

Pretium™ Wallmount Slack Storage Housing

Revision History

Issue	Date	Reason for Change
1	01/2007	Initial release

Related Literature

SRP 003-724	Pretium™ Wallmount Housing (PWH-02P, -04P and -06P)
SRP 003-728	Pretium Wallmount Housing (PWH-12P)

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Admonishments

The precautionary terms used by Corning Cable Systems in its standard recommended procedures conform to the guidelines expressed in the American National Standards Institute

document (ANSI Z535) for hazard alert messages. Alerts are included in this instruction based on the following:



DANGER: indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.



WARNING: indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.



CAUTION: indicates a hazardous situation which, if not avoided, may result in minor or moderate injury.

1. GENERAL

This document describes the recommended procedure for installing a Pretium™ Wallmount Slack Storage Housing (SSH) manufactured by Corning Cable Systems. The SSH unit supports the Pretium Wallmount Housing (PWH) and allows cable routing directly to the PWH units. The housing is designed to store cable slack and can also be used as a splice housing for pigtailed cables.

The slack storage housings are available in two versions. The PWH-SSH-02-06P unit supports the PWH-02P, -04P, and -06P wallmount housings. The PWH-SSH-12P unit supports the PWH-12P wallmount housing. Both slack storage housings accept up to eight Type 2 or four Type 4 splice trays.

Before proceeding with the cable installation, determine how the cable will be routed in the SSH. Cable entry location is dependent upon the type of cable being installed and the location of the housing on the wall. Make sure there are no obstructions that would prevent the door on the SSH from opening. The unit can be mounted on the wall so the door swings to either the left or the right.

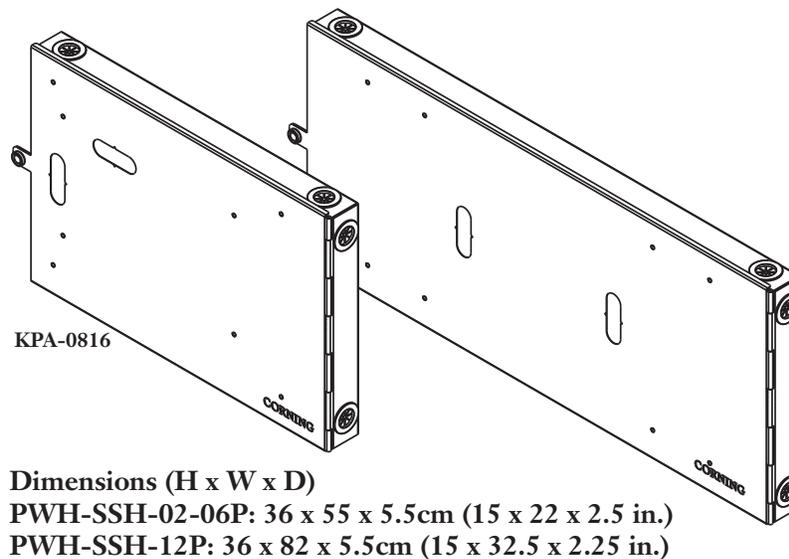


Figure 1 — Dimensions of Slack Storage Housings

2. CARTON CONTENTS

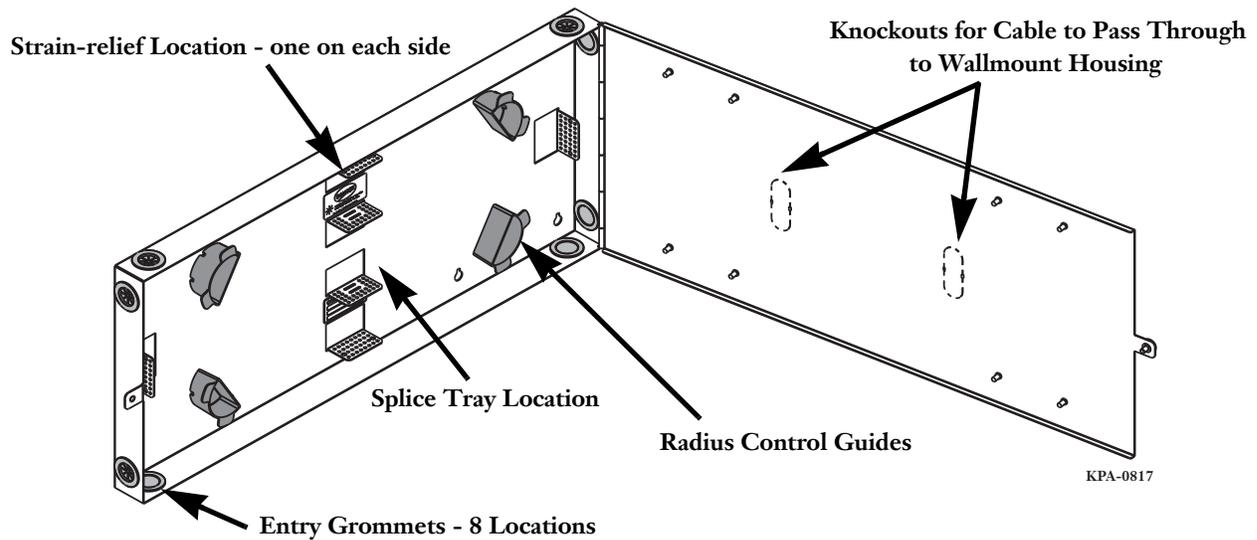


Figure 2 — Components of Slack Storage Housing

- Slack Storage housing (p/n PWH-SSH-12 shown)
- Hardware kit containing:
 - (4) 10-32 x .3125 Phillips-head screws
 - 1 foot of Serrated grommet strip
 - (6) Cable ties
 - (1) Module label
- Central Member Strain-relief kit containing:
 - (1) #10-24 x .75 Carriage bolt
 - (1) Splice shelf clamp
 - (1) Wing nut
 - (2) M6 washers

3. TOOLS AND MATERIALS REQUIRED

3.1 Tools

- Phillips-head screwdriver
- Slotted screwdriver
- Needle-nosed pliers
- 216B tool (can wrench) or $\frac{3}{8}$ -inch nutdriver
- Cable knife
- Pen or pencil

3.2 Materials

- Splice trays
- Heatshrink fusion splice protectors (p/n 2806032-01, package of 50, 40 mm long)
- Optical Fiber Access Tool (p/n OFT-000) to split buffer tubes and access individual fibers in ALTOS® cable
- Ideal™ Buffer Tube splitter (p/n 100107-01) to split endspan buffer tubes

4. INSTALLATION

4.1 Mounting

Step 1: Open the front door of the unit using the can wrench. Using the housing as a template (Figure 3), ensure the unit is square and mark the locations for the mounting hardware. Install appropriate anchors (not provided) to the surface to which the housing will be attached. Use shims (not provided) on uneven surfaces to ensure the housing is square and to prevent warpage.

PWH-SSH-02-06P: 41 cm (16 inches)
PWH-SSH-12P: 76 cm (30 inches)

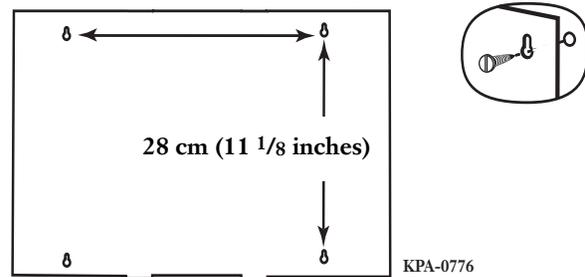


Figure 3 — Mounting Hole Locations

- Step 2:** Install mounting bolts or screws leaving a 1/8-inch gap between the mounting surface and screw or bolt head.
- Step 3:** Slide the housing onto the screws through the keyhole openings in the rear of the housing and tighten.
- Step 4:** Determine cable entry location into the housing and pierce the appropriate entry grommet as illustrated in (Figure 4).

Use a pair of needle-nosed pliers or a pencil to pierce the grommet. Do NOT use a knife or cutters. The grommets must fit tightly to prevent the intrusion of foreign particles.

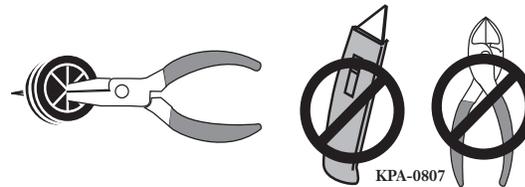


Figure 4 — Pierce Entry Grommet

4.2 Prepare Cable

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 than can alter the transmission characteristics of the cable; the cable may have to be replaced.*



CAUTION: *Wear safety glasses to protect your eyes from accidental injury when handling chemicals and cutting fiber. Pieces of glass fiber are very sharp and can damage the eye easily.*



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.*

IMPORTANT: *Typical lengths are illustrated. Since the actual application may vary, it is recommended to route the buffer tubes as they will lie in the housing to determine actual strip lengths before cutting fiber. Do not expose the bare fiber until you are ready to splice.*

Step 1: Remove the cable sheath as described in the sheath removal instructions for the cable you are using (Figure 5).

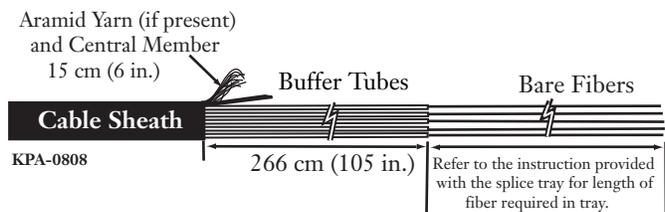


Figure 5 — Recommended Strip Lengths

Step 2: Cut the central member to 15 cm (approximately 6 inches) from the end of the cable sheath using side cutters.

Step 3: If aramid yarn is present, leave approximately 15 cm (6 inches) of yarn for additional strain-relieving.

4.3 Strain-relieve the Cable

IMPORTANT: *If you are installing outside plant cable or temperature fluctuates widely along any part of the cable, the central member must be strain-relieved. Failure to do so may result in damage to the cable as temperature varies. If the entire length of cable is located in a controlled environment where temperature fluctuation is minimal, it is not necessary to secure the central members. The cable can be strain-relieved by sheath retention alone.*

Step 1: Strip 15 cm (approximately 6 inches) of cable sheath to expose the central member, if present. Secure the cable sheath to the bracket using two cable ties.

Step 2: Install the carriage bolt from the back of the strain-relief bracket.

Step 3: Wrap the yarn, if present, in a clockwise direction around the stud on the front of the bracket. Install the U-shaped washer over the bolt.

Step 4: Position the central member over the U-shaped washer.

Step 5: Place the round washers on the bolt over the central member.

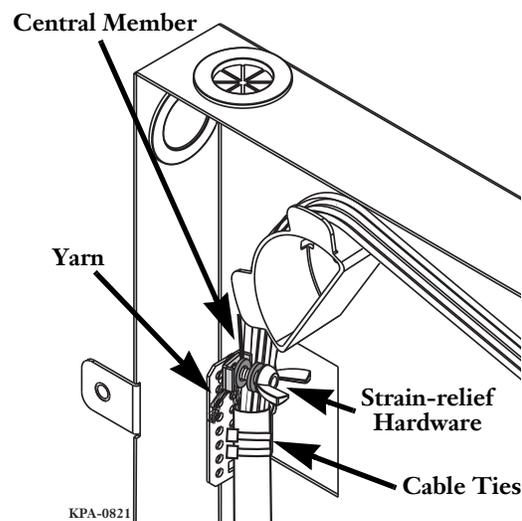


Figure 6 — Central Member Strain-relief

- Step 6:** Attach the wing nut and tighten to secure the central member and yarn (Figure 6). Cut excess central member and yarn.

4.4 Route the Cable

Route the cable around the radius guides and store until later use (Figure 7). Carefully close the door of the housing and secure it using the can wrench.

When the slack storage housing is used in conjunction with a wallmount housing, mount the wallmount housing to the front of the slack storage housing.

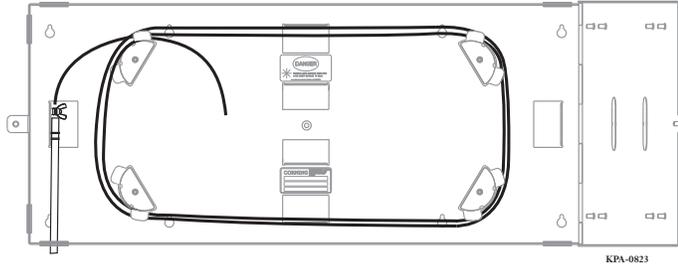


Figure 7 — Store Slack Cable

- Step 1:** Remove the knockouts from the front of the SSH and from the rear of the wallmount housing to allow cable to be routed from the SSH to the wallmount housing.
- Step 1:** Install mounting screws in the locations in front of the SSH shown in Figure 7 leaving a 1/8-inch gap between the screw head and the SSH.

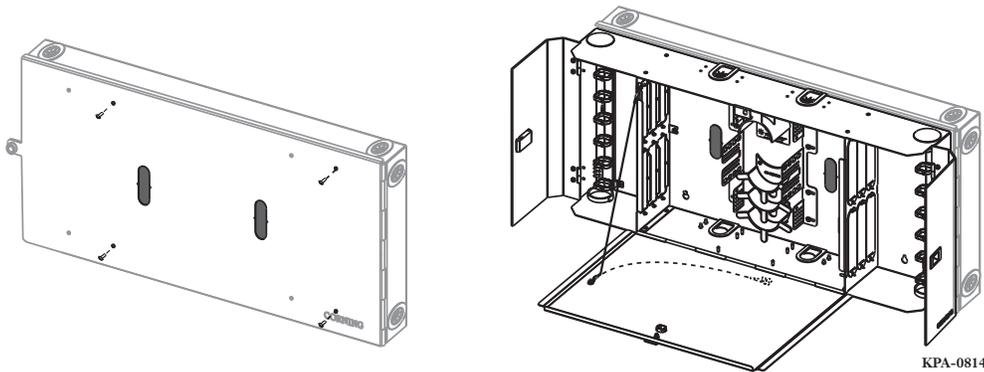


Figure 8 — Mount Slack Storage Housing to PWH Connector Housing

- Step 2:** Hang the wallmount housing on the screws and tighten the screws (Figure 8).

4.5 Using the Unit as a Splice Housing

- Step 1:** Route the pigtails through the knockouts from the wallmount housing into the SSH unit (Figure 9).
- Step 2:** Route the fiber once around the radius guides and to the splice tray. Splice trays are purchased separately. Follow instructions provided with the splice tray and splicing equipment you are using.
- Step 3:** After the fibers have been spliced and stored in the splice tray, place the splice tray in the tray holder.
- Step 4:** Route incoming buffer tubes (shown with solid lines) around the routing guides.

Step 5: Route the pigtail fibers (shown with dashed lines) from the splice tray around the routing guides.

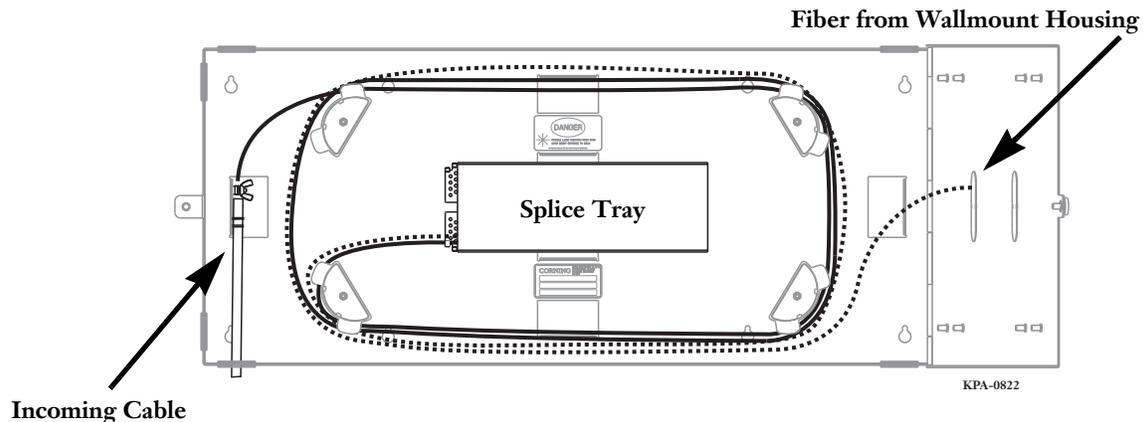


Figure 9 — Install Splice Tray

Step 6: Repeat previous steps for all splice trays. Once all splicing is complete, secure the splice trays using a hook-and-loop strap.

Step 7: Attach the provided label from the kit to the inside of the front door of the SSH. Record fiber identification information on the label. Accurate recordkeeping is imperative to an organized installation.

5. TESTING

5.1 Provisioning Tests

Equipment should be tested from the source (or central office) to receiver at the time of provisioning to verify signal continuity and acceptable loss limits. Use an optical power meter to verify signal continuity and determine loss measurements are within specified local standards.

5.2 Troubleshooting Tests

An optical power meter can be used to perform the first step in troubleshooting. A power meter designed for measuring only dBm power levels is suitable for maintenance purposes.

For high attenuation:

- Remove connector and reclean connector and adapter.
- Verify cable ties are not too tight.
- Maintain appropriate fiber bend radius. Make sure there are no sharp bends.

Once a fault is isolated to the installed cable link, an OTDR (Optical Time Domain Reflectometer) is needed. An OTDR can locate fiber events and measure the losses attributable to cable, connectors, splices, and/or other components. The graphical display of loss over a cable's entire length provides the most revealing analysis and documentation available on a cable link, commonly referred to as its signature trace. Corning Cable Systems recommends performing an OTDR analysis to document the integrity of the cable system, locate and measure each event or component, and uncover faults throughout the cable. Follow the instructions provided with the OTDR tester you are using.

6. MAINTENANCE

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

- External components may be cleaned occasionally with a damp, nonabrasive cloth.
- Check nuts, bolts, and screws; tighten as needed.
- Check fiber optic cable to make sure bends do not exceed the minimum bend radius.
- Check cables for unnecessary strain, for crimping or crushing at entries and exits, and for damage.
- Check unit record labels to make sure all are clear and accurate.

Acronyms

ANSI American National Standards Institute
OTDR Optical Time Domain Reflectometer

Glossary

Aramid Yarn

Strength elements that provide cable tensile strength, support and additional protection of the fiber bundles. Kevlar® is a brand of aramid yarn.

Attenuation

The decrease in magnitude of power of a signal in transmission between points; a term used for expressing the total loss of an optical system, normally measured in decibels (dB) at a specific wavelength.

Buffer Tube

Extruded cylindrical tubes within a cable assembly used for protection and segregation of colored optical fibers.

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Central Strength Member

Any component of a communication cable, metallic or optical, the function of which is to protect the transport medium, i.e., conductor or fiber, from excessive tensile and bending stresses during installation and while in service.

Pigtail

Optical fiber cable that has connector(s) installed on one end.