6 - Bond clamps (3" long)
- 2 - Braided grounding straps
- 12 - Small tie wraps
- 1/4" Nut driver to install hose clamps
- Transportation tubes/spiral wrap
- Ribbon buffer tube storage "sock"
- Installation instructions

Other Accessory Kits:

- FOSC ACC D Tray 36, 48 or 72 (Extra tray kits)
- FOSC ACC D/Ribbon - 24
- FOSC ACC D/Gel Cable kit (Replacement cable termination components)
- FOSC ACC D/Basket

Use these accessory kits to seal multiple small cables in a single port:



3. Cable Preparation

IMPORTANT: Small round or flat cable installations – If cables are less than 0.35″ in diameter or flat drop style, an additional step is required for cable sealing in the port. In this case the cable diameter must be build up to the minimum 0.35″ diameter. In addition, if multiple small cables like these are to be installed in a single port, it is imperative that gel is applied between the cables before installing them into the gel port. See FOSC 450 Small/Seal-3 or -4 Cable Kit installation instructions or FOSC 450 Single Small Cable Kit installation instructions for further details.

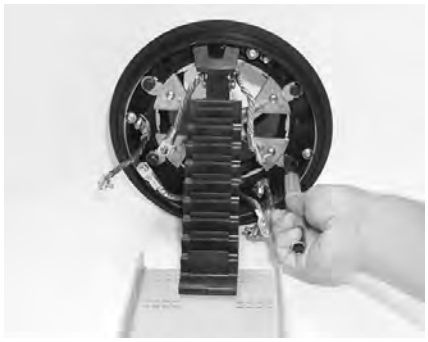


Figure 1

3.1 Loose Buffer Tube (LBT)

Note: Cable range is .35″ to 1″ diameter.

1. Loosen the four bolts to remove metal frame from the 450 D closure base. (See Figure 1)
2. Slide base (narrow end first) over all cables that are to be spliced up and out of the way.
3. For loose buffer tube cable ends, remove 70″ of cable sheath. For LBT midspan applications, remove 102″ of cable sheath and store uncut buffer tubes in the slack basket. If shield is present, tab 1″ and attach bond wire. Wrap the installed bond wire tightly with two or three wraps of vinyl tape.

4a. **Loose Buffer Tube Ribbon Cable:**

For loose buffer tube ribbon cable midspan applications, remove 120″ of cable sheath. Coil the uncut buffer tubes and store above the slack basket using the ribbon buffer tube storage sock (See Figure 2). To splice the ribbons, remove all but 9″ of buffer tube and attach to the inside of the slack basket. Route the ribbons through the slack basket and up to the splice trays using spiral wrap or ribbon transportation tubes. Follow D Tray Ribbon 24 installation instructions to splice and store ribbon fibers.

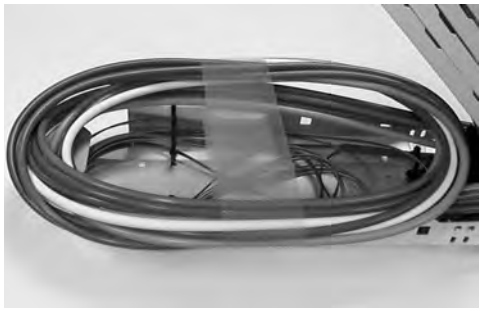


Figure 2

4b. **Loose Buffer Tube Ribbon Cable:**

Make a mid-span opening on each buffer tube and store all ribbons in slack basket. Route ribbons to be spliced to ribbon trays using spiral tubing.

5. Go to Section 5. Cable Installation.

3.2 Central Core Tube Cable

Note: Cable range is .35″ to 1″ diameter.

1. Loosen the four bolts to remove metal frame from 450 D closure base. (See Figure 1)
2. Slide base (narrow end first) over all cables that are to be spliced up and out of the way.

3a. **Central Core Loose Fiber:**
Open 70″ of cable sheath leaving 10″ of core tube. For midspan applications, open 102″ to 120″ also leaving core tubes 10″ in length. The core tubes will be routed and attached to the bottom splice tray.

3b. **Central Core Ribbon Fiber:**
Open 70″ of cable sheath leaving approximately 10″ of core tube. For midspan applications, open 102″ to 140″ also leaving core tubes 10″ in length. The core tubes should be routed to either bottom tray bracket support or slack basket.

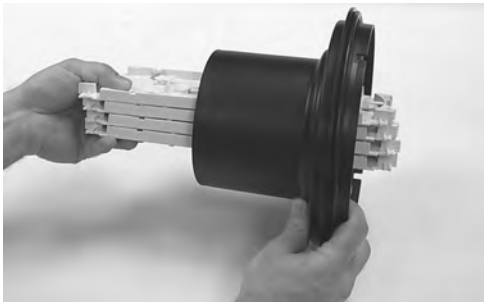


Figure 3

Note: The FOSC ACC D/Ribbon - 24 trays are required to splice ribbons.

4. If shield is present, tab 1″ and attach bond wire. Wrap the installed bond wire tightly with two or three wraps of vinyl tape.
5. Go to Section 5, Cable Installation.

Figure 4

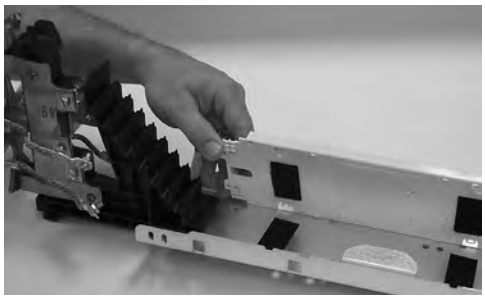


Figure 5

Figure 6

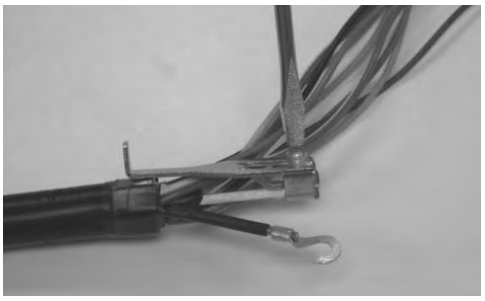


Figure 7

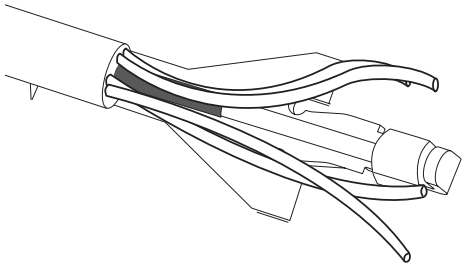
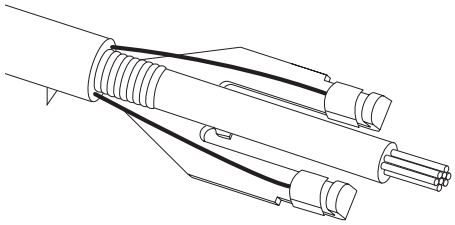


Figure 8



4. Installation Repair or Upgrade

Note: Cable range is .35" to 1" diameter.

Note: Existing trays must be able to fit through the hole in the base of the FOSC 450 D closure, (Figure 3) and must not exceed the length of the metal basket. Maximum tray length is 14" and maximum width is 4.5".

Note: If existing cables are arranged in an in-line configuration, they must be rearranged into a butt-splice configuration. This may require stripping extra cable sheath to even up cable sheath ring cuts.

1. For repair and upgrade, remove the existing splice closure, leaving trays and splices intact.

2. Loosen four bolts to remove metal frame from 450 D closure base, as shown in Figure 1.

3. Slide base of closure (narrow end first) over existing splice trays and any cables to be spliced and place it up and out of the way. (Figure 3) Attach bottom splice tray inside metal slack basket or bottom tray bracket support using supplied Velcro fastener pieces. (Figure 4) Stack remaining trays on bottom tray and fasten trays to slack basket or bottom tray bracket support with short Velcro fastener strap.

5. Cable Installation

Note: For maximum cable retention on AT&T/LUCENT CABLE, (High density PE jacket) it is recommended that the cable jacket be heated with heatgun before assembling cable strain relief holders.

1. Select proper strength member attachment bracket. For larger cables, typically 288 and above, choose the larger strength member attachment bracket.

2. Cut rigid strength members 2.00" from cable ring cut.

3. Using 1/2" nutdriver or wrench, loosen bolt and swing strain relief arm out of the way. (Figure 5) Remove cable strain relief assembly from metal bracket.

4. Insert strength member(s) into the strength member attachment bracket and tighten screw. (Figure 6)

5. For central strength members, use the center prong. For dual strength members, bend the middle prong out of the way and use the two outer prongs. (Figures 7 and 8)

6. Install the strength member attachment bracket into the smaller cable attachment part, making sure the metal tab fits into the slot. (Figure 9) Attachment teeth should engage cable jacket.

7. Slide larger slotted cable attachment part into the smaller cable attachment part. Tighten the hose clamp around the sheath retention clip to grip the cable sheath, such that the teeth fully seat into the cable assembly. Do not tighten the clamp to the point that it deforms. (Figure 10)

8. Slide cable strain relief assembly into the appropriate metal slot of the closure. Re-install cable relief arm. (Figure 11)

Note: Large diameter cables should be installed in opposite slots of cable bracket.

9. If the bond wire is present, attach to the stranded wire from the closure bracket or ground feed-through lugs, depending on grounding configuration. (Figure 12)

10. Repeat steps for each main and drop cable to be installed in closure.

Note: Leave remaining cable strain relief holders in metal bracket slots for future use.

Figure 9

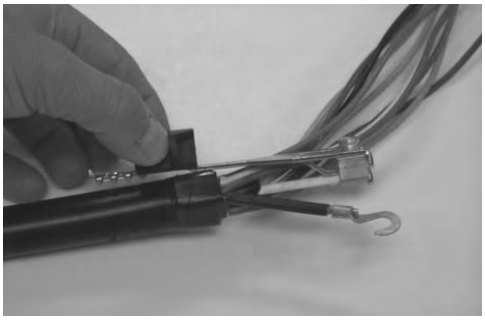


Figure 10

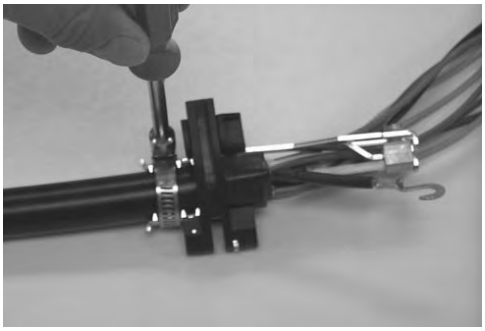


Figure 11

Figure 12

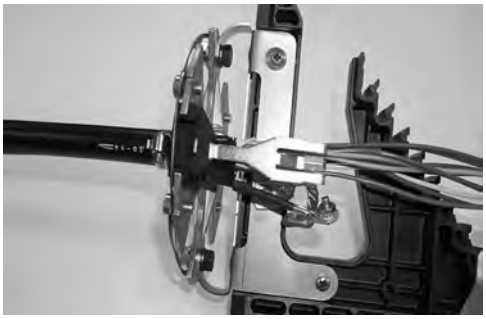


Figure 13

Figure 14

Figure 15

Figure 16

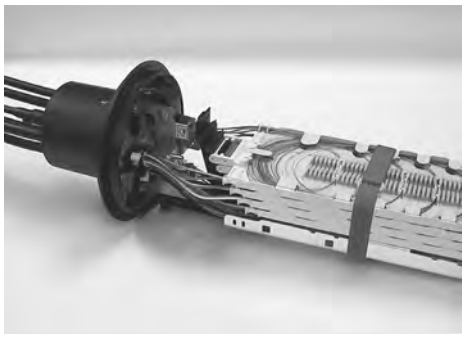


Figure 17

6. Gel End-Piece Installation

Note: If cable diameter is between 1" (25.4mm) and 1.04" (26.4mm), the gel end-piece has to be modified. For specific instructions please contact Tyco Electronics.

1. First, turn the "tail" of the end-piece counter clockwise until it stops to ensure that the cable openings are in the open position. Squeeze the gel end-piece to open it. (Figure 13) Position the cables and snap the end-piece closed. Install the gel end-piece 2" behind the metal bracket.

2. Important: Insert one port plug in each unused port. (See Figure 14)

3. Slide the base up and over the gel end-piece. The white mark on the base must be at the top of the closure.

4. Inside the base, loosen and turn the four metal clips to secure the base to the metal bracket Then tighten the clips securely. Make sure the white mark is on top of the base.

5. Pull the end-piece "tail" away from the closure to seat the gel end-piece to the end of the base. Turn the "tail" clockwise until it dead ends at the physical stop to seal cables and plugs. (Figures 15 and 16) **Warning: Do not use drill to turn end-piece tail as this will damage gel end-piece.**

6. Place a large tie wrap around all the cables near the end of the tail.

Note: If Gel end-piece collects dirt, it should be washed off with water only.

7. Route buffer tubes or transportation tubes to the appropriate splice tray for splicing.

8. Once the splicing is complete, wrap Velcro fastener straps around the splice trays. The short strap is for securing the small trays, and the large strap secures the large trays. (Figure 17)

9. If desiccant is to be used (optional - not supplied) install 150 grams of desiccant on top of the uppermost splice tray. Secure trays and desiccant in place with Velcro fastener strap.

10. Important: Place all unused cable termination hardware in bag in closure to be used with future cable terminations.

11. Mount dome onto base, aligning white mark on base with arrow on dome.

12. Install clamp around dome/base interface. Position feet of handle in front of the two posts and push down on the handle to pull the two halves of the clamp together. (Figure 18)

13. Continue to push handle down until the small pin on the handle snaps into the triangular hole in the clamp.

14. A security lock or tie wrap may be inserted through the round holes in the handle and clamp to lock the closure.

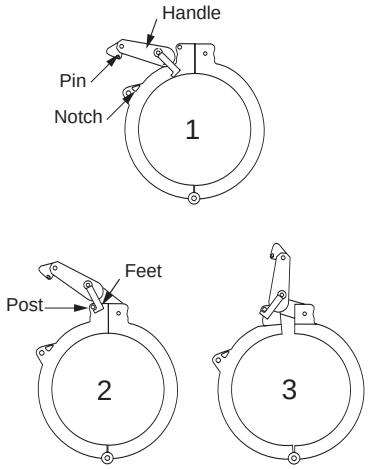


Figure 18

6.1 Test Seals

Flash test the closure to 5 psi. Thoroughly soap seals to check for integrity.

Important: After flash testing, bleed all pressure from the closure through the valve.

6.2 Re-entry

Make sure all air is bled from closure. To remove the dome from the closure, release the clamp handle, hook the handle on the two posts, and pull back until the clamp releases from the closure. Keep the o-ring, clamp, and dome clean and dry.

6.3 Adding Cables

1. Turn the "tail" of the end-piece counterclockwise to loosen the seal between the end-piece and the base. (Figure 15)

2. Loosen the four metal bolts and turn the clips inside the base to release the metal bracket from the base. (See Figure 1)

3. Slide the base back over the cables and out of the way.

4. Refer to Sections 3, 4 and 5 to install a new cable and re-seal the closure.

Tyco Electronics Corporation
Telecom Outside Plant
8000 Purfoy Road
Fuquay-Varina, NC 27526-3000
Tel.: 919-557-8900
Fax: 919-557-8498
www.tycoelectronics.com