



INSTALLATION INSTRUCTIONS

AFL RTD® Mini Splice Terminal



TABLE OF CONTENTS

PACKAGE CONTENTS	2
REQUIRED TOOLS	2
ADDITIONAL KITS AND ACCESSORIES.....	2
SPECIFICATIONS	2
OPENING TERMINAL	3
GROMMET SIZES AND APPLICATION	4
CABLE GROMMET VERIFICATION	5
FEEDER CABLE INSTALLATION	6
SPLICE TRAY OPTIONS AND ROUTING (FEEDER PORT)	8
TAP/SPLITTER SPLICE TRAY (BRANCH PORT)	9
DROP CABLE INSTALLATION – DIRECT PATCH	9
DROP CABLE INSTALLATION – SPLICING	10
CLOSING TERMINAL	11
MOUNTING OPTIONS.....	12
POLE/WALL MOUNT.....	12
STRAND MOUNTING	13
INSTALLING SPLITTERS	14

PACKAGE CONTENTS

AFL RTD® Mini Splice Terminal Closure
Hose Clamp 10-16 mm
Hose Clamp 13-32 mm
Nylon Tube
Soft Spiral Tube – 120 mm
Soft Spiral Tube – 230mm
Cable Grommet – 3-12mm
Cable Grommet – 13-25mm

Grommet Cutting Guide Strip 3-12mm
Grommet Cutting Guide Strip 13-25mm
Sleeve Clip for Ribbon Cable – MID
Sleeve Holder Structure
4" Cable Ties
Silicone Grease
Cable Grip Sheet

REQUIRED TOOLS

216 Can Wrench or Slotted
Screwdriver
Tape measure
Cable entry tools
Splicing equipment and tools
UV-resistant black tie wraps

ADDITIONAL KITS AND ACCESSORIES

ORDERING INFORMATION

Description	AFL No.
12-Port Splice Terminal Aerial Mounting Bracket	FC169026
12-Port Grommets for 13~25 mm Cable 6 pcs	FC171271
AFL RTD, Mini/Micro Terminal, Grommets for 3~12 mm Cable 12 pcs	FC171272
PLC Splitter, 1x2, 900 µm, 1260-1650, 1 Meter Leads, SC/APC Connectors	PLC-1X8-9-1M-ASC
PLC Splitter, 1x4, 900 µm, 1260-1650, 1 Meter Leads, SC/APC Connectors	PLC-1X4-9-1M-ASC
PLC Splitter, 1x8, 900 µm, 1260-1650, 1 Meter Leads, SC/APC Connectors	PLC-1X2-9-1M-ASC

NOTE:

Additional configurations are available for the RTD Mini Splice Terminal.
See [AFL RTD Mini Splice Terminal specification sheet](#) for ordering information.

SPECIFICATIONS

Parameter	Value
Cable Entry/Exit Ports	Feeder (x2): 13-25 mm Diameter Branch (x2): 3-12 mm Diameter
Splice Capacity	144 Splices
Drop Ports Capacity	12 Ports
Terminal Outer Dimensions	12.8" x 7.7" x 4.8"
Supported Drop Cables	Round: 3.0 mm and 4.8 mm Standard Flat: 8.1 x 4.6 mm Micro Flat: 5.4 mm x 3.0 mm

QUALIFICATIONS

Governing Body	Standard Code
IEC	IEC 60529 (IP68) 6 FT Waterhead
Telcordia	GR-771

TEMPERATURE SPECIFICATIONS

Temperature Range
Operating -40°C to +65°C

OPENING TERMINAL

1. Release the pressure valve to ensure no pressure or vacuum is present. (Figure 1)
 2. Pull the four (4) latches outward direction, using hands or tool, to open the enclosure. (Figures 2 and 3)
- **NOTE: Do not bend more than 90° on the latches with red arrows.****
3. Open the Box Lid to access the drop cable location. (Figure 4)
 4. Loosen the three (3) captive screws on the Cable Holder Top and Bottom. Flip the TAP Splitter Tray to access the Splice Trays. (Figure 5)
 5. Flip the two (2) Splice Trays to access the cable entry/exit ports and slack storage area beneath. (Figure 6)
- **NOTE: Inspect captive screws for loose fiber strands before removing or reinstalling the screws. Any fiber caught between the screw and surrounding hardware may be crushed or damaged during screw removal or installation.****

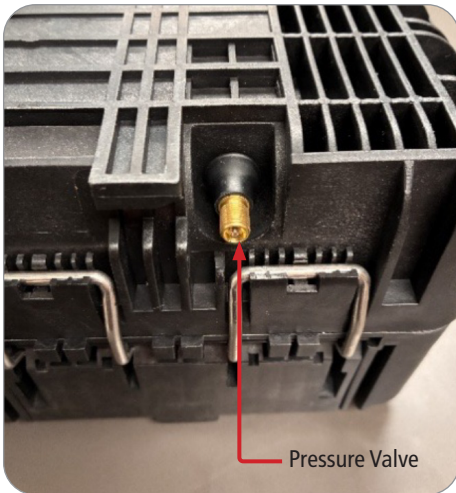


Figure 1



Figure 2

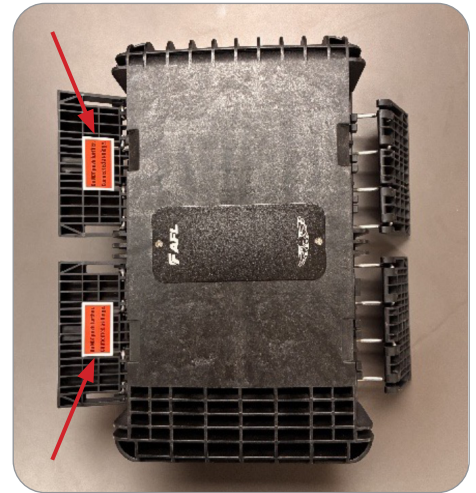


Figure 3



Figure 4

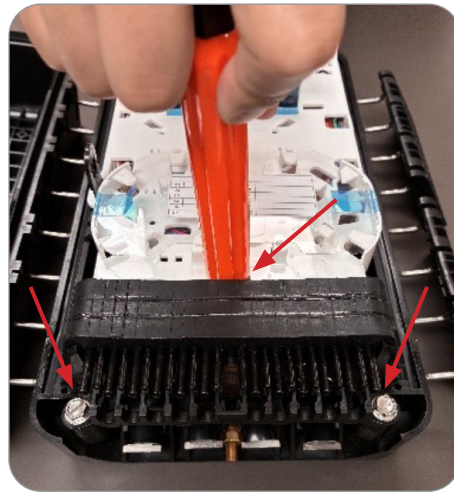


Figure 5

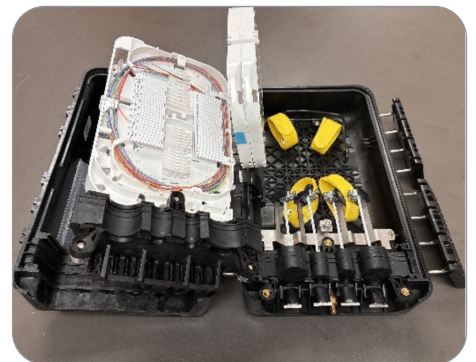


Figure 6

GROMMET SIZES AND APPLICATION

The AFL RTD Mini Splice Terminal comes with two (2) large outer slots designed for feeder cable entry and exit and two (2) small, inner slots designed for branch cable entry and exit. (Figure 7)

Four (4) graduated grommets are available for the cable entry/exit ports. These grommets must be cut to length based on the cable diameter. (Figure 8)

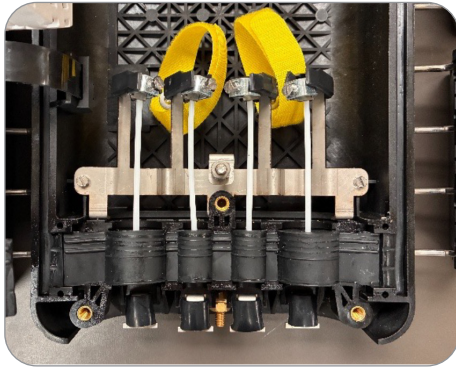


Figure 7



Figure 8

Follow provided grommet cutting guide strip included in packaging for the proper cutting line of the grommet based on required cable sizes. (Figures 9 and 10)

****NOTE:** For cables with an outside diameter (OD) smaller than the minimum sealing range of the feeder cable entry port, a dual-grommet configuration can be used. **

Feeder Cable Grommet (For cable size of 13.0 mm – 25.0 mm)

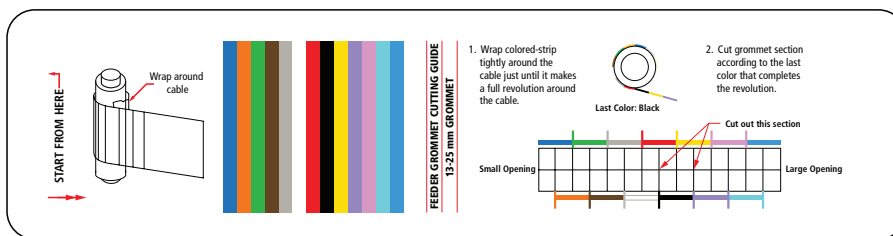


Figure 9

Branch Cable Grommet (For cable size of 3.0 mm – 12.0 mm)

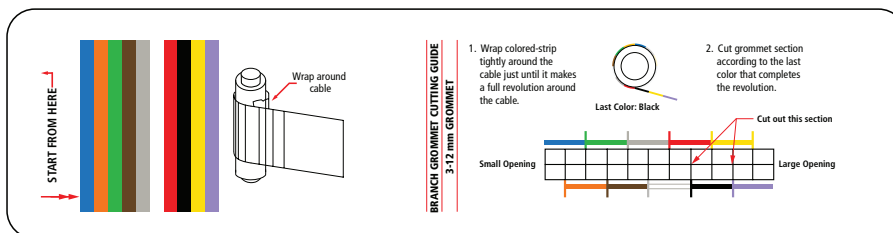


Figure 10

Install a branch grommet as the inner grommet and a feeder grommet as the outer grommet to increase the effective cable diameter, providing proper sealing and secure cable retention.

1. Using the Branch Grommet Cutting Guide Strip to identify the correct section to cut.
2. After identifying the proper cutting lines, mark the two sections on the branch grommet and cut the appropriate section.
3. Cut a slit along the grommet to allow it to be wrapped around the cable.
4. Apply silicone grease to the inside and outside surfaces of the grommet before wrapping it around the cable.

SINGLE GROMMET VERIFICATION

1. After identifying the proper cutting lines, mark the two sections on the grommet. (Figure 11)
2. Cut the appropriate section from the graduated tube. (Figure 12)
3. Make a slit in the newly cut grommet piece so it can be wrapped around the cable. (Figure 12)
4. Apply Silicone grease to the inside and outside the grommet before wrapping around the cable. (Figure 13)



Figure 11

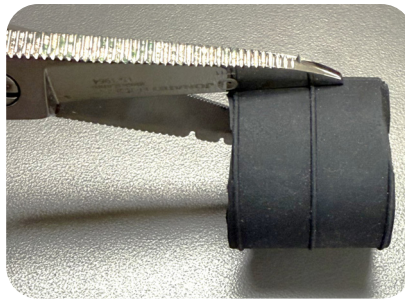


Figure 12

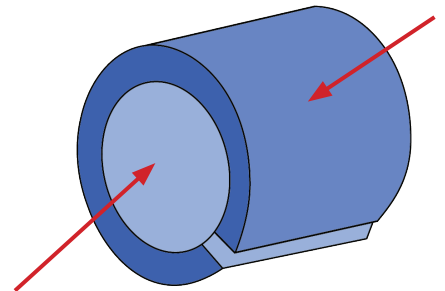


Figure 13

DOUBLE GROMMET VERIFICATION

When the cable OD is below the feeder entry port sealing range, use a branch grommet inside a feeder grommet to achieve a proper seal.

1. Prepare and install the branch grommet by following Steps 1-4 in Single Grommet Verification section above.
2. Once the branch port is around the cable, use the Feeder Cable Grommet Cutting Guide, identify the feeder grommet size that properly fits over the installed branch grommet. (Figure 14)

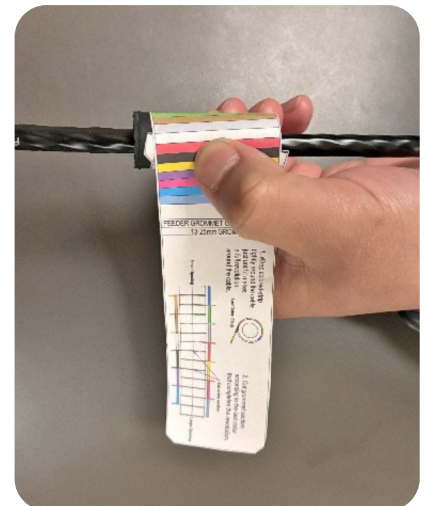


Figure 14

3. Repeat Steps 1-4 in Single Grommet Verification section for the feeder grommet, installing it over the branch grommet to create a double grommet configuration for smaller diameter cables. (Figure 15)
4. Align the grommet slits on opposite sides of the cable, with the branch grommet slit at the 9 o'clock position and the feeder grommet slit at the 3 o'clock position. (Figure 16)

****NOTE: For Below-Grade Installation, application of SILICONE GREASE on all grommets and the surface of the gaskets must be done before closing the unit.****



Figure 15



Figure 16

FEEDER CABLE INSTALLATION

1. Strip the jacket of the feeder for about 6-8 ft (1800-2400 mm). Cut the central membrane leaving 1.5 in. (40 mm) from both ends of the jacket. (Figure 17)
2. Loosen the two (2) captive screws on Cable Bracket from the Box Tray. (Figure 18)
3. Completely remove the Cable Bracket Assembly from the enclosure. (Figure 19)
4. Remove the dummy plugs and Cable Anchor safety caps. Retain if slot will not be used. (Figure 20)

****NOTE: For Below-Grade Installation, application of SILICONE GREASE on all grommets and the surface of the gaskets must be done before closing the unit.****

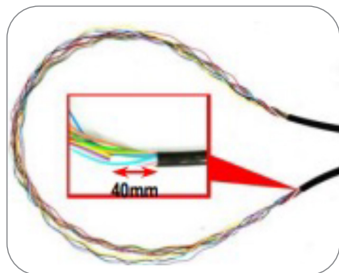


Figure 17

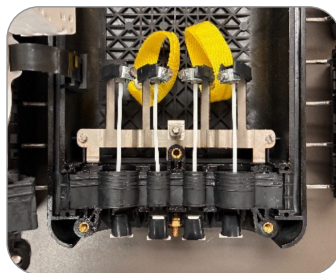


Figure 18



Figure 19



Figure 20

5. Secure the strength member to the strength member clamp and tighten the screw. (Figure 21)

****NOTE: Maximum allowable torque limit for strength member clamps: ≤ 23 in-lbs.**

6. Insert the cable grommet onto the cable.
7. Position the cable so the branch and feeder grommet slits are offset from one another and oriented opposite each other. (Figure 22)
8. Secure the feeder cable to the Cable Anchor using a hose clamp provided and ensure the screw of the hose clamp is tightened. (Figure 23)

****NOTE: Maximum allowable torque limit for strength member clamps: ≤ 23 in-lbs.**

9. Separate the needed buffer tube that will be used for mid-span splicing.
10. Loop the remaining tubes. Ensure that there are no kinked or pinched tubes after looping.
11. Place the cable loop inside the slack storage area, and secure using Velcro. (Figure 24)
12. Expose the bare fibers of the separated buffer tube. Cut the fibers that will be spliced.

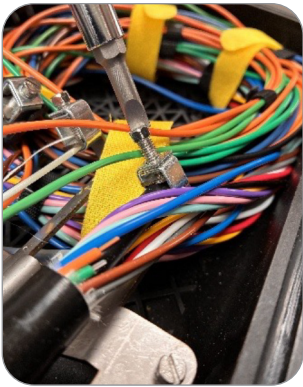


Figure 21

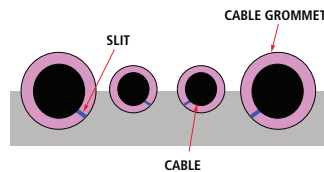


Figure 22



Figure 23



Figure 24

SPLICE TRAY OPTIONS AND ROUTING (FEEDER PORT)

Splice trays for the AFL RTD Mini Splice Terminal come fully loaded, but splice modules are field removable.

1. To remove a splice module, disengage the locking tabs on the sides with a slotted screwdriver, and slide module to release the latches. (Figure 25)
2. To re-install a splice module to the splice tray, align the latch tabs with the module slot on the splice tray and push down to engage. (Figure 26)
3. Unroute the cables from the Splice Tray.
4. Route the tube to be used into the splice tray and mark the tube slightly beyond the wall of the splice tray.
5. Ensure the tube will have the proper amount of slack and will not kink or catch on anything.
6. Wrap the supplied soft spiral tube around the tube being used. (Figure 27)
7. Secure the tube to the splice tray entrance using a cable tie. (Figure 28)

Once all splicing is complete:

1. Insert the splice tube into the holder.
2. Ensure all slack is dressed neatly in the splice trays. (Figure 29)
3. Close the cover of the terminal and secure all the wire latches.

****NOTE: Always follow locally accepted practices when splicing.****

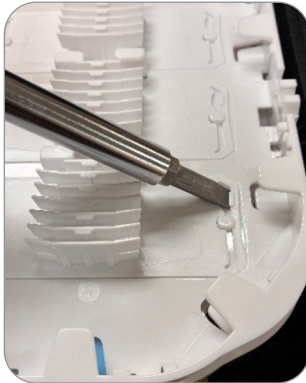


Figure 25

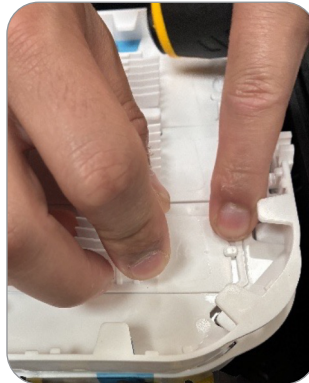


Figure 26

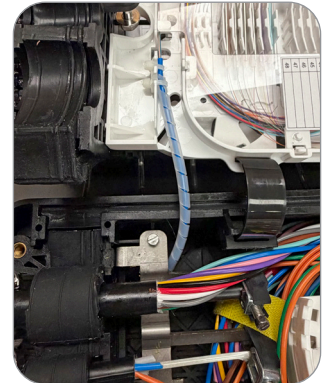


Figure 27

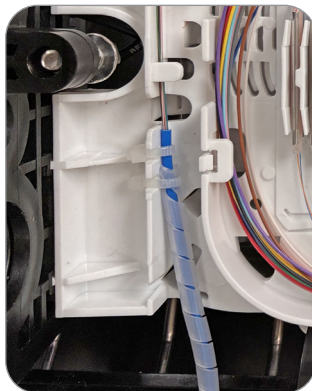


Figure 28

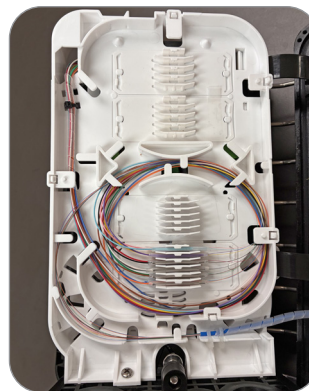


Figure 29

TAP/SPLITTER SPLICE TRAY (BRANCH PORT)

1. Route the tube to be used into the branch splice tray and mark the tube slightly beyond the wall of the splice tray.
2. Ensure the tube will have the proper amount of slack and will not kink or catch on anything.
3. Secure the tube to the splice tray entrance using a cable tie. (Figure 30)
4. Insert the splice tube into the holder.
5. Ensure all slack is dressed neatly in the splice trays. (Figure 31)
6. Once all splicing is complete, close the cover of the terminal and secure all the wire latches.
7. Repeat steps 1-6 for additional branch port splice tray if desired.

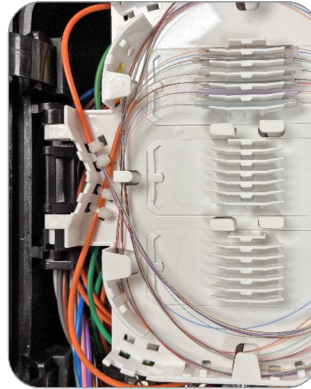


Figure 30



Figure 31

****NOTE: Always follow locally accepted practices when splicing.****

DROP CABLE INSTALLATION – DIRECT PATCH

⚠ Caution: When working with fiber optics, do not look directly into the end of the fiber cable or adapter port. A power meter may be used to determine if the cable or port is dark. Always use locally accepted fiber optic safety practices.

1. Remove the blank port plug from the drop slot using a pair of cutters. (Figures 32 and 33)
2. Wrap the drop cable with cable grip sheet, aligned with the fixing bars. (Figure 34)



Figure 32



Figure 33

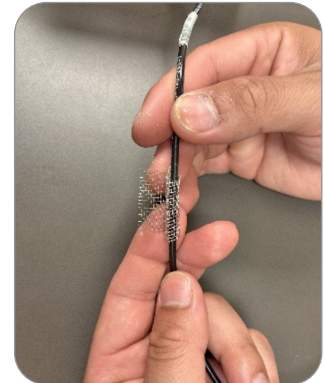


Figure 34

3. Install the drop cable in the drop just past the drop seal.

4. Secure the cable to the drop retention bracket using UV-resistant, black-tie wraps. It is recommended to use 8-inch long tie wraps. (Figure 35)
5. Tighten and then cut the excess ties.

****NOTE: Keep blank port plugs in place if cable slot will not be used.****

6. Remove the dust caps from the connector and the drop and install the drop cable. (Figure 36)
7. Repeat steps 1-6 for all remaining drop cables. (Figure 37)

****NOTE: AFL recommends always cleaning and inspecting connectors and adapters before making a connection. Always follow locally-accepted practices and cleaning procedures.****

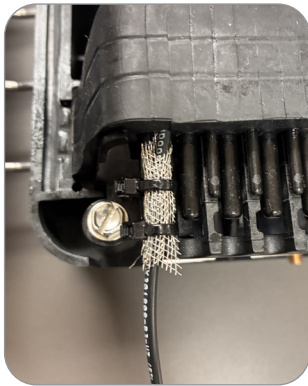


Figure 35

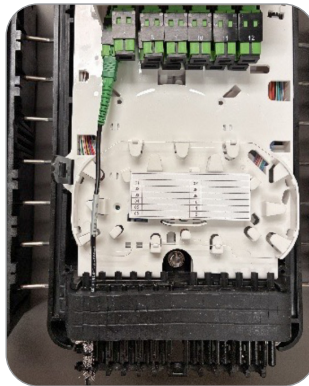


Figure 36

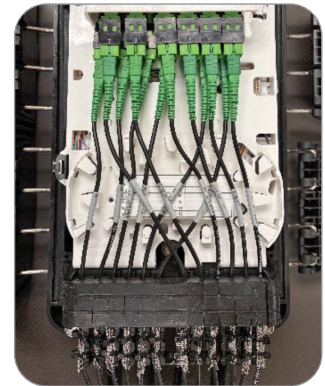


Figure 37

DROP CABLE INSTALLATION – SPLICING

⚠ Caution: When working with fiber optics, do not look directly into the end of the fiber cable or adapter port. A power meter may be used to determine if the cable or port is dark. Always use locally accepted fiber optic safety practices.

1. Remove the blank port plug from the drop slot using a pair of cutters.
2. Wrap the drop cable with cable grip sheet, aligned with the fixing bars.
3. Insert the drop cable with the stripped end into the drop cable grommet.

****NOTE: Keep blank port plugs in place if cable slot will not be used.****

4. Secure the cable sheath to the drop retention bracket using UV-resistant, black-tie wraps. It is recommended to use 8-inch long tie wraps.
5. Tighten and then cut the excess ties.
6. Repeat steps 1-5 for remaining drop cables.
7. Perform fusion splicing for the drop and pigtail cable.
8. Route the cables onto the TAP-Splitter tray ensuring to cover the tray with clear lid when finished.

****NOTE: Always follow locally accepted practices when splicing.****

CLOSING TERMINAL

1. Secure the splice tray covers using the supplied Velcro strap. Ensure the cover is fully seated and retained before closing the terminal. (Figures 38 and 39)
2. Secure the Cable Holder Top on the enclosure by fully tightening the three (3) captive screws.

****NOTE: Maximum allowable torque limit for captive screws: <27 in-lbs.****

3. Gently close the lid making sure it is aligned with the tray.
3. Engage the two (2) latches on the Box Lid and then push the four (4) latches inward. (Figure 40)

****NOTE: Avoid putting your hands near the latches during closing for safety purposes.****

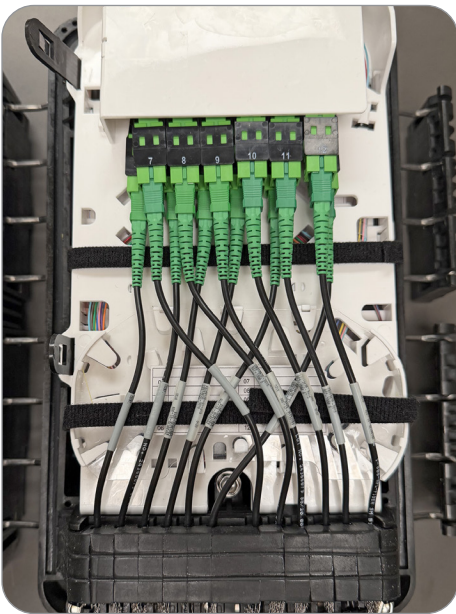


Figure 38



Figure 39

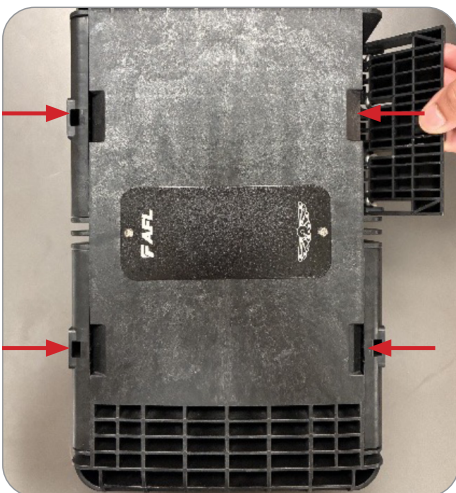


Figure 40

MOUNTING OPTIONS

The AFL RTD Mini Splice Terminal comes with mounting brackets that have three mounting positions to allow for mounting to a pole, wall, and aerially on a messenger wire strand.

Mounting aerially to a messenger wire strand requires an additional kit (see details below).

POLE/WALL MOUNT

****NOTE: Mounting screws for pole or wall mounting are not included.****

1. Position the Mounting Bracket to the desired area on the pole or wall.
2. Install Mounting Bracket to the pole or wall using standard mounting screws. (Figure 41)
3. Place the splice terminal on the slide mount bracket and position the protruding parts just before the sliding guides. (Figure 42)
4. Slide the enclosure on the sliding guides until you hear a “clicking” sound. This means the enclosure is already locked to the bracket. (Figure 43)

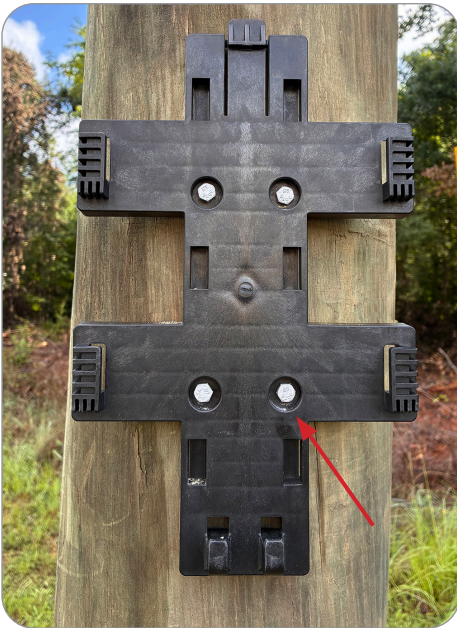


Figure 41

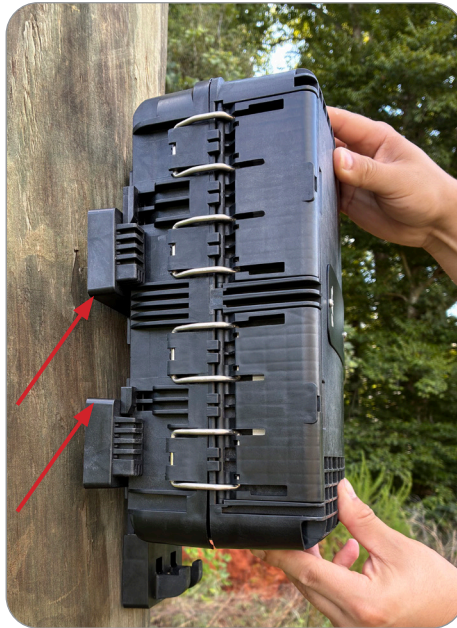


Figure 42



Figure 43

STRAND MOUNTING

Mounting aerially on a messenger wire strand requires using the supplied mounting brackets with the Aerial Strand Mount Bracket Kit. Position the brackets 90° and attach the strand mount bracket to the slide mount bracket using flanged hex head slotted screws.

1. Place the enclosure on the slide mount bracket and position the protruding parts just before the sliding guides. (Figure 44)
2. Slide the splice terminal on the sliding guides until you hear a “clicking” sound. This sound means the enclosure is locked to the bracket. (Figures 45 and 46)
3. Loosen the Clamp of both strand mounts. Hang the Mount Bracket to the wire strand.
4. Insert the strand wire/cable on the Clamp. Hand tight the hex nut using wrench as tight as possible. (Figure 47)

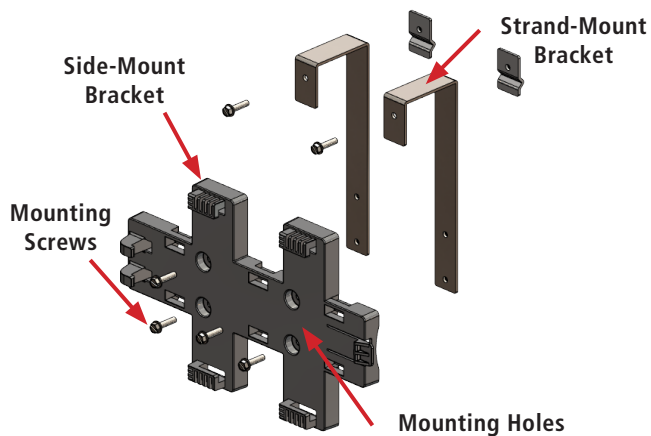


Figure 44

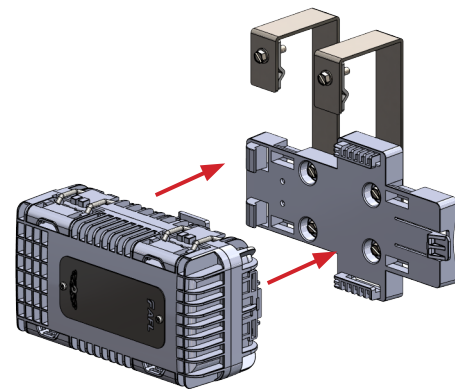


Figure 45

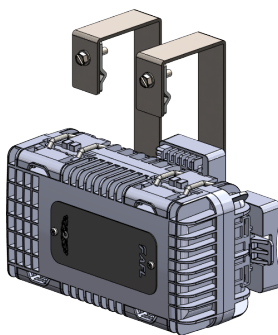


Figure 46

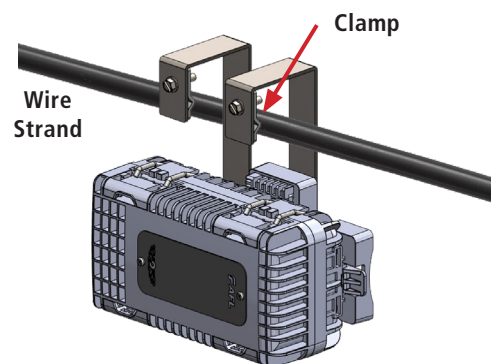


Figure 47

INSTALLING SPLITTERS

The AFL RTD Mini Splice Terminal can be ordered with PLC splitter assemblies for field installation. The terminal is supplied with standard adapters and pigtails, which may be removed and replaced with the PLC splitter assembly as needed.

AFL recommends using 900 μ m fiber splitter assemblies with 1-meter length pigtails to properly route the assembly to the splice tray. Refer to the “Additional Kits and Accessories” table on Page 2 of this document for AFL-offered splitter assemblies.

1. Remove the white cover by pulling upward to expose the pigtail connectors attached to the adapters. Disconnect and remove the adapters and pigtails that will be replaced by the PLC splitter assembly. (Figure 48)
2. Plug in the pigtail connectors to the adapters, ensuring they are inserted in the correct numerical order. (Figure 49)

****NOTE: AFL recommends inspecting and cleaning each connector prior to making a connection.****

3. Route the PLC splitter pigtails through the opening in the upper-right corner of the terminal and toward the splice tray.
4. Secure the pigtail bundle at the splice tray entrance using a tie wrap, then place the PLC splitter chip into the splice module slot on the far right side of the splice tray. (Figure 50)

****NOTE: Ensure the fibers still have free movement after securing to prevent attenuation.****

5. Adjust the slack as necessary.

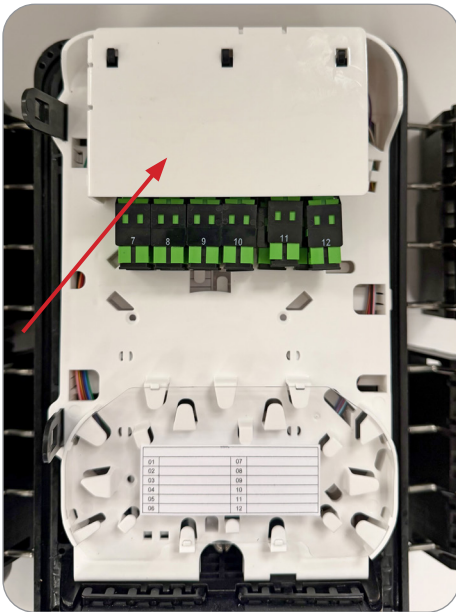


Figure 48

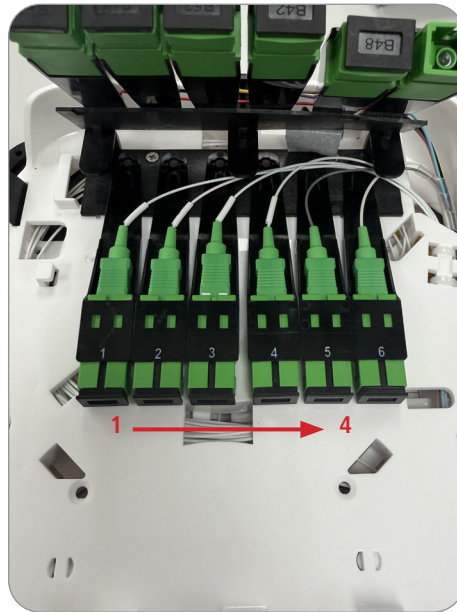


Figure 49



Figure 50