

Environmental Distribution Center (EDC-02P-NH)



Figure 1

1. General

1.1 This instruction describes the recommended procedure for the installation of the two-panel Environmental Distribution Center (EDC) (p/n EDC-02P-NH) manufactured by Corning Cable Systems.

1.2 To purchase any accessories that are sold separately, contact your Corning Cable Systems service representative for assistance.

1.3 This document is being reissued to clarify cable cleaning directions.

NOTE: *Read and understand this procedure (as well as the instructions provided with related assemblies) before beginning an installation. Make sure you know how the unit will be mounted and how the distribution cable and drop cable will be routed to the unit.*

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2. Description

2.1 The EDC is a cabinet designed for storage and protection of fiber optic connections and splices in an outdoor environment. The cabinet carries a NEMA 250 Type 4X and Type 13 rating in addition to a IEC 529 IP66 rating. The unit provides environmental protection and strain-relief for one distribution cable and up to six drop cables.

2.2 Connector panels are used to provide interconnection between the distribution and drop cables. The EDC accommodates up to two LANscape® connector panels. Some connector panels come with icons. Colored icons are available with different symbols to be used as a quick visual reference of the data type at each connector location. Panels and connector panel icons are ordered separately.

2.3 The EDC will hold up to three Type 2R 0.2-inch high or two Type 4R 0.4-inch high reduced length splice trays (ordered separately).

2.4 The unit can be field connectorized using Corning Cable Systems Buffer Tube Fan-out (BTF) kits, which are ordered separately.

2.5 The EDC comes with brackets to mount the unit to a wall or a standard utility pole. The unit may be rack-mounted with an optional rack-mount kit (purchased separately).

2.6 The unit may be pad-locked with a user-supplied padlock after installation of the provided quick-release latch kit.

2.7 Factory stubbed units are available with a preconnectorized length of fiber optic cable installed and strain-relieved inside the unit.

3. Precautions

3.1 Laser Handling Precautions



WARNING: *Never look directly into the end of a fiber that may be carrying laser light. Laser light may be invisible and can damage your eyes. Viewing it directly does not cause pain. The iris of the eye will not close involuntarily as when viewing a bright light. Consequently, serious damage to the retina of the eye is possible. Should accidental eye exposure to laser light be suspected, arrange for an eye examination immediately.*



WARNING: *DO NOT use magnifiers in the presence of laser radiation. Diffused laser light can cause eye damage if focused with optical instruments. Should accidental eye exposure be suspected, arrange for an eye exam immediately.*

3.2 Safety Precautions



CAUTION: *The wearing of safety glasses to protect the eyes from accidental injury is strongly recommended when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the cornea easily.*



CAUTION: *The wearing of safety gloves to protect hands from accidental injury is strongly recommended when using sharp instruments.*



CAUTION: *Isopropyl alcohol is flammable with a flashpoint at 50°F. It can cause irritation to eyes on contact. In case of eye contact, flush eyes with water for at least 15 minutes. Inhaling fumes may induce mild narcosis. In case of ingestion, consult a physician.*



CAUTION: *The filling compound remover used to clean loose-tube cable contains petroleum distillates which are harmful or fatal if swallowed. DO NOT induce vomiting. Call physician immediately.*

3.3 Glass Fiber Precautions



WARNING: *Cleaved glass fibers are very sharp and can pierce the skin easily. Do not let cut pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cut or broken pieces of the glass fibers and place them on a loop of tape kept for that purpose alone. Good housekeeping is very important.*

3.4 Cable Handling Precautions

NOTE: *Fiber optic cable is sensitive to excessive pulling, bending and crushing forces. Consult the cable specification sheet for the cable you are installing. Do not bend cable more sharply than the minimum recommended bend radius. Do not apply more pulling force to the cable than specified. Do not crush the cable or allow it to kink. Doing so may cause damage that can alter the transmission characteristics of the cable — the cable may have to be replaced.*

3.5 Installer Precautions



WARNING: *Do not install this unit or work with telephone wiring during a lightning storm. Telephone lines can carry high voltages from lightning causing electrical shock resulting in severe injury or death.*

4. Tools and Materials

In addition to the usual complement of installation tools, the following are required for this installation:

- Slotted and Philips-head screwdrivers
- Tape measure
- Pliers
- 8-mm ($5/16$ -inch) open or box wrench
- Utility pole or wall mounting hardware (as required by your installation)
- Two cable entry port fittings (ordered separately) and sealant (if required)

5. Components

5.1 Components are illustrated in Figure 2. The base plate is the dark metal plate that holds the components inside the enclosure. It is secured by four screws.

5.2 An installation kit is provided that includes cable ties, central member strain-relief hardware, a sheath retention kit and a quick-release latch kit.

6. Unpacking Stubbed Units

Stubbed unit unpacking instructions are detailed in SRP 003-310. This instruction is provided with stubbed hardware shipping containers.

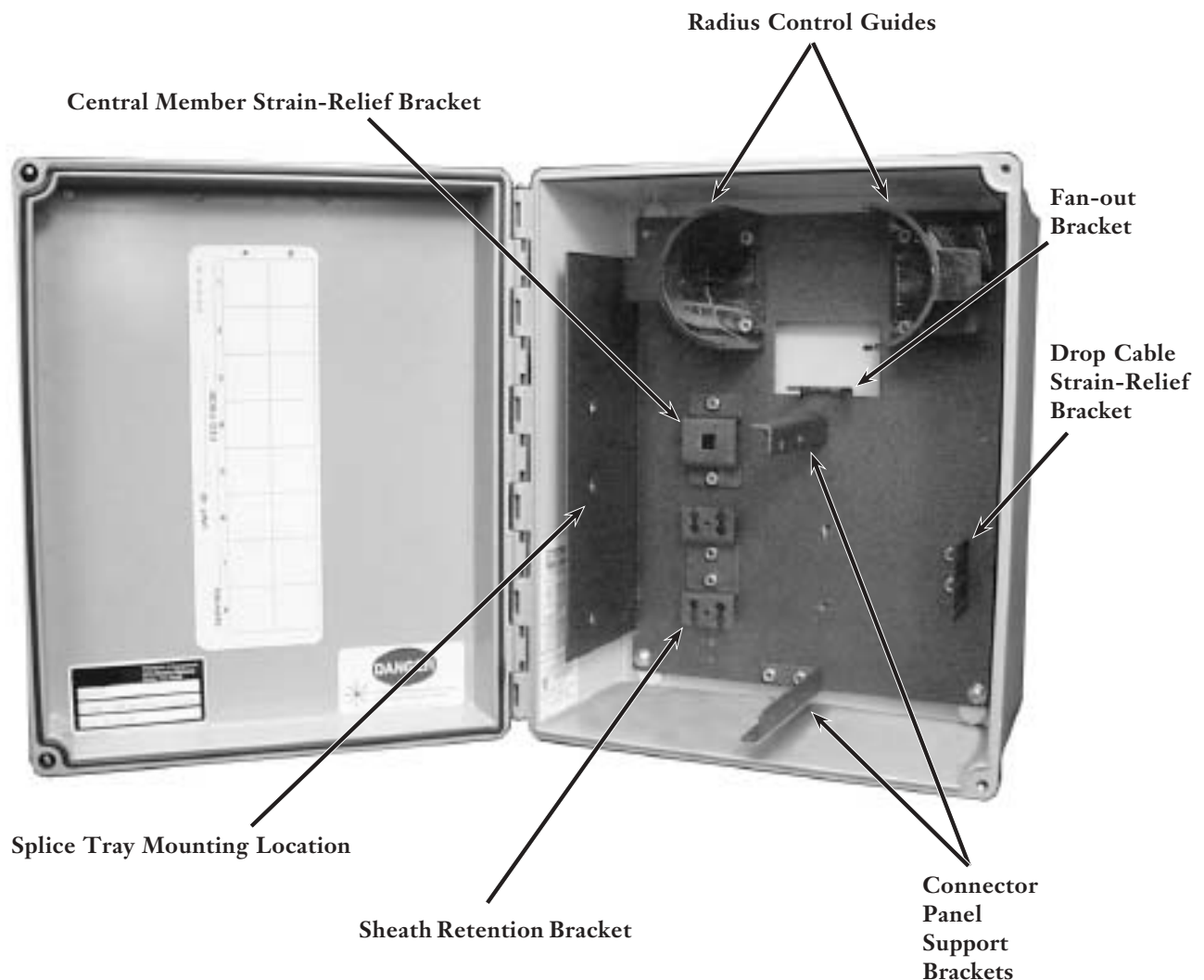


Figure 2

7. Installing Holes

IMPORTANT: Remove the base plate from the housing before cutting any holes.

7.1 Determine the size hole needed based on the fitting being used. Measure and mark the location of the hole centers, based on dimensions in Figure 3, on the bottom of the unit. The 2-inch conduit holes are represented by the larger circles and the 1-inch conduit holes by the smaller circles.

7.2 Cut holes as required for your coupling fitting. Follow local safety practices.

7.3 Install the fittings (purchased separately). Fitting kits are available in three types. The kit is dependant on the type of fitting desired for your application.

7.4 Reinstall the base plate.

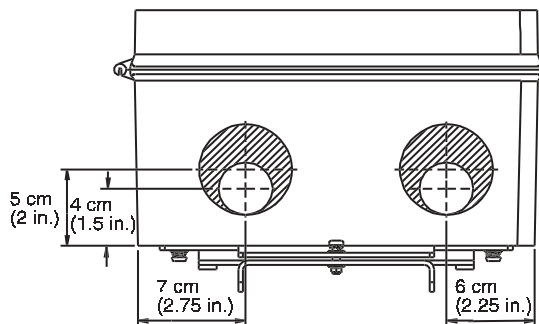


Figure 3

8. Mounting

NOTE: If you will be mounting the EDC without the stabilizer bracket, remove and discard the stabilizer bracket. Rotate the top bracket so the elliptical hole is exposed. Position the housing as desired and secure using $\frac{1}{4}$ -inch screws in the top and bottom brackets.

8.1 When wall-mounting,

- Remove the stabilizer bracket (Figure 4).
- Drive $\frac{1}{4}$ -inch screws or wall anchors through the stabilizer bracket and into the mounting surface. *Do not install a screw in the bottom hole of the stabilizer bracket at this time.*
- Hang the unit on the stabilizer bracket, ensuring that the top mounting bracket is resting between the two tabs on the stabilizer bracket (Figure 5).

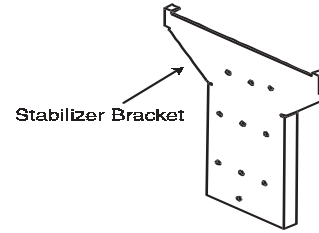


Figure 4

- Align the elliptical hole in the bottom mounting bracket and the bottom hole in the stabilizer bracket. Install a $\frac{1}{4}$ -in. screw through the holes into the mounting surface.
- Mounting hardware is not provided.

Hang the unit over the mounted stabilizer bracket.

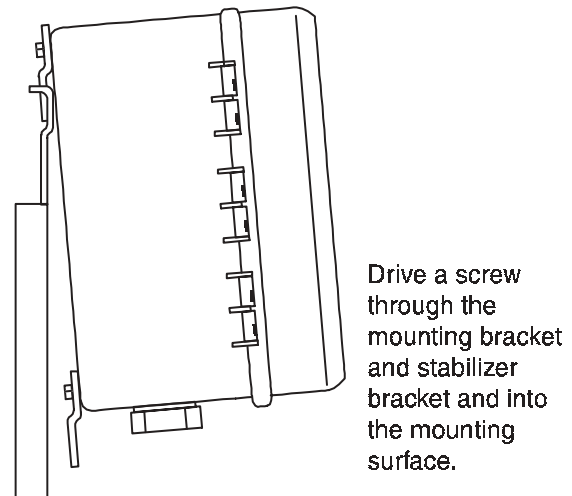


Figure 5

8.2 When the EDC will be mounted onto a utility pole:

- Secure the stabilizer bracket to the pole using $\frac{1}{4}$ -inch screws. *Do not install a screw into the bottom bracket at this time.*
- Hang the EDC on the stabilizer bracket, ensuring that the top mounting bracket is resting between the two tabs on the stabilizer bracket.
- Line up the elliptical hole in the bottom mounting bracket with the bottom hole in the stabilizer bracket. Drive a $\frac{1}{4}$ -inch screw through the brackets and into the utility pole.
- Mounting hardware is not provided.

8.3 To rack-mount the unit, a universal rack-mount kit (ordered separately) is required. Remove the stabilizer bracket, rotate the top bracket so the elliptical hole is exposed and follow instructions supplied with the rack-mount kit.

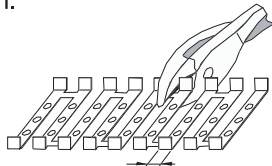
9. Preparing the Cable

9.1 Route the incoming distribution (feeder) cable through the fitting on the left at the base of the unit.

9.2 Perform cable sheath removal steps per instructions for the type of cable being installed. Cut the cable to 2 meters (6 feet) inside the unit.

NOTE: Do not expose the bare fiber until you are ready to terminate it.

- 1) Wrap a section of clamp material around the cable to determine the length needed for one full wrap.
- 2) Use side cutters to cut the clamp material so that it ends up one section shorter than this length.



- 3) Place the cut length of clamp material 5 cm (2 in.) from the end of the cable sheath.
- 4) Install a hose clamp over it, covering as many holes as possible. Hand tighten with a slotted screwdriver or a 5/16-in driver.
- 5) Wrap the sheath retention assembly with vinyl tape. (Shown without vinyl tape for clarity)



Armored cable requires a ground clamp.

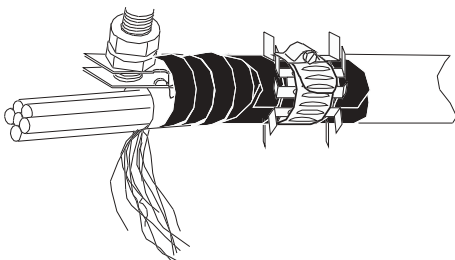
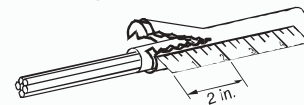


Figure 6

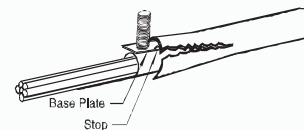
9.3 Install a sheath retention clamp onto the cable sheath as illustrated in Figure 6. If an armored cable is used, install the ground clamp before installing the sheath retention clamp. Ground kits are purchased separately.

9.4 Armored cable (metallic cable sheath) should be grounded using a ground clamp (Figure 7).

Cut a slit into opposite sides of the outer sheath and armor about 5 cm (2 in.). To do this, score the armor with a cable knife (being careful not to damage the inner sheath) and split the sheath by flexing it.

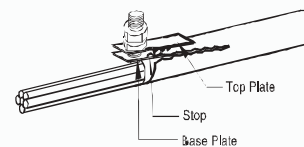


Position the grounding clamp base plate under the armor. The stops of the clamp should just touch the outside of the armor and sheath. Tap the sheath above the ground clamp base to set the teeth.



Position the top plate and lock nut on the outer sheath over the base plate. Tighten with a 10 mm (3/8 in.) wrench so that the teeth on the upper plate are driven into the sheath.

Tighten the assembly with a 10 mm (3/8 in.) wrench.



Wrap the grounding connector and split portion of the sheath with a few wraps of vinyl tape.

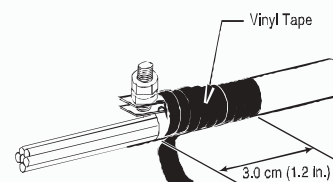


Figure 7

9.5 Secure the cable to the sheath retention bracket using cable ties. Make sure the tabs on the clamp material are in the recessed section of the bracket (Figure 8).

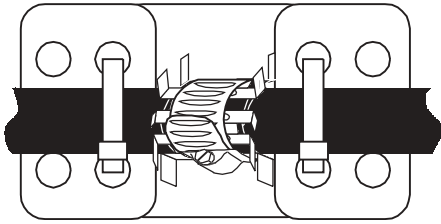


Figure 8

9.6 When central member strain-relief is required, the central member bolt must be installed into the strain-relief bracket as shown (Figure 9).

NOTE: *Smaller diameter central members require a shim to make sure they are adequately secured in the central member clamp. Use a central member clamp shim when necessary (Figure 10).*

- a) Remove the top nut and the two washers from the bracket.
- b) Loosen the remaining nut.
- c) Insert the central member of the cable between the bracket and the U-shaped washer.
- d) Arrange the buffer tubes to ensure clearance around the central member clamp assembly and hardware.**
- e) Tighten the hex nut.
- f) Install the two flat washers.
- g) Loosely install the other hex nut.
- h) Wrap the strength member yarn in a clockwise direction around the bolt and between the flat washers.

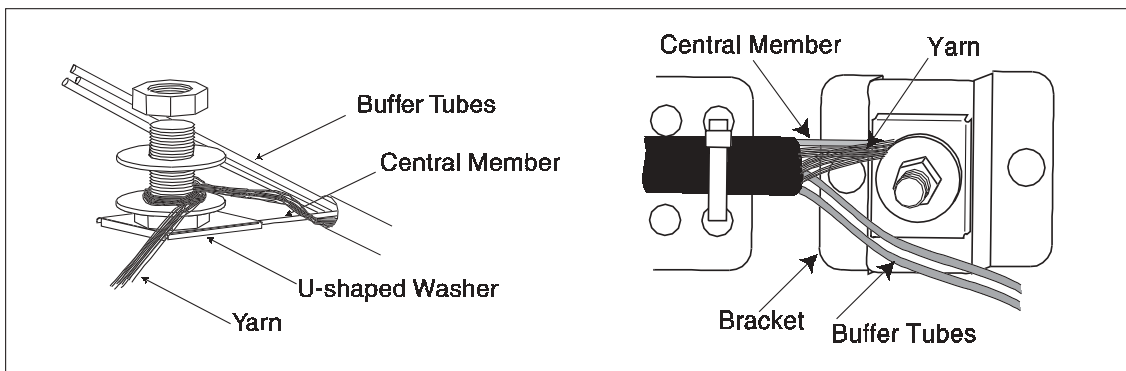


Figure 9

Insert the central member into the hole in the shim.

- If the central member passes through the hole, the shim is required to secure the central member. Position the shim between the U-shaped washer and the bracket.
- If the central member does not fit in the hole, discard the shim.

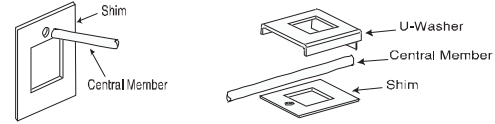


Figure 10

- i) Tighten the second hex nut.
- j) Trim off the excess yarn and central member.

NOTE: *The exposed length of the central member (after strain-relief) is to be less than or equal to 6.5 cm (2 1/2 inch) between the U-shaped washer and the end of the cable sheath.*

9.7 When cable grounding is necessary, use the hardware ground kit (purchased separately). Install the ground kit as shown in Figure 11.

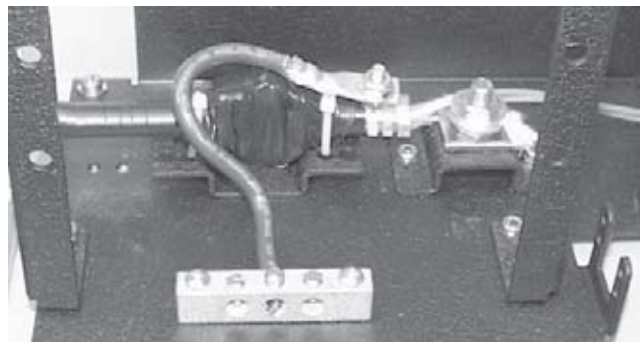


Figure 11

10. Connector Panels

10.1 LANscape® connector panels (Figure 12) are sold separately, typically with connector adapters installed.

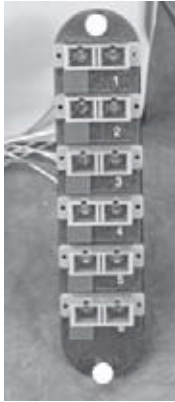


Figure 12

10.2 If fibers are not already connectorized, install connectors onto the fibers using pigtail splicing or direct connectorization per manufacturer's instructions. If installing BTF kits, proceed to Section 12.

10.3 Panels can be ordered with a specific length of preconnectorized pigtail cable installed. Pigtails are fiber optic cables with connectors on one end that are installed into connector panels (Figure 13). The other end of the pigtail is terminated in a splice tray.

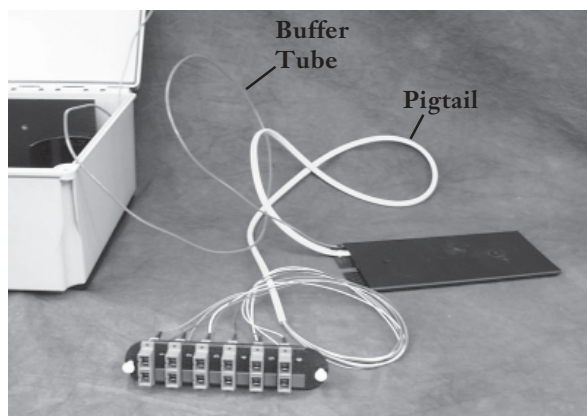


Figure 13

10.4 Install connectors into the appropriate panels.

NOTE: *The connector is a delicate device. Obey the following precautions. Damage to the surface of the connector will make it unusable:*

- Use a clean tissue soaked in alcohol to gently clean the connector. Do not press heavily on it as you clean.
- Dry the connector prior to installation with compressed air or a dry tissue.
- Clean all areas that will contact the connector adapter.
- Do not force the connector into the receptacle. If the connector does not fit easily into the receptacle, back it out and reinstall.
- Install threaded connectors into the adapter and tighten. Do not OVERTIGHTEN. Do not allow the connector body (ferrule) to turn as you screw it into place. This causes the surfaces to grind against each other.

10.5 Remove the blank panels from the unit. Install the connector panels into the connector support bracket (Figure 14).

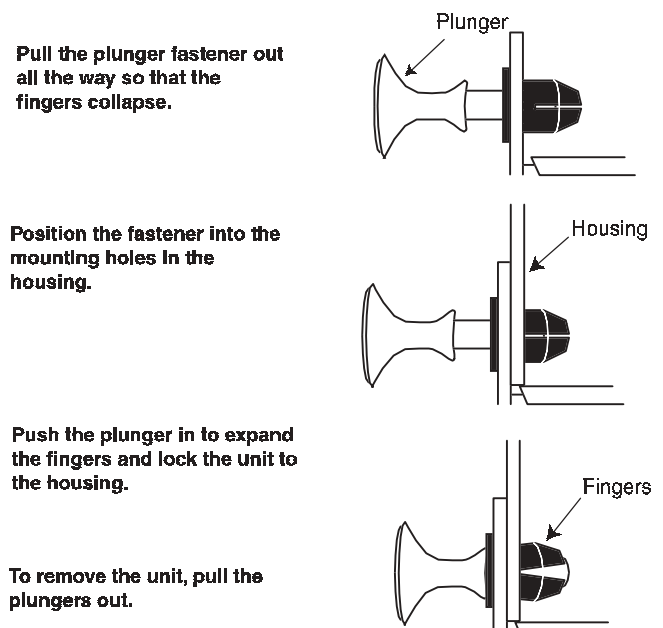


Figure 14

11. Splicing

11.1 Work on one splice tray at a time. Follow the instructions provided with the splice trays.

- a) Position the splice tray in the location it will be secured to the holder.
- b) Route two complete loops of buffer tube(s) in a counterclockwise direction around the radius guides. The radius guides are designed with three sections. Begin routing from the back section and work your way forward with each loop in a different section.

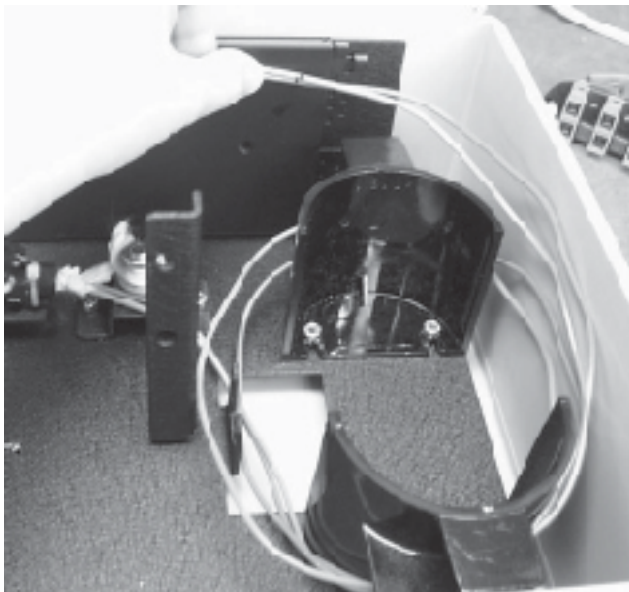


Figure 15

- c) Place the buffer tube(s) where they will lie after installation and mark the cable where it will enter the splice tray 2 cm ($3/4$ inch) past the corner of the tray (Figure 15). (This is where the buffer tube will be removed.)
- d) Loop the pigtail fiber from the connector panel around the radius guides as shown in Figure 16 and mark the jacket the same way you did for the buffer tube(s). Remove the cable jacket from the pigtail.

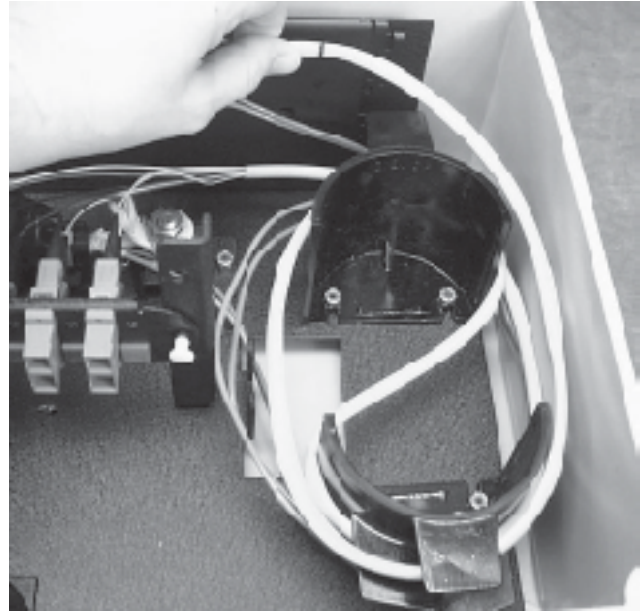


Figure 16

- e) Refer to the instructions provided with the splice trays to determine the appropriate length of fiber required in the tray. Measure from the first mark towards the end of the cable and mark the cable. (This is the fiber that will be routed inside the splice tray.)
- f) Trim the excess buffer tube beyond the second mark.
- g) Remove the splice tray and the coiled buffer tubes.
- h) Strip the buffer tube from the fibers from the mark you made in the previous step c). Clean the fibers that will be inside the tray according to the cable manufacturer's instructions.

11.2 Bring both pigtails and buffered fibers to a convenient splicing area - one pair at a time. Secure these fibers to the splice tray according to the instruction supplied with the splice tray.

IMPORTANT: *When securing 900 μ m fiber to the splice tray, 1.5 inch of vinyl tape around the sheath as protection for the 900 μ m fiber is recommended. Feed a cable tie through the strain-relief holes in the corner of the tray. Carefully tighten the cable tie around the tape-wrapped portion of the fibers to secure the fibers to the tray.*

11.3 Splice fibers as described in instructions for the splicing method you are using.

11.4 As you complete a splice, label the connector end of the pigtail with its port identifier. Record information appropriately on the record label inside the front door (Figure 17).

11.5 Repeat for all required splice trays.

NOTE: *Accurate record keeping is imperative for an organized installation.*



Figure 17

11.6 Once all splicing is complete, route the buffer tubes and pigtails around the radius control guides as shown in Figure 18. Route the buffer tubes as shown in order to maintain the appropriate bend radius to the connector panel.

11.7 Secure the splice tray to the wall as shown in Figure 18. Discard spacers as required for the type of tray installed.

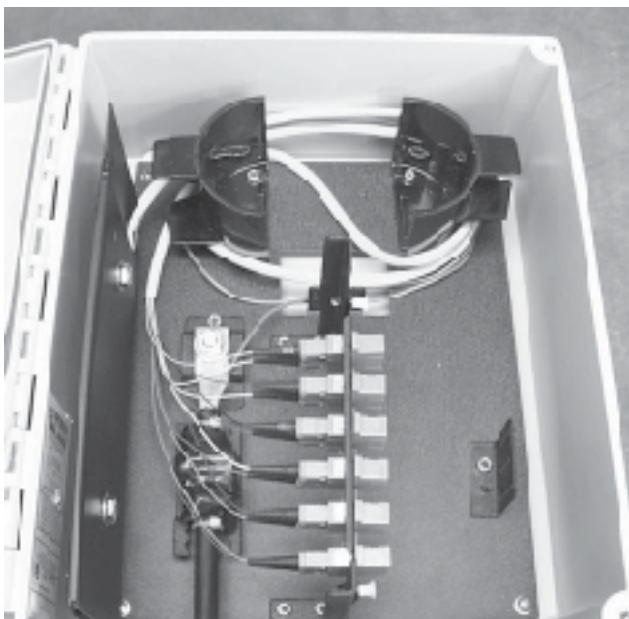


Figure 18

12. Installing BTF Kits

12.1 Fiber optic cable can be installed using Corning Cable Systems BTF kits.

12.2 Route the buffer tubes twice around the radius guides in a counterclockwise direction. Mark the location of the mounting bracket on the buffer tubes as shown in Figure 19 to determine the length required.

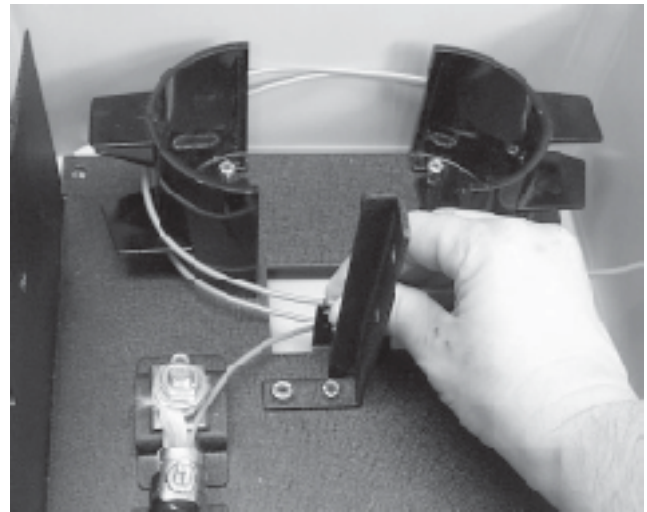


Figure 19

12.3 Install fan-out assemblies and connectors according to the instructions provided with the BTF kits.

12.4 Route the buffer tubes around the radius guides and secure the fan-outs to the fan-out bracket as shown using a cable tie (Figure 20).

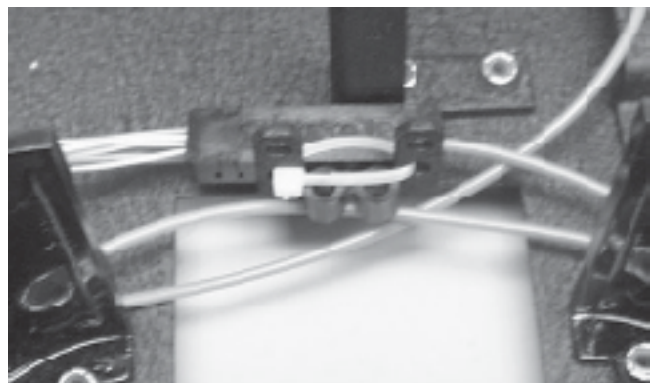


Figure 20

12.5 Route the fiber in the fan-out tubing around the guides and plug connectors into the connector panel (Figure 21). Refer to the previous connector care instructions to avoid damaging the connectors during installation.

12.6 Label the connector end of the pigtail with its port identifier. Record information appropriately on the record label inside the front door.

NOTE: *Accurate record keeping is imperative for an organized installation.*

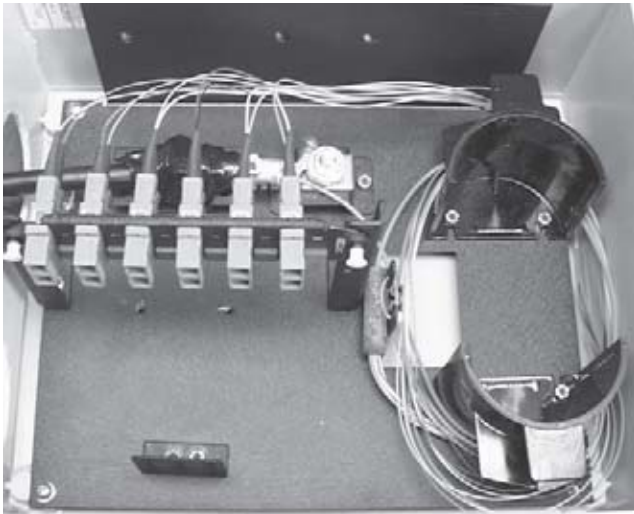


Figure 21

13. Installing Drop Cables

13.1 The EDC is designed to accept up to six drop cables. Feed the drop cable through the fitting you installed on the right at the base of the closure.

NOTE: *Drop cable subunit lengths should be approximately 130 cm (51 inches) in length in order to provide two loops of fiber slack around the radius guides.*

13.2 If the drop cables do not include central members, secure the cables to the bracket using a loosely tightened cable tie. When central member strain-relief is necessary, remove the drop cable strain-relief bracket and secure the cable to the bracket using a cable tie as shown (Figure 22).

a) Install the 8-32x5/8 screw from the front side of the strain-relief bracket through the flat washer and U-shaped washer. Loosely install the hex nut.



Figure 22

- b) Insert the central member of the cable between the flat washer and the U-shaped washer (Figure 23).
- c) From the front side of the strain-relief bracket, wrap the strength member yarn in a clockwise direction around the screw and under the U-shaped washer (Figure 23).
- d) Tighten the hex nut.
- e) If the central member is metallic, place the eye of a ground wire (#6 AWG, purchased separately in appropriate length from any electrical supply store) under the U-shaped washer or under the flat washer.

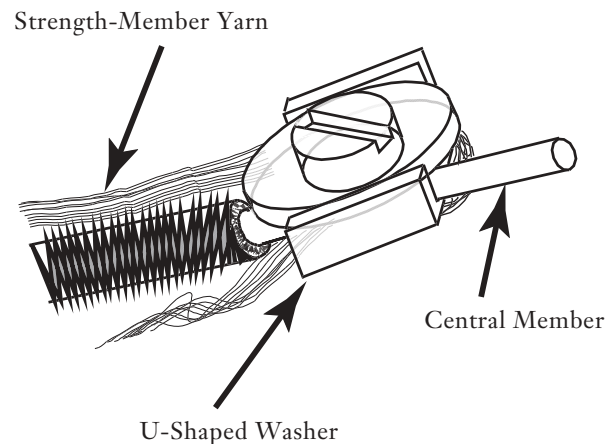


Figure 23

- f) Trim off the excess yarn and central member.
- g) Reinstall the strain-relief bracket.

NOTE: *The exposed length of the central member (after strain-relief) is to be less than or equal to 6.5 cm (2 1/2 inch) between the U-shaped washer and the end of the cable sheath.*

NOTE: *For full optimization, the bracket will accept three U-shaped washers and each U-shaped washer will accommodate two central members, one on each side of the screw.*

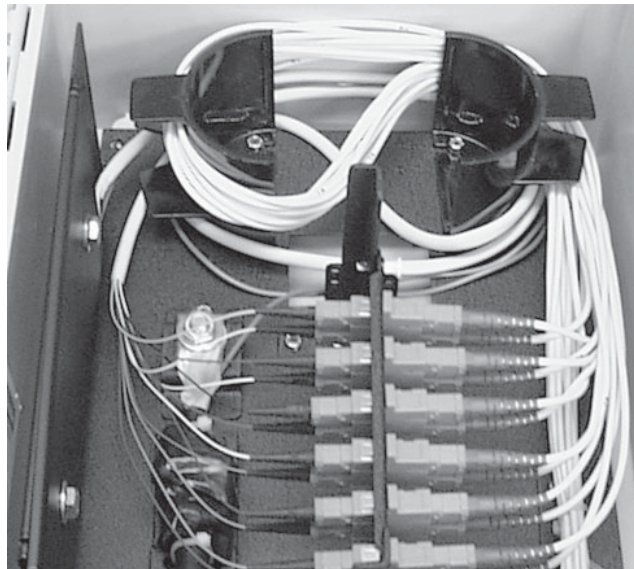
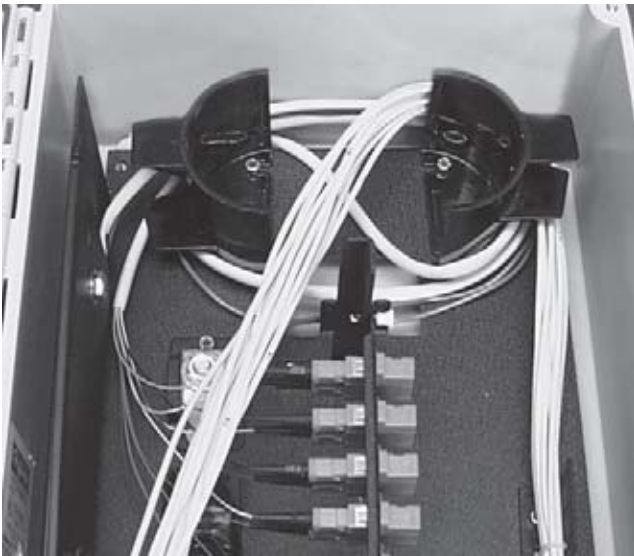


Figure 24

13.3 Route cable through the guides as shown in Figure 24 and plug in connectors. Refer to the connector installation instructions in Section 11 and the fiber precautions in Section 3 to avoid damaging the cable during installation.

14. Maintenance

The unit requires very little maintenance to make sure fibers and parts remain in good condition.

Loose Parts: Check nuts, bolts and screws for looseness and tighten.

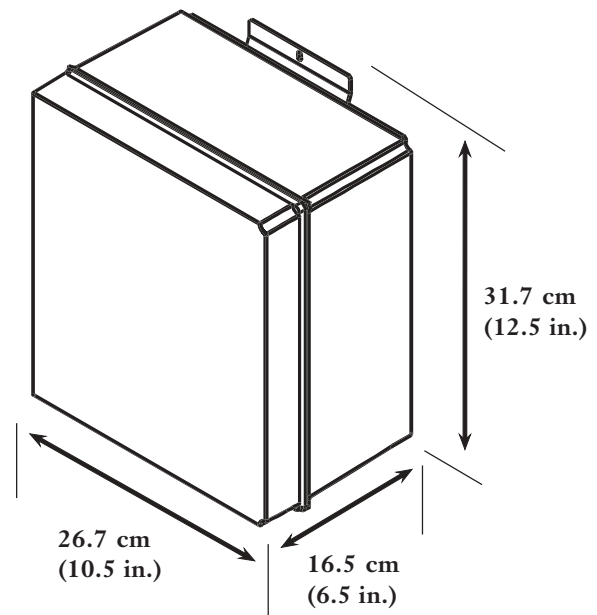
Moisture: Check the housing for accumulated moisture and place moisture absorbent packets as needed.

Fiber Bends: Check fiber optic cable to make sure bends do not exceed the minimum bend radius. Check cable for unnecessary strain. Check cable entries and exits for crimping or crushing.

Documentation: Check record label to make sure it is clear and accurate.

15. Specifications

The unit weighs 4.3 kg (10 lb)



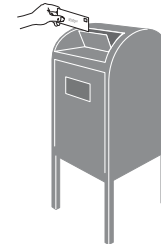
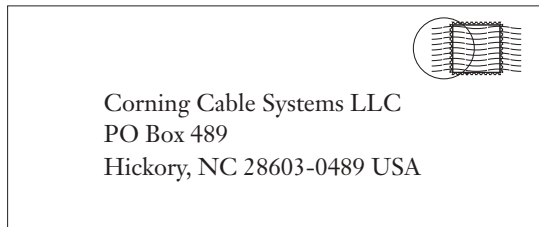


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Product Information: _____

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