

ETK1545171



INSTRUCTION MANUAL
FOR
ASSEMBLING
19" Rack Mounted Optical Panel
Y-OP4-U

- ▽ Please read and understand thoroughly the contents of this manual before use.
- ▽ After reading, keep this manual for future reference.

February 2016



SUMITOMO ELECTRIC INDUSTRIES, LTD.
TOKYO JAPAN

Safety Precautions — Observe precautions for safe use —

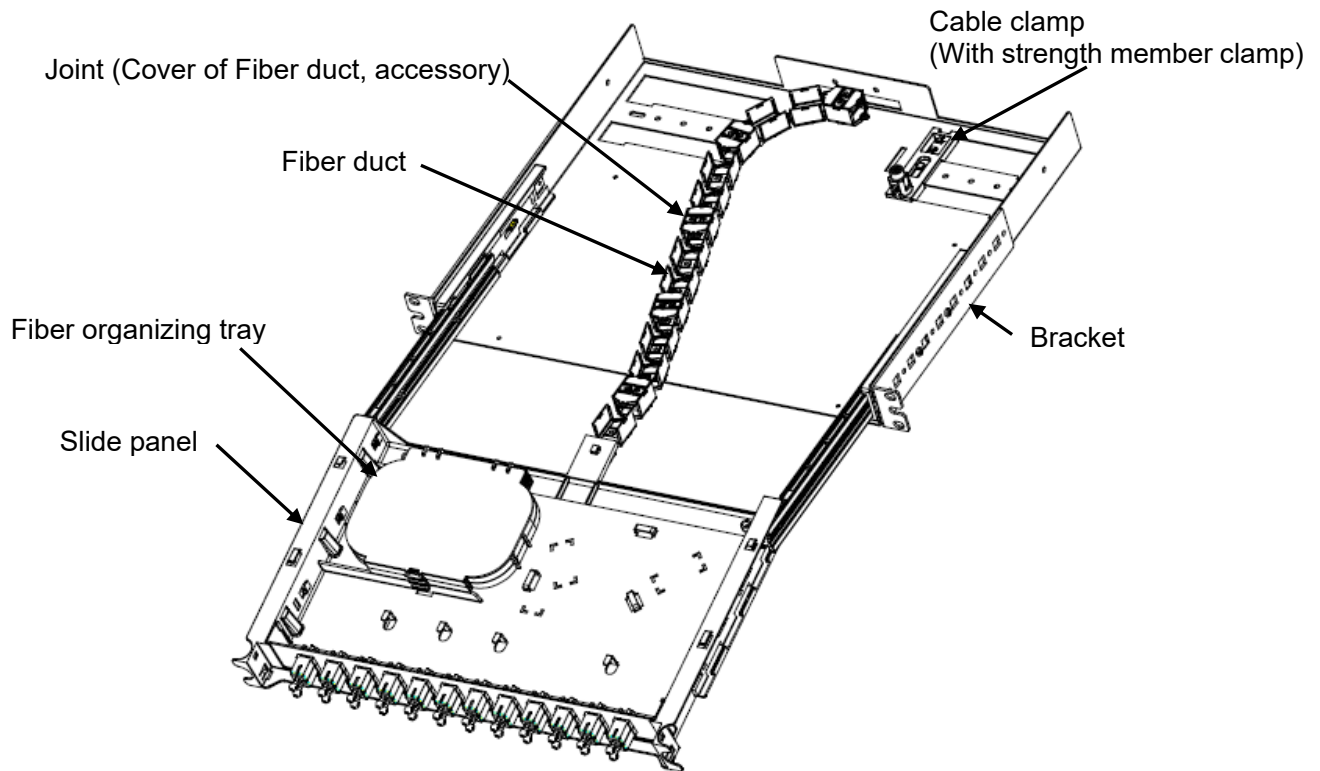
This manual describes items that must be observed for safe use of the closure to avoid injury to people and damage to property. The meanings of indications and symbols are listed below. Read the text after understanding the contents of these labels.

	Safety precautions for the closure
 DANGER Improper handling and ignoring the precautions listed in the column on the right is very likely to cause serious injury or even death.	_____
 WARNING Improper handling and ignoring the precautions in the column on the right may cause injury or even death.	• Firmly clamp the panel to prevent it from falling. • While working at the high place, be careful not to drop parts and / or tools in use.
 CAUTION Improper handling and ignoring the precautions in the column on the right may cause injury or damage to equipment and property.	• Take great care when using knives and other sharp objects and tools. • When assembling the panel, do not use parts other than those intended for the product.
 REQUEST Improper handling and ignoring the precautions in the column on the right may prevent utilization of the closure or cause the suspension of functions.	• For optical fiber, keep an allowable bending radius of $R \geq 30\text{mm}$. • For splicing, refer to the manual provided with the fusion splicer to be used. • For operation such as adding cables to be deployed, some parts may be replaced, so please consult with sales personnel beforehand.

List of Tools Required

Item	Name	Item	Name
1	Side cutting pliers	6	Cable cutter
2	Knives	7	Wire clipper
3	Pliers	8	Philips head screw driver
4	Sheath cutter	9	-
5	Tape measure	10	-

1. Name of the Parts

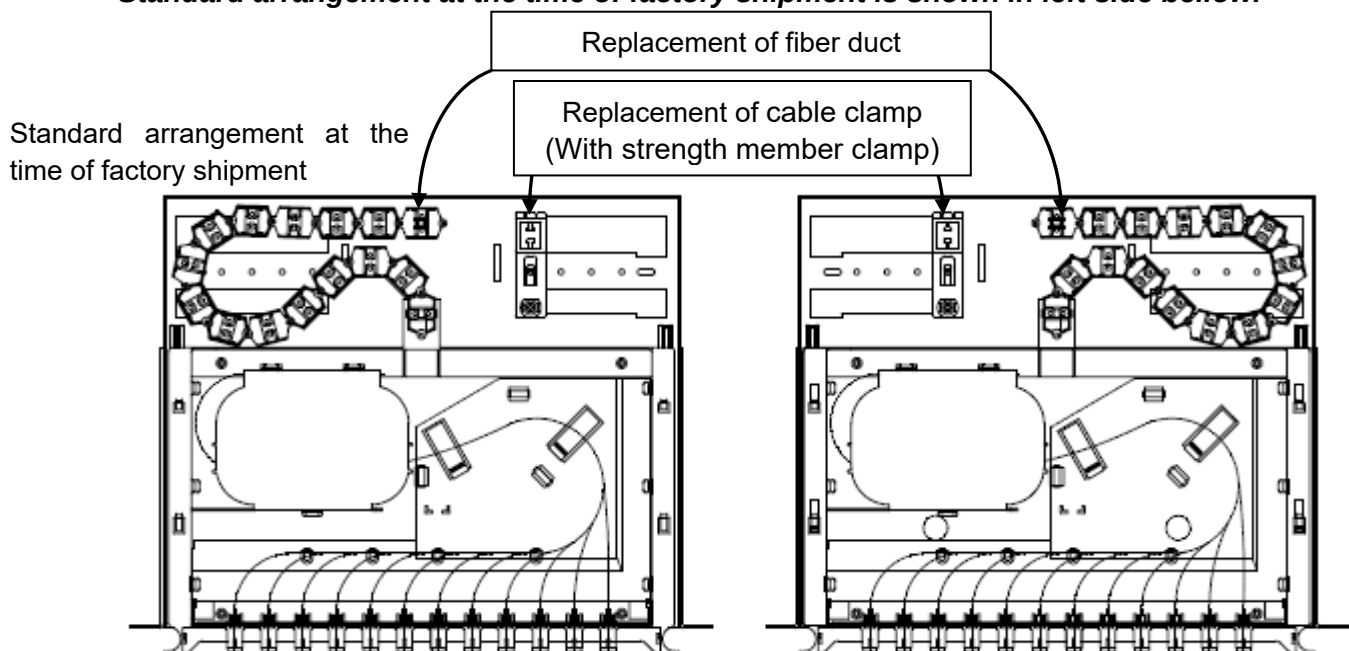


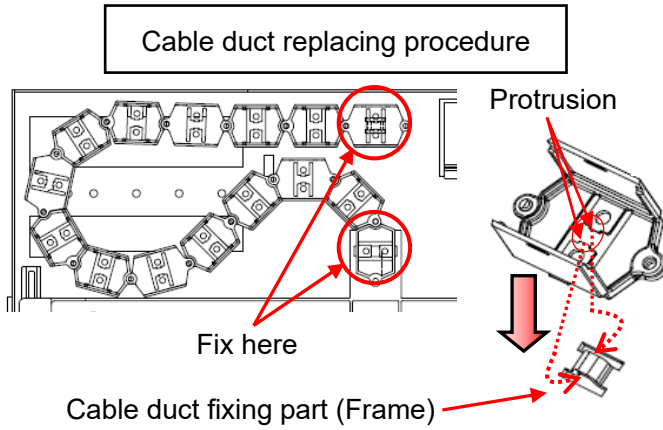
****Conduct the procedure of 2. and 3. #1 after confirming the installation state of 19" rack.***

2. Changing the Introduction Direction of Cable Between the Right Side and the Left Side

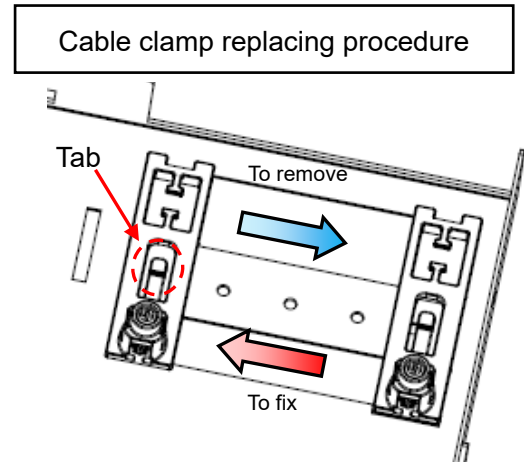
#1 By replacing the fiber duct and cable clamp (with strength member clamp), introduction direction of the cable is able to be changed between the right side and the left side. (Refer to the next page for the replacing procedure of the fiber duct and cable clamp.)

****Standard arrangement at the time of factory shipment is shown in left side bellow.***





- (I) While removing the cable duct, pull it upward.
- (II) To fix the cable duct, insert one side of the protrusion of the cable duct and then push in the other side into cable duct fixing part.



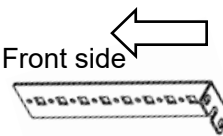
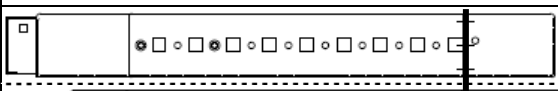
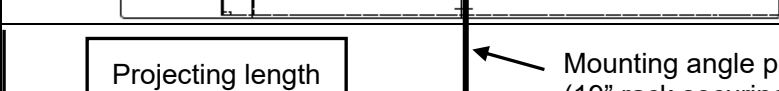
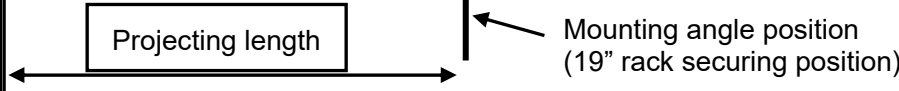
- (I) To remove the cable clamp, pull up the tab and slide the cable clamp as shown in the figure.
- (II) Slide the cable clamp up to the end and remove it.
- (III) When fixing the cable clamp, confirm that the protrusion of the tab fits in the hole of the frame.

3. Mounting the Optical Panel

#1 The mounting position of the panel is selectable by moving the bracket position as shown in below table below. Refer to the table below and specify the position of the bracket. Fix the bracket with four screws. Recommended tightening torque is 2.0 N·m.

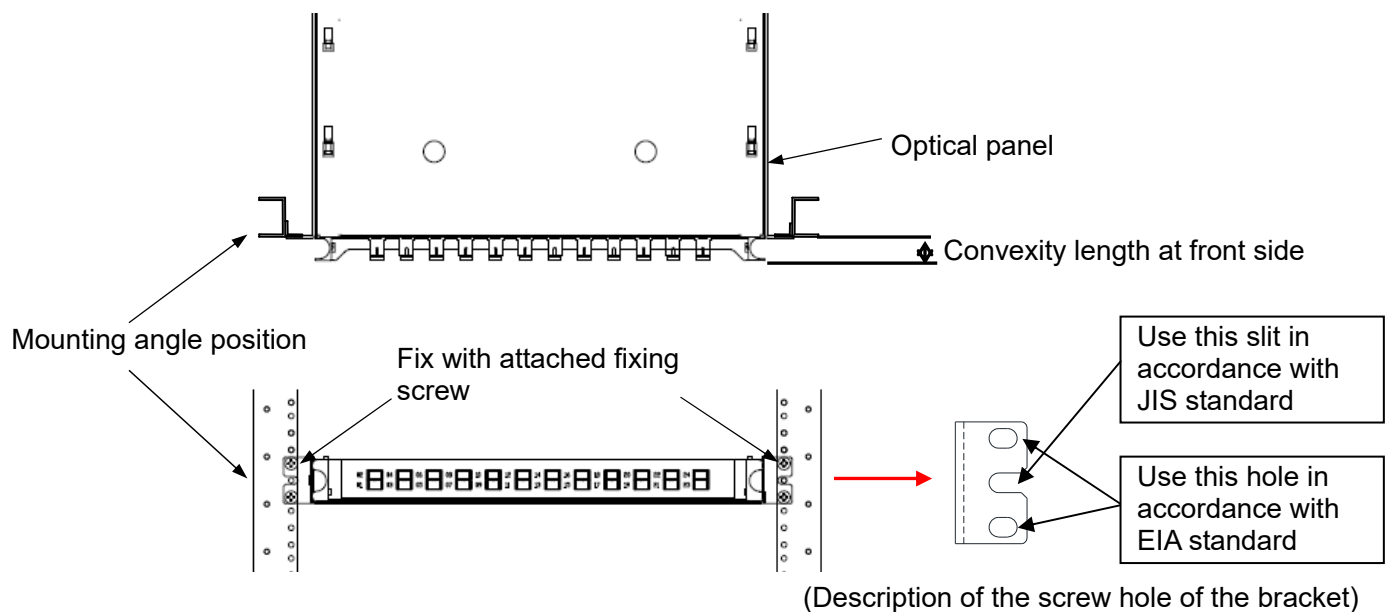
***The attached pan head screw (M4x10mm) should be used for fixing; otherwise, the body may be fallen out.**

Direction of the bracket	Fixing position of the bracket	Projecting length (mm)
Front side		72.8
		47.8
		22.8
		-2.3
		-27.3
		-52.3
		-77.3
Mounting angle position (19" rack securing position) Screw Optical panel		
Projecting length		

Direction of the bracket	Fixing position of the bracket	Projecting length (mm)
		312.5
		287.5
		237.5
		229
		229
		229
		

#2 Firmly secure the optical panel to the body of a 19" rack using the attached fixing screws (M5x12) at two locations for Type 1U and at four locations for Type 2U.

***Recommended tightening torque is 1.0N·m.**



Note 1) In case of 1U (refer to the figure above)

- In case of EIA standard 19" rack, optical panel is able to be fixed with 2 screws **at the hole** of the bracket both side (4 screws in total).
- In case of JIS standard 19" rack, optical panel is fixed with one screw **at the slit in the middle** of the bracket both side (2 screws in total).
- To install cable after fixing 19" rack, space more than 2U is required for cable fixing and cable termination.

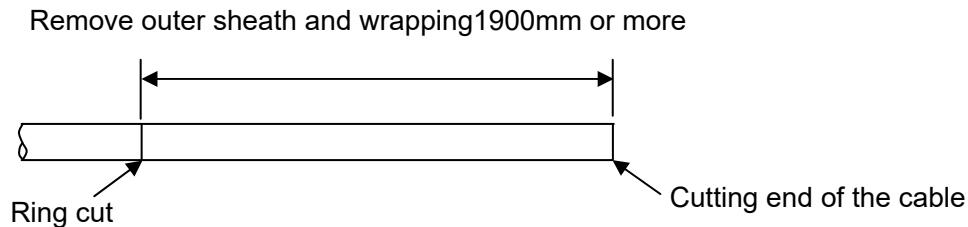
Note 2) In case of 2U (figure is abbreviated)

- In case of EIA standard 19" rack, optical panel is able to be fixed with 2 screws **at the hole** of the bracket both side (4 screws in total).
- In case of JIS standard 19" rack, optical panel is fixed with two screws **at the slits in the middle** of the bracket both side (4 screws in total).

- To install cable after fixing 19" rack, space more than 1U is required for cable fixing and cable termination.

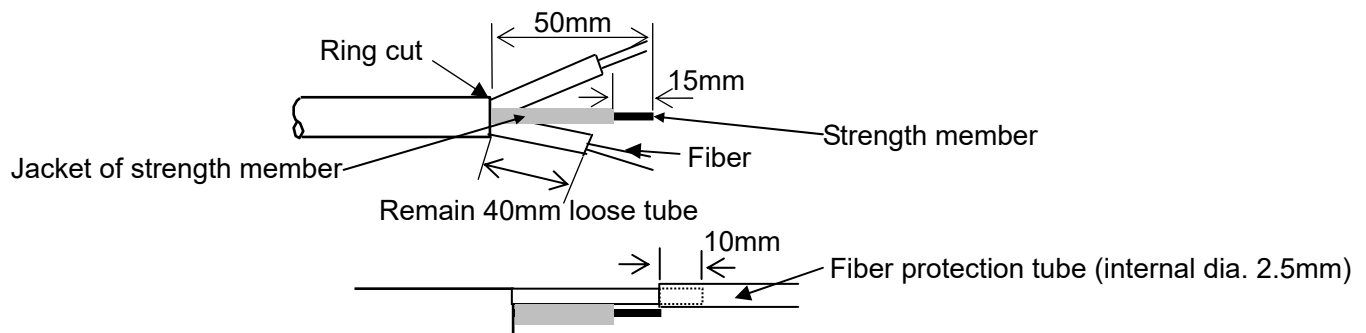
4. Cable Preparation

#1 Ring cut and remove the outer sheath, then expose Loose tube and strength member as shown in below figure.



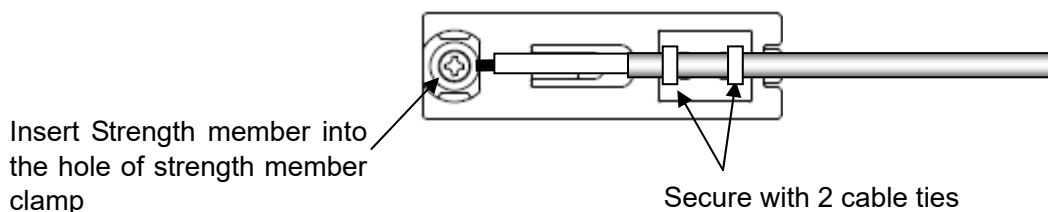
****In case of fixing the strength member in horizontal direction, 1800mm or more is enough for removing the outer sheath.***

#2 Cut the strength member 50mm from the sheath ring cut. Cut and remove the jacket of the strength member at length of 15mm from the end of the strength member. Cut and remove the loose tube 40 mm from the ring cut of the cable sheath. In case of jelly filled, clean the jelly off the fiber. Slide the protection tube (internal dia.2.5mm) over fibers and loose tube.



#3 Secure the cable on cable clamp as shown below.

Cable dia.	Torque for securing strength member
Under 15mm	1.0N·m



Note 1) Tightening over the torque determined shall cause the breakage of threaded hole.

Note 2) In case of non-metallic strength member, secure the strength member with optional TM spacer.

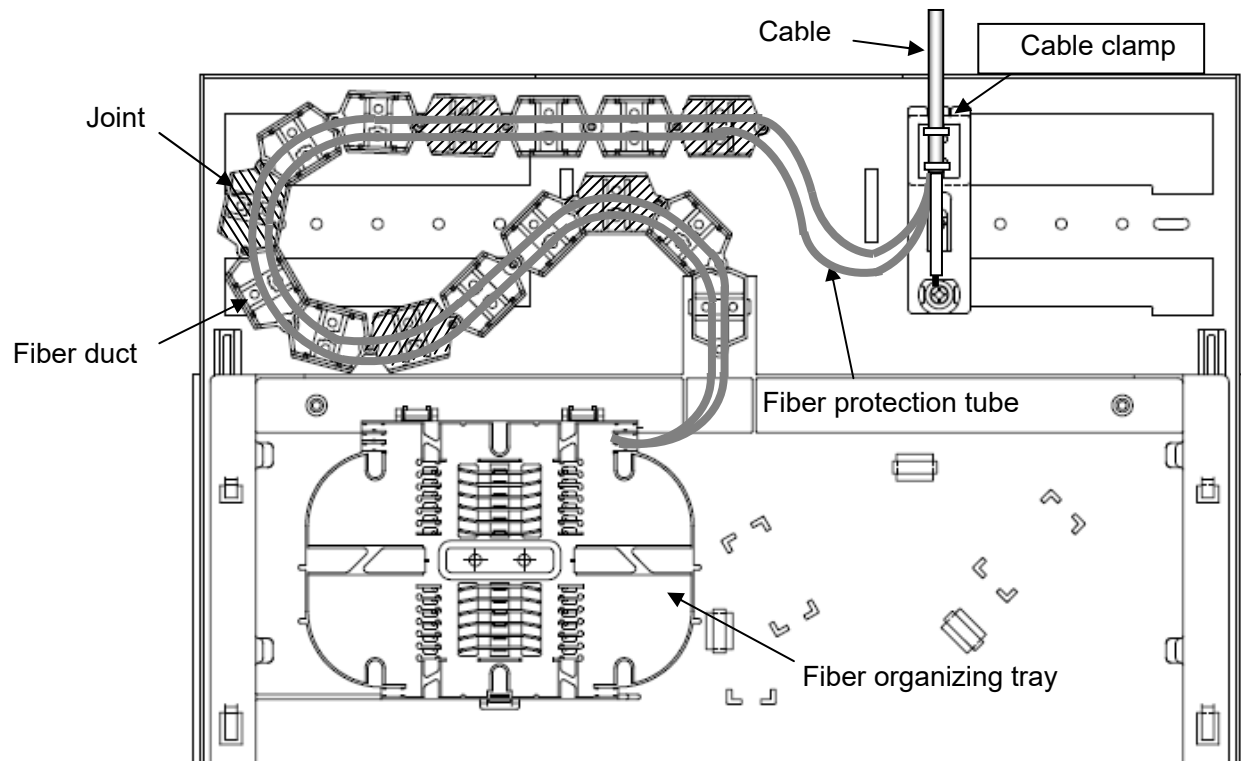
Note 3) Take care not to pinch or hook fibers.

5. Installation of Ribbon Fiber

5.1 In case installation with cable clamp

#1 Insert ribbon fiber in the fiber duct and route them to the tray. After routing, cover the fiber guide with 5 joint (cover of fiber duct, accessory).

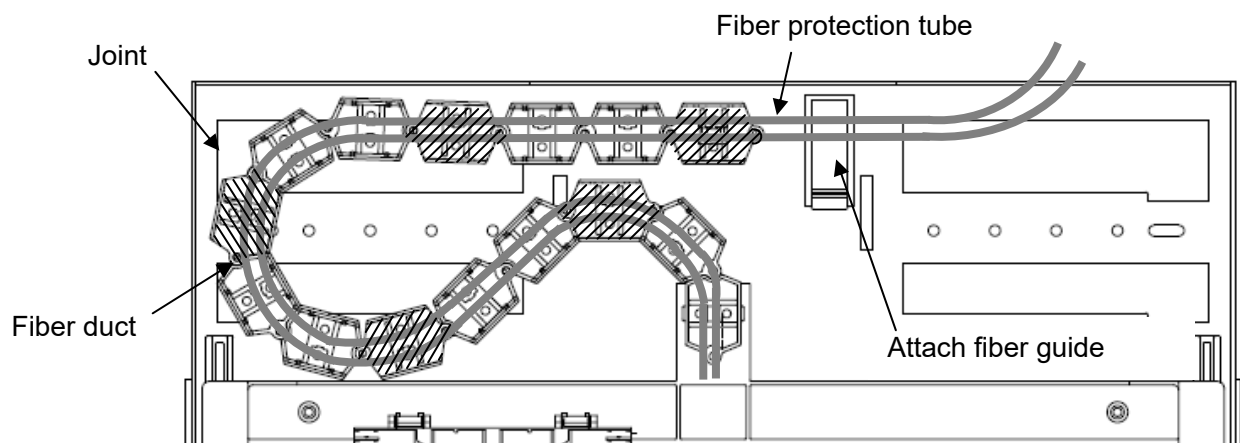
****Refer to 5.3 for the procedure of fixing the cover on fiber duct.***



5.2 In case of installation without cable clamp

#1 Attach fiber guide to the frame of optical panel, and route fiber through fiber guide and fiber duct as shown in below figure. After routing, cover the fiber guide with 5 joint (cover of fiber duct, accessory).

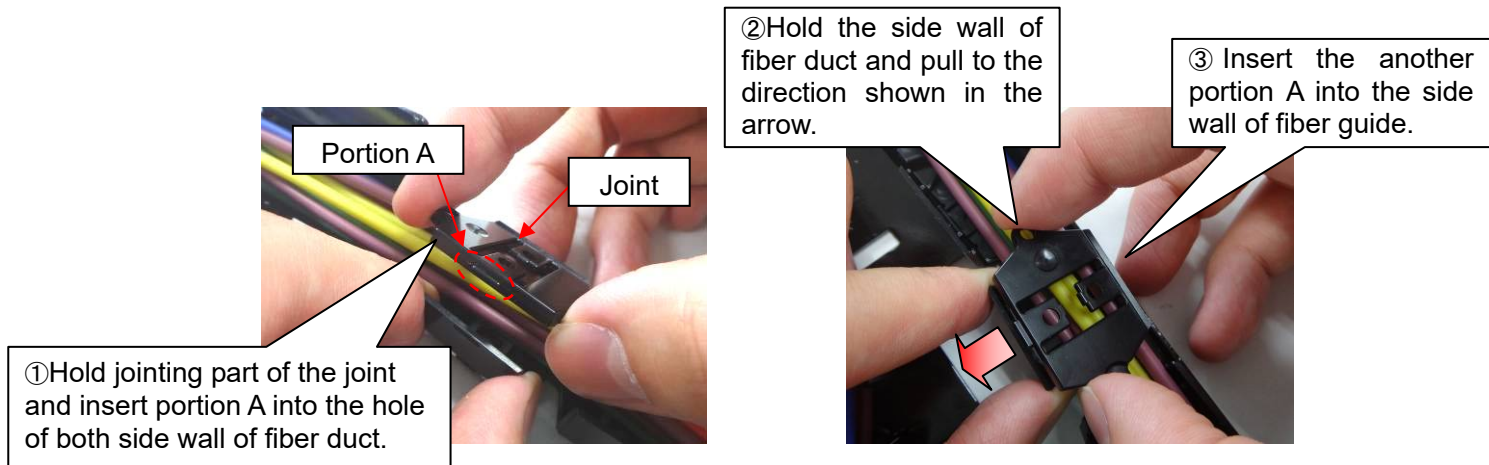
****Refer to 5.3 for the procedure of fixing the cover on fiber duct.***



Note) Except for fibers in fiber duct, keep the bending radius more than 30mm.

5.3 Attaching and removing the joint (cover of fiber guide)

#1 For attaching the joint, conduct the procedure shown in below picture.



#2 For removing the joint, conduct the procedure that follows vise versa.

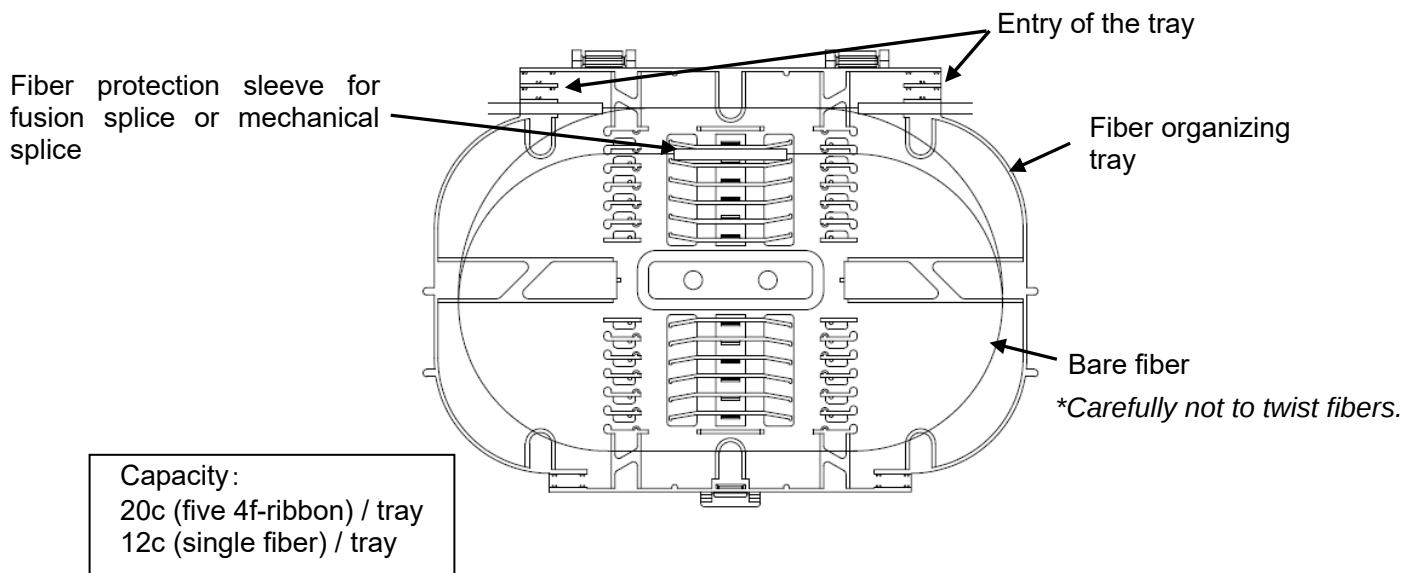
****When removing and attaching the joint, take care of the fibers in the fiber duct.***

6. Fiber Splicing

6.1 In case of U type

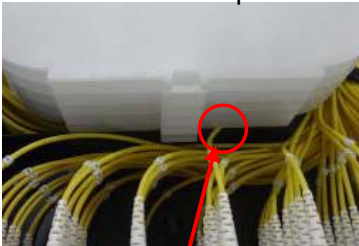
#1 Install fibers in the fiber organizing tray, 12 fibers of outer line and single core fiber cord (12 single fibers) shall be stored in each tray. Secure the fibers of outer line in tray entry with fiber protection tube .

#2 Splice fibers by fusion splice or mechanical splice and store the excess fibers in the tray.

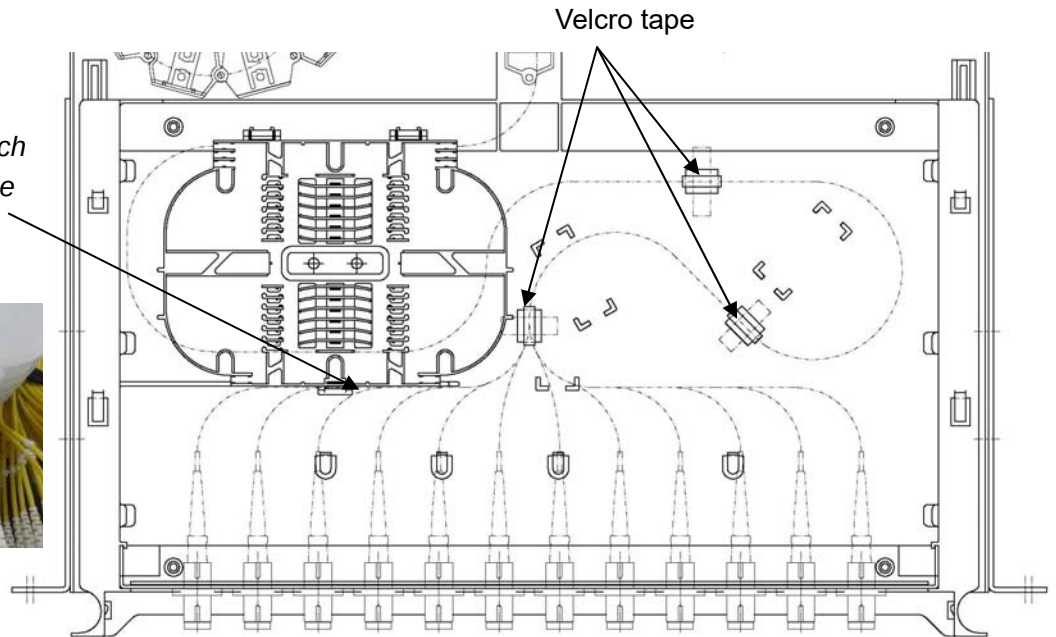


* Take care not to pinch fibers while closing the tray cover.

<Bad example>



Pinching fiber!

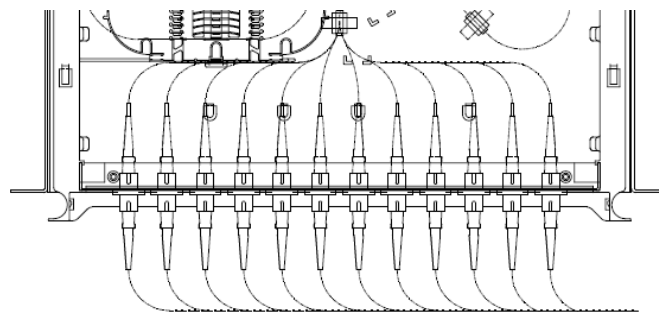


7. Termination of Secondary Side cord

7.1 Without front cord support, front panel (option)

#1 Bundle the secondary side cord and secure to the frame of 19" rack.

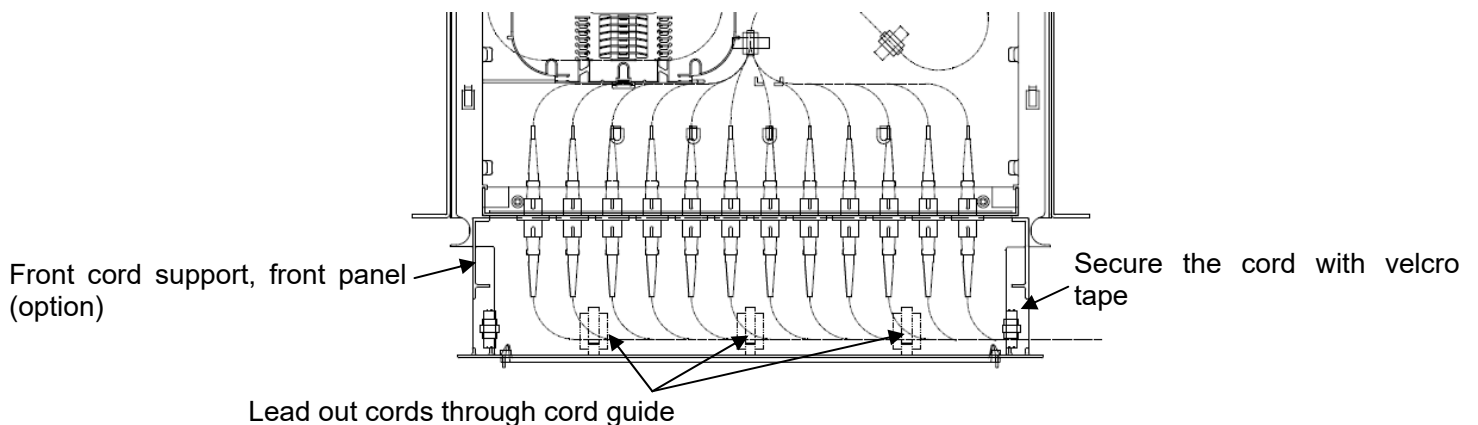
* For example divide cords in left and right, then secure at the left and right side of the frame.



To the frame of 19" rack

7.2 With front cord support, front panel (option)

#1 Lead out the secondary side cord from the optical panel as shown in the figure.



ANNEX 1 Installation of Optional Accessories

1. Fixing the Parts for New cable Installation

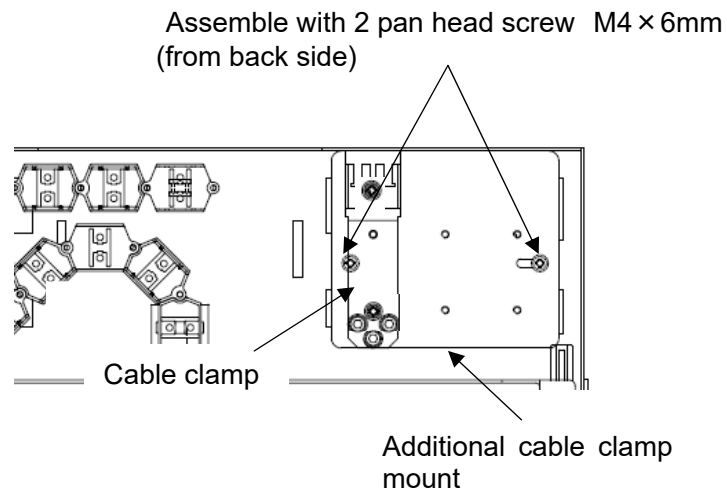
**Cable clamp (with strength member clamp is assembled as shown in the figure at the factory. In case of using more than two cable clamp, optional cable clamp kit (for multiple cable) is required.*

In case of installation from back side of the optical panel, optional cable clamp kit (for back side) is required.

1.1 Assembly of additional cable clamp mount and cable clamp stacking bracket

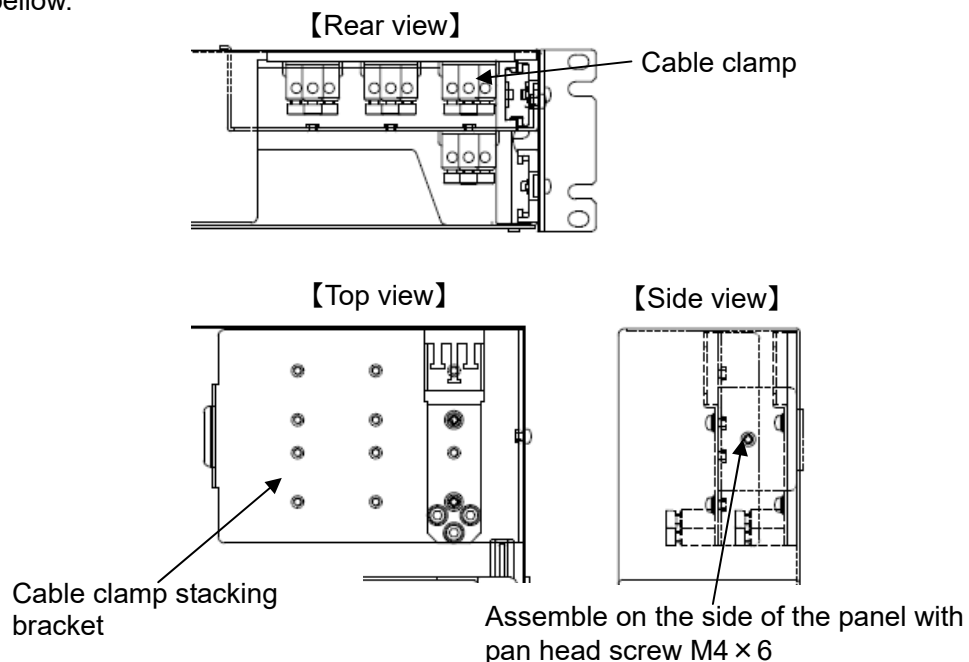
1.1.1 In case of horizontal direction <1U>

#1 Assemble the additional cable clamp mount with two pan head screw M4 × 6mm as shown in figure below.



1.1.2 In case of horizontal direction <2U>

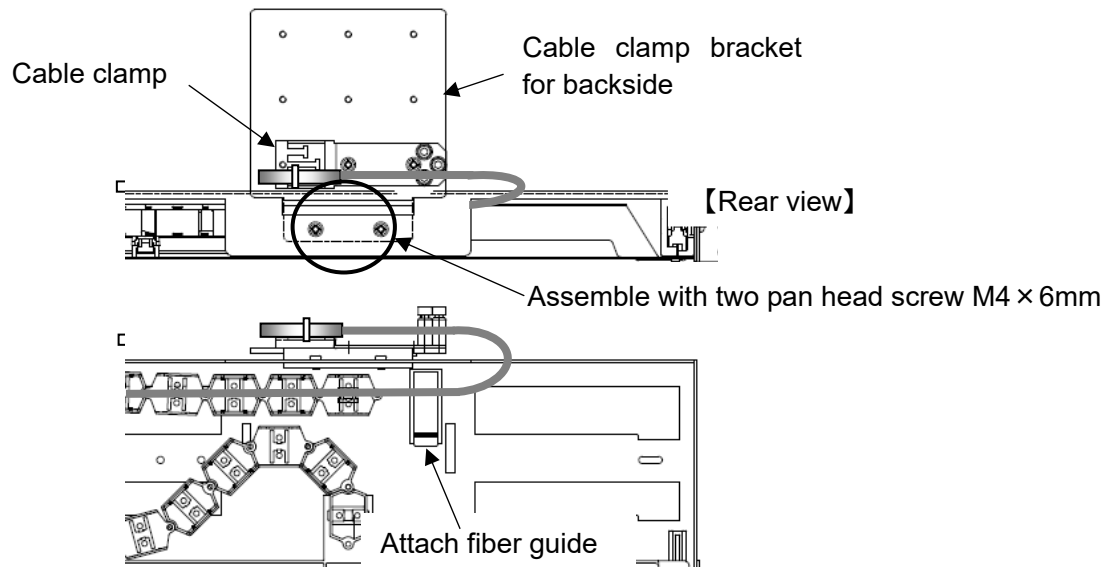
#1 Assemble the additional cable clamp stacking bracket with one pan head screw M4 × 6mm as shown in figure below.



1.2 Assbmbly of the cable clamp bracket for back side

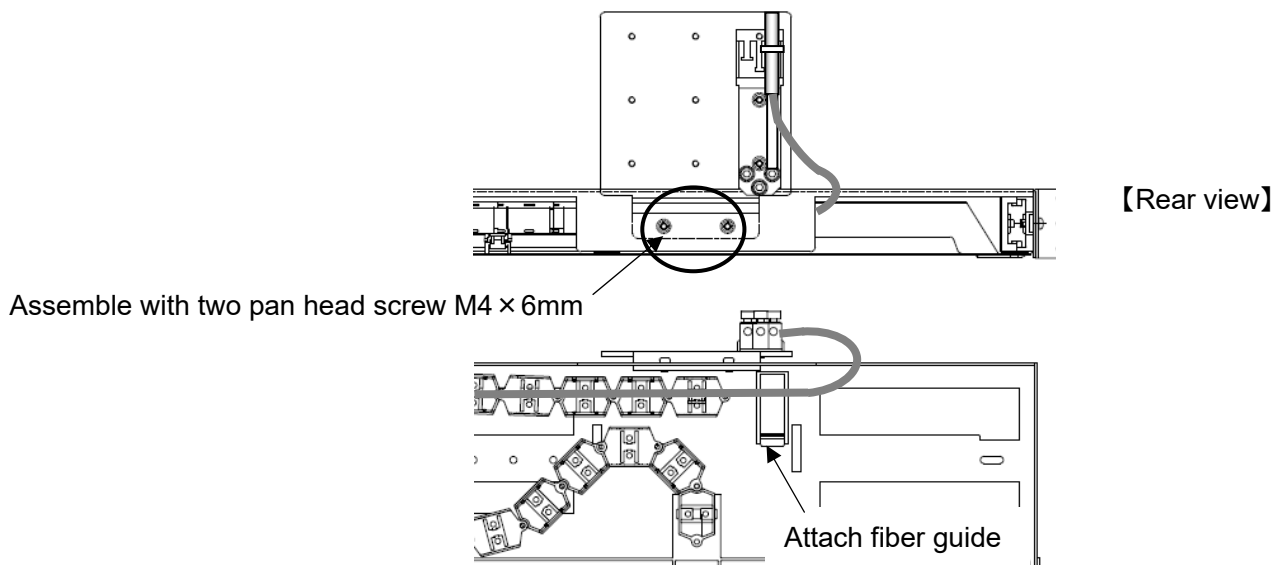
1.2.1 In case of horizontal mounting at backside

#1 Assemble the cable clamp bracket for backside with two pan head screw M4 × 6mm as shown in figure bellow.



1.2.2 In case of vertical mounting at backside

#1 Assemble the cable clamp bracket for backside with two pan head screw M4 × 6mm as shown in figure bellow.



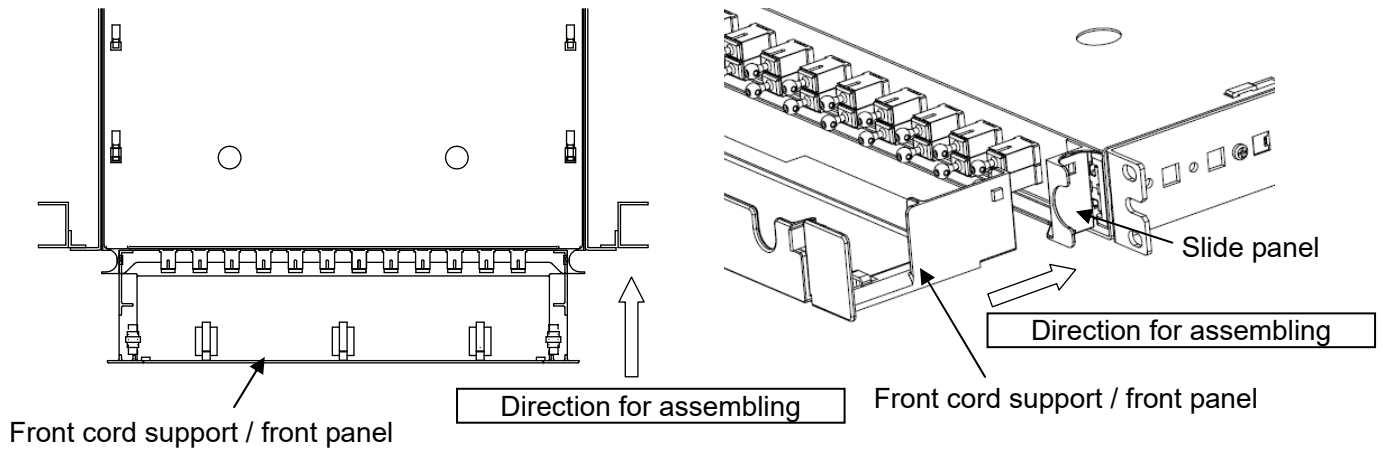
1.3 Assembly of earth plate (for grounding)

#1 Remove the square nut of cable clamp (plastic) and replace it with earth plate.

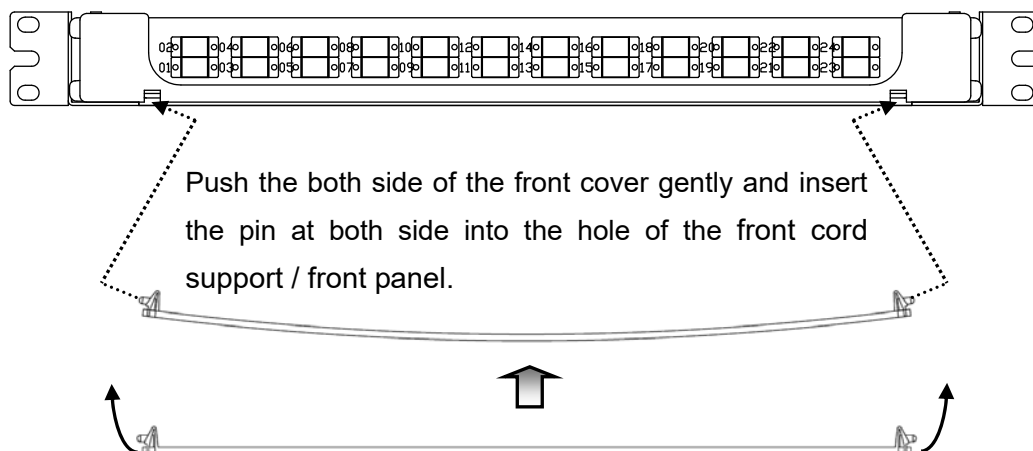
1.4 Assembly of front cord support / front panel

#1 Insert the front cord support / front panel from the front side of the panel to inside (slide panel) as shown in below figure.

**screw is not necessary.*



#2 Assemble the front cover on the front cord support / front panel as shown in below figure.



**Above figure shows in case of 1U optical panel, however procedure for 2Us is the same.*

END