



SYSTIMAX® iPatch® 600B Shelf with Faceplate Instructions

General

The **iPatch**® 600B shelf with faceplate is a **SYSTIMAX**® approved product. This distribution shelf provides for connection of non-metallic Outside Plant (OSP) cable or Lightguide Building Cable (LGBC) to 12 **iPatch** SC duplex fiber ports or 24 **iPatch** LC duplex fiber ports either by direct termination or splicing. Designed for use in an **iPatch** system, this shelf is one unit high and can be mounted in a standard 19-inch rack with a universal hole pattern. This shelf slides out for easy access.

Note: To use the **iPatch** 600B shelf in an existing **iPatch** system, the network manager and rack managers must be running software version 6.03 or later. The System Manager software, used to manage the system, must be Version 6.2 or later. We recommend that you upgrade the System Manager software to Version 6.2 or a later version before you install the shelf. System Manager will automatically upgrade the **iPatch** Manager software.

Ordering information is listed below:

Material ID	Part No.	Description
760005629	iP-600B-12-SC-MMF	600B sliding multimode intelligent fiber shelf, SC 12 port duplex
760080895	iP-600B-12-CSC-SMF	600B sliding SC Single-mode intelligent fiber shelf, 12 port duplex

How to Contact Us

- To find out more about **CommScope**® products, visit us on the web at <http://www.commscope.com/>
- For technical assistance:
 - Within the United States, contact your local account representative or technical support at 1-800-344-0223. Outside the United States, contact your local account representative or Authorized Business Partner.
 - Within the United States, report any missing/damaged parts or any other issues to CommScope Customer Claims at 1-866-539-2795. Outside the United States, contact your local account representative or Authorized Business Partner.

This product is covered by one or more of the following U.S. patents or their foreign equivalents: 6,285,293 and 6,522,737.

Parts List

Verify parts against the parts list below:

Quantity	Description
1	Sliding shelf with the one of the following items installed: sliding fiber tray; iPatch SC duplex fiber faceplate (12 ports) or iPatch LC duplex fiber faceplate (24 ports); 184U1 cover
1	Panel bus jumper
2	Mounting brackets
2	3-inch storage drums
2	Splice organizer holders
2	Adhesive-backed wire retainers
4	#12-24 x 3/8 inch screws for mounting the shelf
2	Liquid tight cable fittings with lock nuts
2	Plastic cable tie retainers
2	Cable ties
3	Fiber type labels (8 labels each sheet)
1	Double-sided tape (6 inches / 15.2cm) for mounting splice organizers
1	Instruction sheet

Separately Orderable Components

Material ID	Part No.	Description
700006257	1AF1-16LG	Fusion splice organizers
700006281	1AMF1-6LG	Mass fusion organizers
700006240	1AM1-12LG	Mechanical splice organizers
760002348	—	1U-17 Patch Cord Trough

Specifications

Fiber Optic Interface

Industry-standard SC or LC

Compatible Fiber Size

Multimode with 50 µm core diameter, such as **LazrSPEED**®

Multimode with 62.5 µm core diameter, such as **OptiSPEED**®

Singlemode with 8.3 µm core diameter, such as **TeraSPEED**®

Environmental Data

Temperature: -40° F to 158° F (-40° C to 70° C) (storage)

Range: 14° F to 158° F (-10° C to 70° C) (operational)

Humidity: : 95% noncondensing



Important Safety Cautions

- To reduce the risk of fire, electric shock, and injury to persons, read, understand, and adhere to the following instructions as well as any warnings marked on the product.
- Remote risk of electric shock. Never install the product in wet locations or during lightning storms. Never touch uninsulated communication wires or terminals.
- Disconnected optical components may emit invisible optical radiation that can damage your eyes. Never look directly into an optical component that may have a laser coupled to it. Serious and permanent retinal damage is possible. If accidental exposure to laser radiation is suspected, consult a physician for an eye examination.
- Wear safety glasses to install the shelf. Although standard safety glasses provide no protection from potential optical radiation, they offer protection from accidental airborne hardware and cleaning solvents.

Precautions

- Fiber optic trunk cable and jumper performance is sensitive to bending, pulling, and crushing. Minimum bend radius must be maintained during installation per the manufacturer's specification. Appropriate pulling socks must be used during installation, and pulling forces shall not exceed manufacturer's recommendations. MPO terminated trunk cables may use ribbonized fiber optic cable, which has a preferential bend axis. Use caution to avoid kinking trunk cables.
- **iPatch** high density fiber MPO adapters are equipped with protective dust caps installed in the front of all adapters.
- Prior to installation, clean the trunk cable and jumper connectors per the manufacturer's recommendations.
- All wiring that connects to this equipment must meet applicable local and national building codes and network wiring standards for communication cable.
- Care should be taken not to compromise the stability of the rack by installation of this equipment.
- **iPatch** high density MPO fiber shelves are for use in restricted access areas only.



IMPORTANT

- **SYSTIMAX 360 iPatch 600B** shelves use infrared sensing technology and should be installed where they are not exposed to direct sunlight or other infrared sources.

Save these instructions.

Step 1 – Applying the Fiber Type Labels (LC Faceplate Only)

When installing a shelf with an LC faceplate, apply one of the color-coded labels provided to each connector module to indicate the type of fiber optic cable to be used for the module. Place the label just below the connectors (Figure 1).

Refer to the table below to select the appropriate color of label for each module.

Color	Fiber Type
Aqua	Multimode with 50 μm core diameter— LazrSPEED [®]
Beige	Multimode with 62.5 μm core diameter— OptiSPEED [®]
Blue	Singlemode

Note: If you are unsure what type of fiber optic cable will be used for each module, you can apply the labels later, after the shelf has been installed and the cable has been connected to the back of the modules.

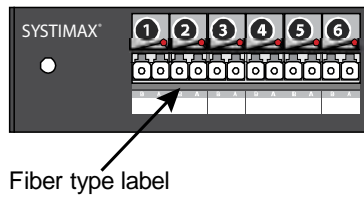


Figure 1 Applying the Fiber Type Labels

Step 2 – Routing the Panel Bus Jumper

Follow the appropriate set of steps below to route the panel bus jumper in preparation for installing the shelf.

For a sliding shelf:

1. Slide the plastic cover off the shelf.
2. Remove the tape securing the panel bus jumper to the cable support.
3. Route the panel bus jumper with protective corrugated tubing around the end of the sliding rail to the outside of the rail.
4. Snap the corrugated tubing protecting the panel bus jumper into the cable retainer on the outside of the rail as shown in Figure 2.

Position the corrugated tubing so that about 1 inch (2.5cm) of the tubing extends past the end of the cable retainer.

5. Position the exposed ribbon cable of the panel bus jumper in the flat retainers on the outside of the sliding rail as shown in Figure 2.

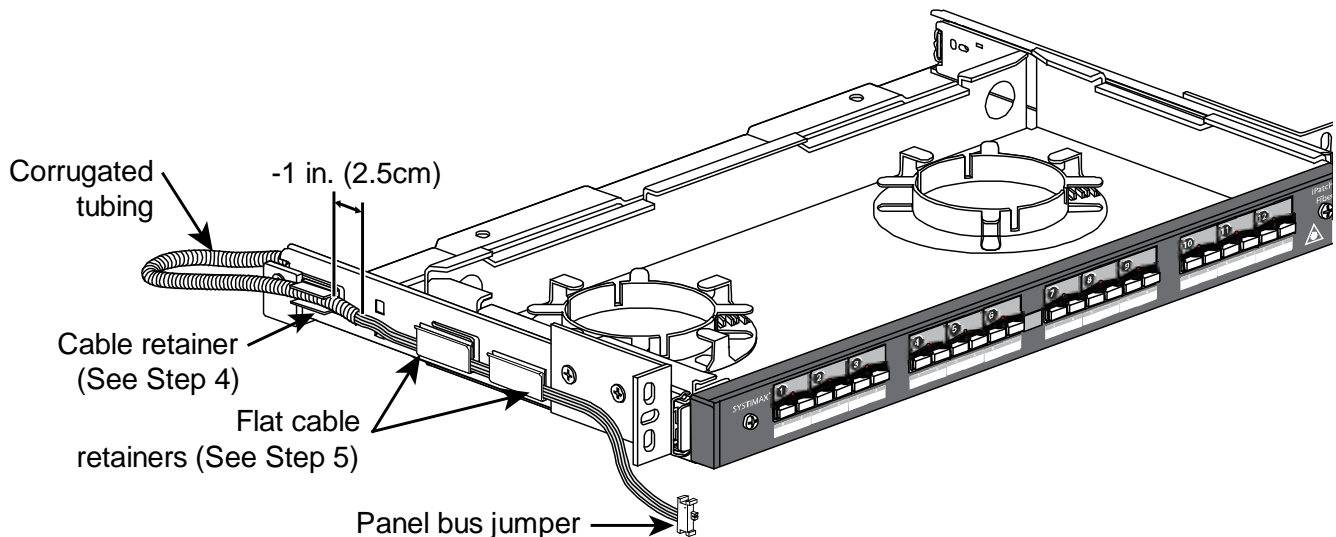


Figure 2 Routing the Panel Bus Jumper for a Sliding Shelf

Step 3 – Installing the Shelf

When installing multiple shelves in a rack, install the lowest shelf first and work toward the top of the rack.

To install the shelf in the rack:

1. Mount the shelf in the rack using the four #12-24 x 3/8 inch screws provided (Figure 3).

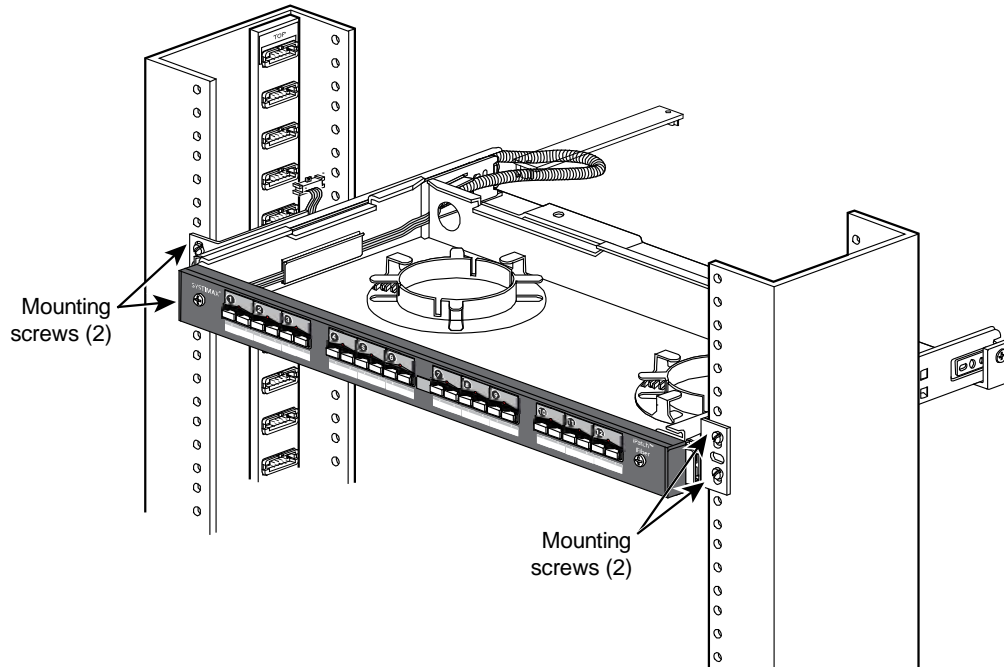


Figure 3 Installing the Shelf in the Rack

2. Connect the panel bus jumper to the nearest connector on the panel bus (Figure 4).

Note: The connector is keyed. The polarized tab on the jumper connector fits into the opening in the header connector on the panel bus.

Important: Make sure that the jumper connector is fully seated in the header connector on the panel bus.

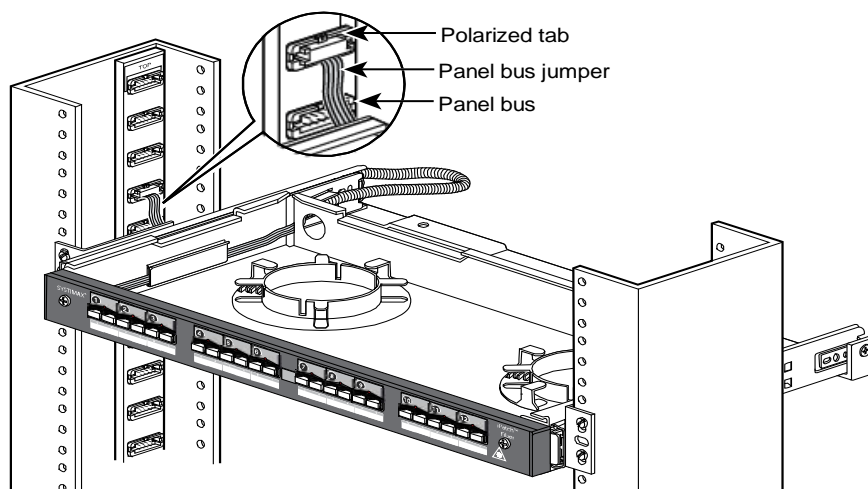


Figure 4 Connecting the Panel Bus Jumper to the Panel Bus

Step 4 – Installing the Patch Cord Trough

A 1U-17 Patch Cord Trough (ordered separately) can be installed for routing patch cords to the faceplate and to serve as a handle for sliding the tray.

To install the patch cord trough:

1. Loosen the two #8-32 x 3/4 inch screws holding the faceplate on the shelf (Figure 5).
2. Position the trough over the faceplate and tighten the two screws (Figure 5).
3. Install an adhesive-backed wire retainer (provided) on each end of the trough as shown in Figure 5.

Note: Each wire retainer can hold up to 6 duplex patch cords.

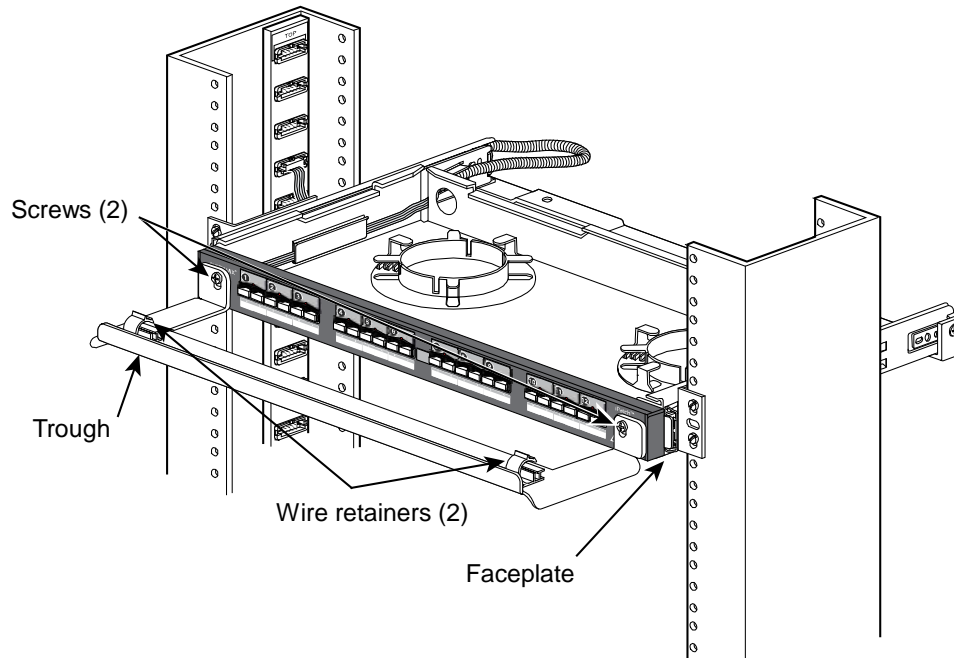


Figure 5 Installing the Trough on the Shelf

Step 5 – Installing Cable

Directions are provided in the sub-sections below for preparing the fiber optic cable and connecting it to the faceplate connectors.

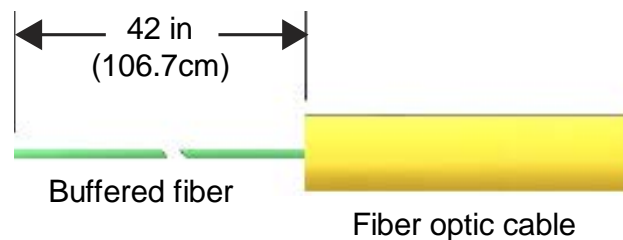


Figure 6 Preparing the Cable for Termination or Splicing

Preparing the Cable for Splicing or Termination

Whether you are splicing or terminating the fiber optic cable, perform the following steps:

1. Prepare the cable as shown in Figure 6.
2. Slide the liquid tight sealing nut and cable fitting onto the incoming fiber optic cable (Figure 7).
3. Position the cable fitting about 1 inch (2.5cm) from the edge of the jacket and tighten the sealing nut onto the cable fitting.
4. Remove the plastic plug from an appropriate cable entry hole in the back of the shelf.
5. Feed the buffered fibers and the jacketed end of the cable through a round hole in the back of the shelf (Figure 7).
Note: When stacking several shelves in the same rack, alternate use of the left and right cable entry holes for routing cables into the shelves.
6. Slide the liquid tight lock nut onto the buffered fibers and the jacketed end of the cable (Figure 7).
7. Hold the liquid tight cable fitting so that the threaded portion is through the hole in the back of the shelf. Then tighten the locknut onto the cable fitting, securing the fitting to the back of the shelf (Figure 7).

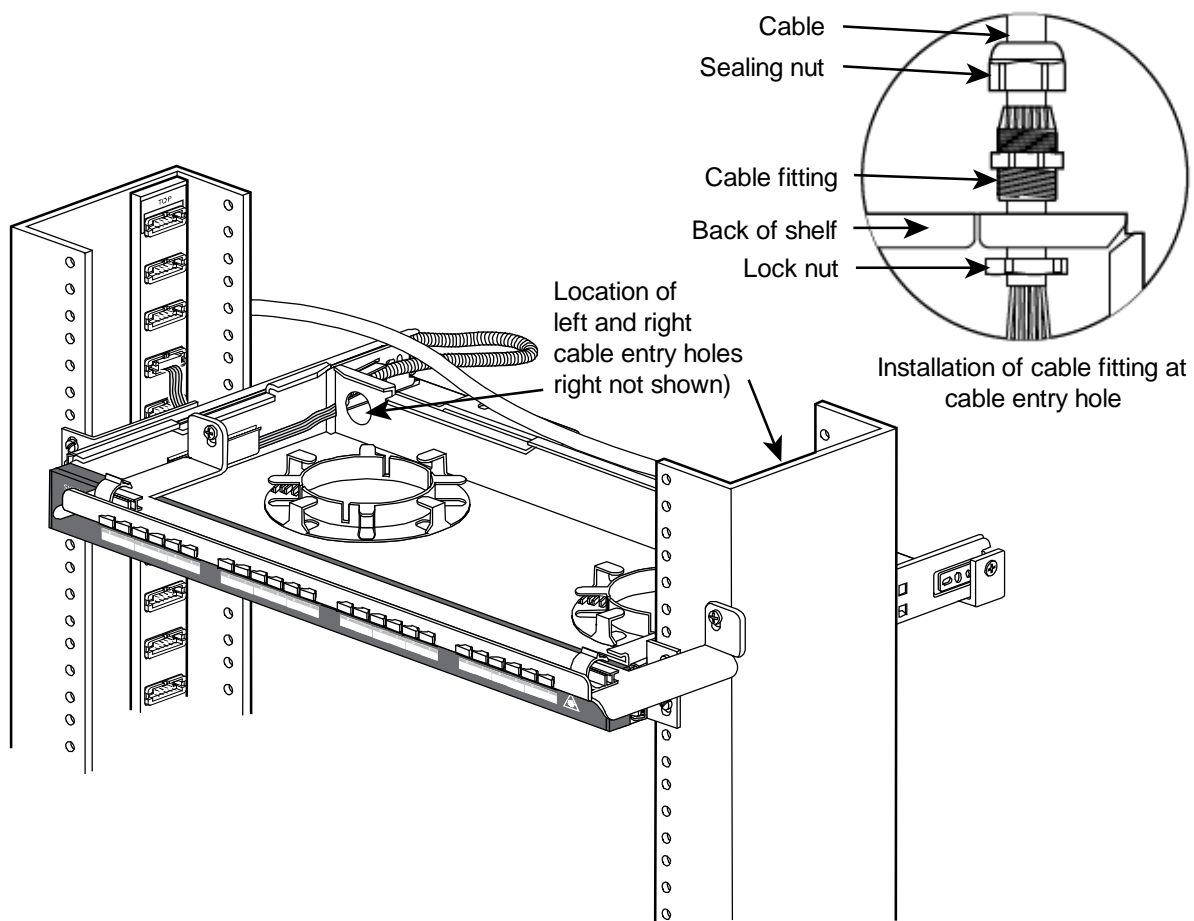


Figure 7 Installing the Liquid Tight Cable Fitting

Prepare the fiber optic cable for connection to the faceplate either by splicing or terminating the cable. For instructions, see “Splicing and Installing the Cable” on page 8 or “Terminating and Installing the Cable” on page 11.

Splicing and Installing the Cable

To install two fusion or mechanical splice organizers (ordered separately) in the shelf:

1. Cut four 1.5 inch (3.8cm) pieces of double-sided tape (provided with the shelf).
2. Apply two pieces of tape to the underside of each splice organizer. Do not cover the slots.
3. Affix the two splice organizers to the shelf approximately in the position shown in Figure 10 on page 9.

If you are using mass fusion splice organizers (ordered separately), you will need to install four splice organizers, using the splice organizer holders (provided).

To install four mass fusion splice organizers:

1. Cut a 3 inch (7.5cm) piece of double-sided tape (provided with the shelf).
2. Apply the piece of tape to the underside of one of the splice organizer holders (also provided with the shelf).
3. Insert two splice organizers into the holder.
4. Affix the holder and splice organizers to the shelf approximately in the position shown in Figure 8.
5. After you have finished splicing the fiber optic cable, stack the four splice organizers as shown in Figure 8.
6. Install the second splice organizer holder (provided with the shelf) as shown in Figure 8 so that it attaches to the bottom holder and secures the splice organizers.

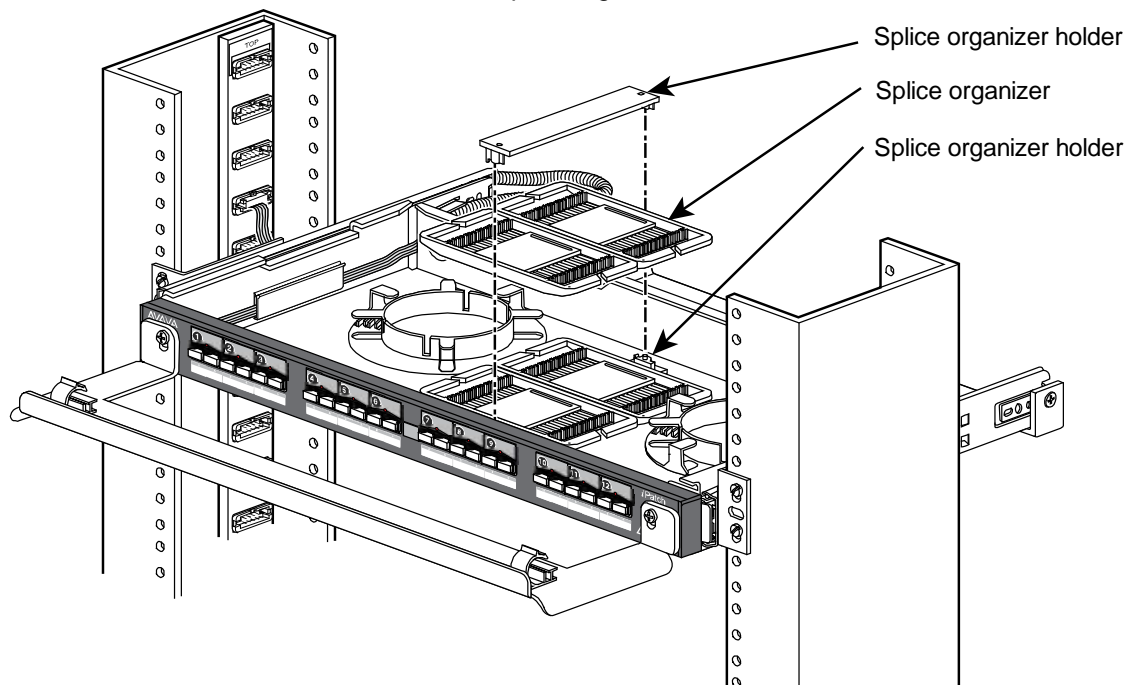


Figure 8 Installing Mass Fusion Splice Organizers Using Holders

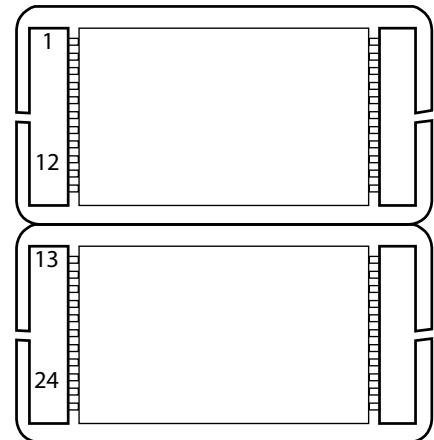
To splice and install the fiber optic cable:

1. On a clean work surface, prepare the incoming buffered fibers for splicing to the fiber pigtail by untangling them and laying them out flat.
2. Using the splicing materials appropriate for the type of splices you are making, splice the incoming buffered fibers to the pigtail.
3. For fusion splices, use your fingers to place the splices in the splice organizers (ordered separately) in the recommended sequence shown in Figure 9.

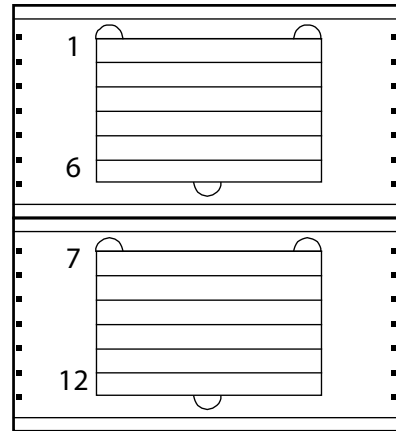
Note: The numbers shown in Figure 9 do not appear on the actual splice organizers.

Note: Each fusion splice organizer has four spare positions.

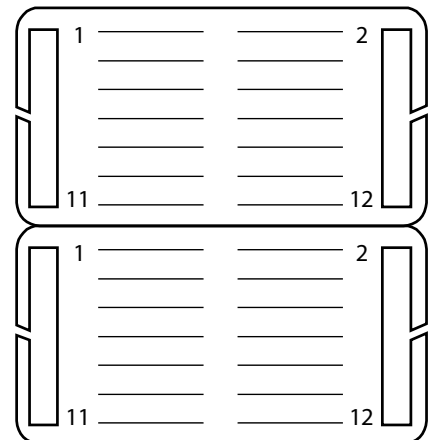
For rotary/ mechanical splices, use a 1012A compression tool to compress the springs on the splices and place the splices in the splice organizers (ordered separately) in the recommended sequence shown in Figure 9.



Fusion splice organizers



Mass fusion splice organizers



Mechanical splice organizers

Figure 9 Splice Sequence for Fusion Mass Fusion and Mechanical Splice Organizers

4. Dress the fibers as shown in Figure 10 and route the slack around the storage drums.
5. Connect the pigtail connectors to the adapters on the back of the faceplate.

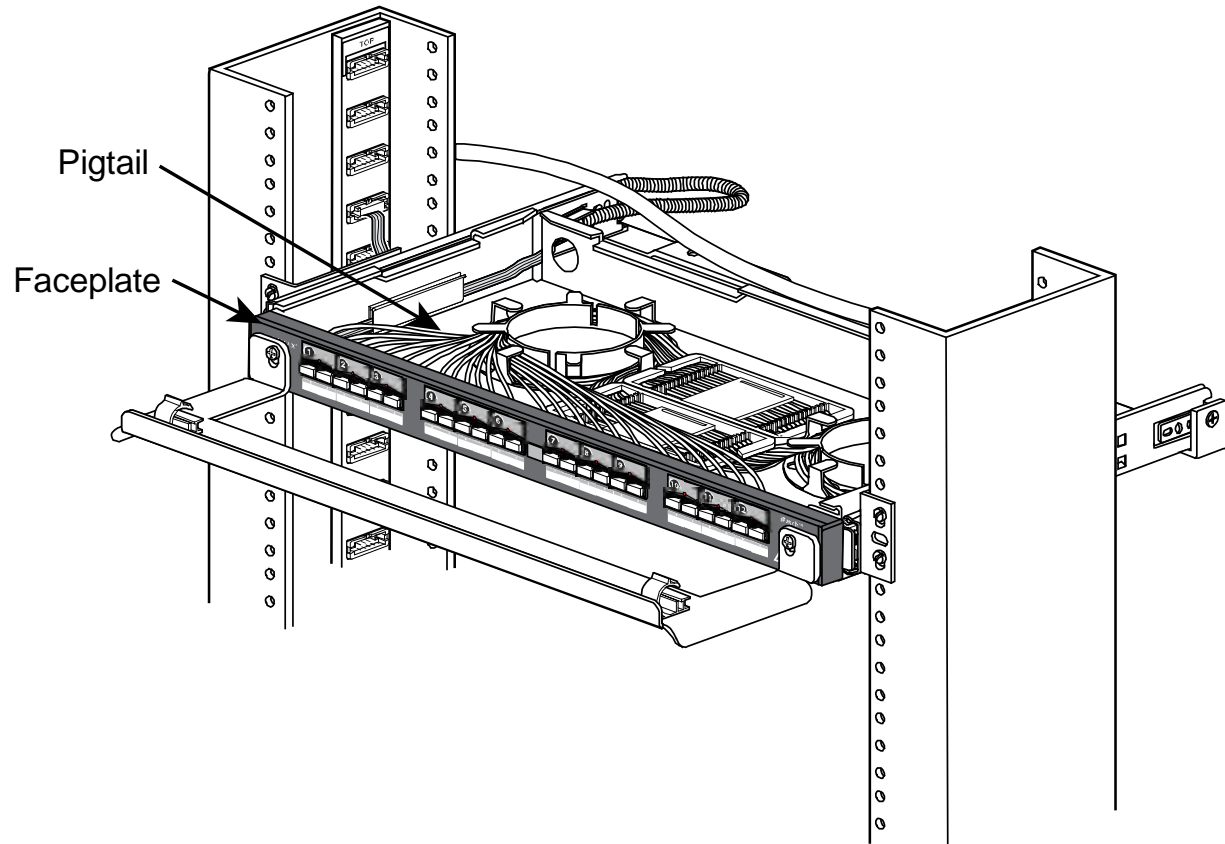


Figure 10 Positioning the Splices and Fibers

Terminating and Installing the Cable

To terminate and install the fiber optic cable:

1. Install appropriate (SC or LC) connectors on the buffered fibers.
2. Affix the 2 adhesive-backed wire retainers to the shelf approximately in the position shown in Figure 11.
3. Route the buffered fibers through the wire retainers and around the storage drums to the adapters on the back of the faceplate (Figure 11).
4. Connect the terminated fibers to the adapters on the back of the faceplate.

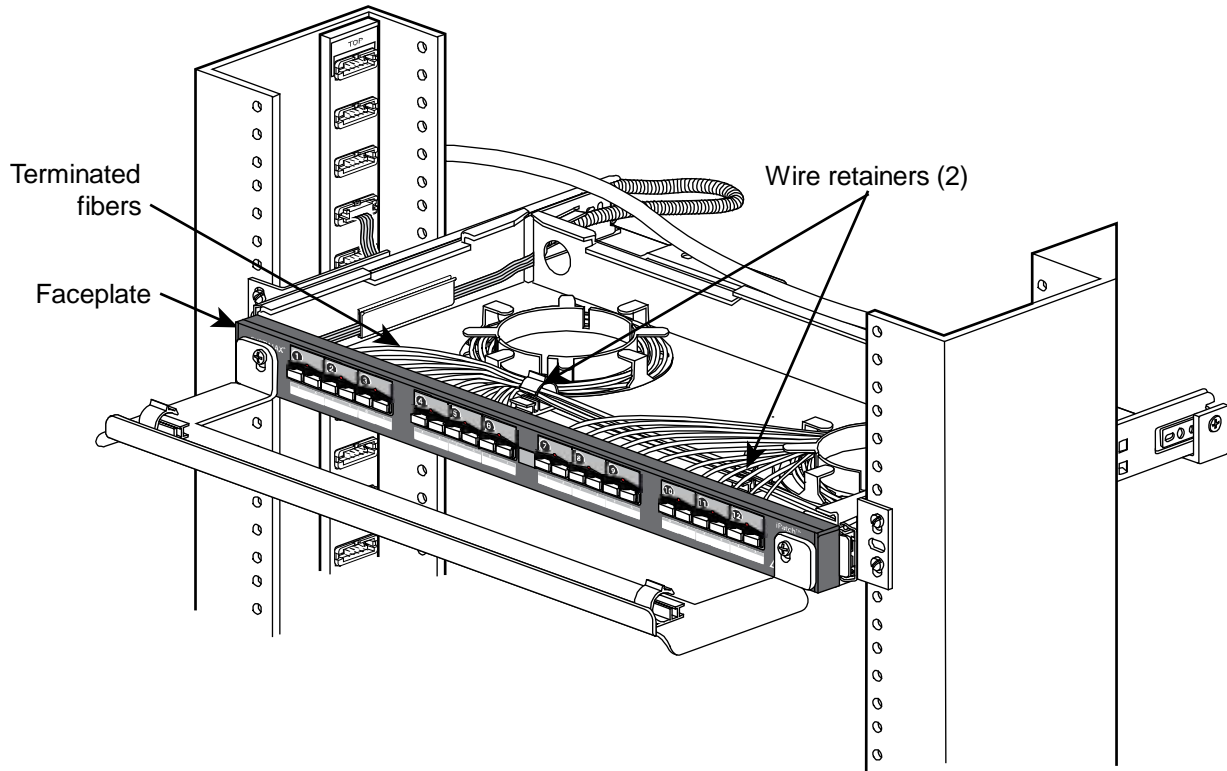


Figure 11 Routing the Terminated Fibers

Securing the Cable:

To secure the incoming fiber optic cable to the back of the shelf and rack:

1. Insert a flat cable tie holder (provided) up through the hole in the cable support on the rear of the shelf on the side opposite from where the cable enters the shelf (Figure 12). For example, if the cable enters the shelf on the right side, use the hole on the left side of the cable support.
2. Insert a cable tie (provided) through the cable tie holder and retain the incoming fiber optic cable to the cable support.

Important: Do not tighten the cable tie completely. Leave enough slack so that the cable moves freely when you slide the shelf out from the rack.

3. Secure the incoming fiber optic cable to the back of the rack approximately 7 inches (about 18cm) above the shelf (Figure 12).
4. Slide the shelf out of the rack and back in, making sure that it slides freely and the panel bus jumper does not bind.

Note: The ribbon cable of the panel bus jumper may slide in the corrugated tubing.

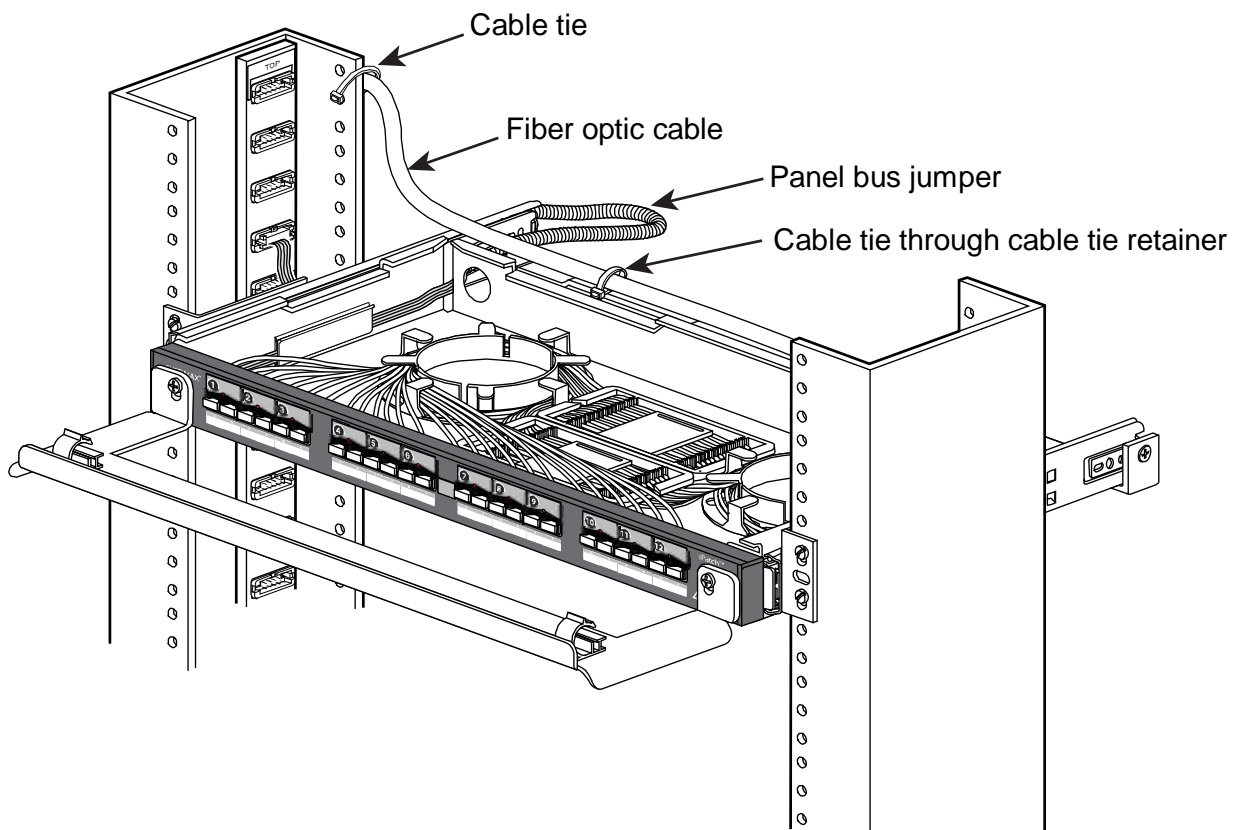


Figure 12 Securing the Cable to the Back of the Shelf and Rack

Step 6 – Checking the Panel Bus Jumper

Make sure that the panel bus jumper is still firmly connected to the faceplate (Figure 13).

Important: The connector is keyed. The polarized tab on the panel connector fits into the opening in the header connector on the back of the faceplate.

Step 7 – Installing the Cover

Install the 184U1 Cover (provided) to shield the shelf from foreign particles. The cover, which is made of clear, flame-retardant plastic, slides on and off the shelf.

To install the cover:

Slide the cover through the flanges on the shelf until the cover reaches the back wall of the shelf (Figure 13).

Important: Dust covers are installed in the ports to protect the fibers connected to the back of the faceplate. Do not remove the dust cover from a port until you connect a patch cord to that port. If you remove a patch cord later, replace the dust cover in the port.

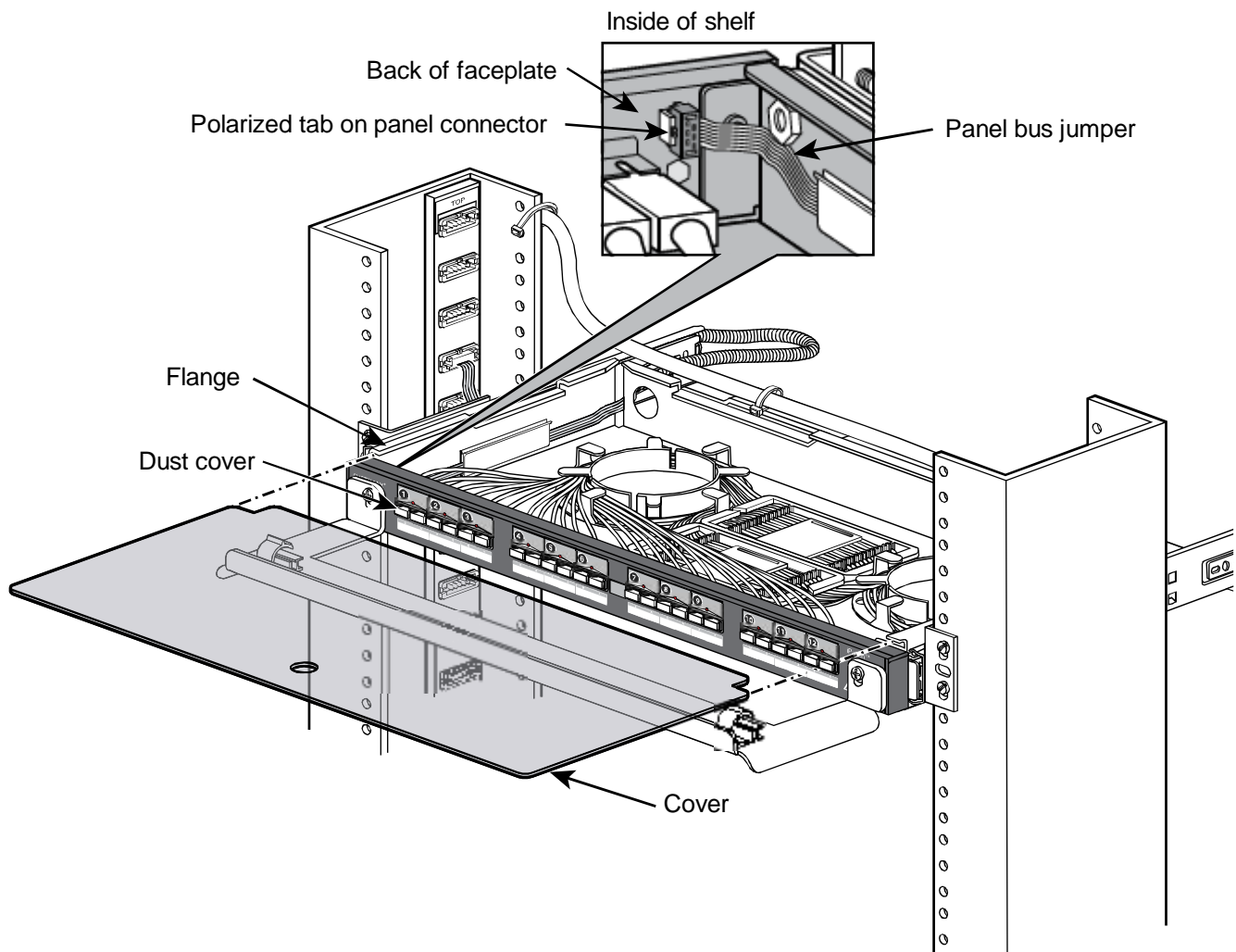


Figure 13 Checking the Panel Bus Jumper and Installing the Cover on the Shelf