

**Secure Fiber Zone Box (FZB-12P-85-S)**

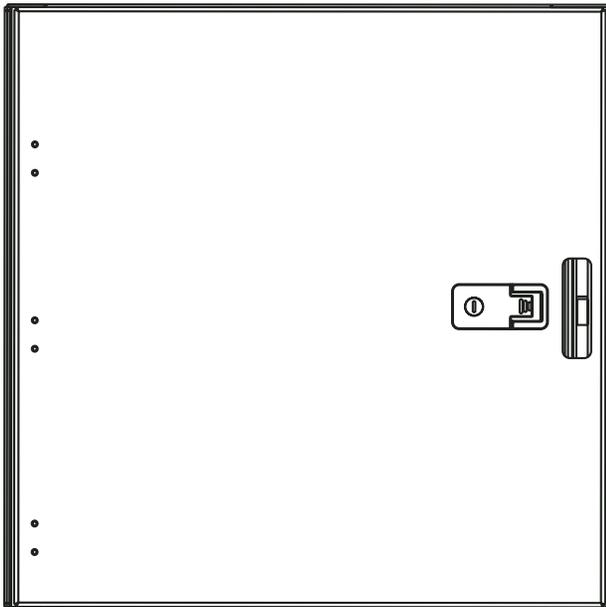


Figure 1

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**1. General**

**1.1** This instruction describes the recommended procedure for installation of a Fiber Zone Box (FZB-12P-85-S) (Figure 1). The FZB unit is a multi-user telecommunications outlet assembly intended for zone cabling applications.

**1.2** Contact your customer service representative for assistance in purchasing accessories that are sold separately.

**1.3** Should this document be reissued, the reason will appear in this paragraph.

**NOTE:** *Read and understand this procedure (as well as the instructions provided with related assemblies) before beginning an installation. Familiarize yourself with the unit's placement in your network. Make sure you know where the cable will enter the unit and other details of the installation plan.*

**2. Description**

- An indoor unit intended for use as a link between the telecommunications closet and the work area.
- Has separate areas for distribution and drop cables.
- Allows termination of distribution cable using buffer tube fan-out (BTF) kits (purchased separately). Up to twelve BTF kits can be installed on one side of the patching area.
- A removable inner tray allows convenient cable routing and installation components. Disengage the quick-release latches on the tray to remove it from the cabinet.
- Has a removable door with a key lock and location for a padlock.
- The FZB-12P-85-S unit accommodates up to twelve Closet Connector Housing (CCH) connector panels.
- Has twelve cable entry locations, two on each side and four on the rear. Each location has a 1-inch knockout inside a 2.5-inch knockout. The 2.5-inch knockout accommodates large pulling grips, such as those installed on cable for the Plug & Play™ system.

### 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 54°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:** *Do not stand directly underneath the FZB unit once it has been mounted into the ceiling. Opening the door can possibly cause head injury.*

#### 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 the 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.*

### 4. Tools and Materials

- The usual complement of installation tools are required for this installation.
- Mounting hardware is not provided. The type of hardware used is dependant on the mounting location; wall anchors may be required for adequate support on sheetrock walls.

### 5. Components

5.1 Components are illustrated in Figure 2.

5.2 The Fiber Zone Box weighs 11 kgs (24 lbs).

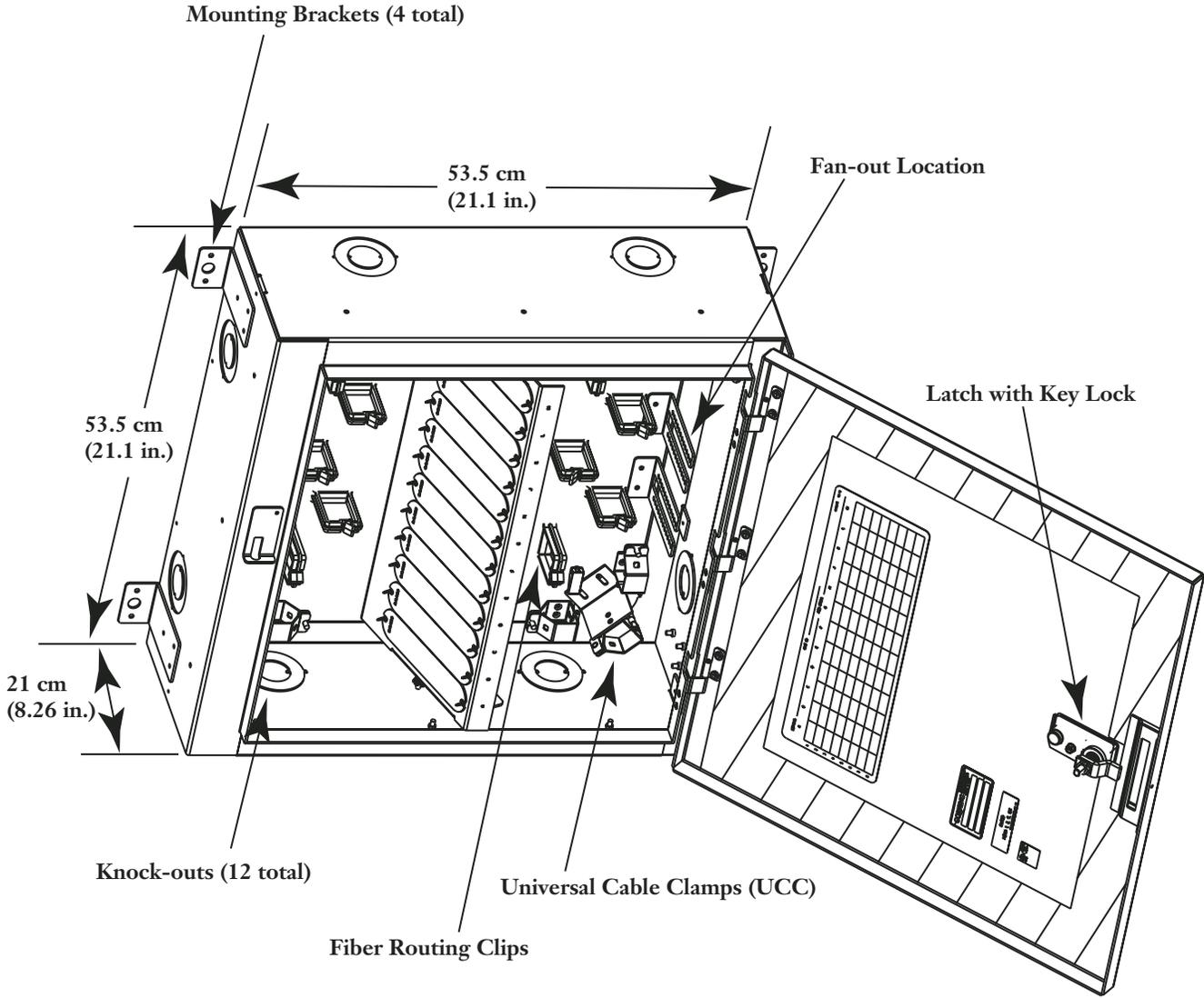


Figure 2

## 6. Mounting

**6.1** Attach the supplied mounting brackets to the FZB using the screws provided (Figure 2).

**6.2** To mount the unit into a 2-ft by 2-ft drop ceiling:

- a) Secure the mounting brackets on the unit to the building red-iron using threaded rods or other secure means.
- b) Attach the trim pieces to the cabinet.

**NOTE:** When installed into a 2-ft by 4-ft drop ceiling opening, a 2-ft by 2-ft ceiling tile will fill the unused space.

**6.3** To mount the unit to a wall:

- a) Select a flat vertical surface to prevent warping.
- b) Determine the mounting location.

**IMPORTANT:** The door opens toward the right. Make sure there is adequate space for the door to open without interference.

- c) Position the unit against the wall. Use a pencil to mark the wall through the holes in the mounting brackets.
- d) Secure the unit to the wall using hardware appropriate for the wall's surface.

## 7. Opening the Cabinet

**7.1** When opening the cabinet, observe safety precautions in Section 3.2.

- a) Remove the padlock, if installed.
- b) Unlock the latch and then remove the key.
- c) Pull the latch handle up and turn it one-quarter turn (Figure 3).

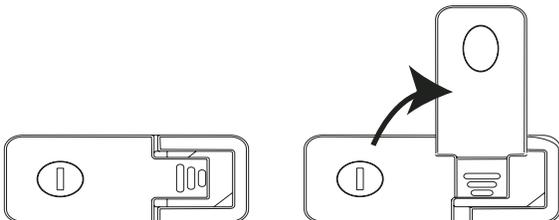


Figure 3

**7.2** To remove the door:

The door can be removed without opening it by sliding it to release it from the hinges and lifting it off the cabinet. Or open the door, slide it to release it from the hinges and pull the door away from the cabinet (Figure 4).

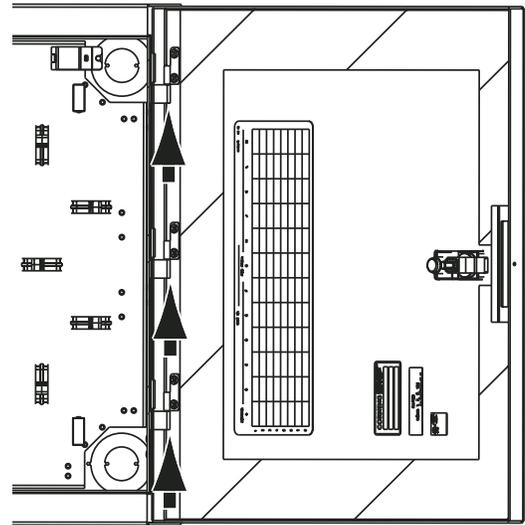


Figure 4

## 8. Cable Strain-relief

**8.1** Perform cable sheath removal steps per instructions for the type of termination being performed.

- Expose 10 ft of buffer tube for fan-out applications.
- Remove cable jacket appropriately for direct connectorization of multifiber indoor cable.

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

**IMPORTANT:** To maintain a NEMA 12 rating, cable must enter the cabinet from the sides through a watertight cord connector. Two liquid-tight cord connectors are included.

**8.2** To strain-relieve the cable using the cord connectors:

- a) Remove the 1-in. knockout to install the cord connector.
- b) Install cord connectors with the knurled nut on the outside of the housing.
- c) In order to clamp the housing tightly, orient the washers so that there is a gap between them in the center as they are clamped together (Figure 5).

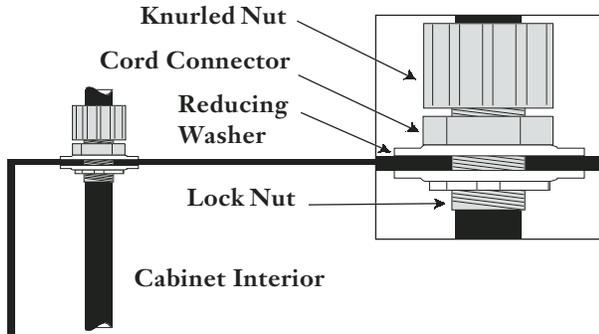


Figure 5

- d) Secure the cord connector on the inside of the housing using the provided lock nut.
- e) Thread the cable through the fitting.
- f) Tighten the nuts.

**8.3** To strain-relieve the cable using the Universal Cable Clamp (UCC):

- a) Attach the UCC clamshell to the strain-relief bracket using the screws provided in the UCC kit.
- b) Install cable into the UCC (Figure 6) following the instructions provided with the UCC kit.



Figure 6

**NOTE:** To secure cable entering from the rear of the cabinet, attach the strain-relief bracket to the inner tray directly above the cable entry knockout (Figure 7). Repeat previous steps to install cable into the UCC clamp.

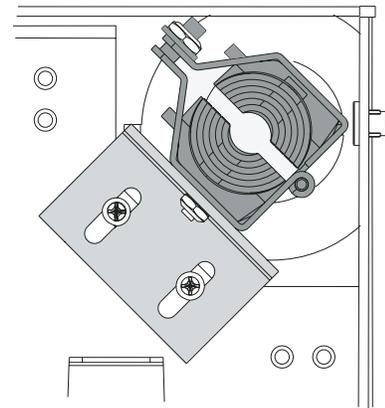


Figure 7

**IMPORTANT:** When using Plug & Play™ system, the cable must enter the housing through the sides. The NEMA 12 K rating cannot be maintained using Plug & Play™ cable because the water tight connector cannot be used.

**8.4** A ground kit (purchased separately) is required for armored cable.

- a) Attach the ground wire to the cable armor according to the instructions that come with the ground kit.
- b) Attach the other end of the ground wire to the ground stud inside the cabinet (Figure 8).
- c) Then, run a #6 AWG ground wire (purchased separately at any electrical supply store) from the ground stud to the primary building ground according to the local code authority.

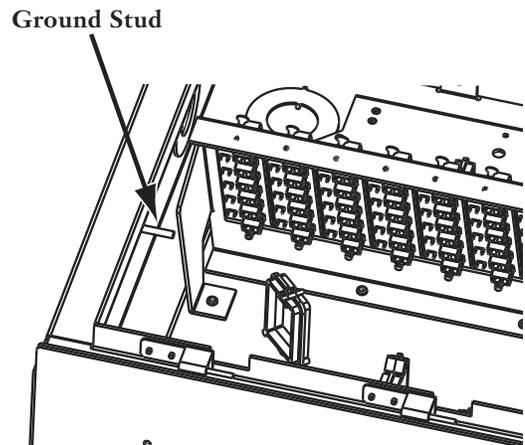


Figure 8

**NOTE:** To maintain the NEMA 12 K rating, the ground wire must utilize a watertight connector (purchased separately).

## 9. Cable Installation

9.1 Remove the blank panels and install connector panels into the unit.

**NOTE:** Connector panels are ordered separately with connector adapters installed.

9.2 If fibers are not already connectorized, install connectors onto the fibers according to the instructions provided with the connectors.

9.3 Insert connectors into the connector adapter on the panel.

**NOTE:** Obey the following precautions in order not to damage the surface of the connector and 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 by using a dry tissue or blowing it dry with compressed air.
- 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.
- If connectors are threaded, 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.

9.4 Secure the fiber in the fiber guides on the inner tray. Make sure there is adequate slack so that the fiber bend radius is maintained across the routing guides. Refer to Figure 9 for examples of routing configurations.

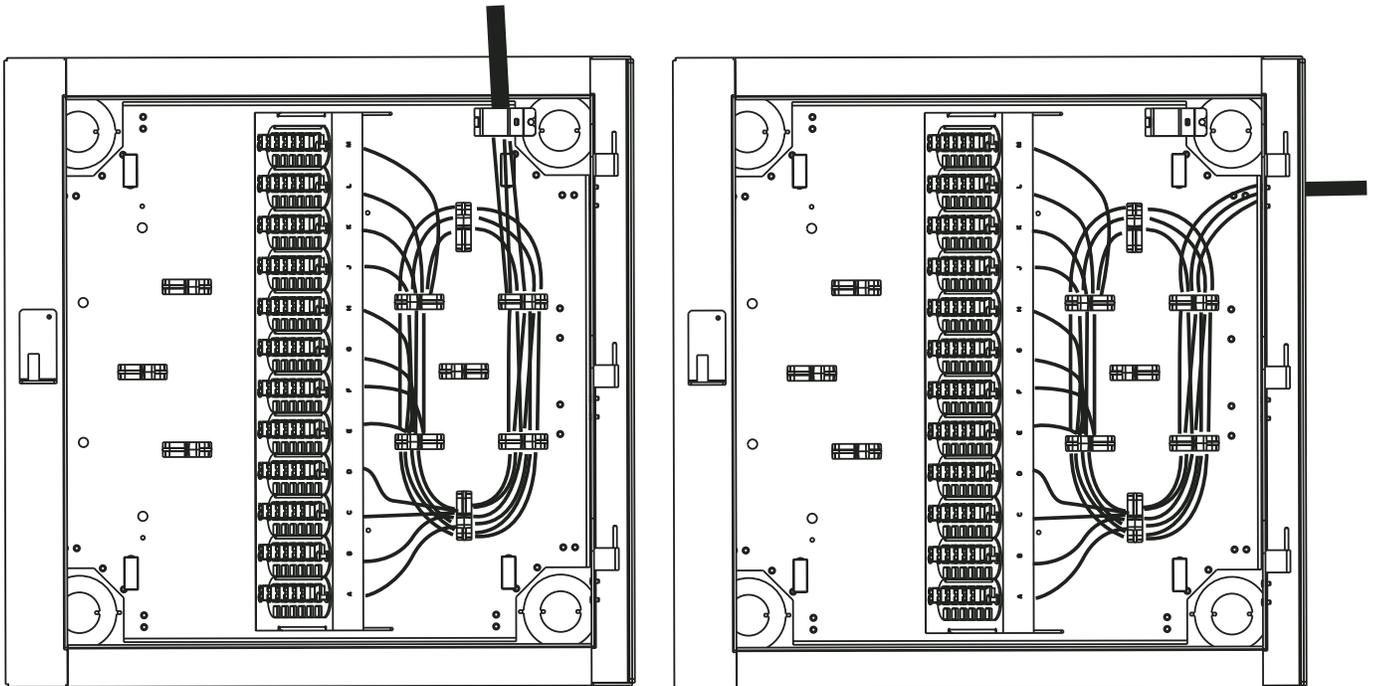


Figure 9

9.5 When installing Plug & Play™ cable, remove routing clips as needed from the removable tray and route to modules as shown in Figure 10.

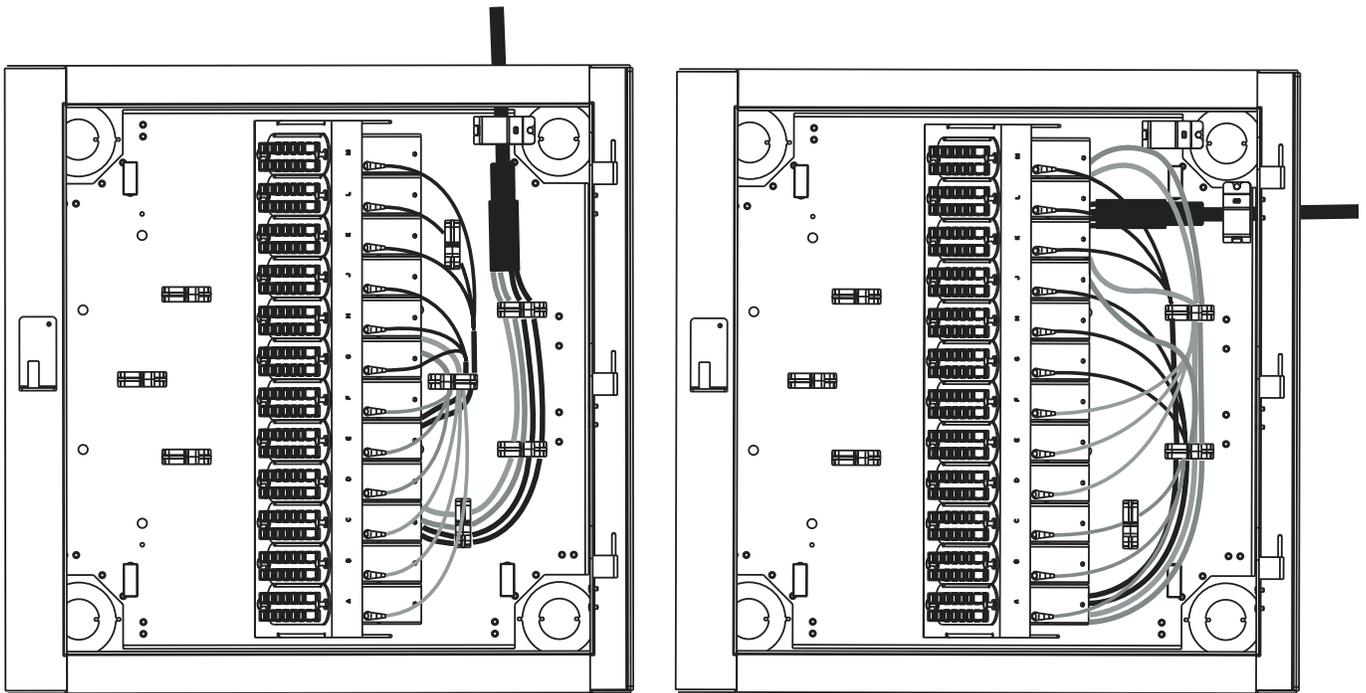


Figure 10

## 10. Buffer Tube Fan-outs

**NOTE:** *Loose-Tube fiber optic cable can be installed using BTF kits (ordered separately).*

**10.1** Install the fan-out bracket using the provided screws.

**10.2** Route the buffer tubes through the fiber guides twice for cable slack storage.

**10.3** Position the buffer tubes against the fan-out bracket. Mark the location of the fan-out on the buffer tubes to determine the length required.

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

**10.5** Secure the fan-out bodies to the bracket as shown (Figure 11).

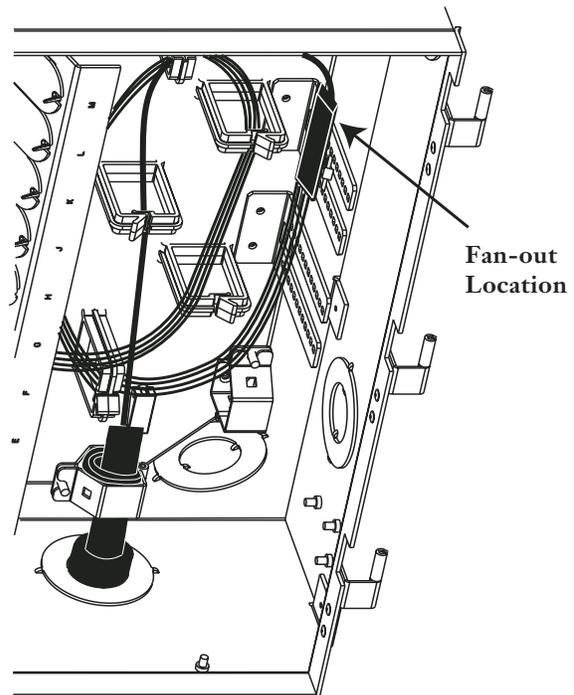


Figure 11

**10.6** Route the connectorized fan-out tubing around the guides and plug connectors into the connector panel (Figure 12). Refer to the connector care instructions in Section 9.3 to avoid damaging the connectors during installation.

**10.7** Label the connector end of the pigtail with its port identifier. Record information appropriately on the record label on the inside of the door flange.

**IMPORTANT:** *Accurate recordkeeping is imperative for an organized installation.*

**NOTE:** *For convenience, use cable ties to group pigtails with their corresponding buffer tube.*

## 11. 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.

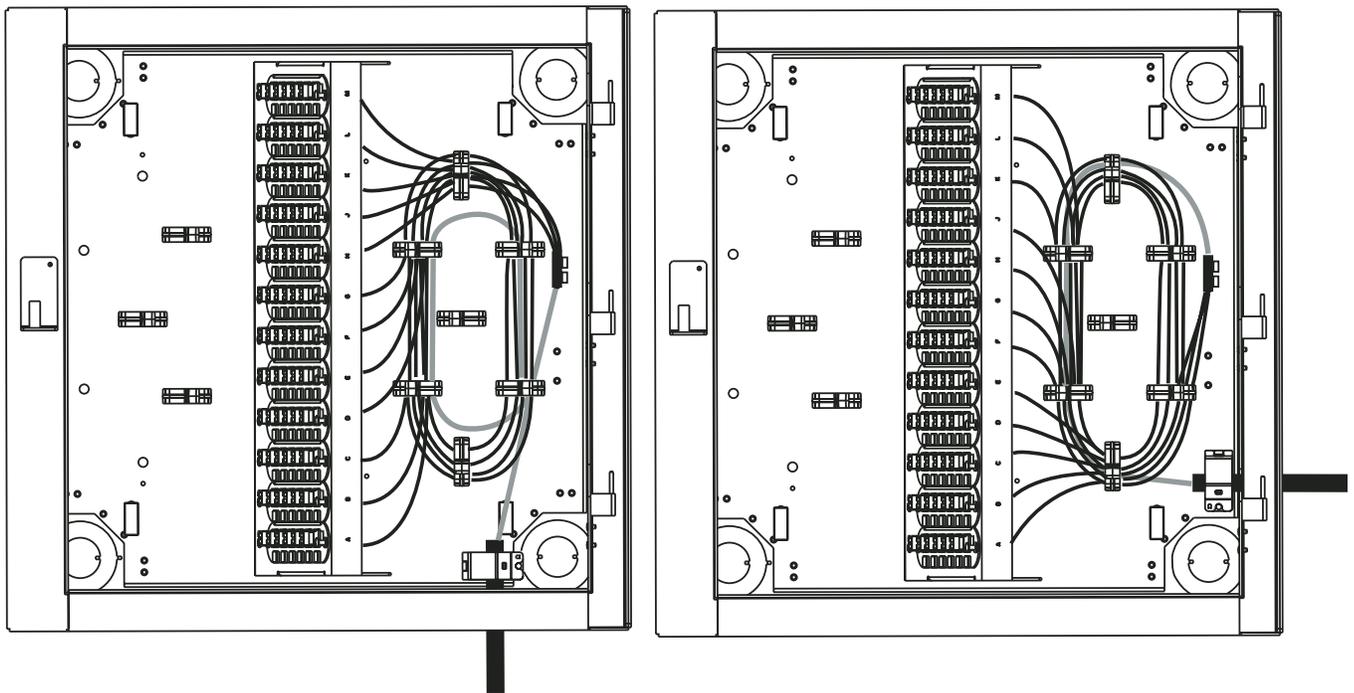


Figure 12

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