Installation Instructions for Slimbox 24 Fiber Indoor Enclosure

8/3/2016

This document describes the assembly instructions for the SlimBox-V, Indoor Enclosure – 24 fiber.

Contents

1. Products

There are four basic types of configuration of the product.

1. Fan-out
2. Splitter
3. Splice Tray
4. Direct

Wall mounting technique is the same for all configurations. Each configuration will be described under a separate paragraph.

2. Wall Installation Instructions

1. Start by opening the accessories package and find the wood screws M3.5 x 19 mm (4x), wall anchors S5 (4x) and T18R plastic ties (10x) included in the installation kit.

2. Use the drill template to mark the location of the mounting holes for the enclosure.

3. Use a 3/16 inch (approx. 5mm) drill bit to drill ¾ inch (19mm) deep holes for the wall anchors. Insert the wall anchors flush with the mounting surface. You can use #6 x3/4 in long wood screws for direct mount on plywood. In this case, pre-drill holes using a 3/32 inch (2.4 mm) drill bit.

4. Secure the enclosure base to the wall using provided Pan Head Recess Cross M3.5-19mm long screws. If you direct mount the base to the board without using wall anchors, drill pilot holes at the marked locations using a 3/32 inch drill bit and then use #6 x ¾ in long wood screws (not included in the mounting kit) for securing the base to the board..

3. Installation Type "Fan-out"

Typical application of a fan-out consists of up to 24 fiber input cable conectorized with two MPO 12 fiber female connectors and twenty four (24) 1.6-2mm single fiber distribution cables connectorized with SC/UPC connectors.

Other configurations are available upon request.

1. Complete wall installation per paragraph 2 "Wall installation Instruction"
2. Unscrew two (2) screws and temporally remove the holding plate to loosen the plastic retainers. Lay down incoming 1.6 or 2 mm diameter cables in the retainer's grooves. Assemble approximately six (6) cable assemblies per retainer. Start laying the cables from the bottom retainer and work your way up to the top one. Don't put the holding plate on back yet
3. Plug the cable connectorized ends (SC/UPC) into the adapters. Match the adapter number with the appropriate cable number. Adjust the cable "free" length before tightening the cable retainers
4. Put the holding plate back and tight up the screws. The cables should not move if you gently tug on the cable
5. Cut the rubber grommet following the molded in notch until you reach the center of the molded hole. Slide a 3 mm cable of the MPO connectorized cable assembly through the opening.
6. Connect the MPO end to the appropriate MPO adapter port labeled F1 or F2
7. Secure the cable to the retaining "L" bracket with a cable tie
8. Fill in the provided destination sheet and insert it into the document holder, located on the inside wall of the cover
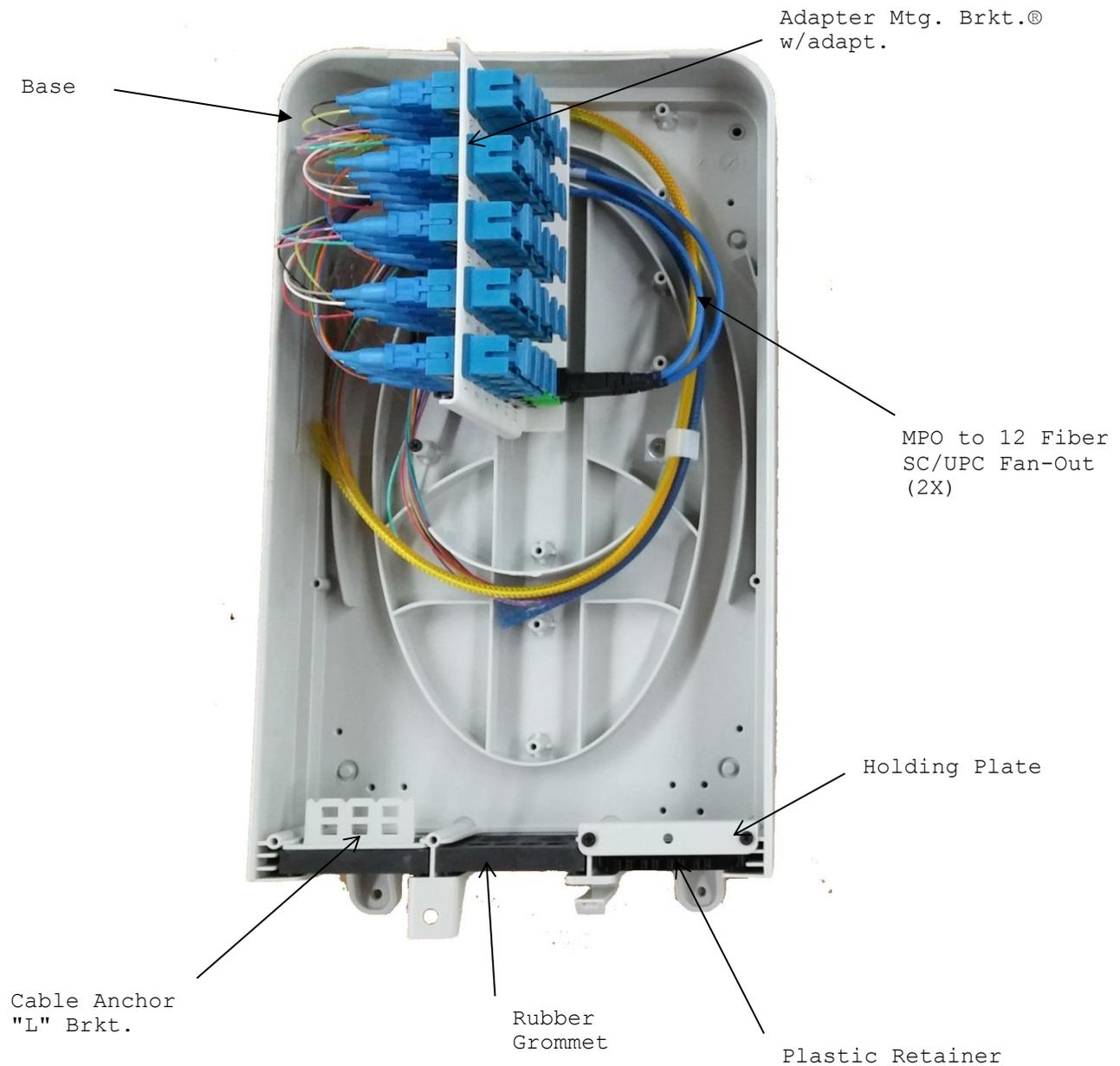9. Assemble the cover to the base

Adapter Mtg. Brkt.® w/adapt.

Base

MPO to 12 Fiber SC/UPC Fan-Out (2X)

Holding Plate

Cable Anchor "L" Brkt.

Rubber Grommet

Plastic Retainer

Fig. 1   **"Fan-out" style assembly** (installation kit and cover are not shown)
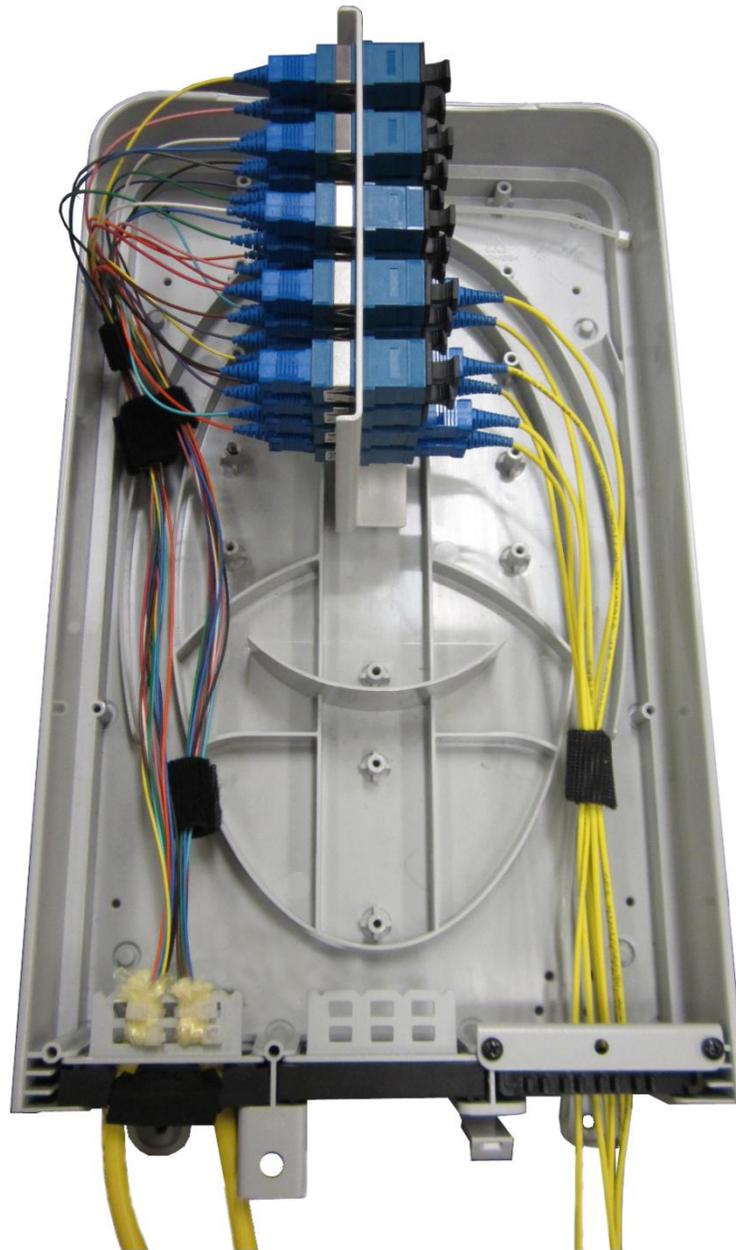
Fig.2   Typical installation of   the "Fan-out" assembly

Cover

Cover, back view

Exploded view of the assembly
(fan-outs not shown)
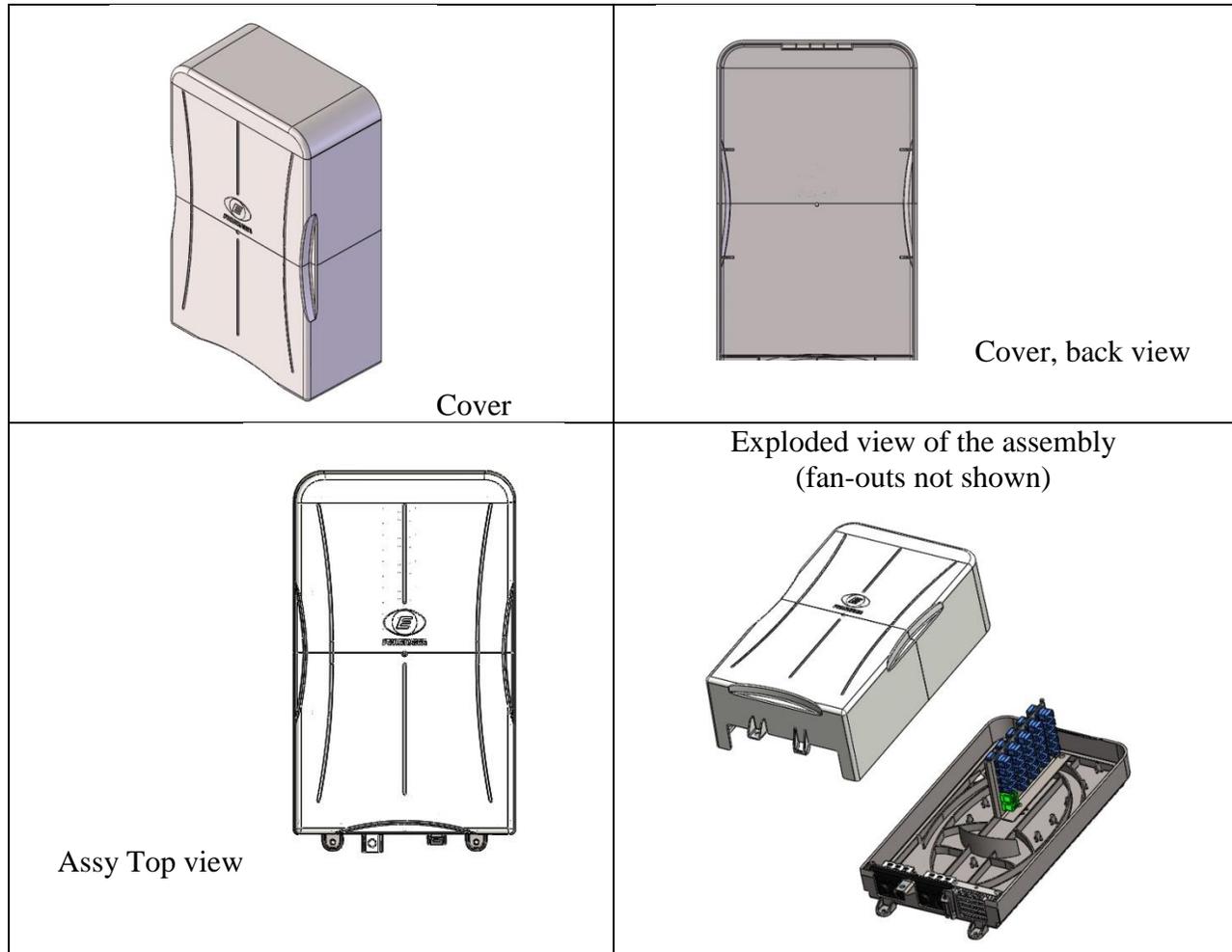
Assy Top view

Fig. 3   Components of the "Fan-out" type enclosure

4. Installation Type "Splitter"

Typical application consists of 4 fiber input cable conectorized with SC/APC connectors, up to
four (4) PLC 1:32 splitters and up to 128 fiber distribution cable or cables connectorized with
and 16 MPO Female 8 Fiber connectors. Other splitter and connector configuration are available
upon request.

Instructions

1. Open the closure and examine its content. Ref to Fig.3 and Fig. 5. All assemblies will contain :

    a. Fiber organizer spool

    b. Three rubber grommets with tree cable retainers ("L" shape brkt. with rectangular holes to pass plastic ties)

    c. Metal adapter bracket with SC and adapters

    d. One up to four (order dependent) ruggedized splitter housings each containing one 1:32 PLC splitter. The splitter input fiber is connectorized with a SC/APC connector. The output four-ribbon cables are connectorized with MPO female connectors. The connectors are inserted into corresponding ports.

    e. Two pivoting Splice trays are provided to hold splice protectors.

    f. Cover

    g. Mounting kit

Fig. 4   Enclosure type "Splitter"
(As received excluding installation kit)

2. Follow the enclosure installation steps from the paragraph entitled "Wall installation instructions (paragraph 2)

3. Cut the middle entry port rubber grommet following the molded in notch until you reach the center of the molded hole. Thread drop cable through the he just created opening. Use the cable aramid yarn, "L" bracket and cable ties to restrain the cable.

4. Splice provided SC/APC 900 μm pigtails with the drop cable fibers. Store the splice protectors in the pivoting splice trays. Use the slack management spool and the splice trays to manage fiber extra length.

5. Plug the spliced pigtail SC/APC ends into designated SC/APC adapters located in the adapter bracket to mate with the splitter input fiber.

6. Use left and right entry port for drop cables installation. Choose the grommet hole to match the cable size. Cut the rubber grommet following the molded in notch until you reach the center of the molded hole. Thread the MPO connectorized drop cable through the just created opening.

7. Attach the aramid yarn to the retaining" L" bracket with the provided plastic ties.

8. Record the connection information on the destination sheet and insert the sheet into the document holder located on the inside wall of the cover

9. Assemble the cover to the base

Splitter

Adapter
bracket

Splice tray

Entry/Exit
Port (3X)
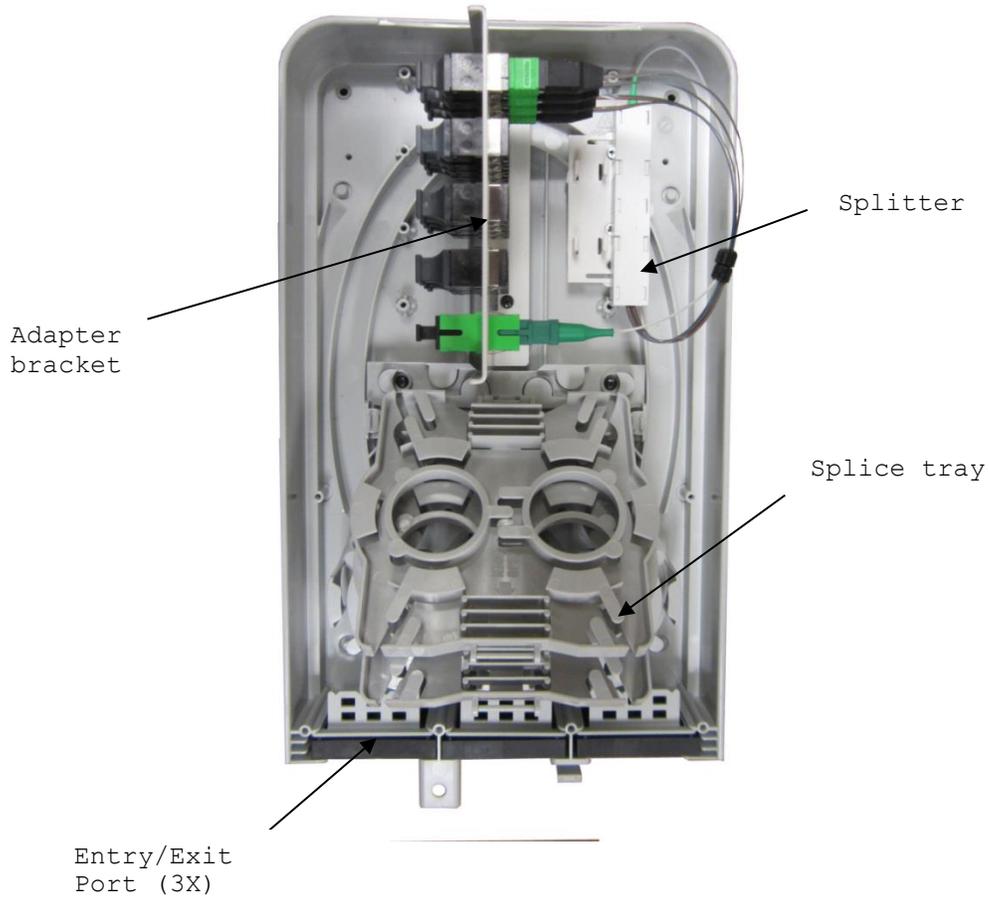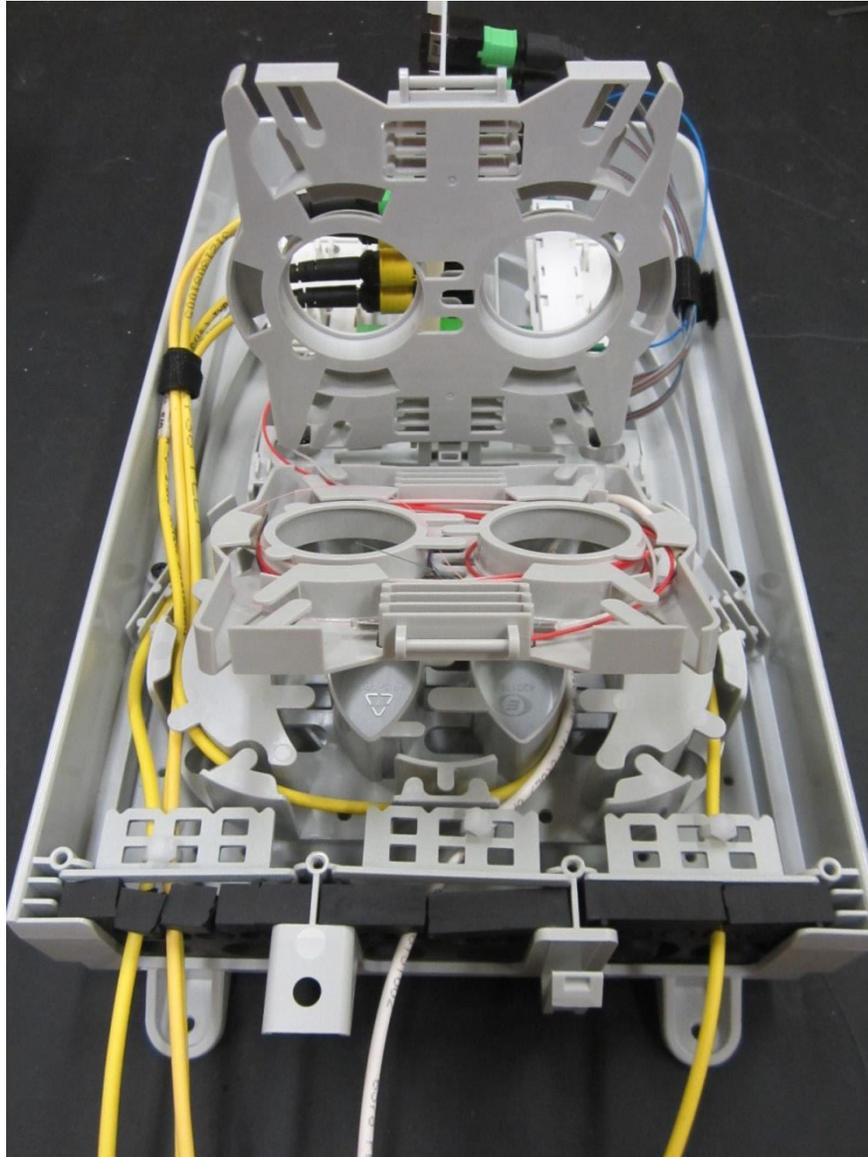
**Fig. 5   Enclosure Type
"Splitter"**

Fig.6   "Direct" style enclosure- typical installation

Note:

White multi-fiber drop outdoor –indoor cable is spliced to the optical splitter (s) input fiber(s) and the splitter(s) outputs are spliced to the distribution cable(s). In Figure 6, the distribution cables are yellow.
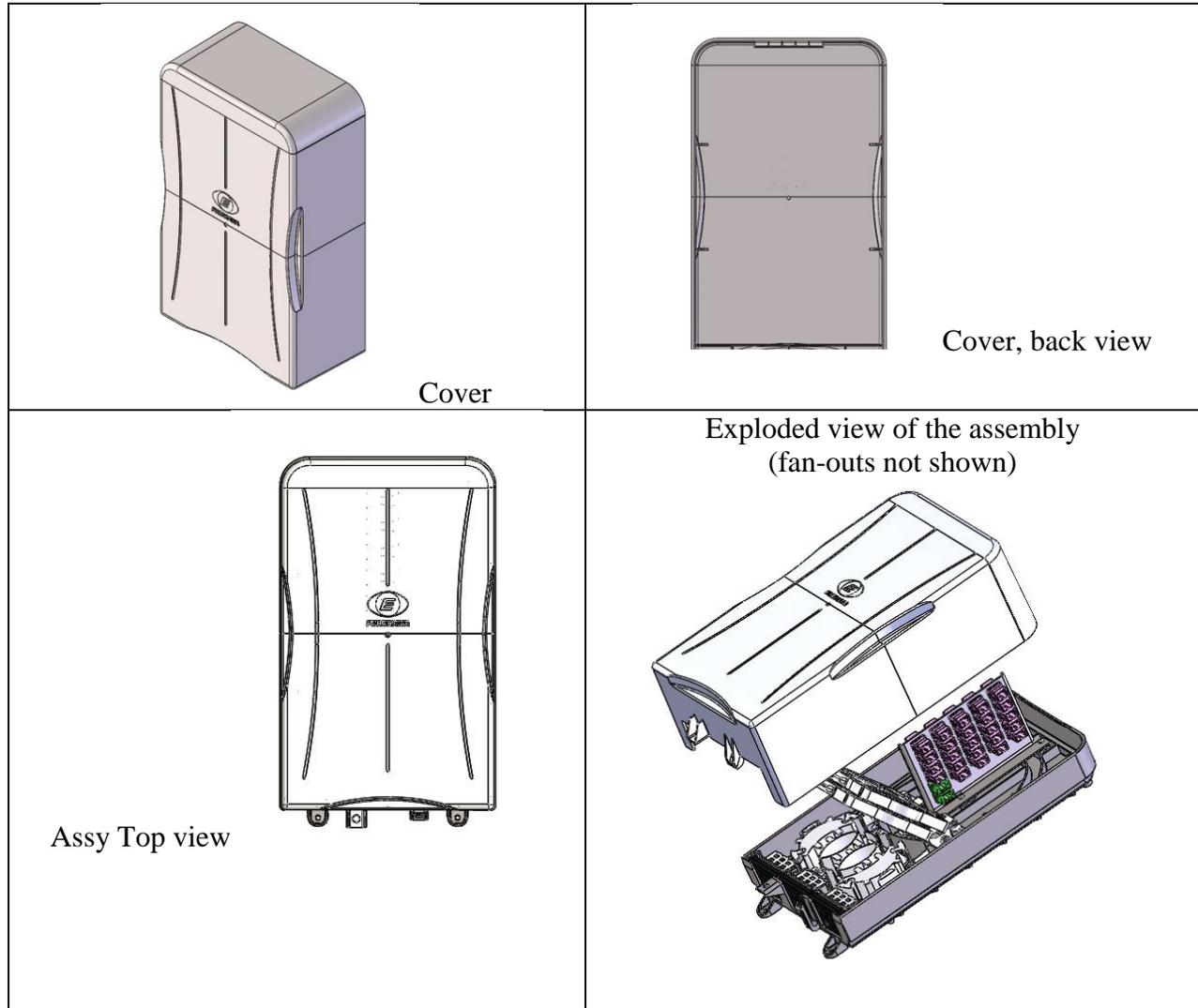
Cover

Cover, back view

Exploded view of the assembly
(fan-outs not shown)

Assy Top view

Fig. 7   Components- Enclosure type "Splitter"

5. Installation Type "Splice Tray"

This type of installation provides ten splice trays. Each splice tray can accommodate 12 splice protectors or splitters. No optical connector or adapters are used.

Drop and drop cables are secured using either aramid yarn or/and the cable strain relief member tied to anchor bracket located at the upper sections of the enclosure. If needed, the bracket can be easily field relocated to the lower section of the enclosure.

Instructions

1. Open the enclosure and examine its content. Refer to Fig. 6. All assemblies will contain:

    a. Fiber organizer

    b. Three rubber grommets with tree cable retainers ("L" shape brkt. with rectangular holes to pass plastic ties)

    c. Ten (10) pivoting Splice trays to hold splice protectors (note: the splice trays come in two colors: gray and black)

    d. Two anchor bracket

    e. Mounting kit
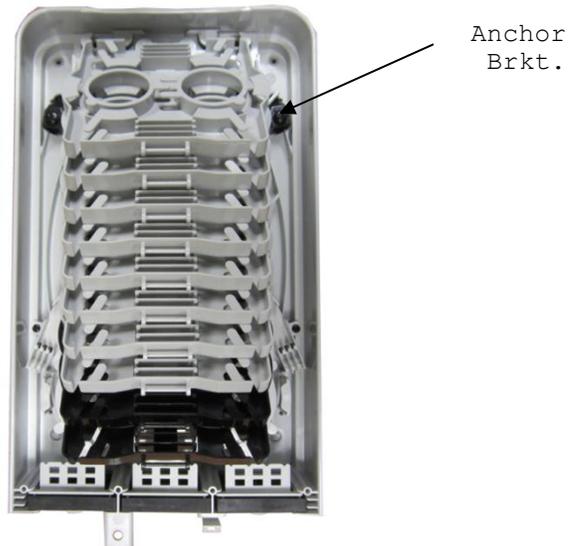
    f. Cover

Anchor Brkt.

Fig. 8 Enclosure type "Splice"
w/o cover and installation kit

2. Follow the enclosure installation steps from the paragraph entitled "Wall installation instructions (paragraph 2)

3. Cut an entry port rubber grommet following the molded in notch until you reach the center of the molded hole. Thread drop cable through the he just created opening. Use the cable aramid yarn, "L" bracket and cable ties to restrain the cable. If you use a cable with a strength member, use the anchor brkt. to restrain the cable. You may move the anchor bracket. to lower part of the enclosure base to comply with your installation requirements

4. Store splice protectors and cable slack in the splice trays. If you use splitters, store them in the splice trays as well.

5. Record the connection information on the destination sheet and insert the sheet into the document holder located on the inside wall of the cover

6. Assemble the cover to the base

Aramid yarn
attached to
"L" brkt.

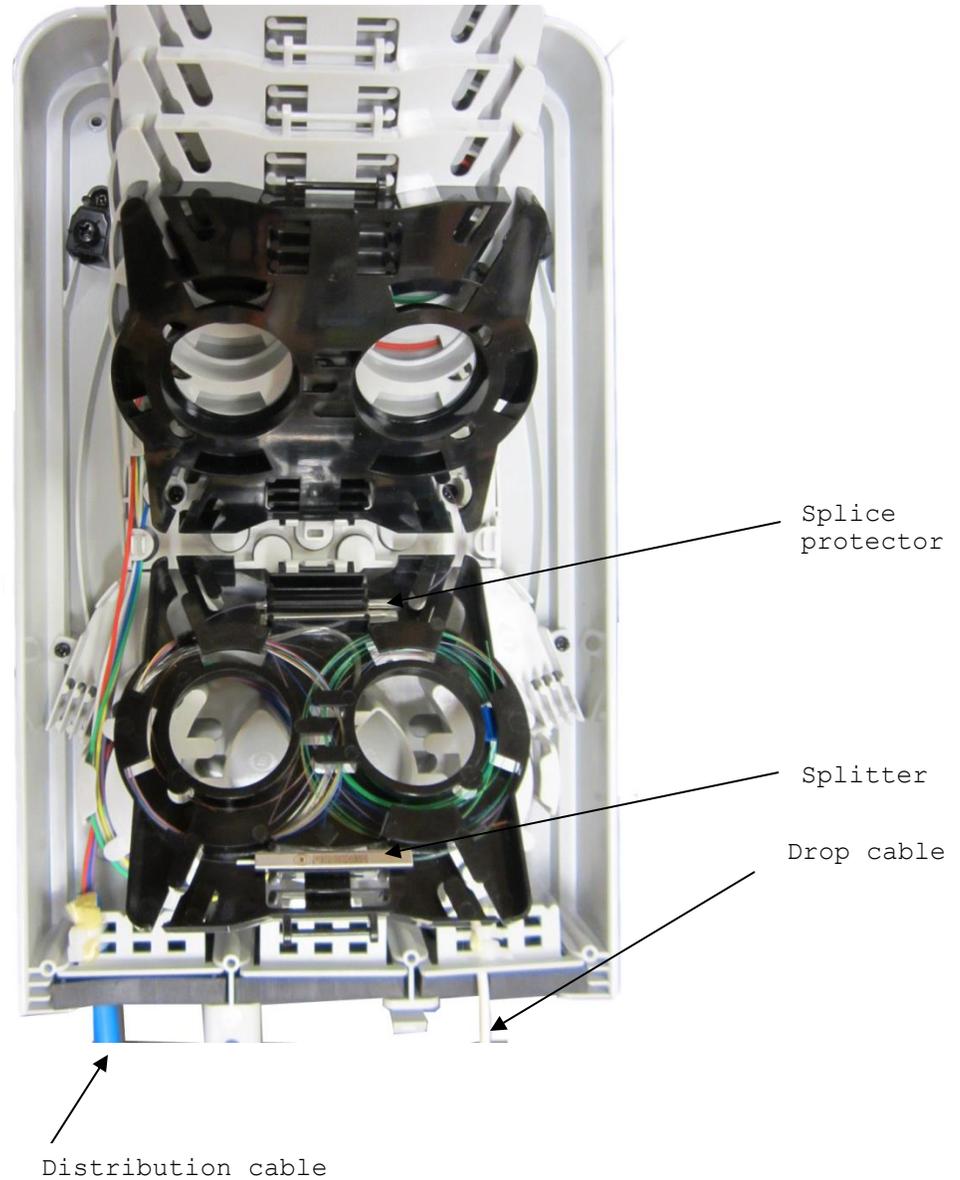**Fig. 9 Securing cable to "L" bracket – enclosure type "Splice"**

Fig. 10 Typical "Splice" style installation

Note:
There are ten splice trays each capable of holding six splitters or twelve splice protectors. Usually, first two trays contain splitters and splice protectors and the remaining eight hold only splice protectors. The splices are made between splitter inputs and the drop cable (white) and the splitter outputs fibers and distribution cables(s).
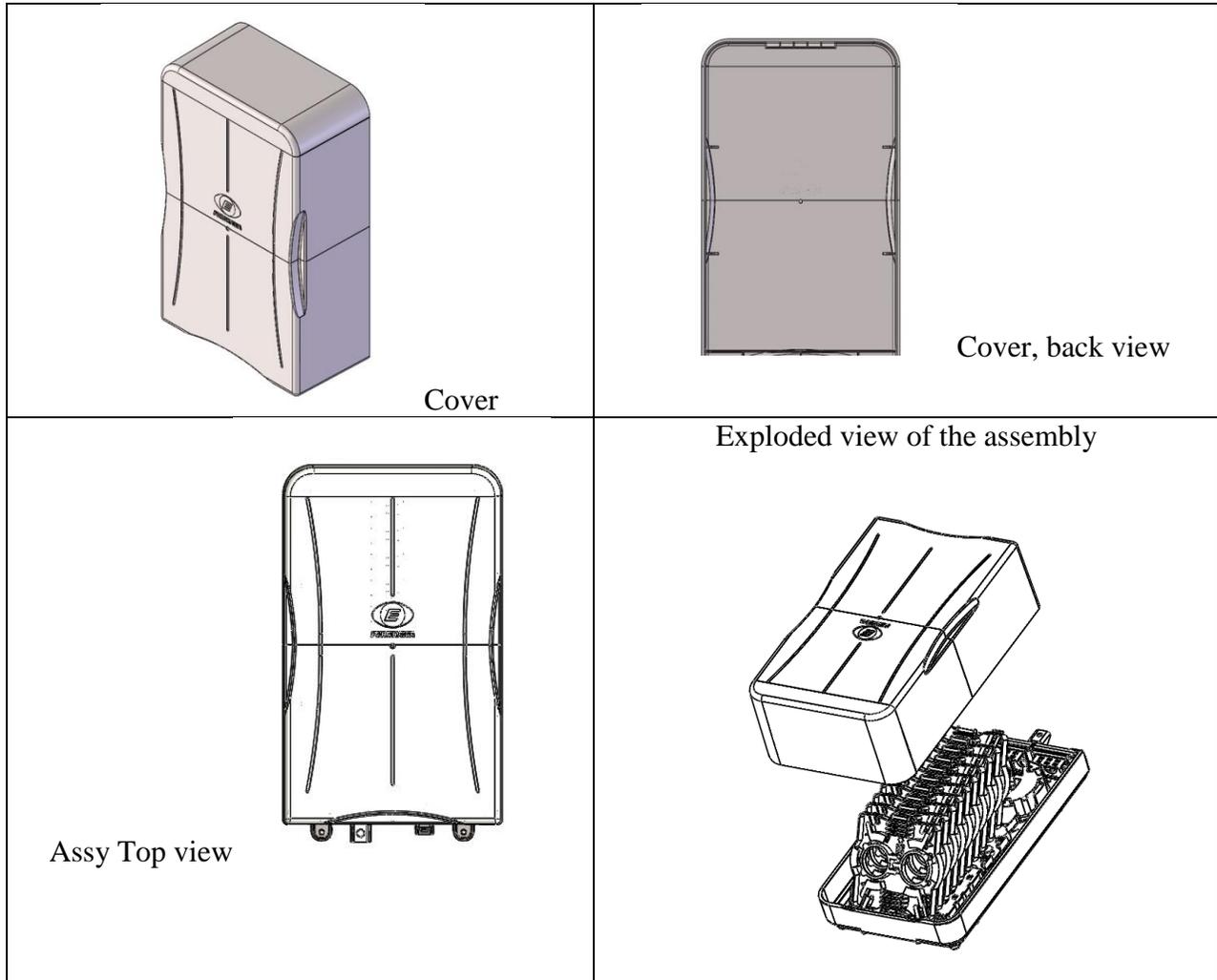
Cover

Cover, back view

Exploded view of the assembly

Assy Top view

Fig. 11   Components – Enclosure type "Splice" w/o mounting kit

6. Installation Type "Direct"

This type of installation uses 12 or 24 fiber cables or multiple of them to the total of 48 connectorized ends. The acceptable cable sizes are up to 15 mm (0.6 in). The cables are either connectorized with SCA, SCU, LCA or LCU connector or not. In the case of using not connectorized cable, use pigtails to splice them onto the cable. Match the connector plug type with the adapter type of the adapter bracket.

The 24 position adapter bracket comes populated with the adapters which match the type of connector the drop cable is terminated with. Alternatively, if a un-connectorized cable is used, pigtails can be spliced to the cable and the splice protectors along with the cable slack stored in the provided pivoting splice trays.

The distribution cables, each in the range 1.6 -2mm in diameter, leave the enclosure through the port having 5 plastic retainers. It is important to not use the cables having diameter outside of the 1.6-2.0 mm range since it may result in the cable damage and high optical losses or not sufficient retention if smaller size cable is used. The port equipped with plastic retainers can accommodate 40 of 1.6-2.0mm cables. If you have more cable leaving the enclosure, use unused ports of two rubber grommets.

Installation steps

1. Open the package and examine the content. You should receive:
    a. Base with oval fiber organizer
    b. Two pivoting splice tray
    c. Adapter bracket with appropriate type of adapters
    d. Two ports with rubber grommets and "L" mounting brackets
    e. One port with five plastic retainers and securing "L" bracket
    f. Cover with destination sheet
    g. Mounting template
    h. Installation kit
2. Complete wall installation per paragraph 2 "Wall installation Instruction"
3. Bring the drop cable through one of the rubber grommet port. For this purpose, cut the rubber grommet following the mold-in cut line until you reach the center of the mold-in

hole. Slide the cable trough just made opening and replace the grommet. Tie the cable aramid yarn to the "L" bracket with a plastic tie. If the cable has a strength member, tie it to the one of the anchor bracket located at the top left and right of the base

4. Plug the cable connectorized ends into the designed adapter ports. If you use un-connectorized cable, splice the pigtails and store the splice protector and extra cable length in the splice trays. Plug the cable connectorized ends into the designed adapter ports.

5. Unscrew two (2) screws and temporally remove the holding plate to loosen up the plastic retainers. Lay down distribution 1.6 to 2 mm diameter cables in the retainer's grooves. Assemble approximately six (6) cable assemblies per retainer. Start laying the cables from the bottom retainer and work your way up to the top one. Don't put the holding plate on back yet

6. Plug the cable connectorized ends   into the adapters. Match the adapter number with the appropriate cable number. Adjust the cable "free" length before tightening the cable retainers.

7. Put the holding plate back and tight up the screws. The cables should not move if you gently tug on the cable.

8. Secure the cable to the retaining "L" bracket with a cable tie

9. Fill in the provided destination sheet and insert it into the document holder, located on the inside wall of the cover

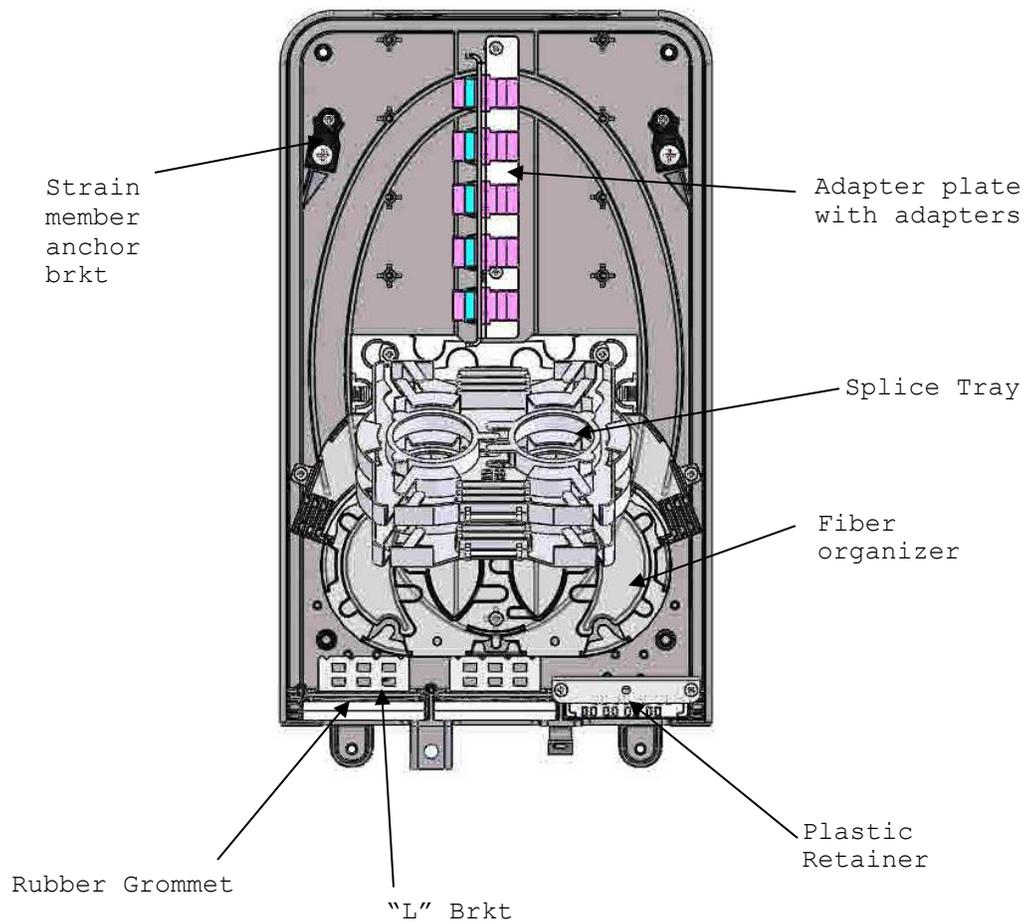10. Assemble the cover to the base

Fig. 12 Enclosure Installation type "Direct"
(w/o cover and mounting kit)

7. Technical assistance

OFS ensures that the technical information, statements, drawings and illustrations contained in this manual are reliable. However, the information may not be sufficient to install in certain conditions OFS reserves itself the right to make improvements, enhancements or changes to the products without prior notification including technical data and other information related to this product.

For additional information, please contact your sales representative.

You can also visit our website at www.ofsoptics.com or call 1-888-fiberhelp (1-888-342-3743) from inside the USA or 1-770-798-5555 from outside the USA