

# Installation Guide (Version française de l'autre côté)

Version 05.00 2007

PX100125

# BELDEN

## FiberExpress 48/96 (4U) Patch Panel Assembly NX6F26N Series

1 of 10 pages



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### About This Document

This document contains five (5) installation and maintenance chapters for the FiberExpress 48/96 (4U) Patch Panel Assembly.

Each of the five (5) chapters deals with a specific recommended installation or maintenance task.

This document assumes that you are familiar with procedures, such as fiber cable termination and splicing of optical fiber.

Before starting a procedure, check to make sure that you have the required tools and materials outlined in each chapter.

Briefly review each pictorial procedure to familiarize yourself with the icons and graphic symbols used.

#### Legend



Attention



Repeat



Reference



Step



Direction of action

# BELDEN

## Safety Guidelines and Warnings

### Optical Fiber

The following precautions must be taken when working with optical fibers:

- Safety glasses must be worn when installing optical fibers. Small bits of glass fiber are almost invisible when on the fingers; the hands should therefore always be wiped on a handy-wipe before making any contact with the eyes.
- Handle optical fibers carefully and always position them in a safe and secure location during the installation procedures.
- Do not handle pieces of cut fiber with bare fingers. Use tweezers or sticky side of piece of a tape to pick up and discard any loose fiber ends.
- All fiber cuttings should be placed in a plastic bottle!

**Warning:** If there is any suspicion of a glass chip in the eye, seek medical attention at once!

### Laser Radiation

Optical fibers transmit laser radiation of sufficient magnitude to cause injury to personnel and caution must be exercised to avoid exposure. This caution applies to any point in the system where the laser signal can be "accessed" (for example, at bare fiber ends).



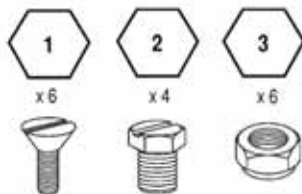
A caution label is located on the cabinet door.

## 1. Installation Preparation

### Tools

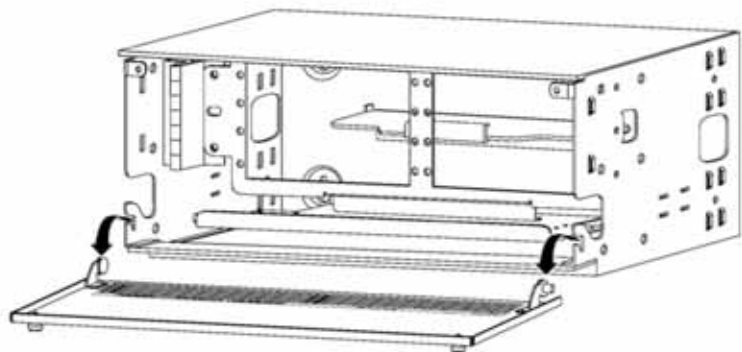


### Materials

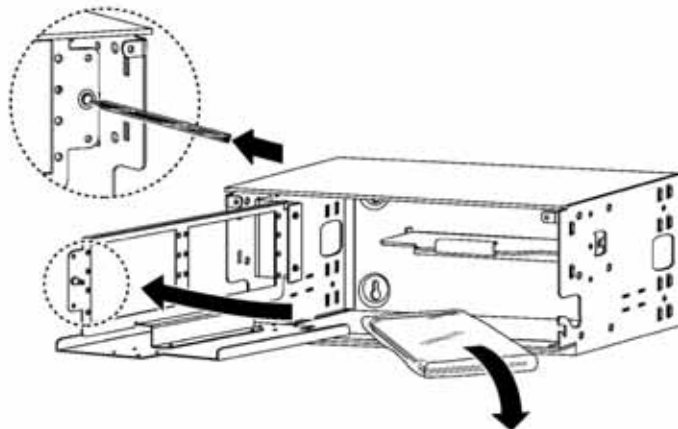


Qty.	Identification	Description
2	PX100117	FPPA mount universal- <b>Grey</b>
	-OR-	
2	PX100118	FPPA mount universal- <b>Black</b>

### 1.1 Unscrew, and remove the door.

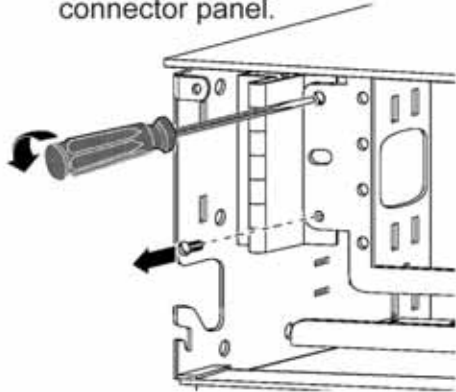


### 1.2 Open connector panel and remove stored parts.

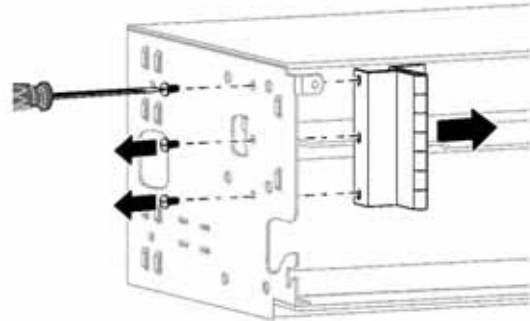


**1.3.** Reverse connector panel orientation (optional). For default panel orientation, go to step 1.4.

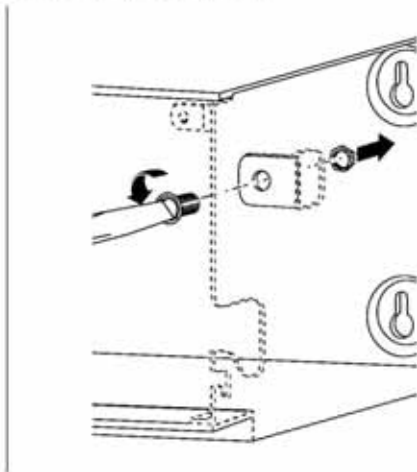
**1.3a.** Remove the hinge from the left side of the connector panel.



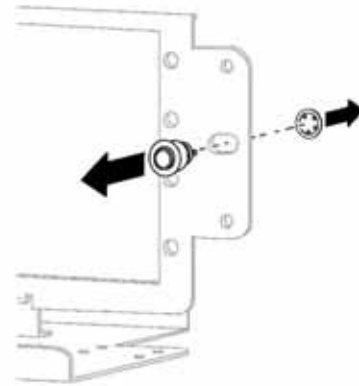
**1.3b.**



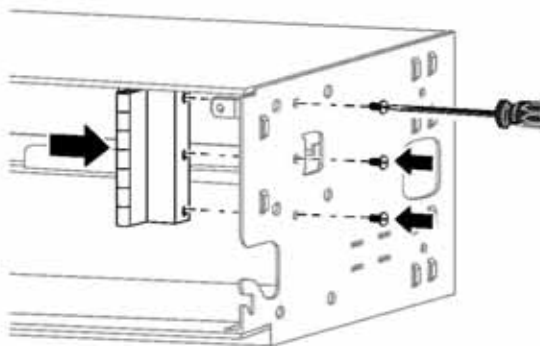
**1.3c.** Remove flush button receptacle from the right side of the chassis.



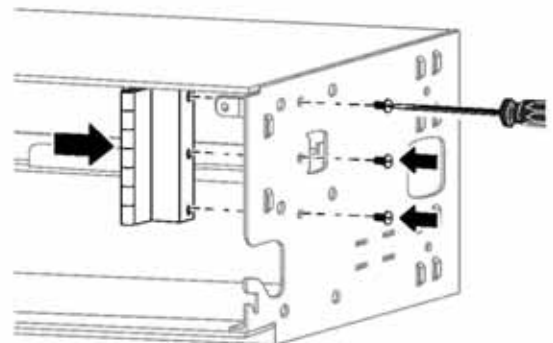
**1.3d.** Remove the flush button fastener from the right side of the panel.



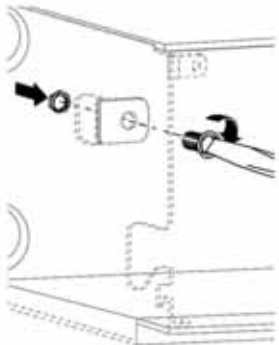
**1.3e.** Install the hinge on the right side of the connector panel.



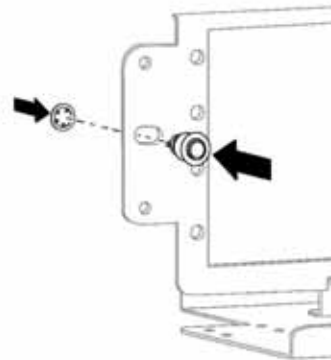
**1.3f.**



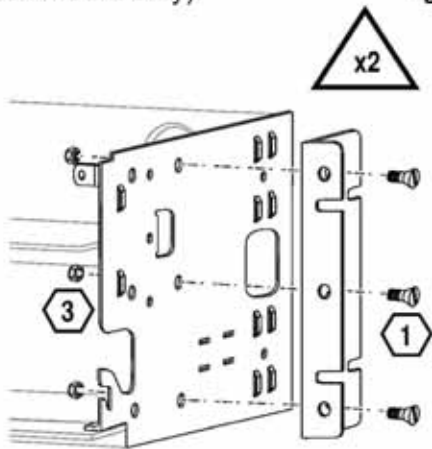
**1.3g.** Install flush button receptacle on the left side of the chassis.



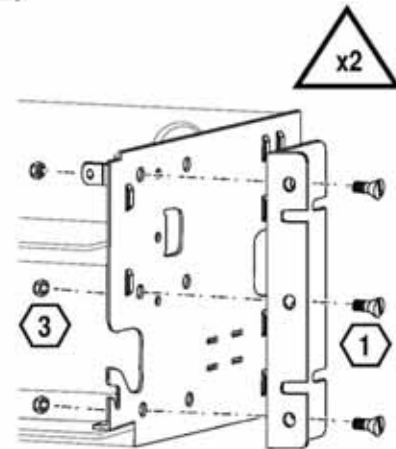
**1.3h.** Using the new lockwasher (supplied), Install the flush button fastener on the left side of the panel.



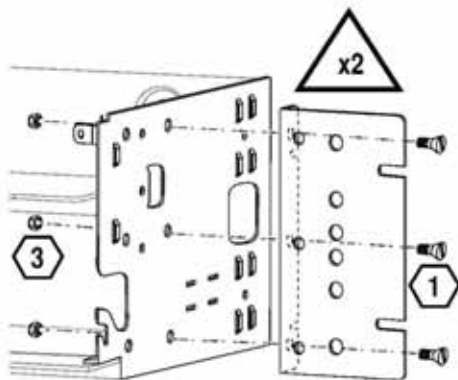
**1.4** Install universal mount adapters (for rack mount only).



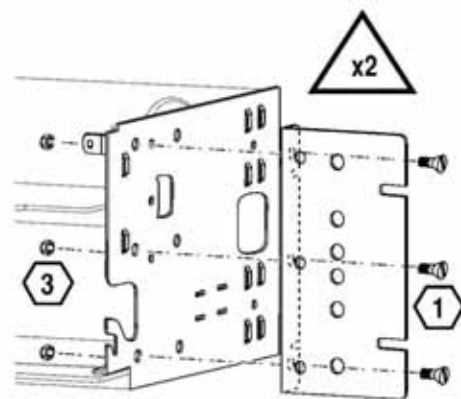
19 in. frame  
at 12.7 cm (5 in.) from the front



19 in. frame  
at 5 cm (2 in.) from the front



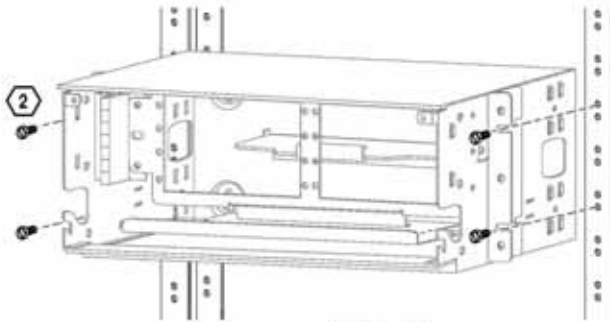
23 in. frame  
at 12.7 cm (5 in.) from the front



23 in. frame  
at 5 cm (2 in.) from the front

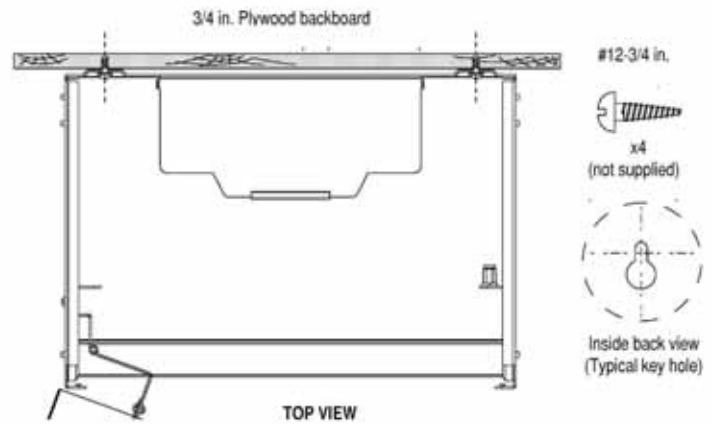
## 2. Installing the cabinet

### 2.1. Rack mount installation

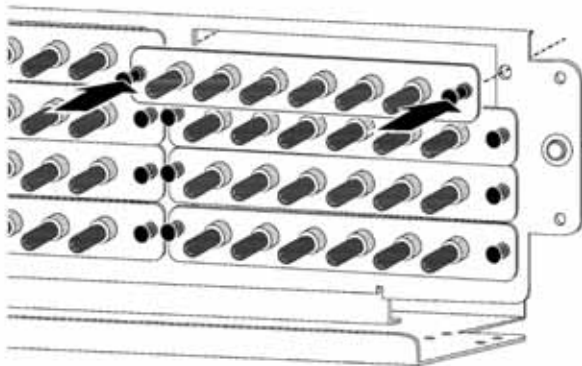


Go to step 2.3

### 2.2. Wall mount installation

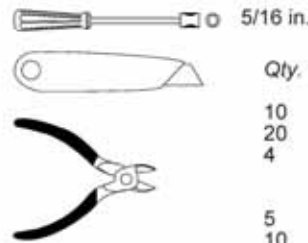


### 2.3. Install adapter strips on the connector panel.



## 3. Cable Preparation

### Tools

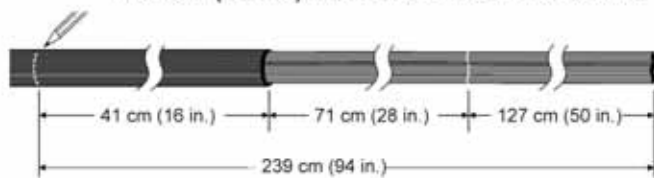


### Materials

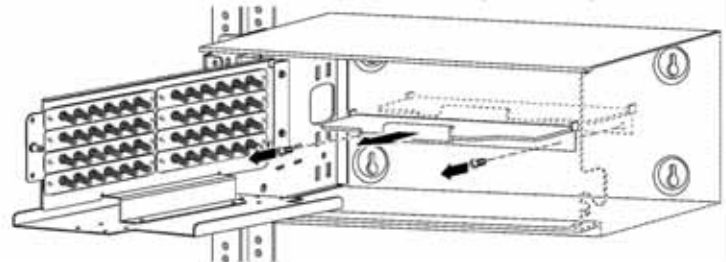
Qty.	Identification	Description
10	P0633702	Tie wraps (large)
20	P0633701	Tie wraps (small)
4	P0719431	Cable tie mounting base
5	P0574174	Kurly ties (small)
10	P0719158	Kurly ties (large)
1	P0831413	FPPA label
1	P0690721	Caution label

### 3.1. Distribution cable and/or Break-out cable

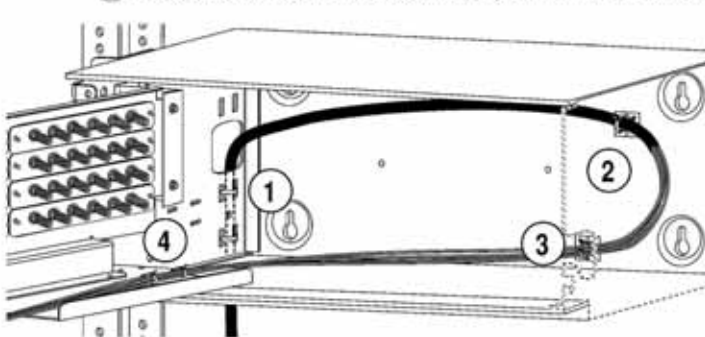
#### 3.1a. Measure and remove cable outer sheath, 198 cm (78 in.) from the end of the cable.



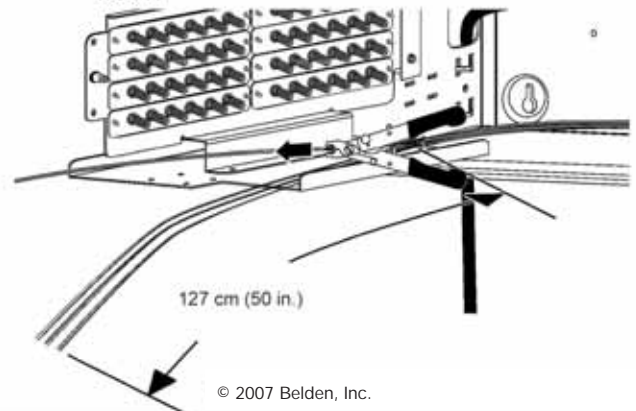
#### 3.1b. Remove splice organizer tray support for field-mount connectors (optional).



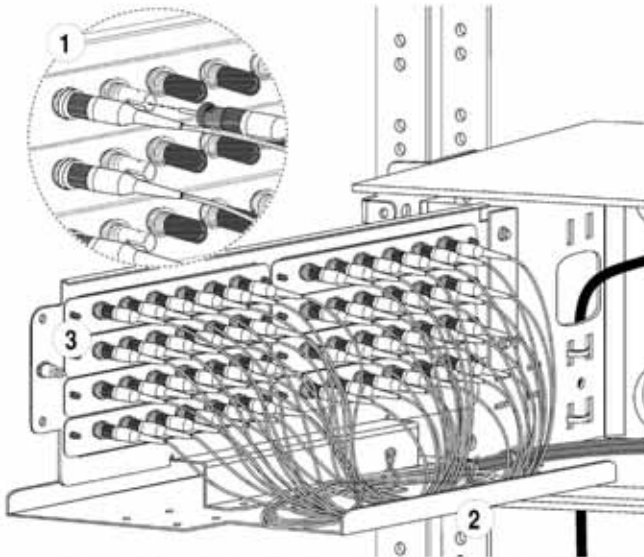
- 3.1c. ① Secure cable entry outside the panel with two tie wraps at the location of the first pen mark.  
 ② Secure cable at locations 2,3 and 4 as shown.



#### 3.1d. Remove inner sheaths to expose buffered fiber.

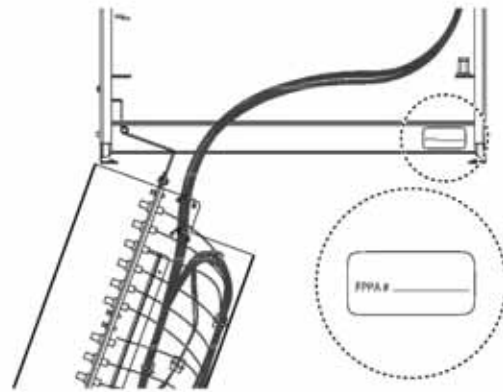


- 3.1e. ① Terminate each of the fibers with the field-mount connectors such as Optimax (A0408837 for ST or AX100028 for SC).
- ② Wrap the excess fiber on the support trap using kurly-ties as shown.
- ③ Install the connectors into the adapter sleeves one by one starting from the bottom row to the next one above.

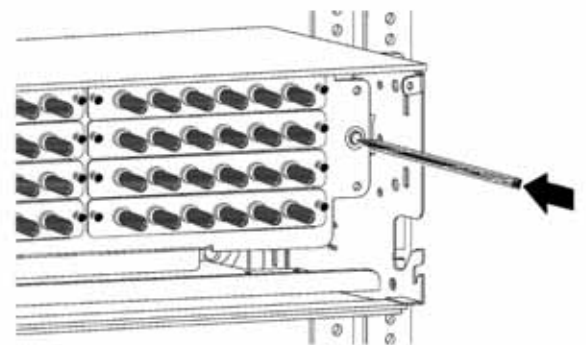


**Note:** Remove the dust caps from the adapter sleeve and the connector respectively.

3.1f. Install the FPPA label.



3.1g. Close the connector panel.



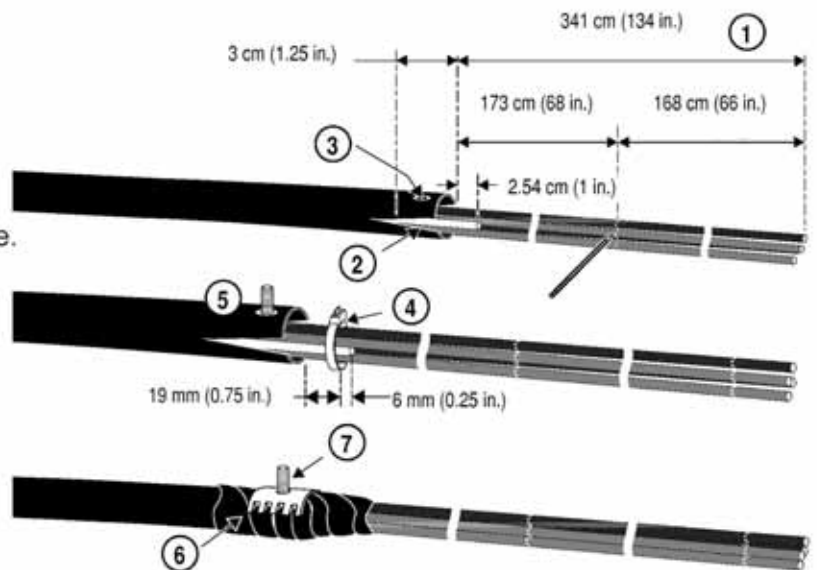
3.2 Campus cable

- 3.2a. ① Measure and remove outer sheath 341 cm (134 in.) from the end of the cable.
- ② Make two (2) slits in the cable center of either side.
- ③ Punch a hole through the cable sheath top center.
- ④ Secure tubes to strength member with tie-wrap.

- ⑤ Drive stud portion of bond clamp under the cable sheath through the hole.
- ⑥ Cover with a layer of electrical tape.

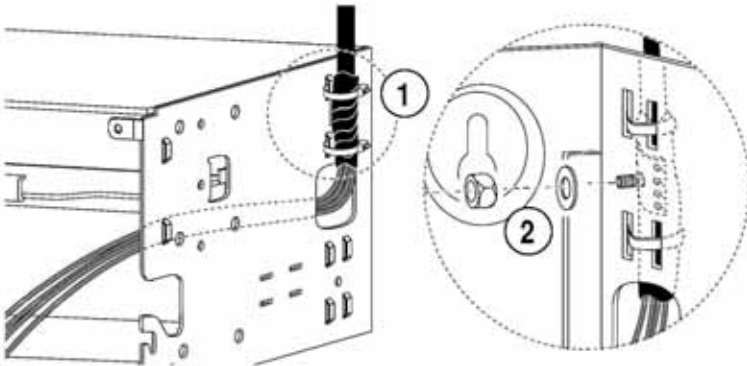
**Note:** Cover with heat-shrink tubing, if necessary.

- ⑦ Install the top layer of the bond clamp.



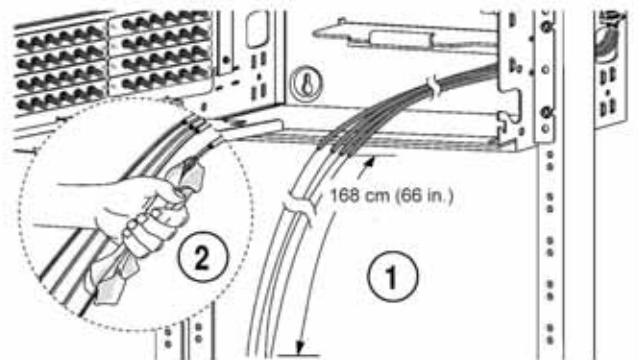
**3.2b.** ① Secure cable entry with two tie wraps.

② Install the bond clamp washer and nut.



**3.2c.** ① Remove protective tubes 168 cm (66 in.) from the end of the cable.

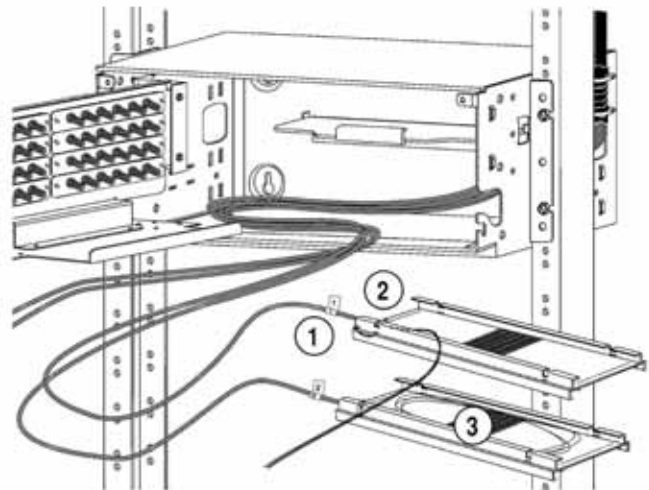
② Clean the bare fibers with alcohol.



**3.2d.** ① Label each of the cable entry tubes.

② Secure the end of each tube to a splice organizer tray with a tie wrap.

③ Wrap the exposed fiber in the tray.



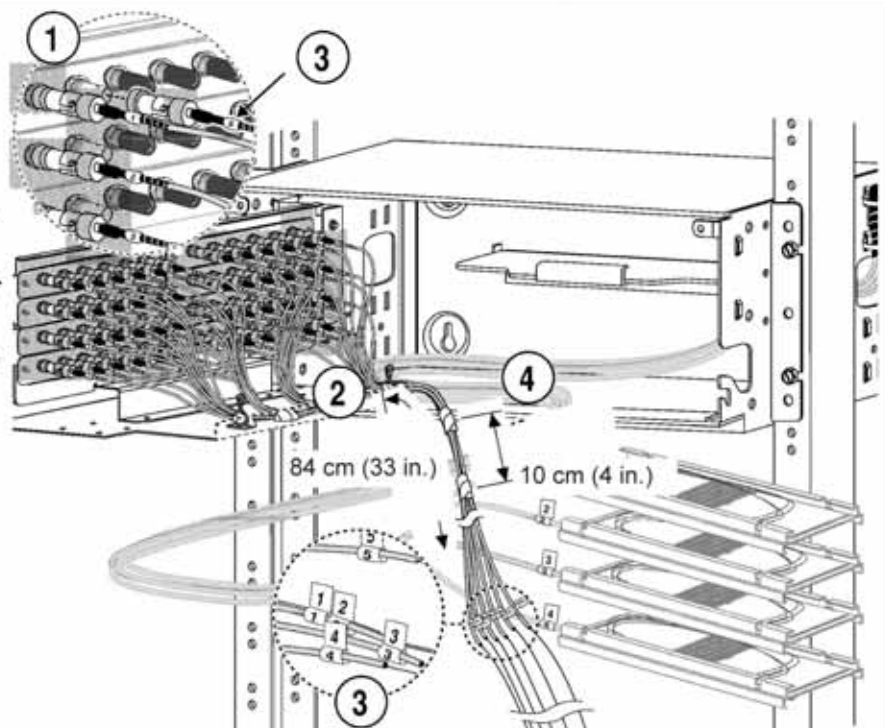
**3.2e.** ① Install connector pigtails on the connector panel starting from the bottom row to the next one above.

**Note:** Remove the dust caps from the adapter sleeve and the connector respectively.

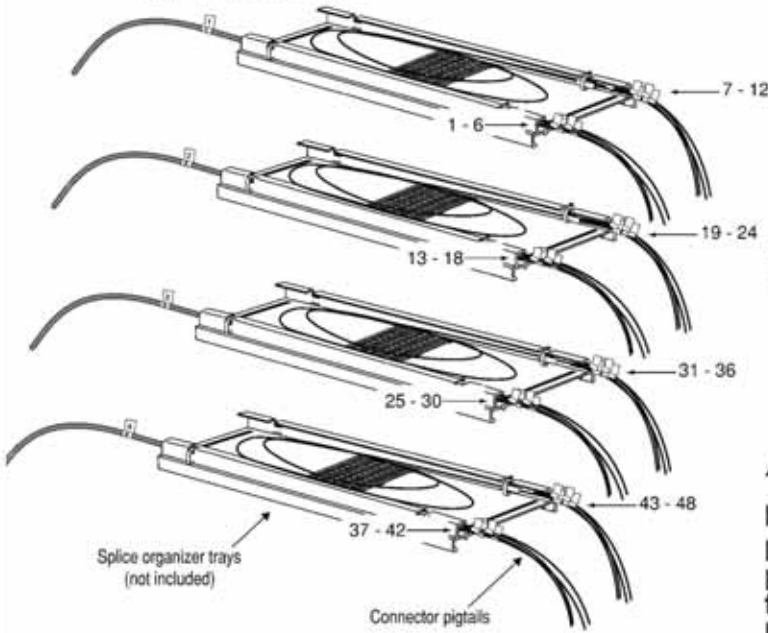
② Remove cable sheath as indicated 84 cm (33 in.) from the connector panel to the end of the fiber.

③ Label each pigtail at both ends.

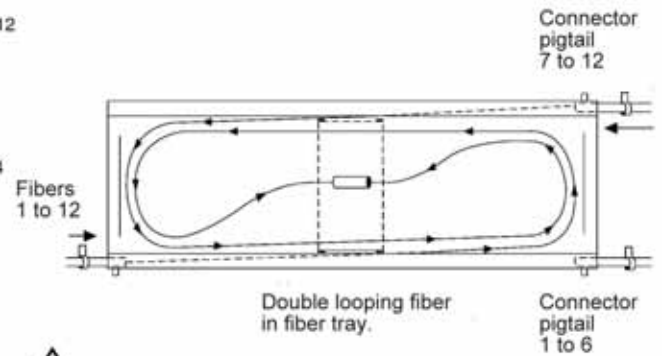
④ Bundle the pigtails with tape separated by 10 cm (4 in.) from the panel to the splice organizer trays.



**3.2f.** Secure pigtails to organizer trays in bundles of six, respectively.

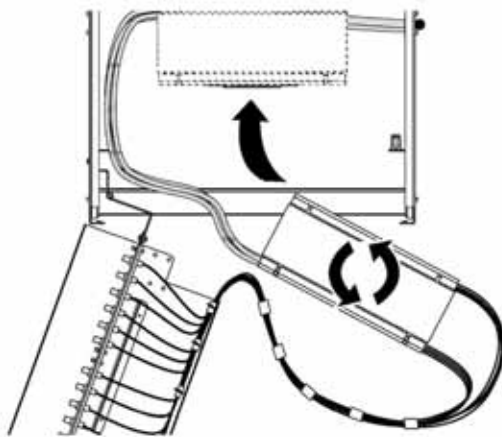


**3.2g.** Splice fiber and route in organizer tray - Label splice connector accordingly.

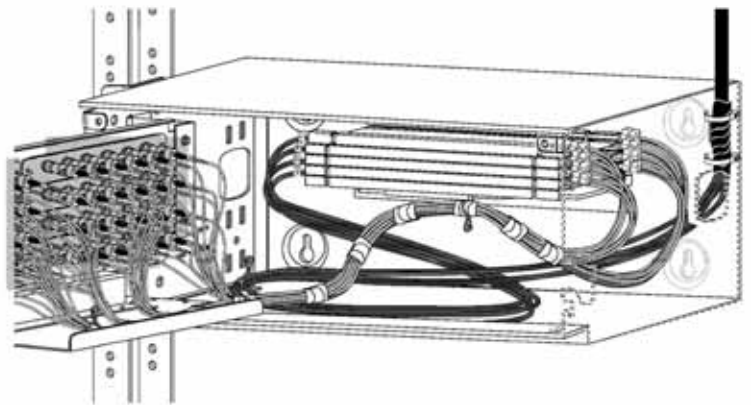


For splicing fibers 7 to 12, position splice protectors as close to center of tray as possible to allow maximum bending radius for fibers. Do not exceed red boundaries on tray.

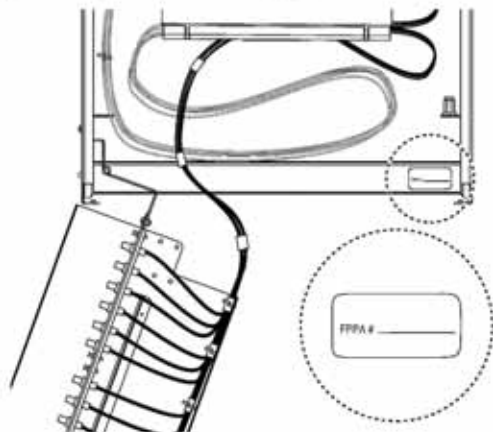
**3.2h.** Snap the four trays one on top of the other. Rotate trays and store in cabinet.



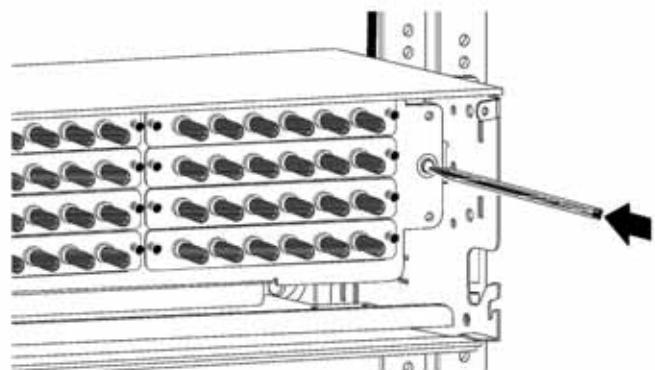
**3.2i.**



**3.2j.** Install the FPPA label.



**3.2k.** Close connector panel.



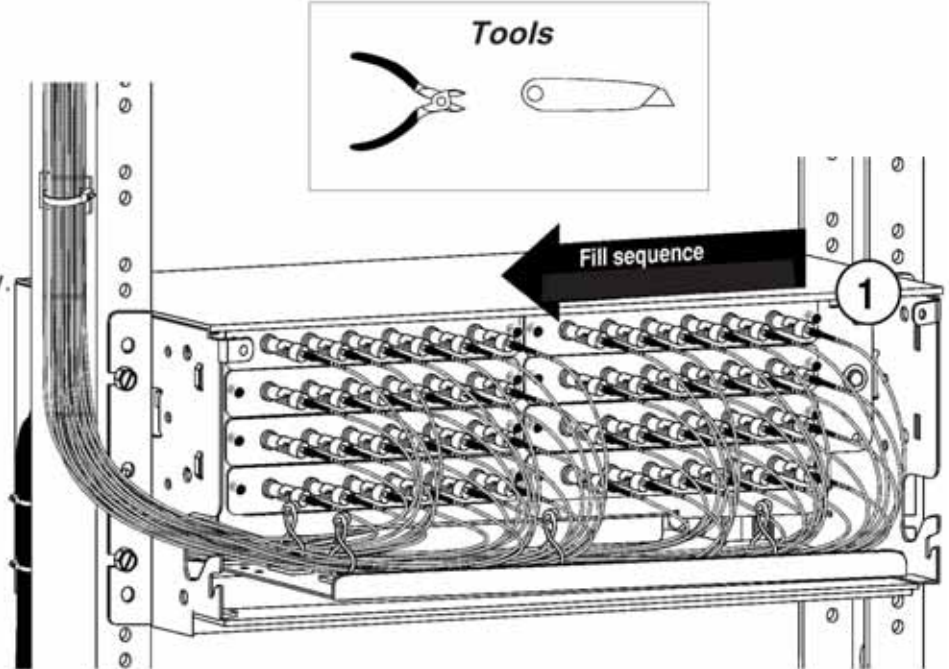
## 4. Connecting the patch cords

### 4.1. Rack mount patch cords

- 1 Install the patch cords into the adapter sleeves starting from the bottom row.

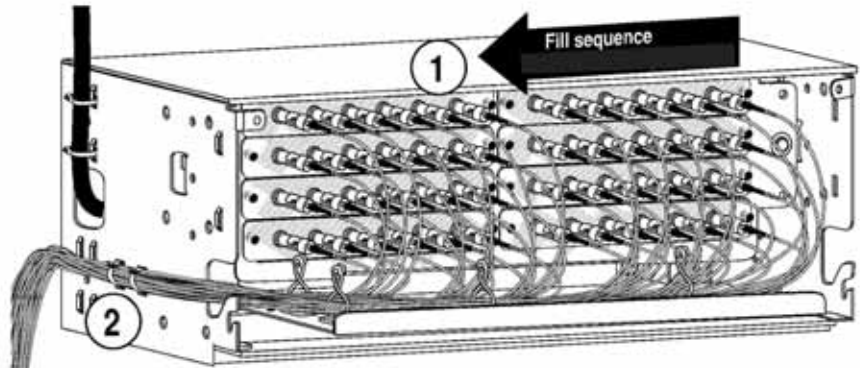
**Note:** Remove the dust caps from the adapter sleeve and patch cord connectors, respectively.

- 2 Secure the patch cords to the rack.



### 4.2. Wall mount patch cords

- 1 Connect the patch cords on the panel as in step 4.1.
- 2 Secure the patch cords to the cabinet.



### 4.3. Install the door to the patch panel.

