CORNING

Eclipse® 4U Splice Housing (ECL-D4U)

1.   General

This document describes installation of the Eclipse® 4U splice housing assembly.

2.   Carton Contents

- •   (1) Housing assembly (ECL-D4U)
- •   (1) Hardware kit
- •   (1) Waterfall assembly
- •   (12) Blank panels (ECL-C4U)

3.   Tools and Materials Required

- •   5/16- and 3/8-in nut drivers
- •   Splice trays (recommended part number SCF-ST-077) -
  (the housing will hold up to six 0.4-in or 12 0.2-in splice trays.)
- •   Splicing equipment, as required for your application

4.   Installation

If your unit has factory-installed adapter panels with pigtails pre-installed in the adapters, skip to Section 4.2 to mount the housing in the rack.

4.1   Install Adapter Panels, if Necessary

Step 1:   Remove blank panels from the housing.

Step 2:   Install pigtails into adapters on the rear of the adapter panel.

- •   Remove dust caps from the connector and adapter on the rear of the panel.
- •   Clean the connector end face and the adapter per standard company practices.
- •   Mate the connector into the adapter on the rear side of the adapter panel.

Step 3:   Feed the pigtails through the opening where the blank panel was removed. Secure the adapter panel to the housing with the plungers as shown.

Step 4:   Repeat for remaining adapter panels.

- • Pull both plungers out all the way.

- • Position the two nylon fasteners into the mounting holes

- • Press the plungers on the fasteners.

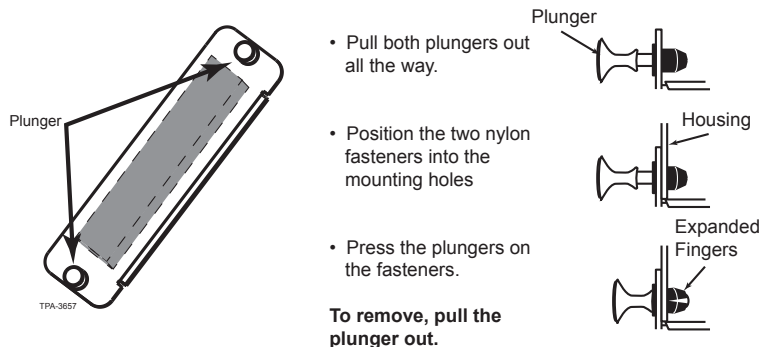**To remove, pull the plunger out.**

Figure 1

4.2   Mount the Housing

The housing can be mounted into a 19- or 23-in equipment rack with EIA-310 universal hole spacing. Before installation, it is necessary to remove the support bar on the front door used for transport purposes. The removed hardware is not part of the necessary elements for operation of the ECL-D4U (refer to Figure 2).
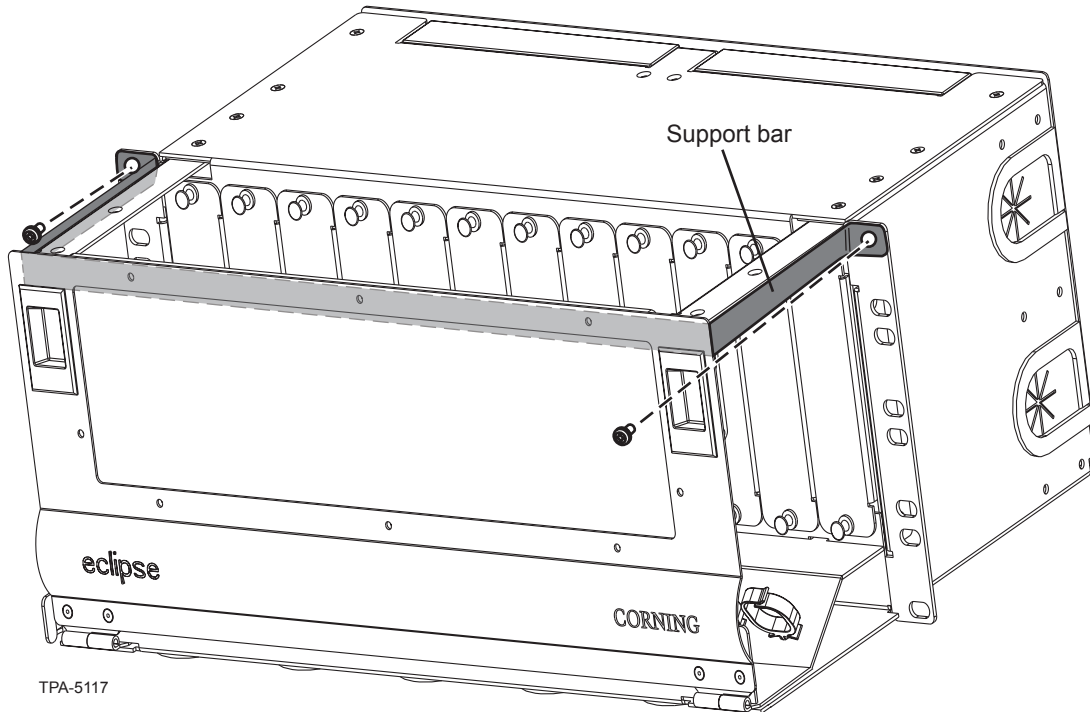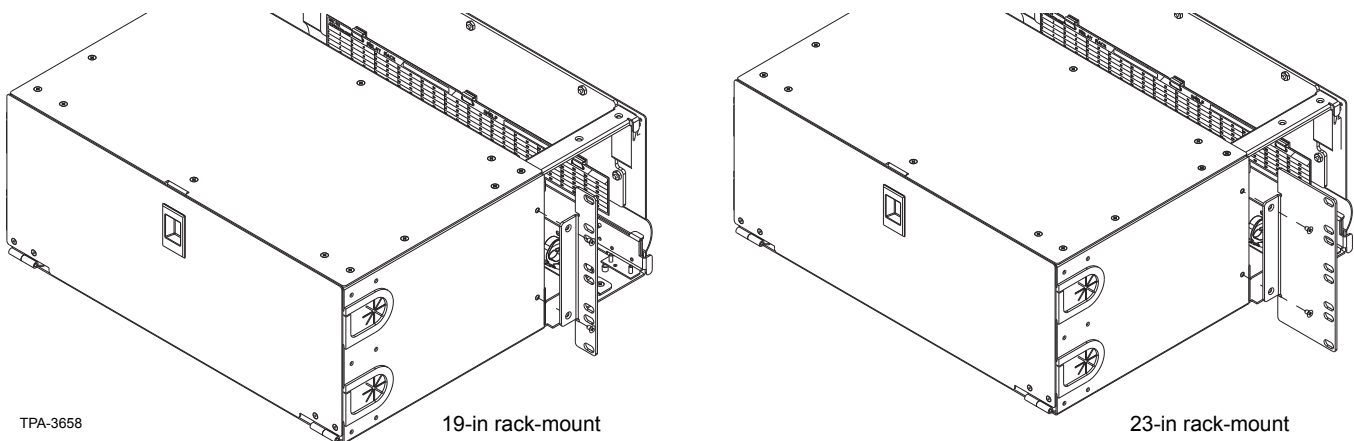

Figure 2

If the unit has panels with adapters and pigtails have preinstalled go to section 4.2 to mount the ECL-D4U on the frame / rack.

Step 1:   Attach the appropriate mounting bracket to the housing using the 6-32 screws provided (Figure 3).

Step 2:   Mount the housing to the equipment rack with the screws provided. (If mounting to an Eclipse® frame, use the 12-24 screws provided.)

19-in rack-mount   23-in rack-mount

Figure 3

4.3 Install Cable

⚠	**WARNING: Never look directly into the end of a fiber that may be carrying laser light.** Laser light can 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 to laser light be suspected, arrange for an eye examination immediately.
⚠	**CAUTION:** Cleaved or broken glass fibers are very sharp and can pierce the skin easily. Do not let these pieces of fiber stick to your clothing or drop in the work area where they can cause injury later. Use tweezers to pick up cleaved or broken pieces of glass fibers and place them on a loop of tape kept for that purpose alone. **Good housekeeping is very important.**
⚠	**CAUTION:** Recommend the use of safety glasses (spectacles) conforming to ANSI Z87 for eye protection from accidental injury when handling chemicals, cables, or working with fiber. Pieces of glass fiber are very sharp and have the potential to damage the eye.
⚠	**CAUTION:** 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.

Step 1:   Remove front and rear doors, if desired (Figure 4).

- To remove rear door, slide it to the left off the hinges.
- To remove the front door, lift lever arm on the left side of the trough and slide door to the left.
- Reverse these procedures to replace the doors.

Step 2:   Determine opening where cable will enter housing.

Step 3:   Puncture or peel away the center section of the grommet (Figure 5).

Step 4:   Prepare cable as described in sheath removal instructions for the cable you are installing. Suggested lengths are provided here. If using the universal cable clamp (UCC) kit for strain-relief, remove the central member and yarn, if present.
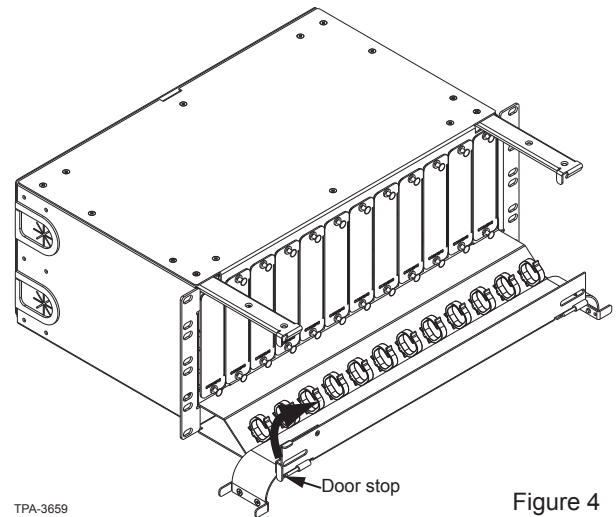
TPA-3659
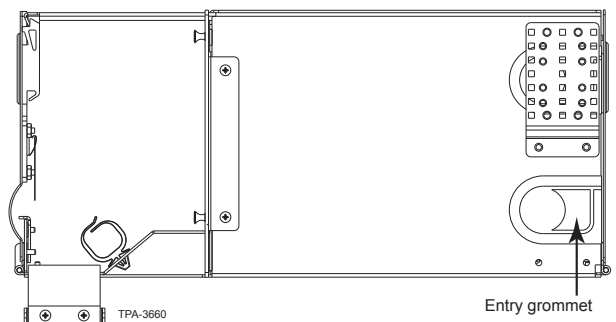
Door stop

Figure 4

TPA-3660

Entry grommet

Figure 5

Step 5: Place spiral wrap around the tight-buffered fiber to manage it as it enters the slack storage area.

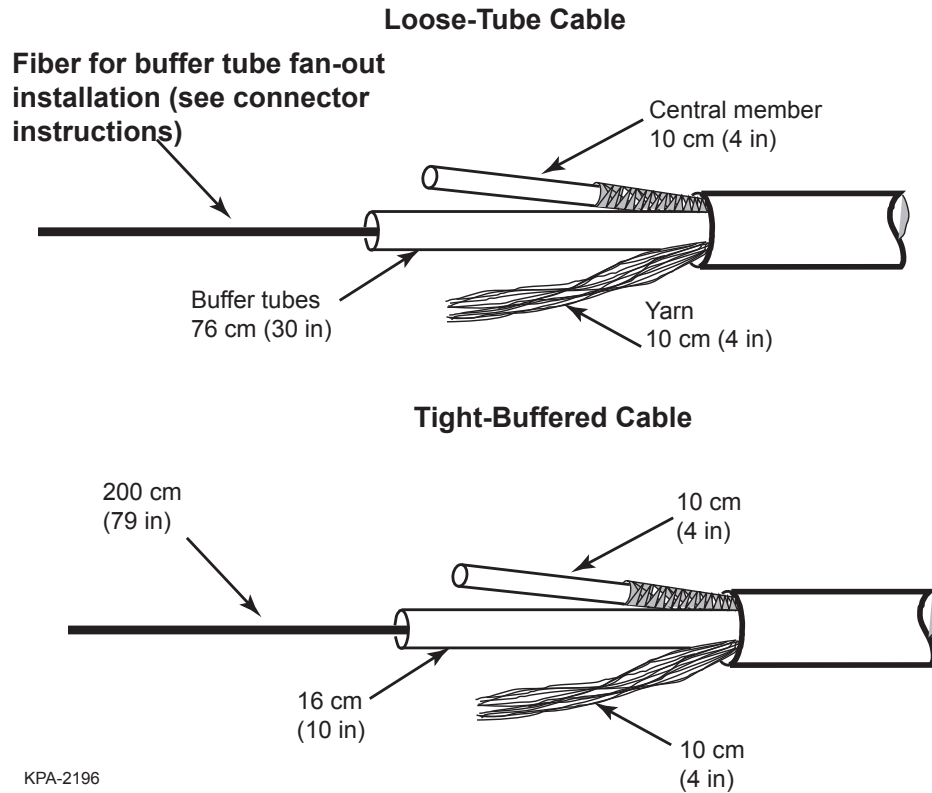**Loose-Tube Cable**

Fiber for buffer tube fan-out installation (see connector instructions)

Central member
10 cm (4 in)

Buffer tubes
76 cm (30 in)

Yarn
10 cm (4 in)

Tight-Buffered Cable

200 cm
(79 in)

10 cm
(4 in)

16 cm
(10 in)

10 cm
(4 in)

KPA-2196

Figure 6

4.4 Strain-relieve Cable

4.4.1 In a Controlled Environment

- If the last 10 m (33 ft) of the cable is located in a controlled environment where temperatures fluctuate very little, it is not necessary to secure the cable strength members (yarn and/or central member). The cable can be strain-relieved using the UCC, as shown in Figure 7.
- When using the UCC, attach the clamshell to the strain-relief bracket before attaching the bracket to the housing. Refer to instructions provided with the UCC kit.
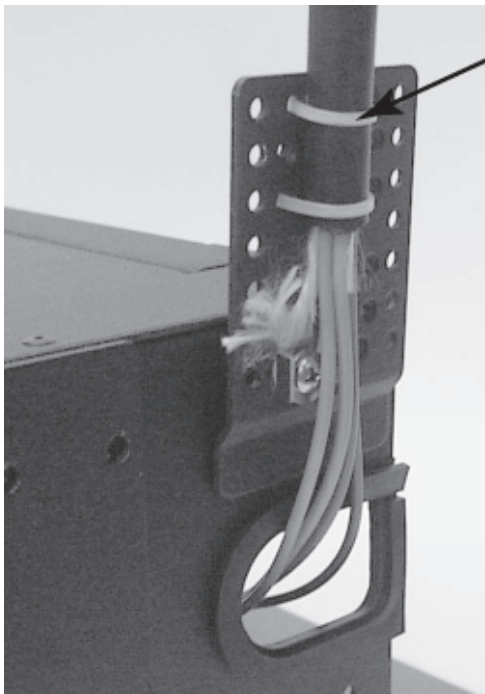
KPA-2197
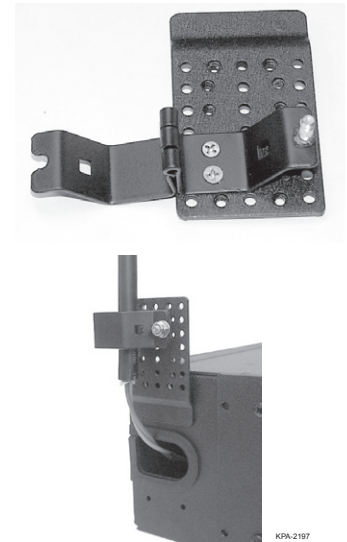
Figure 7

4.4.2 In an Uncontrolled Environment

- If terminating a cable where temperatures fluctuate widely along the last 10 m (33 ft) of the cable, secure the strength members (Figure 8). Failing to do so may result in damage to the cable as temperatures fluctuate.

Attach the cable to the strain-relief bracket with cable ties and components in the strain-relief kit. To attach the bracket to the outside of the unit, insert the studs into the mounting holes on the side of the housing. Make sure to select the correct mounting holes to ensure proper bend radius upon entering the unit. Use the wing nuts provided in the kit to fasten the bracket to the housing.

Both the aramid or fiberglass yarn and the central member are secured with a U-shaped washer and bolt. Insert the metallic central member between the U-shaped washer and the M6 flat washer. Wrap yarn between the U-shaped washer and the side of the bracket. Tighten the nut.

KPA-2198
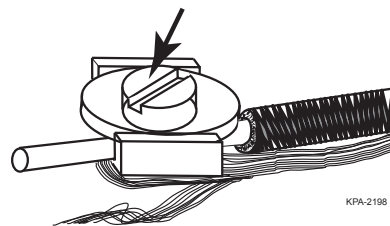
Figure 8

4.5 Splice Pigtails

Step 1: If not already installed, install the pigtails as described in Section 4.1.

Step 2: Splice the pigtail to the fiber from the cable per the instructions provided with the splicing equipment and the splice tray.

Step 3: Store each splice tray on the sliding sub-plate shelf in the rear of the housing as it is completed.

Step 4: Repeat for all splice trays. Secure the completed trays to the sliding shelf with one of the provided hook-and-loop straps (Figure 9).

Buffer tube slack basket
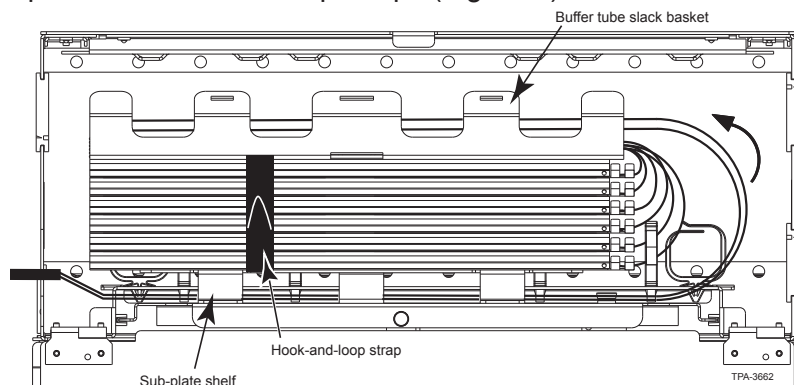
Hook-and-loop strap

Sub-plate shelf

TPA-3662

Figure 9

Step 5: Attach an identification tag to the end of each bundle of pigtails, indicating the number of the panel to which it is attached.

Step 6: Store pigtail slack in routing clips behind the adapter panels as shown in Figure 10.
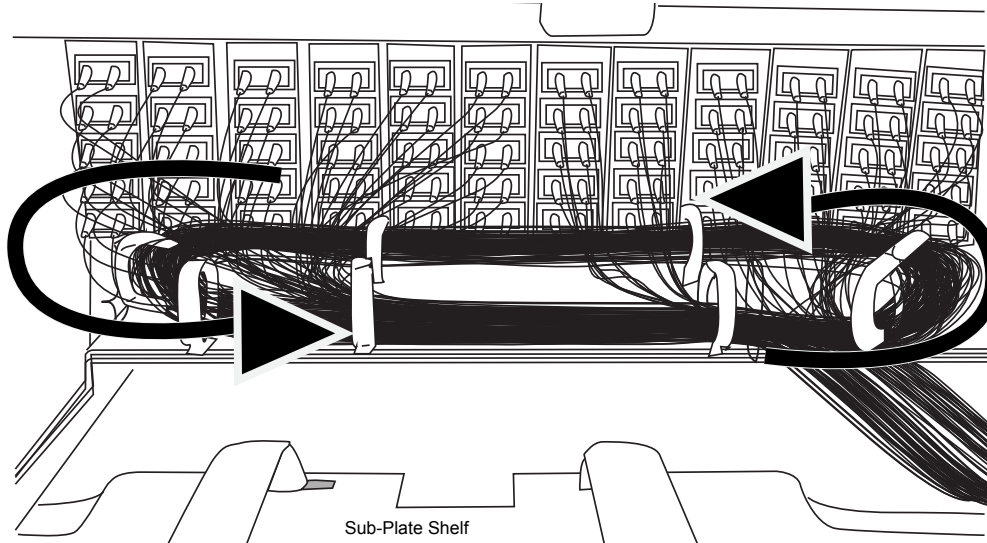

Sub-Plate Shelf

Figure 10

4.6 Store Buffer Tube Slack

Step 1: Install the buffer tube slack basket on top of the splice trays.

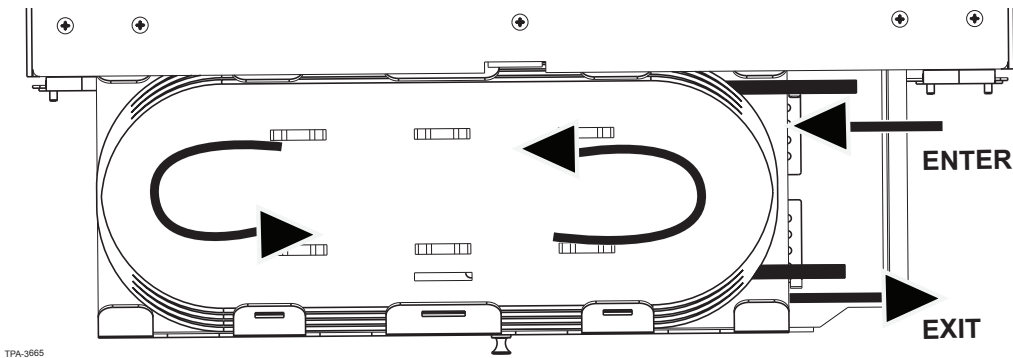**Step 2:** Route the buffer tubes inside the flanges of the basket (Figure 11).

TPA-3665

ENTER

EXIT

Figure 11

Step 3: Secure the slack basket to the stack of splice trays with the remaining hook-and-loop strap provided (Figure 12).

Buffer tube slack basket

Hook-and-loop strap

Sub-plate shelf

TPA-3664
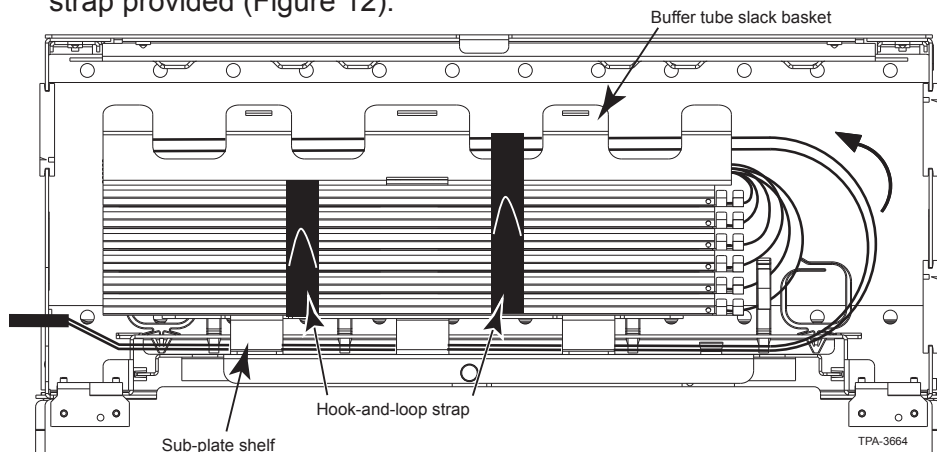
Figure 12

Step 4: Attach a numerical identification tag to each tight-buffered fiber, indicating the connector location on the panel.

NOTE: If it is necessary to remove any excess length of spiral-wrapped fiber, make sure to place new identification tags on the new working length prior to removing the excess.
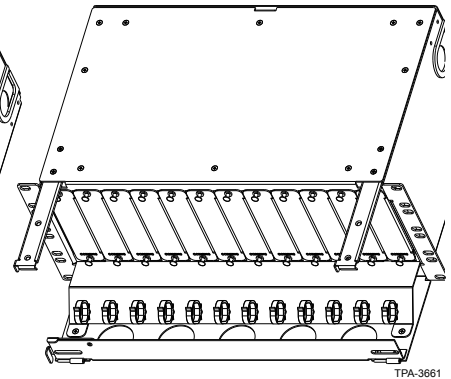
4.7 Install Jumpers

If using a jumper management panel (p/n ECL-JIU, ordered separately), route jumpers through the management panel and down into the D4U housing. Otherwise route jumpers into the housing from either side of the waterfall or in through the ports in the trough floor (Figure 13).
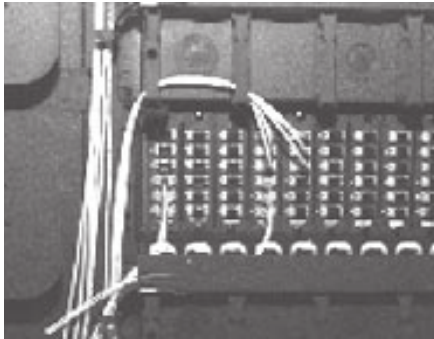
Jumper Management Panel
Installed Above Adapter Panels
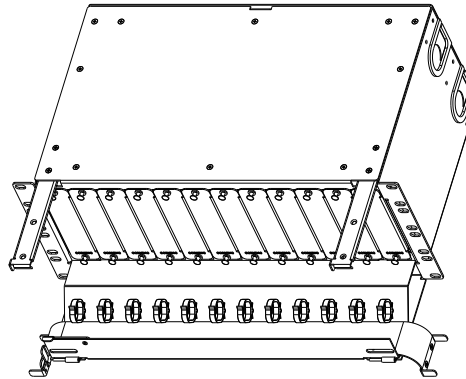
Waterfall Installed
in Trough

No Waterfall;
Jumper Entry Ports Below Panels

Figure 13

Step 1: Install waterfall in the front of the housing using the two screws provided.

Step 2: Route jumpers through the routing clip below the applicable adapter panel. Or route jumpers through the jumper management panel, if installed.

Step 3: Clean the adapters and connector end faces. Mate the connectors in the adapters.

Step 4: Record an identifier for each connection on the flip cards located on the front door, either by writing directly on the card or by using computer-printed labels.