



Closet Splice Housing

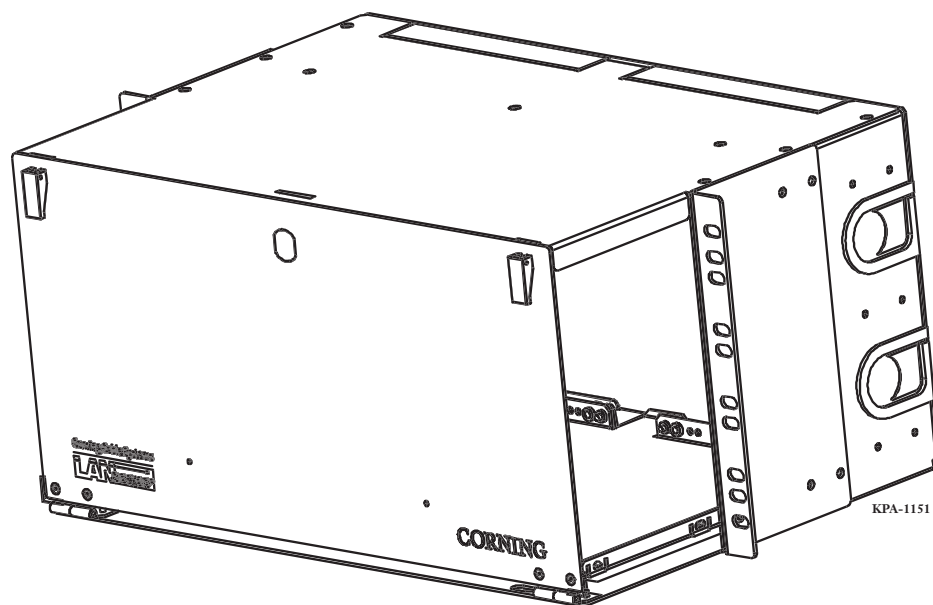


Figure 1

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1. General

1.1 This document describes the installation of the Closet Splice Housing (CSH) manufactured by Corning Cable Systems.

1.2 This document is being reissued to add the logo indicating this product is RoHS compliant.

2. Description

2.1 The CSH is a modular housing designed to hold fiber optic splice trays. The housing is usually part of a system that allows a fiber optic cross-connection between outside cables and opto-electronic equipment in a main cross-connect, computer room, or remote terminal equipment location.

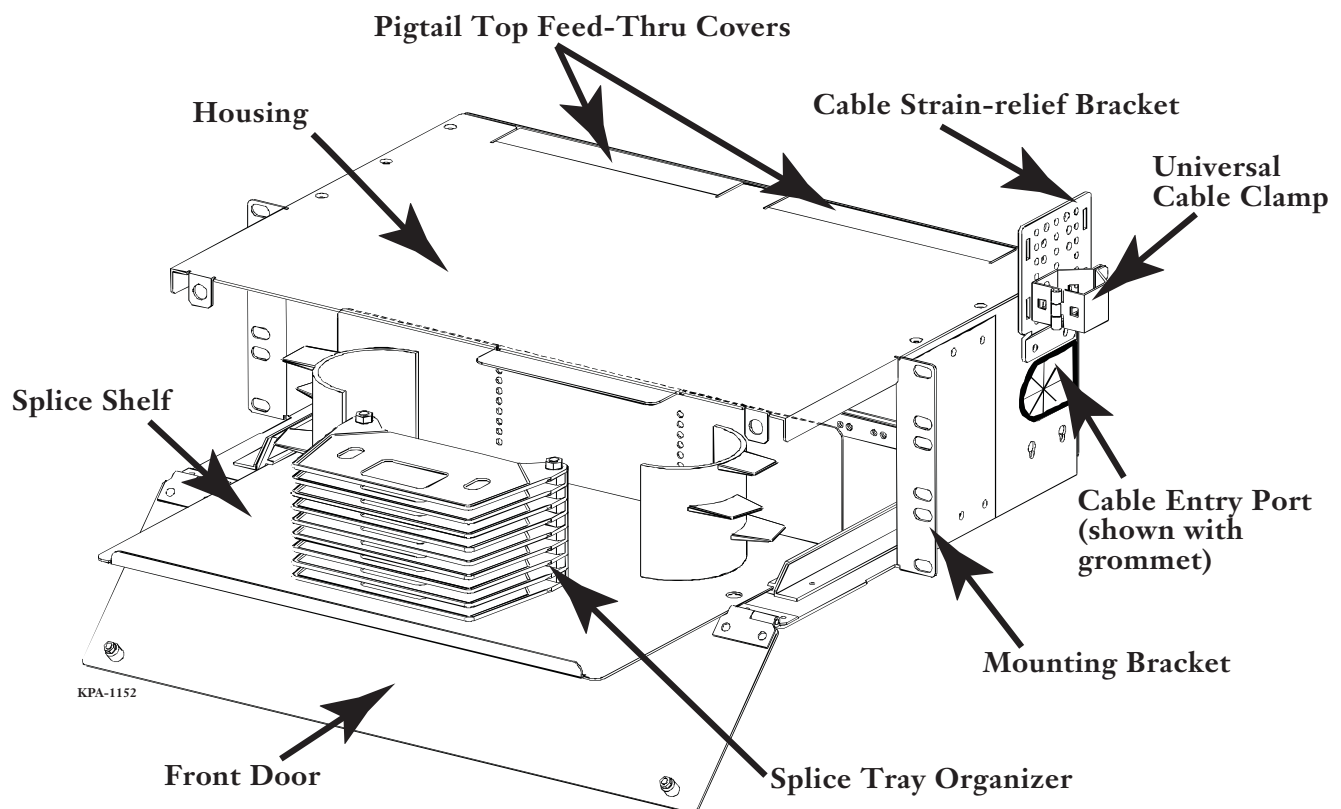
2.2 The unit comes ready to be mounted into 19-inch equipment rack. Extension brackets are provided to allow the unit to be mounted into 23-inch racks.

3. Components

3.1 Components are illustrated in Figure 2.

3.2 Kit contents are as follows:

- (1) Strain-relief bracket
- (2) #6-32 wing nuts
- (2) Brackets for full flush mounting
- (2) Extension brackets for mounting to a 23-inch rack
- (8) #10-32 rack-mount screws
- (4) #12-24 rack-mount screws
- Spiral wrap
- M6 mounting screws and cage nuts
- (1) Label, unit ID
- (12) Cable ties
- (2) Universal Cable Clamp (UCC) kits with each kit containing:
 - (1) Cable clamp
 - (2) #6-32 flat head screws
 - (1) #10-32 lock nut
 - (1) #10 washer
 - (2) Plastic base
 - Sand paper
 - (2) Shims (six sizes of each)
 - (1) Grommet for smaller cables
- (2) Hardware kit for securing the cable strength members:
 - (1) 8-32 screw
 - (1) M6 washer
 - (1) U-washer



4. Tools and Equipment

The following tools are required to complete this installation:

- Phillips screwdriver
- Flat blade screwdriver
- Utility knife
- $\frac{3}{8}$ -inch nutdriver

5. Planning

5.1 Before you begin your installation, make sure you understand how the unit is to be installed, where cable will enter the unit, where it will be placed on the utility rack, and other details of the installation plan.

5.2 Pigtails are routed through the openings in the top and/or bottom of the unit. Determine how pigtails will be routed and remove the appropriate feed-thru covers (Figure 3).

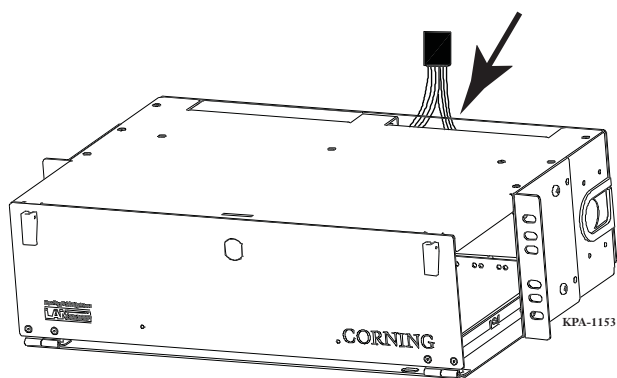


Figure 3

6. 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.*

⚠ 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.*

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.*

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.*

7. Mounting

7.1 The CSH comes ready to mount in a 19-inch equipment rack with EIA/TIA universal hole spacing (Figure 4).

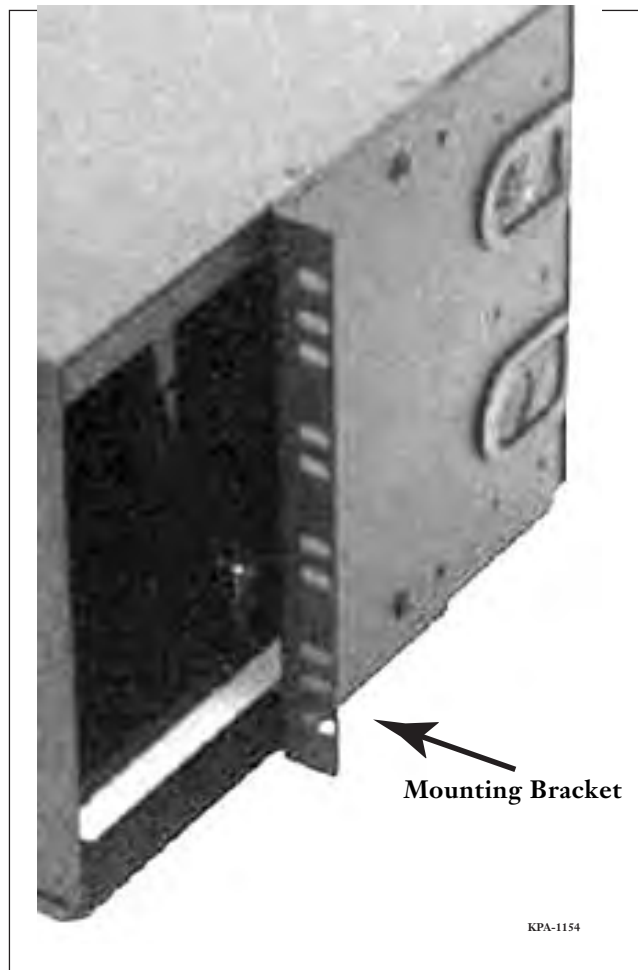


Figure 4

7.2 If you are mounting the unit in a 23-inch rack, you must first attach the extension brackets using the #10-32 screws provided (Figure 5).

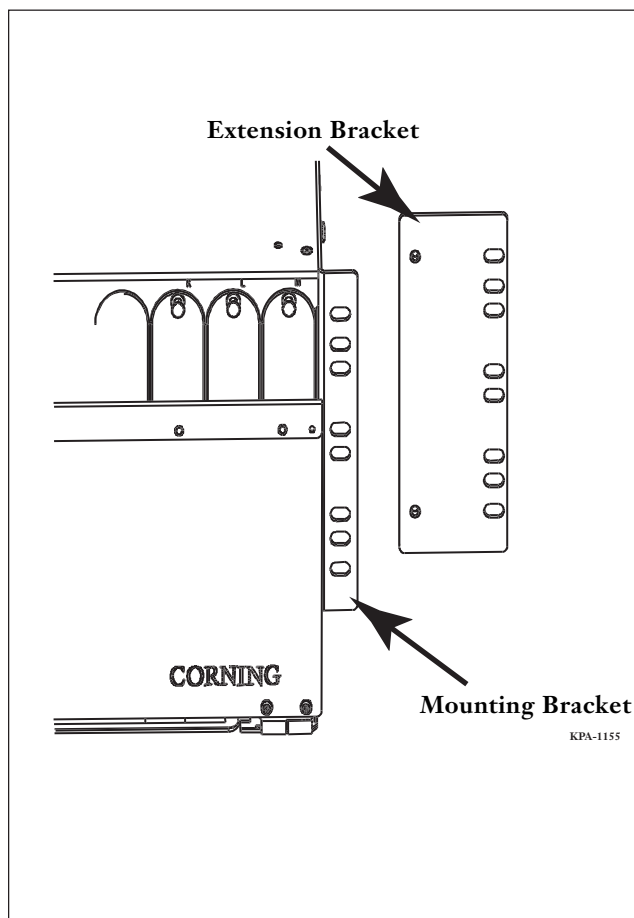


Figure 5

7.3 If you are mounting the unit in a 24-inch rack, you must purchase the adapter brackets separately. To purchase the adapter brackets call your Corning Cable Systems service representative.

7.4 The CSH may also be mounted in partially or full flush configurations:

- **Partially Flush Mounting:** To allow jumpers to exit the side of the CSH in front of the mounting rails, remove the brackets already attached to the housing, move them to their forward mounting positions and reattach them to the housing (Figure 6).

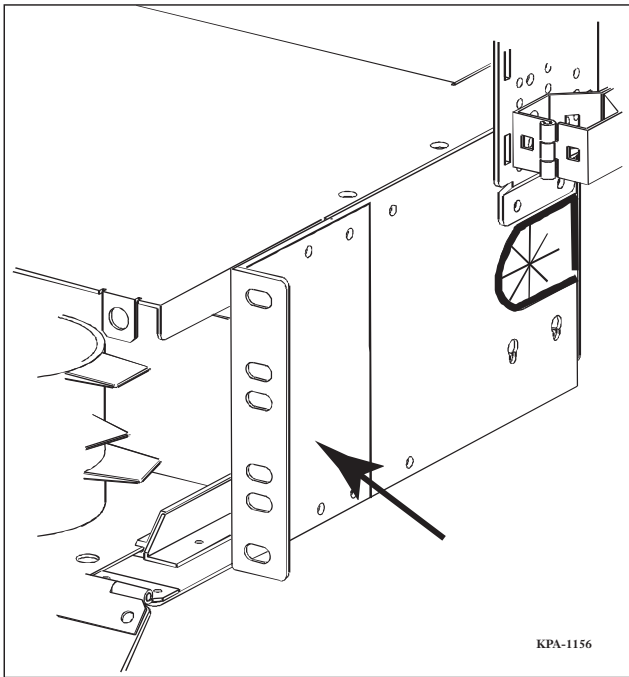


Figure 6

NOTE: Corning Cable Systems does not recommend full flush mounting unless absolutely necessary. Rails may cause problems.

- **Full Flush Mounting:** Remove and discard the mounting brackets already attached to the housing. Replace them with the brackets for full flush mounting (included in the hardware kit).

7.5 If you are using an EIA-310-D compliant equipment rack, make sure you align the mounting holes of the CSH so that the next hole above or below is $\frac{1}{4}$ inch away from the top or bottom surface of the housing (Figure 7). This will prevent misalignment of the lower mounting holes.

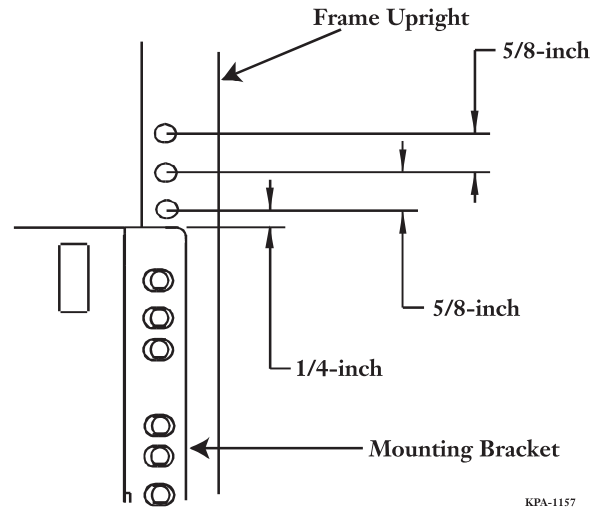


Figure 7

8. Cable Installation

8.1 Fiber optic cable is generally routed to the CSH housing, then strain-relieved on the side of the housing and finally routed to the splice trays inside the housing.

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 the 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.

8.2 Determine the location for the cable entry into the housing. The grommets found at each cable entry port can be punctured or the entire center section may be removed, leaving an edge grommet (Figure 8).

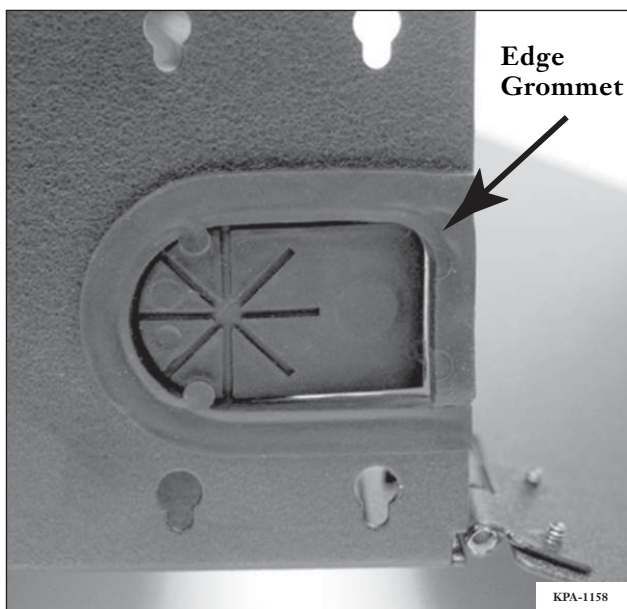


Figure 8

8.3 Prepare the cable as outlined in sheath removal instructions for the cable you are installing. Suggested sheath removal lengths are illustrated in Figure 9.

NOTE: If you plan to use the Universal Cable Clamp, cut the central member and yarn flush with the end of the cable sheath.

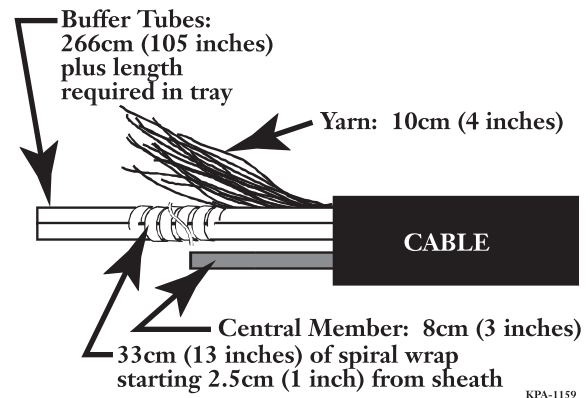


Figure 9

8.4 If the entire length of cable is routed within an environmentally controlled building to reach the CSH, strain-relieving the cable sheath is adequate. Securing the cable strength members (yarn and/or central member) is not necessary.

For cable sheath retention only, cable ties or the Universal Cable Clamp should be used.

8.5 For UCC Strain-relief, follow the instructions supplied with the UCC kit for specific cable installation procedures (Figure 10).

NOTE: The clamp must be attached to the bracket before the shims can be added.

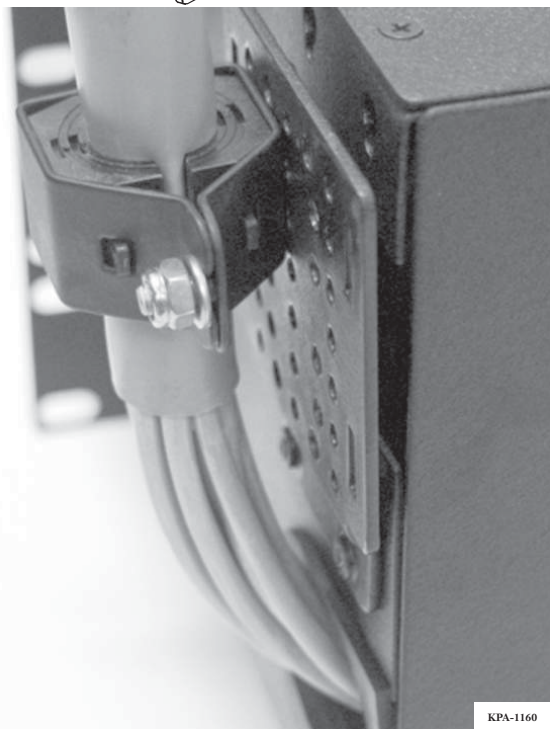
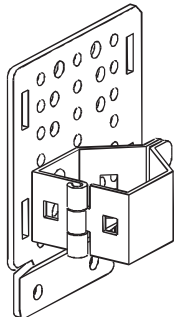


Figure 10

8.6 If temperatures fluctuate widely along the nearest 10 meters (33 feet) of the cable, the strength members should be secured.

NOTE: Failure to do so may result in damage to the cable as temperatures vary.

8.7 Corning Cable Systems recommends strain-relieving the cable outside the unit onto the bracket (Figure 11).

- Attach the cable to the bracket (with cable ties in two places) as shown in Figure 11.
- Install the 8-32x⁵/₈ screw from the front side of the Strain-relief bracket through the flat washer and U-shaped washer.

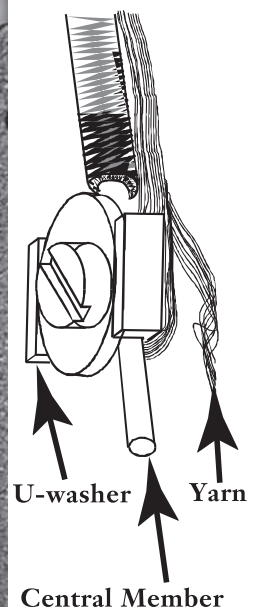
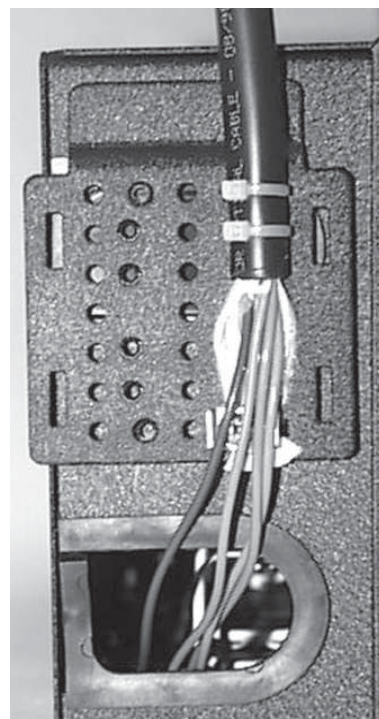
- From the front side of the Strain-relief bracket, wrap the strength member yarn in a clockwise direction around the screw and under the U-shaped washer.
- Insert the central member of the cable between the flat washer and the U-shaped washer.
- Tighten the screw.
- If the central member is metallic, 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.

NOTE: The ground wire must have metal to metal contact providing an electrical path to the central member in order to properly ground the cable.

- Attach the other end of the ground wire to the building ground.
- 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 inches) between the U-shaped washer and the end of the cable sheath.

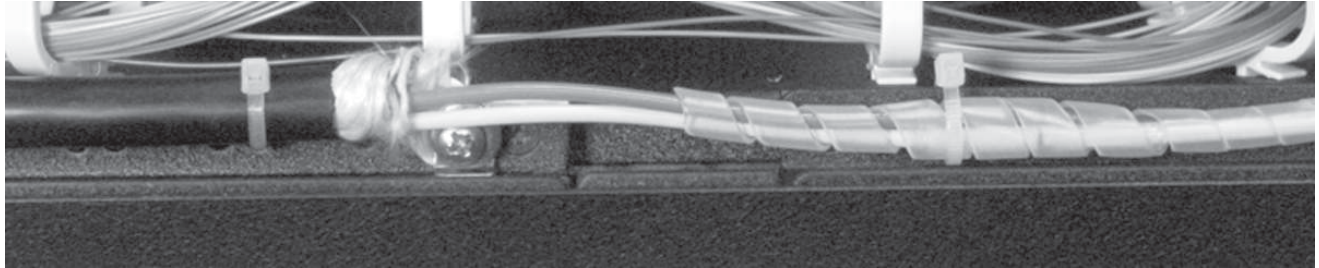
8.8 Attach the Strain-relief bracket to the housing as shown and secure it using the two supplied wing nuts inside the housing.



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Figure 11

8.9 When your application does not allow for outside Strain-relief, the cable may also be strain-relieved inside the unit. Secure the cable to the appropriate feed-thru location as shown in Figure 12.



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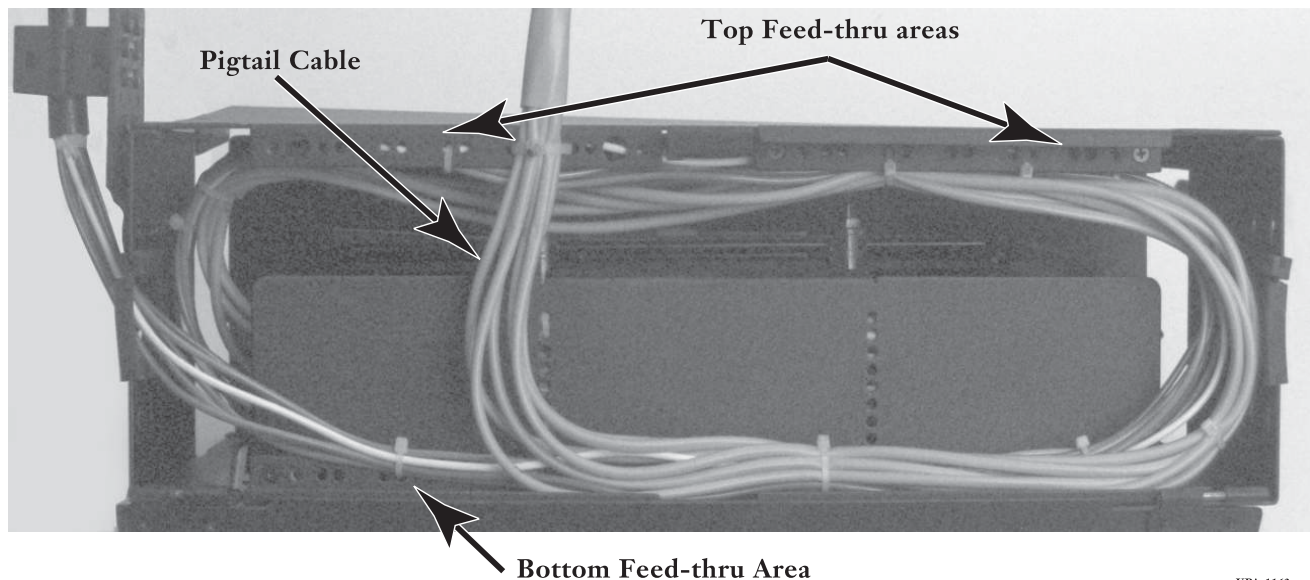
Figure 12

NOTE: Make sure the cable does not bend sharply as it enters the unit. Doing so may cause damage that can alter the transmission characteristics of the cable. The cable may have to be replaced.

9. Cable Routing

9.1 Secure cable behind the feed-thru area using cable ties (Figure 13). Do not tighten cable ties excessively.

9.2 Ensure that a loop of fiber is maintained at the rear of the splice shelf and secured to the inside rear panel of the shelf. This slack is essential for relieving fiber stress when the shelf is moved forward.



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Figure 13

12. Maintenance

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

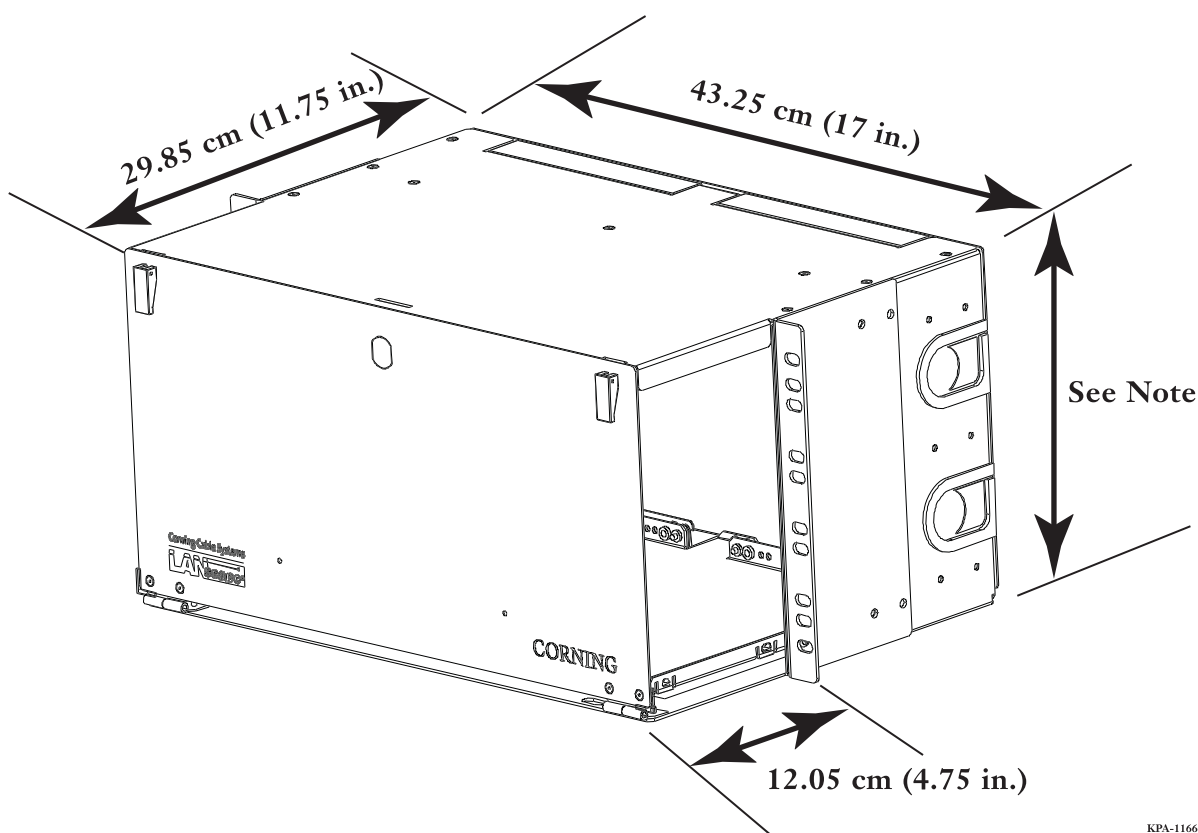
12.2 External components may be cleaned occasionally with a damp, nonabrasive cloth. Internal components should be checked periodically for the following:

- **Loose Parts:** Check nuts, bolts, and screws for looseness and tighten if necessary.
- **Moisture:** Check the housing for accumulated moisture and remove if necessary.

- **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 unit record cards to make sure all are clear and accurate.

13. Specifications

NOTE: CSH-03U is 13.35 cm (5.25 in) tall. CSH-05U is 22.25 cm (8.75 in) tall.



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Figure 16