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YOURx Multi-Purpose Terminal Installation Manual



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Installation Manual

Application

Designed for network design flexibility, Clearfield's YOURx Multi-Purpose Terminal (MPT) is optimized for deployments requiring midspan, fiber drop, splitter or optical component capabilities

Description

The YOURx Multi-Purpose Terminal is a sealed mid-span terminal that will accept cables with a diameter up to 0.7" (17.78mm). The terminal includes eight individual sealed distribution drops with removable tabs - all air and water-tight via YOURx FlexPort technology. The snap-in splice chip will support 12 loose tube splices or 3 mass fusion (36 fibers) splices, with the ability to store up to 8 feet per buffer tube. The terminal cable entry point uses a split sleeve grommet design for easy installation. The slide out adapter plate allows installers easy access for cleaning or testing connectors, if required. The bulkhead allows for mounting of optical components, splitters, WDMs and DWDMs. When accessing the terminal, a standard can wrench is the only tool required. The terminal can be deployed above grade, below grade, on a pole mount, or in an aerial mount.



Technical Specifications

YOURx Multi-Purpose Terminal (MPT)					
Dimensions	12.44"L x 6.76"W x 5.49"H (315.97 mm x 171.70 mm x 139.44 mm)				
Mounting Options	Below Grade: Vaults - V5A-AZP (17" x 30" x 24") or V6A-AZP (24" x 36" 24") Above Ground: Pedestals - FPP-8820 (8" x 8" with 12" high base), FPP-101020 (10" x 10" with 20" high base) or FPP-121230 (12" x 12" with 30" high base) Pole or Aerial/Strand				
Internal Slack	8' of 12 fiber buffer tube				
Feeder Cable	Accepts cable diameter of up to .70" (17.78 mm)				
Distribution Ports	Eight 14 mm ports; ports are designed to accept FieldShield FlexConnector				
Connector Types	SC/APC, SC/UPC, LC/APC, LC/UPC and MPO Duplex				
Material	Black UV Resistant Thermoplastic				
Weight	4lbs				

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Parts

- 1. Terminal Cover
- 2. Terminal Bulkhead
- 3. Terminal Faceplate
- 4. Terminal Collar
- 5. Terminal Seal
- 6. Splice Chip
- 7. Splice Tray Cover
- 8. Adapter Plate
- 9. Strength Member Clamp
- 10. Gasket Plate
- 11. Gasket
- 12. Gasket Film Cover
- 13. FlexPorts
- 14. Vibration Grommet

Additional Hardware

- 15. BOLT, HEX HEAD, 1/4-20X3/4" 18-8 SST
- 16. BOLT, HEX HEAD, 1/4"-20 x 1.00"
- 17. NUT, HEX THIN SST 1/4-20
- 18. WASHER, RETAINING, .213"ID X .50"OD X .025" THK, PVC
- 19. Silicone Tape
- 20. Gray Fiber Retaining Clip
- 21. Velcro
- 22. Optional Grounding Kit (P/N MPT-GROUNDING-01)
- 23. Optional Bonding Kit (P/N MPT-BONDING-01)

Tools Needed

DO NOT USE POWER TOOLS

Pulling tool (for FLATdrop/SFF assemblies)

De-burring tool

FlexPort release tool

Can wrench

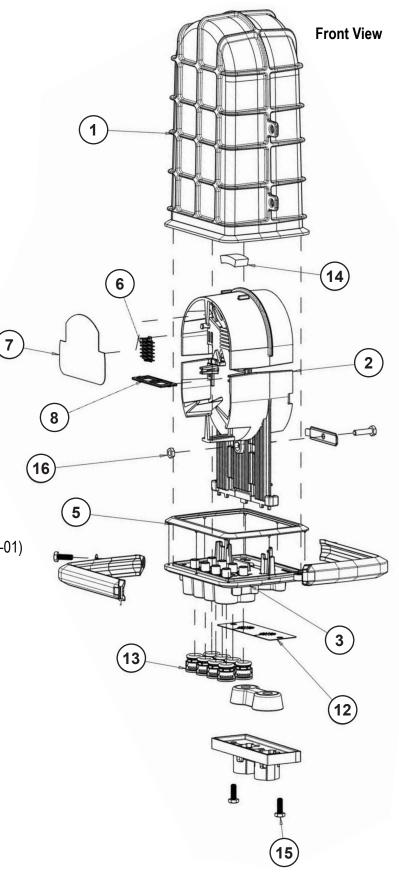
Flat screwdriver

Pipe Dope (when grounding terminal)

Duct/Cigar Cutter (microduct w/o string)

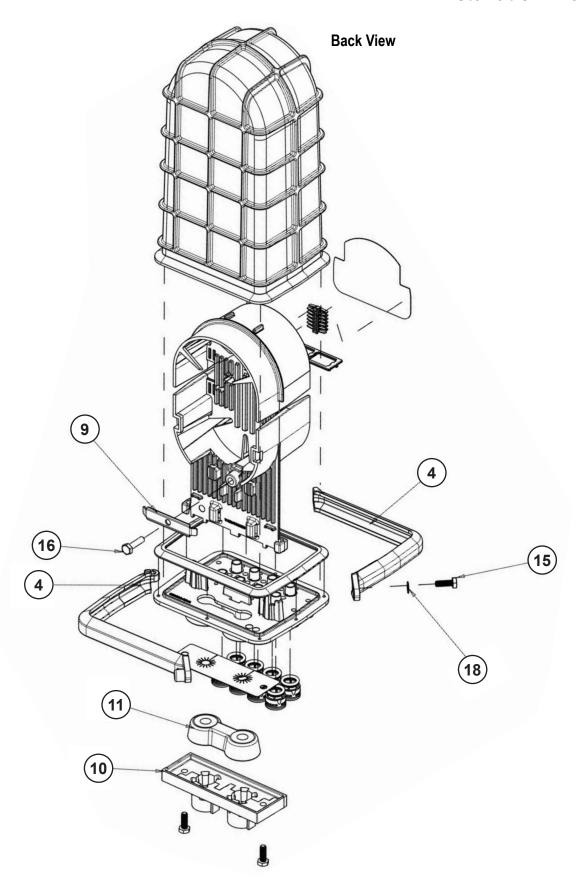
Rotary Cutter (microduct with string)

Tools for cable prep and splicing





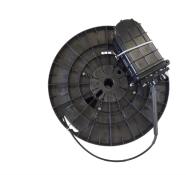
YOURx Multi-Purpose Terminal Installation Manual



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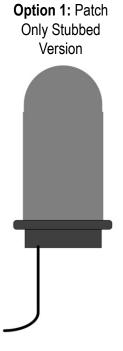


Configurations

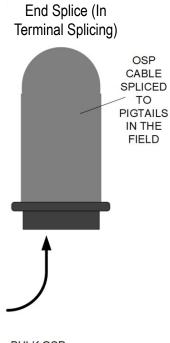


IMPORTANT

Note: For Patch Only versions, when deploying, do not remove terminal from reel.

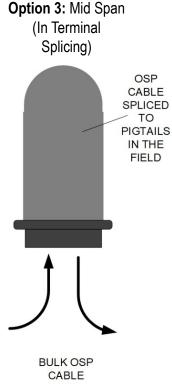


FACTORY SPLICED TAIL



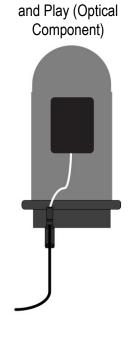
Option 2: Dead

BULK OSP CABLE





Option 4: Plug and



Option 5: Plug

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Deployment/Mounting

Below Grade Deployment

Much like a typical splice case, the MPT can be coiled into the base of a vault/below grade enclosure.

Wall & Pole (Wood) Mounting

The mounting bracket for the MPT can be secured to the wall or pole via preferred hardware through the large back plate of the mounting bracket. Then attach the MPT to the mounting bracket with the 4 provided screws in the holes at the base of the terminal.

Note: Clearfield recommends to orient the MPT mounting bracket with the 4 MPT mounting holes on the bottom of the bracket.



Pole (Metal) Mounting

In order to secure the MPT mounting bracket to the metal pole, place the band clamps through the two sets of bridge lances located on the large back plate of the mounting bracket, and secure them around the pole. Proceed to mounting the MPT to the MPT mounting bracket with the 4 screws provided.





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Pedestal Mounting

- 1. Mount the pedestal mounting bracket into the pedestal.
- 2. Secure the MPT to the pedestal mounting bracket by the holes in the tabs on the MPT lid, using the bolts and wing nuts supplied with the bracket



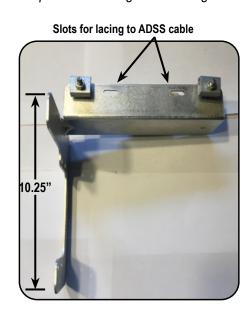


Aerial Mounting

1. Install the MPT onto the base MPT mounting bracket. This will attach via four screws into holes on the base of the MPT.

Note: Proceed to next step for instruction on installing the collar tether prior to securing the lower right screw.



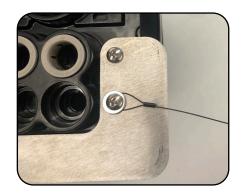




Installation Manual

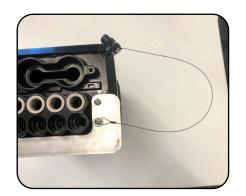
2. Place one end of the collar tether over the hole and secure in place with the provided screw and washer.



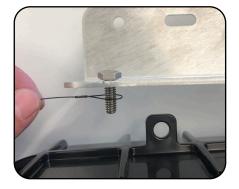


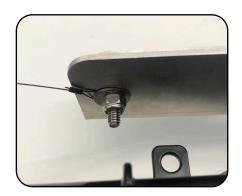
Slightly loosen the bolt on the collar, slip the second end of the tether over the bolt, pull to seat it under the bolt's head, and tighten into place.





4. To install the lid tether, use the provided hardware to attach the first end of the tether to the mounting bracket.





Secure the second end of the lid tether to the MPT's lid at the attachment point nearby.





6. Using a can wrench, loosen the bug nuts on the aerial mounting bracket. Place the bug nuts around the strand in the desired location and tighten the bug nuts.

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Accessing the Terminal

In order to access the internals of the MPT, you must remove the collar and pull off the lid.



1. Loosen the bolt holding the collar closed with a can wrench.



2. Remove the collar and pull off the lid.



3. To re-install the lid, follow these steps in reverse, making sure you match the correct sides of the lid and MPT body so the internals will align (there is a groove inside the top of the lid which the bulkhead will seat into). Replace the collar and tighten until hard stop/the bolt bottoms out.



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Capacity

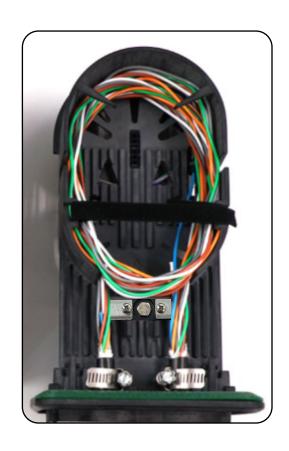
Slack Storage

The YOURx Multi-Purpose Terminal is recommended for use with a max cable OD of 0.70 inches, with a possibility to midspan.

The terminal is capable of storing up to 8 feet of buffer tuber depending on cable size.

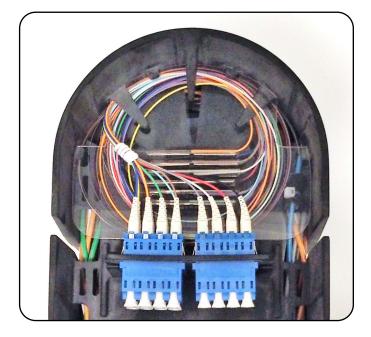
The terminal will accept up to 8 fiber drops connected through the 14mm ports.





Splice Tray

The terminal will support up to 12 loose tube splices or three ribbon fiber mass fusion splices.



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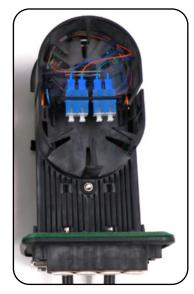
*Up to 16 ports in certain

drops

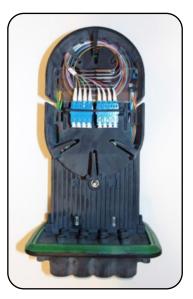
configurations

if dual LC fiber

Adapter Plate Capacity and Configuration



8 SC Adapters



12 LC Adapters

Adapter Plate Port Assignment

Top Row

Bottom Row

5	6	7	8
1	2	3	4

SC Duplex Adapters

9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8

3	4	5	6
IN	OUT	1	2

SC Duplex Adapters with MPO

1	2	3	4	5	6	
II	N	Ol	JT			

LC Quadplex Adapters with MPO

Note: MPO Duplex Adapter will populate one section. The **OUT** MPO is for expressing fibers, and will be blank if not configured to do so.



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Splicing in the Multi-Purpose Terminal

- **1.** Prep your cable. Clearfield recommends opening no more than 8 ft (96") of cable.
- **2.** Cut the strength members to roughly 5 inches in length.
- **3.** Place the hose clamps through the clamp locations on the terminal bulkhead.

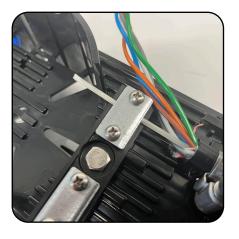


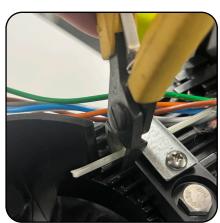
- **4.** Insert the buffer tubes (mid-span or dead end) through the cable entrance on the base of the terminal.
- **5.** Place the cables into the hose clamps and tighten.

Note: In later steps, when installing the gasket plate, the hose clamps and strength member clamp used to secure the cable may need to be loosened in order to allow the cable to shift and the gasket plate bolts to be fully tightened. If this is needed, simply re-tighten the clamps after the gasket plate is installed.



- 6. If needed, loosen the screws on the strength member clamps, then insert the strength members in place below the brackets and tighten.
- 7. Once strength members are secured into place, trim them to length just behind the strength member clamp.

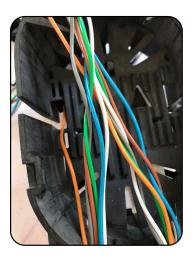




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- Pass the buffer tubes/ribbons to be splice through the slot on the chosen side of the bulkhead, transitioning the fiber from the back of the terminal to the front. It is recommended to place zip ties/wax string before storing buffer tubes.
- Store the remaining buffer tubes in the slack storage area, coiling it neatly into place and securing with a velcro strap across the top.







- **10.** Place a zip tie or piece of wax string into the tie-down location in the terminal. Note that buffer tubes/ribbons can be secured to either side of the splicing area.
- 11. From the tie-down location, measure 30 inches and trim your fiber. Open up the buffer tube from after the tie-down location, exposing the 250 micron fibers.
- 12. Wrap one lap of grommet tape around the buffer tube approximately 1/4 inch behind the opening, and secure it into place at the tie-down location using the zip tie or piece of wax string.

Note: Installing the provided grey fiber retainer clip into the splice tray may prevent the installation of the splice tray cover later. Chose whichever method you prefer.





- **13.** Route the fibers into the splice tray.
- **14.** Install the splice chip into the slot at the center of the splice tray.
- **15.** Route the fibers to be spliced (keeping others stored) and bring them into the splice chip. Trim fibers to length at the center of the splice chip.

Note: Clearfield recommends at least 1.5 laps of slack stored in the splice tray.







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Mid-Spanning Buffer Tubes

The following are instructions for midspanning a single buffer tube inside the MPT, and expressing the remaining fibers that aren't spliced.

- Prior to storing the remaining buffer tubes in the back of the MPT, bring one side of the buffer tube to be mid-spanned through the opening on the side of the bulkhead.
- 2. Repeat for the other side so that all the slack in the buffer tube is located in front of the terminal.



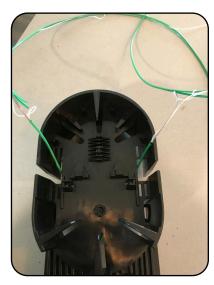


Utilize the tie down areas within the bulkhead, mark the buffer tube on each side approximately 1/2" above this tie down point.





4. Using the appropriate tool, mid-span the buffer tube to expose the fibers between the marks you made on the buffer tube.

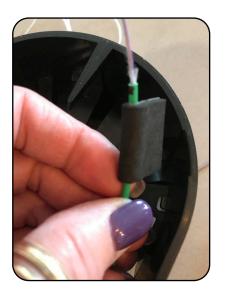


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5. With grommet tape, felt tape, or your local practice, protect the buffer tube by wrapping the material around the buffer tubes approximately 1/8" before the openings.

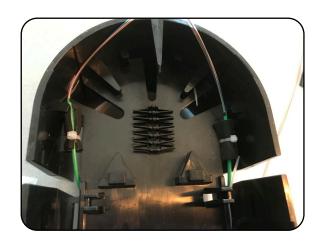
Note: If using grommet tape, it is recommended to wrap buffer tube by folding tape over and then trimming.





6. Tie down the buffer tubes on both side of the bulkhead as shown with zip ties or wax string. If using zip ties, be sure to only tighten until it is "snug" and not damage the buffer tube.





7. Follow instructions for splicing in the terminal, i.e. FLATdrop, pre-connectorized pigtails, or MOCs.

Store the slack from the splices as well as the remaining fibers that are being expressed.





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Splicing Pre-Connectorized Fiber Pigtails

1. Remove the faceplate that comes pre-loaded with the fiber assembly from the terminal. Remove the twist ties from the fibers, and save both halves for later.

Note: Fiber test record will be included. Place onto splice tray cover for future use.

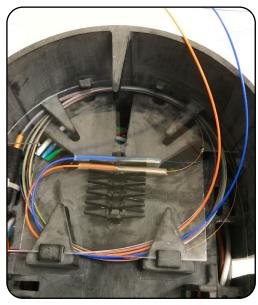
2. Splice each of these fibers to the assigned incoming fiber. Place the splice sleeves into the splice chip.

Note: Slice chip carries a maximum of 12 sleeves (6 slots, 2 sleeves per slot).

3. Store the 250 micron fiber back into the tray.



4. Route the 900 micron fiber down and around the bottom of the tray, and out of the top of the terminal. Install the splice tray cover, allowing the 900 micron fiber to exit the gap in the splice tray cover.

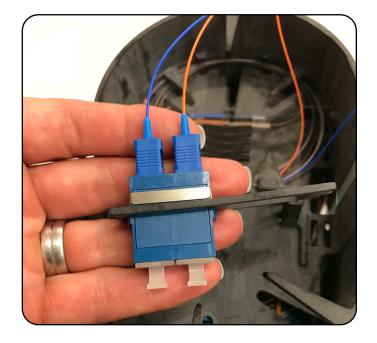


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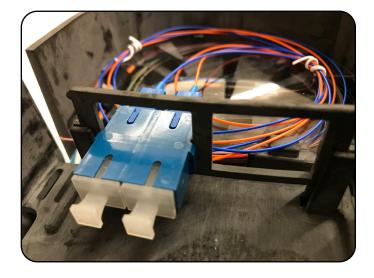


- **5.** Install the adapters into the adapter plate.
- **6.** Inspect and clean the fiber endfaces and connect them into the back side of the adapters.

Note: The underside of the back half of the adapter plate will have a metal clip.



- 7. Gently coil the 900 micron fibers and place the two white twist ties around the fibers to keep them in a neat loop and lay them on top of the splice tray cover.
- **8.** Insert the adapter plate into its location just below the splice tray.





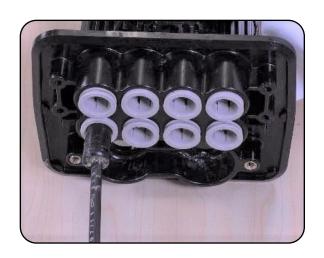
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Splicing Clearfield's FLATdrop

1. After opening and tying the buffer tube into the splice tray on the desired side (Clearfield recommends opening a minimum of 30 inches of buffer tube) store the bare 250 micron fiber in the entire splice tray. This will allow for subsequent users to have easier access to the fibers when splicing additional drops at a later time.



- 2. Prepare the flat drop, opening at least 30 inches of the cable to expose the inner buffer tube.
- Insert the fiber through the FlexPort and into the terminal bulkhead. Fully seat the FlexConnector into the FlexPort.



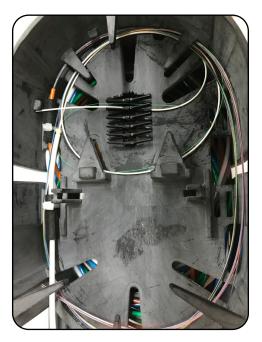
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- 4. Bring the buffer tubes to the opposite side of the MPT bulkhead that the original buffer tube is secured to. You will secure the buffer tubes down at this location. Mark the length to reach the tie-down location on each buffer tube, and open the tubes 1/2 inch after that to expose the 900 micron fibers. See page 13 for more info.
- **5.** Secure all buffer tubes in place with velcro, or grommet tape and zip ties.



6. Store the 900 micron fibers to be spliced in the upper splice tray. Wrap 1 1/2 laps of fiber and bring them to the center of the splice chip, then trim them to length. Do the same with the 250 micron fibers to be spliced.



7. Perform your splices and place the splice sleeves in the splice chip in the center of the splice tray. Store the slack inside the upper portion of the splice tray and reinstall the splice tray cover.





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Splicing in MOCs with Drops

MOC (Modular Optical Component) configurations of the Multi-Purpose Terminal will come with the MOC pre-installed and the distribution leg connectors loaded into the adapter plate. Simply splice in the feeder tail or connect the feed drop as shown in the splicing and drop sections of this manual. Shown below is a DWDM configuration of the MPT.





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Optional Grounding and Bonding Kits

1. To ground the terminal, a ground stud will be threaded into one of the holes used to secure the gasket plate onto the base of the MPT.

Note: Do not use power tools.



- 2. Insert the ground stud into the hole and hand tighten.
- **3.** Tighten a pair of nuts together on the ground stud a good distance away from the beginning of the threaded insert.



4. Using these nuts and a wrench, begin to turn the ground stud, which will start to push through the base of the terminal.



- **5.** Continue turning the stud until it has punched through the base to the other side.
- **6.** Remove the ground stud by backing it out.



7. Cover the thread of the ground stud with pipe dope and reinsert.

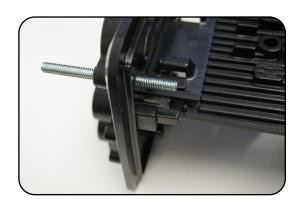






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8. Reinsert the ground stud and screw it through the base of the MPT until about 1" of the stud is on the inside of the terminal. Remove the two nuts from the back of the stud used to screw it in to place.



Install the nuts and washers on the ground stud on the inside of the terminal.

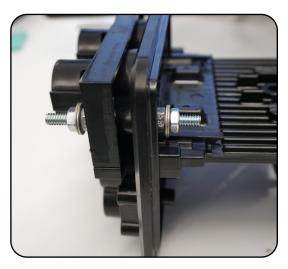


10. After you have installed the gasket plate (see relevant section), use the remaining nuts and washers to secure the grounding stud from the other side.



11. Ground/bond per your local practice.

Grounding Kit (P/N MPT-GROUNDING-01) Bonding Kit (P/N MPT-BONDING-01)



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Cable Sealing

Depending on configuration, the user will receive a cable sealing gasket either with or without holes present on each side of the gasket. For smaller cables such as flat drop fiber, there will be no holes present in the gasket. Large cables greater than 0.45" diameter not to exceed 0.70" diameter, for single entrance cables reference page 27. Slit the sides through to the center of the gasket in the same manner as described in the steps below.

Midspan - Large Cable

 On a clean and dry surface, cut the gasket at the "V" notch on each side of the gasket. Cut from the center down the side using a clean, sharp, and thin blade.

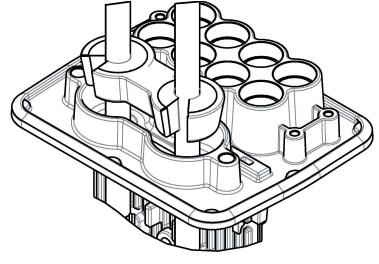


2. Open the gasket and slip it around your cables.

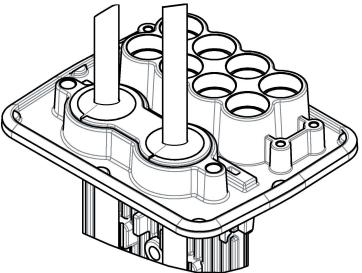
Note: Pay attention to the taper of the gasket. Tapered end should be facing towards the MPT



Note: Gasket healing time to fully seal terminal varies based upon temperature, cable shape, and cable size. This can vary from a few minutes to roughly 24 hours in worst case (cold temp, non-round cable). Gasket must be fully healed for submerging in water.



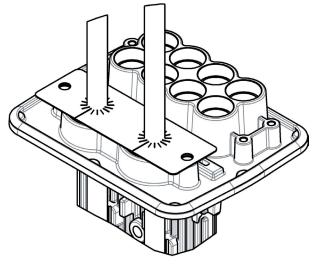
Press the gasket down into the opening, ensuring the center of the gasket is down and around the cable.





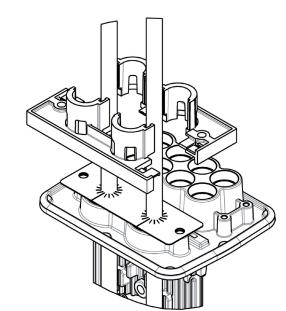
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4. Place the clear film cover over the cables and on top of the gasket. Press down on the film cover to further seat the gasket into the opening and around the cables.

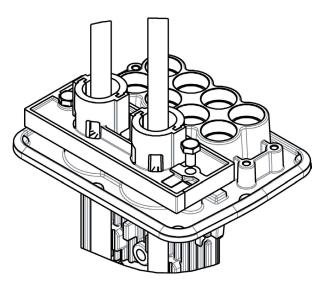


5. Take the two halves of the gasket plate and put them around your cables. Snap them together.

Note: Once the two halves of the gasket plate have been joined, they cannot be separated.



6. Press down firmly on the gasket plate. Using the two provided 1/4"-20 bolts and a can wrench, secure the gasket plate in place. Tighten bolts to hard stop



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Deadend and Midspan w/ Solid Grommet - FLATdrop, FieldShield and Round Cables Below 0.45" Diameter

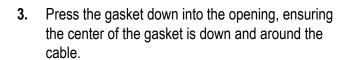
1. On a clean and dry surface, cut the gasket at the "V" notch on each side of the gasket. Cut from approximately 3/4 across the top and down the side using a clean, sharp, and thin blade.

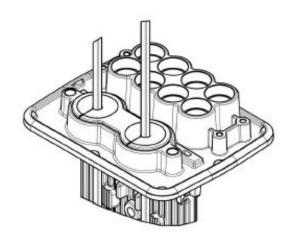


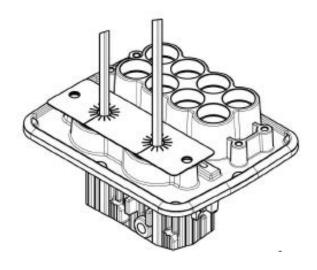


2. Open the gasket and slip it around your cables.

Note: Pay attention to the taper of the gasket. Tapered end should be facing towards the MPT









Note: Gasket healing time to fully seal terminal varies based upon temperature, cable shape, and cable size. This can vary from a few minutes to roughly 24 hours in worst case (cold temp, non-round cable). Gasket must be fully healed for submerging in water.

4. Place the clear film cover over the cables and on top of the gasket. Press down on the film cover to further seat the gasket into the opening and around the cables.

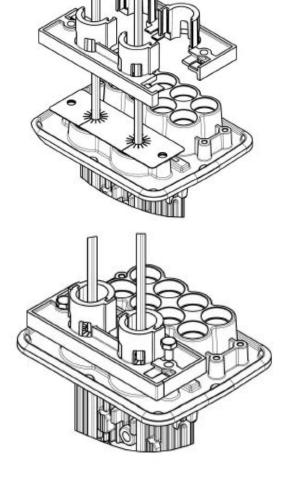


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Take the two halves of the gasket plate and put them around your cables. Snap them together.

Note: Once the two halves of the gasket plate have been joined, they cannot be separated.

6. Press down firmly on the gasket plate. Using the two provided 1/4"-20 bolts and a can wrench, secure the gasket plate in place.



- 7. Clearfield recommends building up small cables with grommet tape to protect it when securing the cable in place with a zip tie. The hose clamps provided will only work on small cables that have been built up substantially.
- **8.** Only tie off cables after they have left the cable gasket plate. Utilize local practice.

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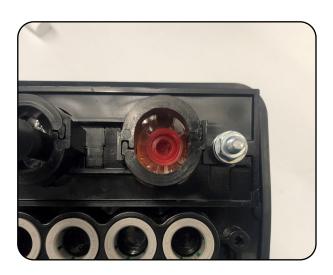
Single Cable Entrance

If the gasket being used is the FLATdrop/FieldShield configuration, with no holes on either side of the cable gasket, no extra steps are needed to bring in a cable end into the MPT. Simply slit one side of the gasket as shown in the previous steps and install the cable, then install the gasket into the terminal and secure it in place with the gasket plate.

If the gasket being used is the standard cable configuration which features holes on each side of the gasket, and the user intends to bring in a single cable end and leave the other side of the cable gasket empty, a plug must be installed.

Locate the 14mm OD plastic plug provided with the cable gasket kit. Insert the plug into the gasket after the other half of the gasket has been placed around the cable and before installing it fully into the terminal.





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Pre-Connectorized Drop Installation

Clearfield's pre-connectorized drop choices allow for easy plug and play connectivity.

Note: Can hard splice FLATdrops, see page 19.



Microduct with Pushable Fiber



FLATdrop with Flex Connector



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Opening the FlexPort

To utilize a FlexPort, snap off the tab of the desired FlexPort with a pair of pliers, and de-burr the port to smooth out the edges.



Microduct

- 1. Using 14/10 microduct, ensure that the end of the microduct is a clean cut and de-burr the duct for a smooth transition into the terminal.
- **2.** Push the pull string through the FlexPort into terminal. Insert the microduct until it is fully seated in to the FlexPort.



Pull the fiber drop into terminal, and proceed to assembling the outer housing, following the instructions provided with the connector housing.

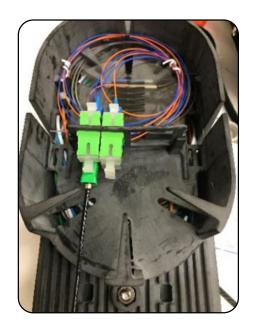




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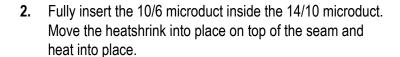
4. Inspect and clean the connector, then make a direct connection to the assigned port.

Note: You can NOT store FieldShield slack in this terminal.



10/6 to 14/10 Microduct Transition

 Place your heatshrink over one of the ends of duct. Align the two duct ends.



3. Make your connection to the terminal, fully inserting the 14/10 microduct into the FlexPort on the base of the terminal.



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FLATdrop

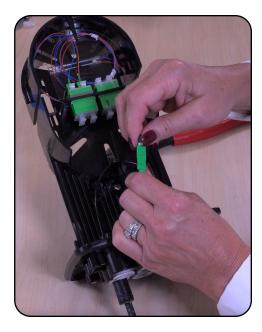
- 1. **DO NOT** assemble the connector until the fiber is through the FlexPort and inside the terminal.
- **2.** Push the terminated fiber end through the assigned FlexPort.



3. If using a factory installed FlexConnector, push the FlexConnector into the FlexPort firmly until it is fully seated.



4. If using a factory installed connector, assemble the outer housing of the connector as directed by the instructions provided with the connector housing.



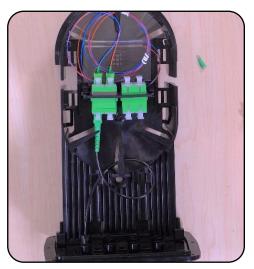


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5. If using a field installed FlexConnector for custom drop lengths, refer to the instructions provided with the Field Installable FlexConnector kit. Once installed, fully seat the FlexConnector into the terminal.



6. After bringing the fiber into the terminal and installing the outer housing, create a slack loop before making the connection to the assigned port.



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Installing Duplex LC Pre-Connectorized Drops

1. Begin by pushing one of the connectorized fibers through the FlexPort.



2. Once the first fiber is through the FlexPort, bring the second fiber through the port. Pull the Fibers Completely into the terminal.



- **3.** Firmly seat the FlexConnector into the FlexPort.
- **4.** Inspect and clean the connectors, then connect them to the designated port.





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Connector Cleaning Procedure

Whether factory terminated or field spliced, clean connectors are essential for proper system operation. Even the smallest dust particle can cause transmission problems, so for optimal network performance inspect, and if necessary, clean connectors and adapters prior to mating.

Inspect Then Connect

These are Clearfield recommended products/applications. Use the product you feel will complete your cleaning procedures. Create a "best practice" for your company and follow those procedures.

The use of Chemtronics end face and bulkhead cleaning products and techniques ensures a clean end face, no matter the type of contamination.

Before cleaning any connector, be sure you know what type of contaminate you are cleaning (dry, fluidic, or combination). All the available products are good, it's the process that you need to be aware of. Using a dry cleaning method to clean "dirt" can lead to scratching of the end face. Learn the process of cleaning properly.

Note: It is **NOT** recommended to use isopropyl alcohol to clean the end face.



Cleaning the End Face

- Place one wiping paper on QbE-2 FiberSafe[™] Cleaning Platen.
 (Figure 1)
- Apply small amount of precision cleaner (about 1" in diameter) with Electro-Wash MX pen on to one end of the wipe. (Figure 2)
- Hold end face at a 90 degree angle. For APC connection, adjust by slightly tilting the container or end face. Angle is correct when no drag is felt on the end face. (Figure 3)
- Draw end face from wet to dry part of the wipe 3 times. Use just enough pressure to ensure complete contact between end face and the wipe.

Note: DO NOT retrace previous step.



Figure 1



Figure 2



Figure 3

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Cleaning the Ferrule

Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the swab, 1 side down to the wetted area and hold for a count of 1-2-3-4-5. (Figure 4)



Figure 4

 Insert swab into side of ferrule, wet side to the ceramic ferrule and circle around 2-3 times and remove. Turn swab to dry side and repeat. (Figure 5)



Figure 5

Cleaning the Mate Through an Adapter AND the Adapter Itself

- Lightly moisten the fiber optic swab (2.5mm/38542F or 1.25mm/38040) by spotting a small amount (about 1") of Electro-Wash PX or Electro-Wash MX pen onto the QbE. Hold the tip of the swab onto the wetted area and hold for a count of 1-2-3-4-5.
- Insert the swab into the adapter to the connector, press lightly against the connector, twist 2-3 times, remove and discard.
- Dry with a second dry swab.
- Inspect, repeat cleaning if necessary, and test for signal strength.
- Use additional swabs to clean inside the actual adapter. Moisten swab, like above, and insert through hole and remove while twisting. (Figure 6)



Figure 6



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Cleaning an MPO/MTP Connector

Male Connector

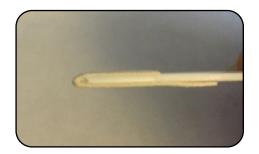
Use of Chemtronics MTP Connector Cleaning Swabs (CC505F) is recommended. Even after cleaning with a probe cleaner, you should always clean the pins with this (or an equivalent) type swab. Cleans ALL MTP/MPO connector end faces. This swab also cleans the "pins" of the male connector



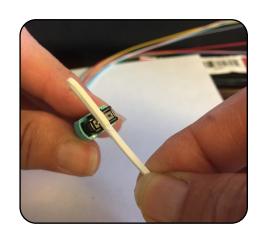
 Lightly "spot" a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, the FiberWash or MX Pen.



 Lightly touch short side of the MTP/MPO Connector Swab to the wetted area (3-5 secs) to absorb some cleaning solution (DO NOT over saturate the swab).



 Wipe connector areas to be cleaned, sliding pad from bottom of pad across and forward to tip of swab, from 1 side to the other, turn over and use long side to dry in same movement.

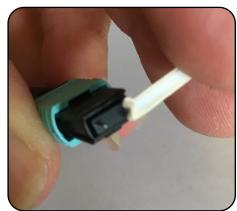


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- Use the hole on end of pad to clean one alignment pin, then press the end of the swab into the other pin to clean.
- Check your work with a fiber scope. This can take several attempts to get the endface clean.





Female Connector (without pins)

- Cleaned like a single fiber connector, using a cleaning platform. The
 receptacles will be cleaned as long as you are using a combination cleaning process as recommended.
- Again, using a platen, moisten the platen with cleaning solvent on one end to accommodate 3 swipes of the MPO female endface.



- Holding the connector (If APC, slightly at an angle to accommodate for 8° angle) swiping with medium pressure, from the wet area into the dry area 3 times, without wiping over previous area.
- Inspect, and if clean, make the connection. If NOT, repeat above steps until clean or if determined that the end face is damaged (based on standards of 5 cleanings per connection), replace.



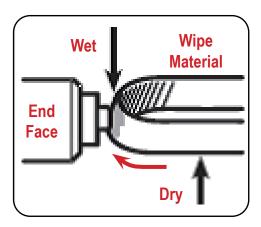


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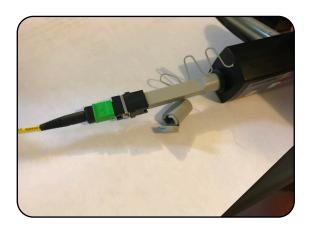
Cleaning Using a Probe-Style Cleaning Tool

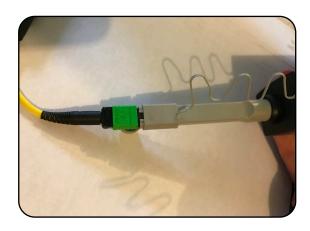
- The probe style cleaning tools are capable of cleaning a connector end face separately or through the adapter.
- Slightly engage probe by pulling back but do not allow to click. Lightly "spot" a QbE-2 wipe on the platen with Electro-Wash PX Fiber Optic Cleaner, this will help alleviate "over saturation" of the material.
- Lightly touch the tip of probe and release.





 Insert connector or insert probe though adapter and click 2-3 times to move past the wet area and allow material to dry wipe.





- Inspect connector, repeat if necessary (following standards)
- If cleaning a male connector, clean the pins (see above)

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Standard Warranty

Clearfield warrants to the original purchaser of the Product sold hereunder is free from defects in material and workmanship under normal use and service, subject to exceptions stated herein. Product purchased is warranted as follows: Clearfield designed and branded Products are warranted for three (3) years: Products manufactured by Clearfield to customer prints and/or specifications are warranted for one (1) year; and any Product Clearfield acquires from or through a third-party manufacturer or distributor and resells to Customer as the original customer will carry the manufacturer's pass-through warranty, if any. In all cases, the warranty period commences on the date of shipment to the original purchaser.

Warranty Claim Procedure

If any Product purchased from Clearfield is found defective under the above warranty, the following basic procedure must be followed:

- 1. Customer must contact Clearfield and obtain a Return Materials Authorization
- 2. Following authorization, the Customer ships the product-freight collect-to Clearfield's manufacturing facility
- Clearfield shall repair or replace the defective Product at its sole option and discretion, and return the repaired or replacement Product to Customer's site, freight prepaid

Note: If the Product is not found to be defective by Clearfield, the product will be returned to the Customer and the customer billed for freight in both directions.

View our warranty policy here: https://www.seeclearfield.com/warranty.html

Limitations of Warranty

Correction of defects by repair or replacement, at the option of Clearfield Inc, shall constitute the exclusive sole remedy for a breach of this limited warranty. Clearfield shall not be liable under any circumstances for any special, consequential, incidental, punitive, or exemplary damages arising out of or in any way connected with the product or with agreement to sell product to buyer, including, but not limited to damages for lost profits, loss of use, or for any damages or sums paid by buyer to third parties. The foregoing limitation of liability shall apply whether the claim is based upon principles of contract, warranty, negligence or other tort, breach of statutory duty, principles of indemnity or contribution, the failure of any limited or exclusive remedy to achieve its essential purpose, or otherwise.

Clearfield will not be responsible for any labor or materials costs associated with installation or incorporation of Clearfield products at customer sites, including any costs of alteration, replacement or defective product, or any field repairs.

Other Limitations

Clearfield assumes no warranty liability regarding defects caused by:

- 1. Customer's modification of Product, excepting installation activities described in Clearfield documentation
- Customer re-packaging of Product for shipment to third parties or destinations other than those originally shipped to by Clearfield, or any defects suffered during shipping where the Product has been re-packaged
- 3. Customer's installation or maintenance, excepting activities described in and performed in accordance with Clearfield documentation
- 4. Customer's improper or negligent use or application of Product
- 5. Other causes external to the Product, including but not limited to accidents, catastrophe, acts of God, government action, war, riot, strikes, civil commotion, sovereign conduct, or the acts or conduct of any person or persons not party to or associated with Clearfield
- 6. Environmental factors and weathering resulting in aging and damage not necessary or applicable to the function of the product



Installation Manual

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Technical Support

Clearfield, Inc. can be contacted for any issues that arise with the supplied product.

If you need to return the supplied product, you must contact the Clearfield, Inc. Customer Service Department to request a Returned Materials Authorization (RMA) number.

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Customer Support: sales@seeclearfield.com Technical Support: techsupport@seeclearfield.com