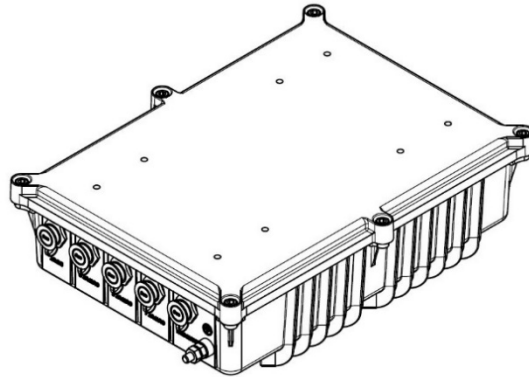




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Model FMPD-1500
FAULT MANAGED POWER
DOWNCONVERTER

Installation Note

Description

The FMPD-1500 converts incoming 380VDC to 48VDC output for use to power local electronics. This section is provided for qualified personnel to install the product, in a restricted access location that is inaccessible to the public.

Cautions and Safety Warnings Attention et Avertissements de Sécurité

- Use proper safety equipment and follow company installation practices.
- Utilisez un équipement de sécurité approprié et suivez les pratiques d'installation de l'entreprise.
- The product shall be installed in a manner to comply with applicable national and local safety codes.
- Le produit doit être installé de manière à se conformer aux réglementations nationales et locales applicables en matière de sécurité.
- Do not install product during a lightning storm.
- N'installez pas le produit pendant un orage.
- Verify no hazardous voltages exist on lines while making connections.
- Vérifiez qu'aucunes tensions dangereuses existent sur les lignes lors des connexions.

Tools Required

- Flat Screwdriver
- Crimping Tool
- 3/16 Allen Wrench
- 3/8 Socket wrench
- 7/16 Socket Wrench.

Parts and Accessories

- PMPD-SM Strand Mount Bracket (Included)
- PMPD-PM Pole Mount Bracket Kit (Optional)

Module Preparation/Mounting

Unpack the unit and inspect for damage. If the unit is damaged, do not proceed with the installation.

For Wood Pole Mounting (Figure 1)

1. Use the pole mount bracket kit P/N PMPD-PM.
2. Attach the brackets to the unit using the hardware supplied as shown in Figure 1. Tighten hardware using a 3/16 Allen wrench to 45in/lbs.
3. Using the mounting brackets as a template, mark the pole at the two centerline bolt hole locations.
4. Drill pilot holes in pole approximately 4" deep at two locations.
5. Mount the brackets using two bolts recommended by the telco company (not supplied) through the .675" holes in the brackets. Tighten bolts to your company's standard practice.

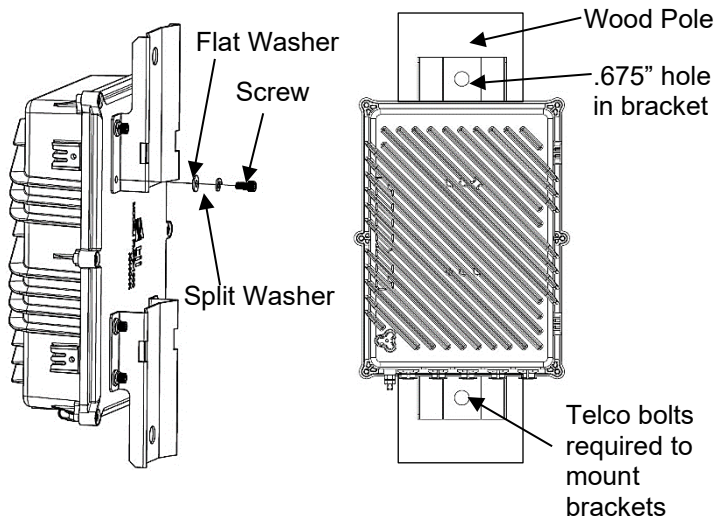


Figure 1

For Steel Pole Mounting (Figure 2)

1. Use the pole mount bracket kit P/N PMPD-PM.
2. Preinstall one steel band into centerline slots of each of the mounting brackets. Insert buckles onto band and bend band behind buckle.
3. Wrap band around the pole and insert band through the front of the buckle.
4. Insert band into banding tool and tighten per manufacturer's instructions.
5. Secure band over buckle and cut excess band.
6. Repeat for both brackets.

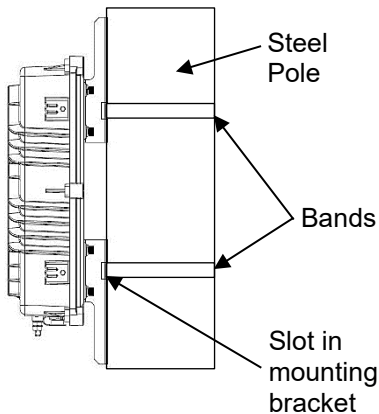


Figure 2

For Strand Mounting (Figures 3 thru 5)

1. Use the strand mount bracket kit P/N PMPD-SM.
2. Attach the brackets using the hardware supplied to the unit as shown. Tighten hardware using a 3/16 Allen wrench to 45in/lbs.
3. Back off the two strand clamp bolts until there is room to place strand wire between the strand brackets and the strand clamps.
4. Hang the unit on the strand by the bottom notch of the strand bracket, **below** the bolt.

5. Rotate the strand clamp until the clamp groove is over the strand wire.
6. **Always use the notch below the strand clamp bolt.** Most installations will use the notch with the small groove. For 10M messenger strands and larger, rotate strand clamp and use the large groove.
7. Once the desired location on the strand is located, tighten the two strand clamp bolts to 50 in/lbs using the 3/8" Socket wrench. For self-supporting cables, tighten the strand clamp bolts to 75in/lbs.

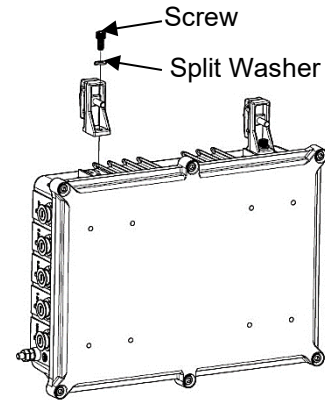
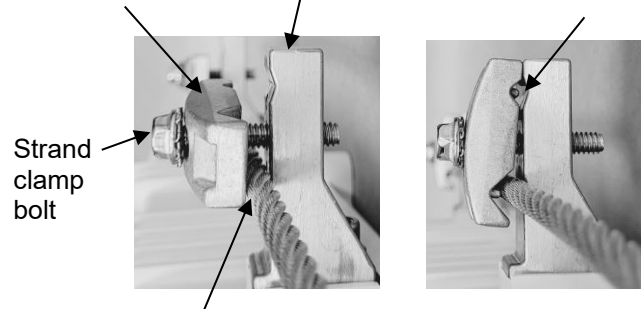


Figure 3

Strand clamp Strand bracket Do not use top notch in strand bracket above bolt



Place unit with strand cable below strand clamp bolt as shown

Figure 4

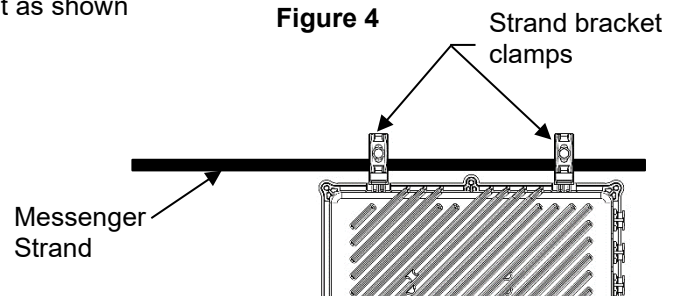
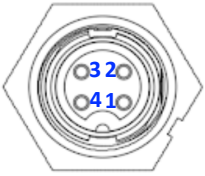


Figure 5

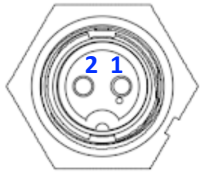
Pin Designations

Input Connector



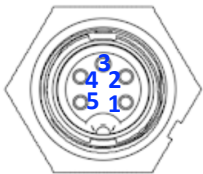
Pin No.	Connection Name
1	-190V Input-A
2	+190V Input-B
3	-190V Input-B
4	+190V Input-A

Output Connector (3 locations)



Pin No.	Connection Name
1	OUT (-)
2	OUT (+)

Remote Shutdown



Pin No.	Connection Name
1	Remote Switch A
2	RESERVED (leave open)
3	RESERVED (leave open)
4	RESERVED (leave open)
5	Remote Switch B

Wiring and Connections (Figures 6 & 7)

Input/Output Connections:

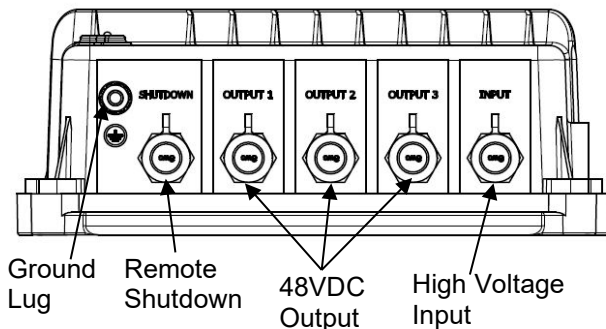


Figure 6

1. Verify DC Power is OFF at the downconverter.
2. Install AC safety ground to the provided ground lug.
3. Install high voltage Input, 48VDC Output (3X), and remote shutdown cables.
4. When installing cables, be sure to align the keyways between the panel connector and the cable. Push the cable straight into connector.
5. To lock the cable to the panel connector, rotate the locking sleeve on the cable in the clockwise direction. Rotate until the locking sleeve stops. Do not try to rotate the cable body, only rotate the locking sleeve.

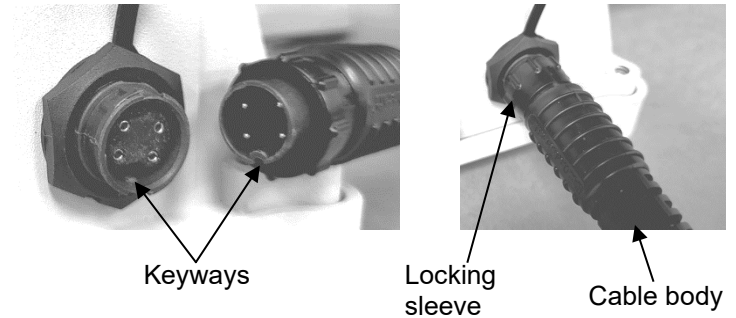


Figure 7

FMP-DIS Shutdown Switch Connection (Figure 8)

1. The FMP-DIS Shutdown switch allows shutdown of the downconverter and RF radios for maintenance.
2. **For safety reasons, the downconverter will not power on without a Shutdown Switch installed.**
3. For a complete detail of installation instructions, refer to the FMP-DIS Series Installation Note TII P/N 92257301.
4. The switch is equipped with a 6ft cable, and the mounting location must be in close proximity to the downconverter.
5. Verify Input power is OFF at the downconverter, and the switch is in the OFF position.
6. Connect the 5 pin switch cable to the 5 pin connector on the downconverter marked "Shutdown".
7. Use the switch brackets to secure the cable from the switch to the messenger strand. Secure excess cable to strand wire using cable ties.

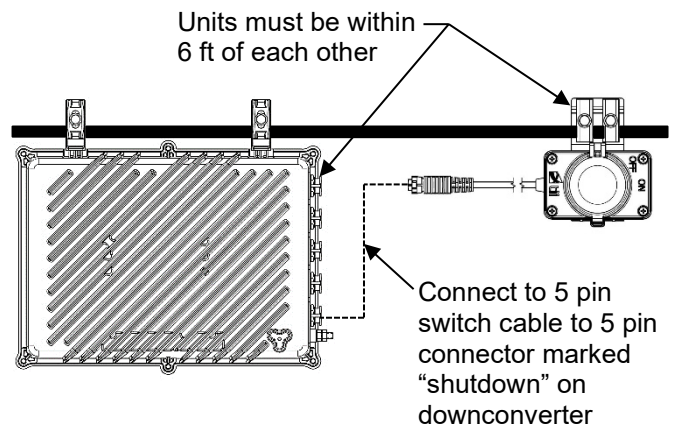


Figure 8

Connecting the Input and Output Cables

One four pin input cable and 3X two pin output cables are provided. Connect these four cables to the Downconverter unit, paying attention to the keyway alignment shown in Figure 7.

Input Cable

The input cable has four wires as shown below in Figure 9. Only the Red and Black wires are used, trim and secure the Green and White wires

In the splice case adjacent to the Downconverter, connect the Red wire to +190VDC and the Black wire to -190VDC.

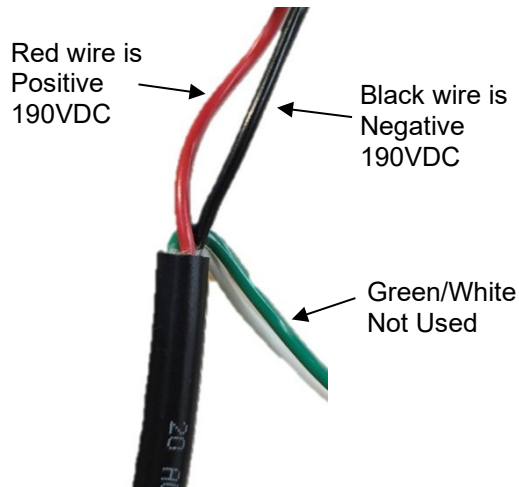


Figure 9

Output Cables

Each output cable has two wires as shown below in Figure 10.

On the cellular radio, connect the Black wire to its Negative 48VDC input, and connect the Red wire to its DC Return.

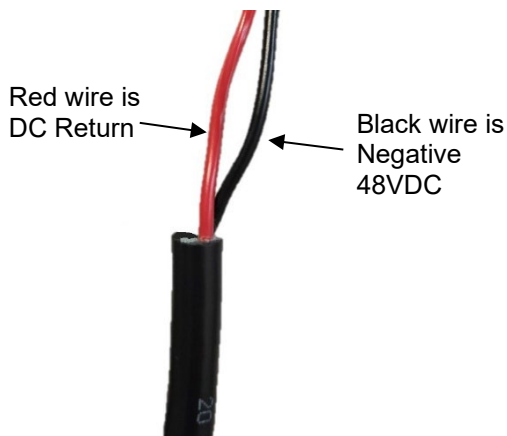


Figure 10

Power Up and LED Indication

Verify the Shutdown Switch set to OFF.

After all wiring and installation is complete, at the Cabinet containing the Upconverter turn on AC power. Verify its two front LEDs are both Green (the lower LED may be blinking).

At the Downconverter location with Shutdown Switch set to OFF, the LED should be Yellow. If it is not, DC power is not being received by the Downconverter and there is a problem upstream.

If the LED is Yellow, turn the Shutdown Switch to ON. The LED should change to Green for normal operation. If it does not, there is most likely a problem with the output wiring.

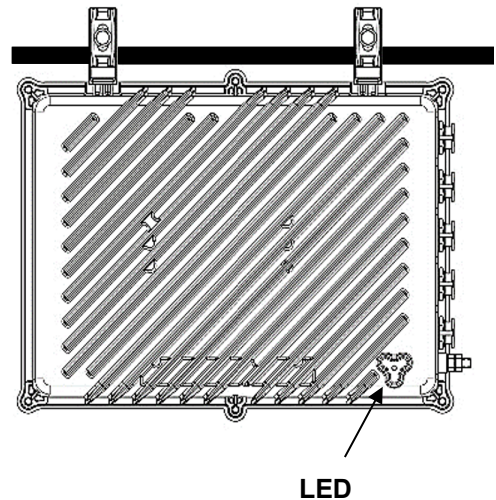


Figure 11