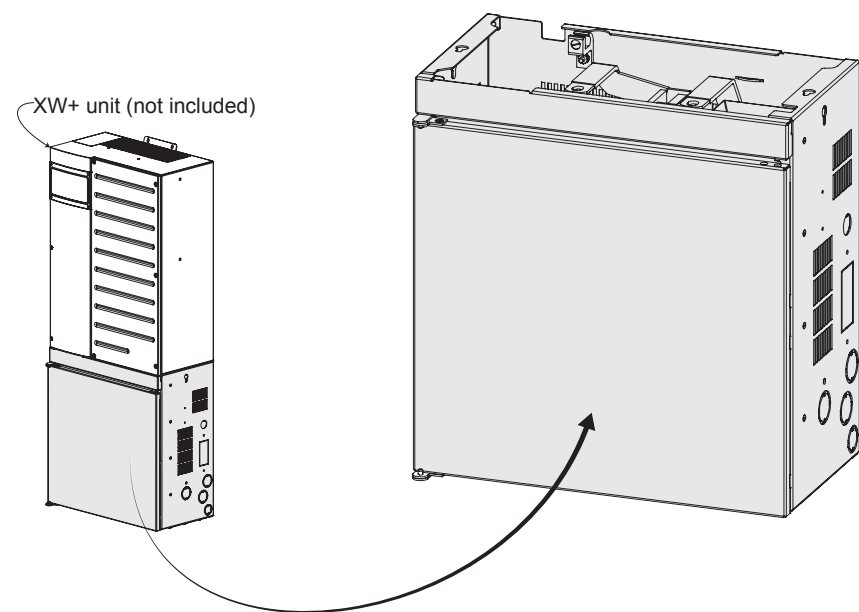


Mini Power Distribution Panel (Mini PDP) and parts for connecting to the Conext XW/XW+ inverter/charger



A Important Safety Information

Save These Instructions

This guide contains important safety instructions for the Conext Mini PDP for the XW/XW+ Inverter/Charger that must be followed during installation procedures. Read and keep this Installation Guide for future reference.

Read these instructions carefully and look at the equipment to become familiar with the device before trying to install, operate, service or maintain it. The following special messages may appear throughout this bulletin or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

B Important Safety Information

This Guide is intended for qualified personnel. Certain configuration tasks should only be performed by qualified personnel in consultation with your local utility and/or an authorized dealer. Electrical equipment should be installed, operated, serviced, and maintained only by qualified personnel. Servicing of batteries must only be performed or supervised by qualified personnel with knowledge of batteries and their required precautions.

Qualified personnel have training, knowledge, and experience in:

- Installing electrical equipment
- Applying applicable installation codes
- Analyzing and reducing the hazards involved in performing electrical work
- Installing and configuring batteries
- Selecting and using Personal Protective Equipment (PPE)

No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

1. **The Mini PDP is compatible with the Conext XW/XW+ inverter/charger only.**
2. Before installing the Mini PDP and using it with the inverter, read all instructions and cautionary markings on the unit, the batteries, and all appropriate sections of this manual.
3. Use of accessories not recommended or sold by the manufacturer may result in a risk of fire, electric shock, or injury to persons.
4. The Mini PDP and inverter are designed to be permanently connected to your AC and DC electrical systems. The manufacturer recommends that all wiring be done by a certified technician or electrician to ensure adherence to the local and national electrical codes applicable in your jurisdiction.
5. To avoid a risk of fire and electric shock, make sure that existing wiring is in good condition and that wire is not undersized. Do not operate the inverter with damaged or substandard wiring.
6. Do not operate the inverter with the Mini PDP if it has been damaged in any way.
7. The inverter does not have any user-serviceable parts. Do not disassemble the inverter except where noted for connecting wiring and cabling. See your warranty for instructions on obtaining service. Attempting to service the unit yourself may result in a risk of electrical shock or fire. Internal capacitors remain charged after all power is disconnected.
8. To reduce the risk of electrical shock, disconnect both AC and DC power from the inverter before attempting any maintenance or cleaning or working on any components connected to the inverter. Putting the unit in Standby mode will not reduce this risk.
9. The inverter must be provided with an equipment-grounding conductor connected to the AC input ground.
10. Do not expose the Mini PDP and the inverter to rain, snow, or liquids of any type. These products are designed for indoor use only. Damp environments will significantly shorten the life of this product and corrosion caused by dampness will not be covered by the product warranty.
11. To reduce the chance of short-circuits, always use insulated tools when installing or working with this equipment.
12. Remove personal metal items such as rings, bracelets, necklaces, and watches when working with electrical equipment.

DANGER

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E or CSA Z462.
- This equipment must only be installed and serviced by qualified electrical personnel.
- Never operate energized with covers removed
- Energized from multiple sources. Before removing covers identify all sources, de-energize, lock-out, and tag-out and wait 2 minutes for circuits to discharge
- Always use a properly rated voltage sensing device to confirm all circuits are de-energized.

Failure to follow these instructions will result in death or serious injury.

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

Batteries can present a risk of electric shock and high short-circuit current. The following precautions must be observed when working with batteries:

- Remove watches, rings or other metal objects.
- Use tools with insulated handles.
- Wear protective glasses, gloves and boots.
- Do not lay tools or other metal parts on top of batteries.
- Disconnect the charging source prior to connecting or disconnecting battery terminals.

Failure to follow these instructions will result in death or serious injury.

HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Battery Circuit Breakers must be installed according to the specifications and requirements specified by Schneider Electric.
- Servicing of batteries must only be performed by qualified personnel and the required precautions. Keep unqualified personnel away from batteries.

Failure to follow these instructions will result in death or serious injury.

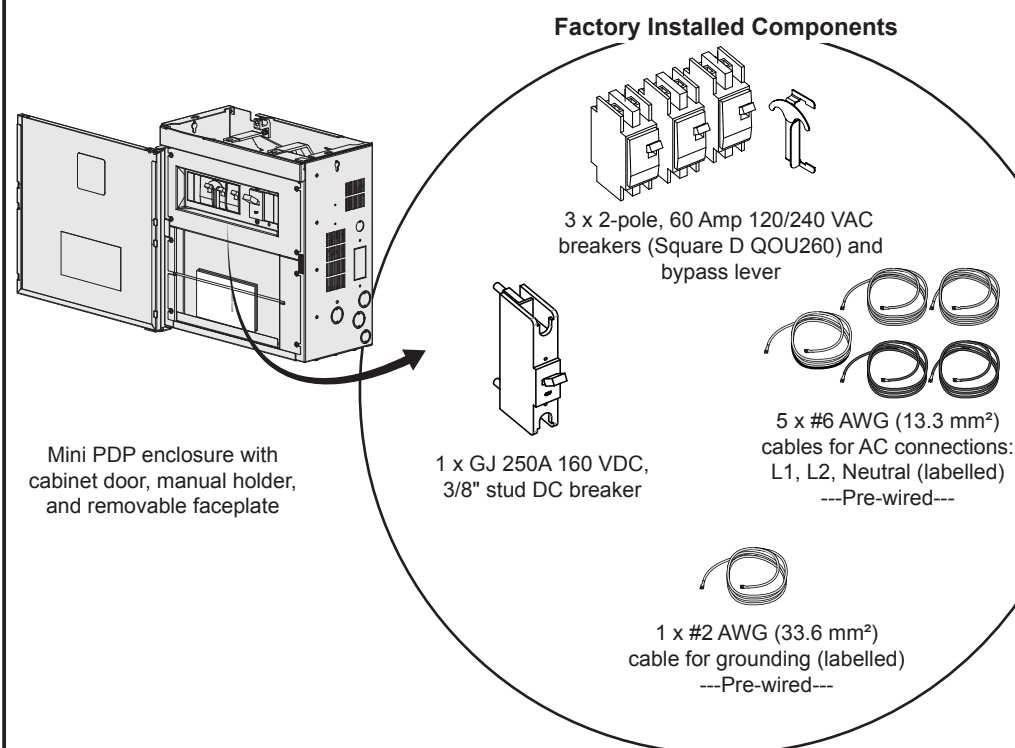
NOTICE

The Conext XW/XW+ Mini PDP may not be available in all regions; installation is dependent upon your local electrical code. Consult your local electrical authority to ensure your installation is code-compliant.

Contact Information

Please contact your local Schneider Electric Sales Representative or visit the Schneider Electric website at: <http://solar.schneider-electric.com>

C Materials List



Installer Provided Tools and Materials:

- Torque screwdriver (up to 60 in-lbf)
- Torque wrench (up to 150 in-lbf)
- Spirit (Carpenter's) Level
- Screws for wall mounting the Mini PDP (select proper screws for selected mounting surface)

Other hardware:

- 3 x plastic bushings for AC knockouts between XW/XW+ and the mini PDP
- 2 x wire lugs (spare)
- 4 x hex head bolts (3/8-16 x 3/4")
- 4 x split washers (3/8")
- 4 x flat washers (3/8")
- 5 x plastic cable ties
- Label sheet

Connecting Conext MPPT Solar Charge Controllers to the Mini PDP

Additional DC breakers are required for connecting MPPT 60 150 and MPPT 80 600 solar charge controllers to the Mini PDP. There are two additional breaker positions that are available for mounting DC and/or PV breakers.

The following DC breakers are recommended for use with the Mini PDP and are available from Schneider Electric distributors and retailers:

- 100A, 125VDC Breaker Master Pack (865-1080) for MPPT 80 600 output, battery side
- 80A, 125 VDC Breaker Master Pack (865-1070) for MPPT 60 150 output, battery side
- 60A, 160VDC Breaker Master Pack (865-1075) for MPPT 60 150 input, PV array side

Exclusion for Documentation

UNLESS SPECIFICALLY AGREED TO IN WRITING, SELLER (A) MAKES NO WARRANTY AS TO THE ACCURACY, SUFFICIENCY OR SUITABILITY OF ANY TECHNICAL OR OTHER INFORMATION PROVIDED IN ITS MANUALS OR OTHER DOCUMENTATION; (B) ASSUMES NO RESPONSIBILITY OR LIABILITY FOR LOSSES, DAMAGES, COSTS, OR EXPENSES, WHETHER SPECIAL, DIRECT, INDIRECT, CONSEQUENTIAL OR INCIDENTAL, WHICH MIGHT ARISE OUT OF THE USE OF SUCH INFORMATION. THE USE OF ANY SUCH INFORMATION WILL BE ENTIRELY AT THE USER'S RISK, AND (C) REMINDS YOU THAT IF THIS MANUAL IS IN ANY LANGUAGE OTHER THAN ENGLISH, ALTHOUGH STEPS HAVE BEEN TAKEN TO MAINTAIN THE ACCURACY OF THE TRANSLATION, THE ACCURACY CANNOT BE GUARANTEED, APPROVED CONTENT IS CONTAINED WITH THE ENGLISH LANGUAGE VERSION WHICH IS POSTED AT WWW.SCHNEIDER-ELECTRIC.COM.

D Knockout and Product Dimensions

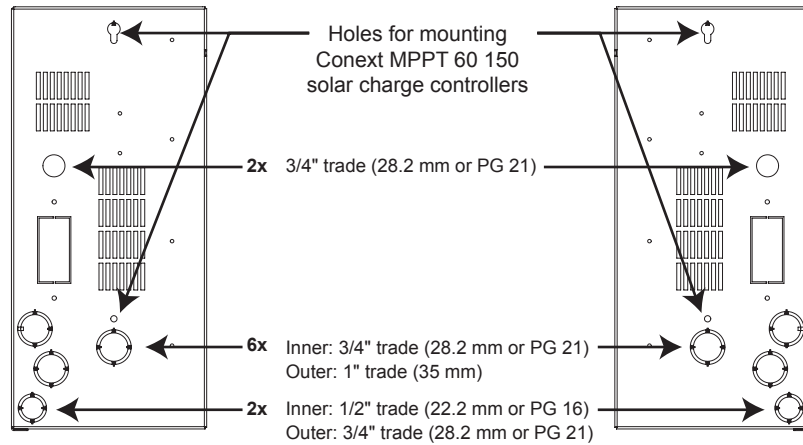
NOTICE

EQUIPMENT DAMAGE

Do not drill, cut or punch holes into the XW/XW+ chassis or Mini PDP. Use only the knockouts provided for conduit entry.

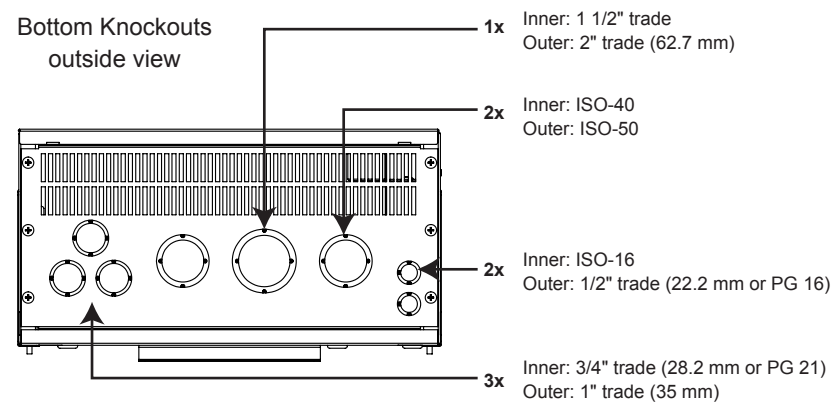
Failure to follow these instructions can result in damage to equipment.

Side Knockouts
(L) outside view (R)

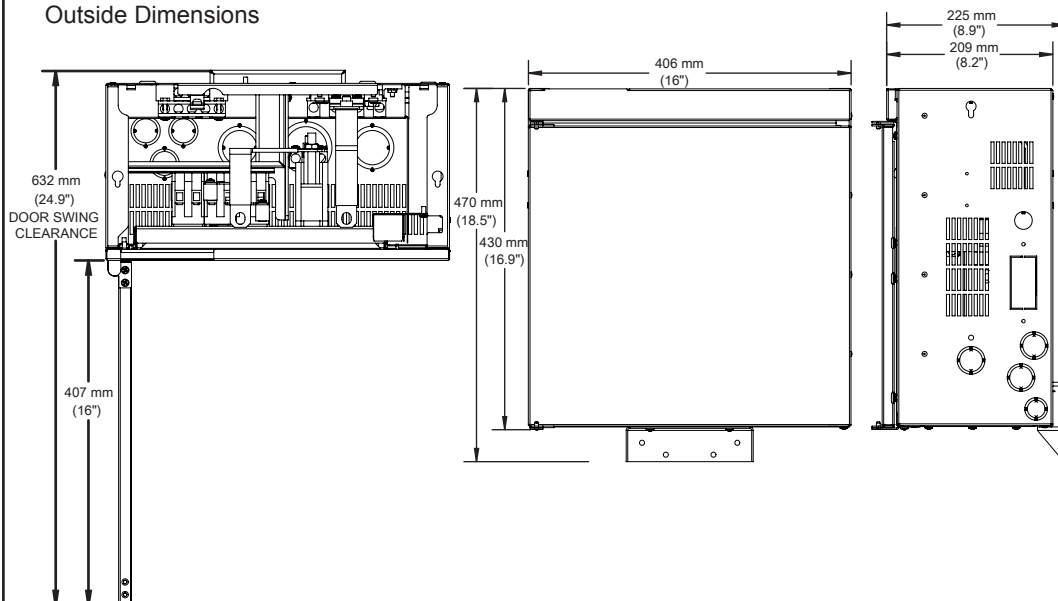


NOTE: When removing your choice of knockouts, ensure no debris remains inside the chassis. Insert appropriately-sized UL/CSA strain reliefs.

Bottom Knockouts
outside view

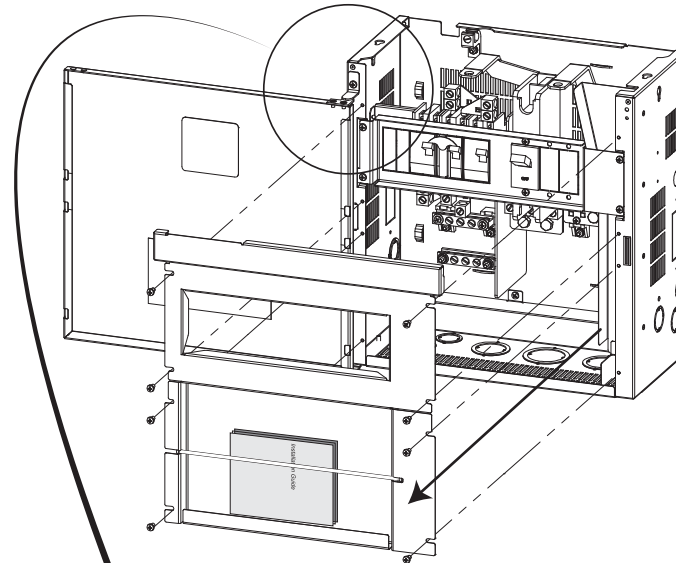


Outside Dimensions

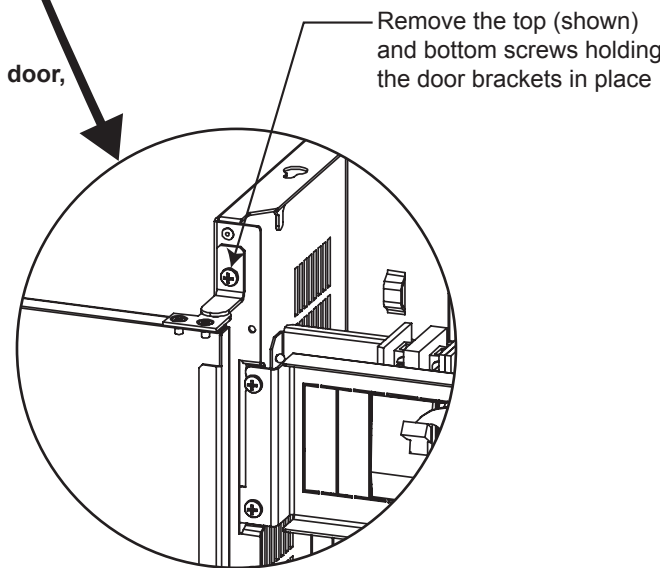


E Removing the Mini PDP Door and Faceplate

- 1 To access the wiring and breakers, open the door, remove the front faceplate (as shown) on the Mini PDP. Set aside the 8 screws.



- 2 Remove the door, if desired.

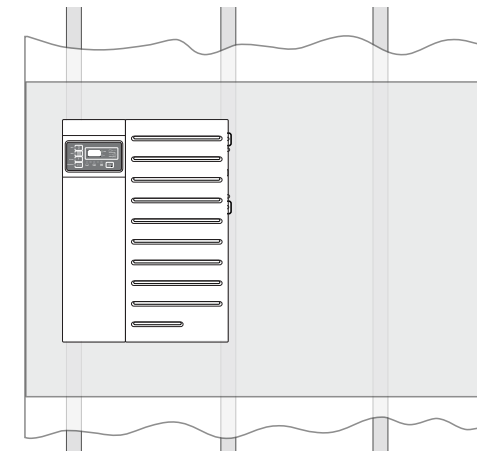


Optional: To mount the door on the other side of the Mini PDP, remove the top and bottom screws holding the brackets in place and reattach on the opposite side. Remove and reverse the two brackets on the top and bottom of the door assembly. Reposition the magnetic latch.

F Wall Mounting the Mini PDP

- 1 Wall mount the Conext XW/XW+.

Before mounting the Mini PDP, mount the Conext XW/XW+ to the wall first.

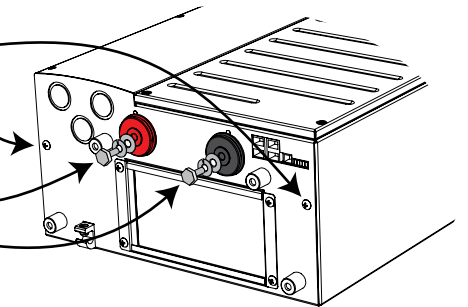


Refer to the Conext XW/XW+ Inverter/Charger Installation Guide for detailed mounting instructions.

- 2 Loosen the attachment screws and remove the DC terminal bolts and washers on the XW/XW+.

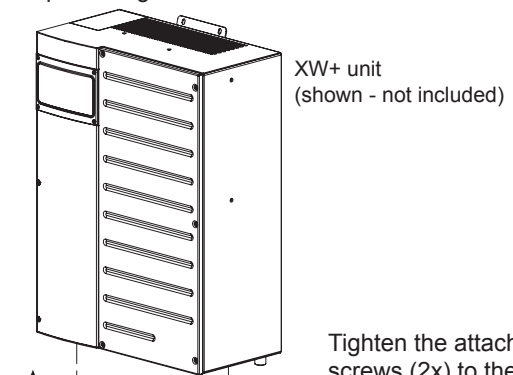
Loosen the 2 attachment screws (included) on the bottom of the XW/XW+ unit.

Remove the DC terminal flat and split washers and bolts (included with the XW/XW+ unit).



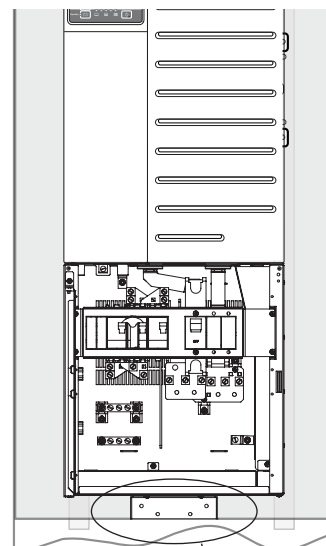
- 3 Attach the Mini PDP to the XW/XW+.

Align the keyholes on the top of the Mini PDP and push it up flush against the bottom of the XW/XW+.



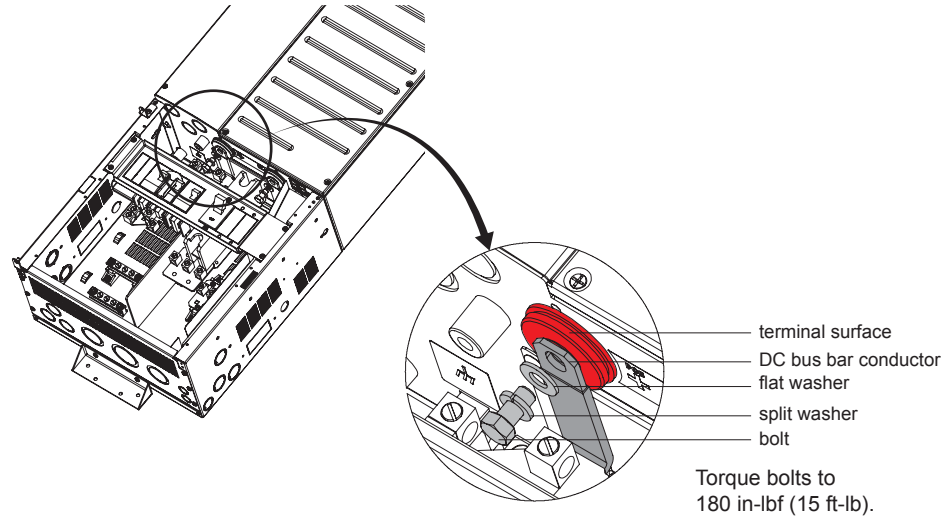
Tighten the attachment screws (2x) to the XW/XW+. Torque screws to 12 in-lbf.

NOTE: Detach the front breaker assembly if necessary to ease securing the attachment screws to the XW/XW+.



Secure the bottom mounting bracket with 4 wall screws (not provided)

4 Replace the DC terminal flat and split washers then the bolts on the Positive (+) (shown) and Negative (-) DC terminals in the correct order as shown below.

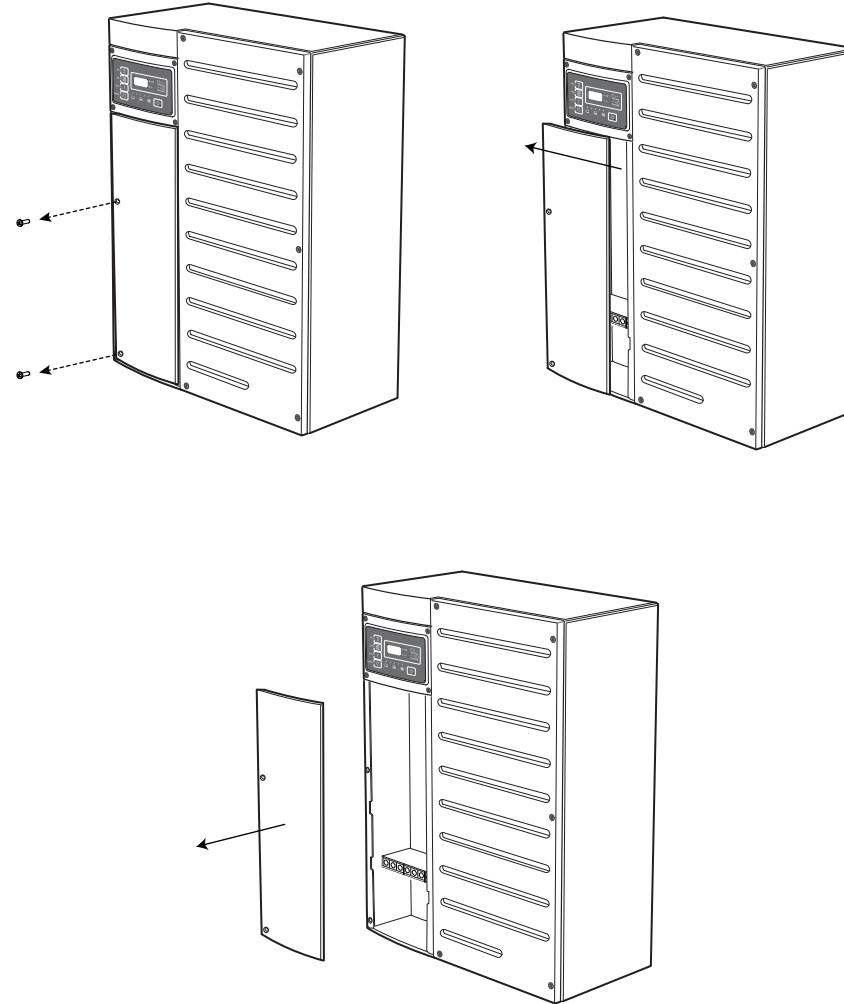


5 Replace the DC terminal caps (provided with the XW/XW+) on the DC terminals to cover them.

G Wiring the Mini PDP

1 Remove the XW/XW+ AC access panel.

XW+ unit (shown)



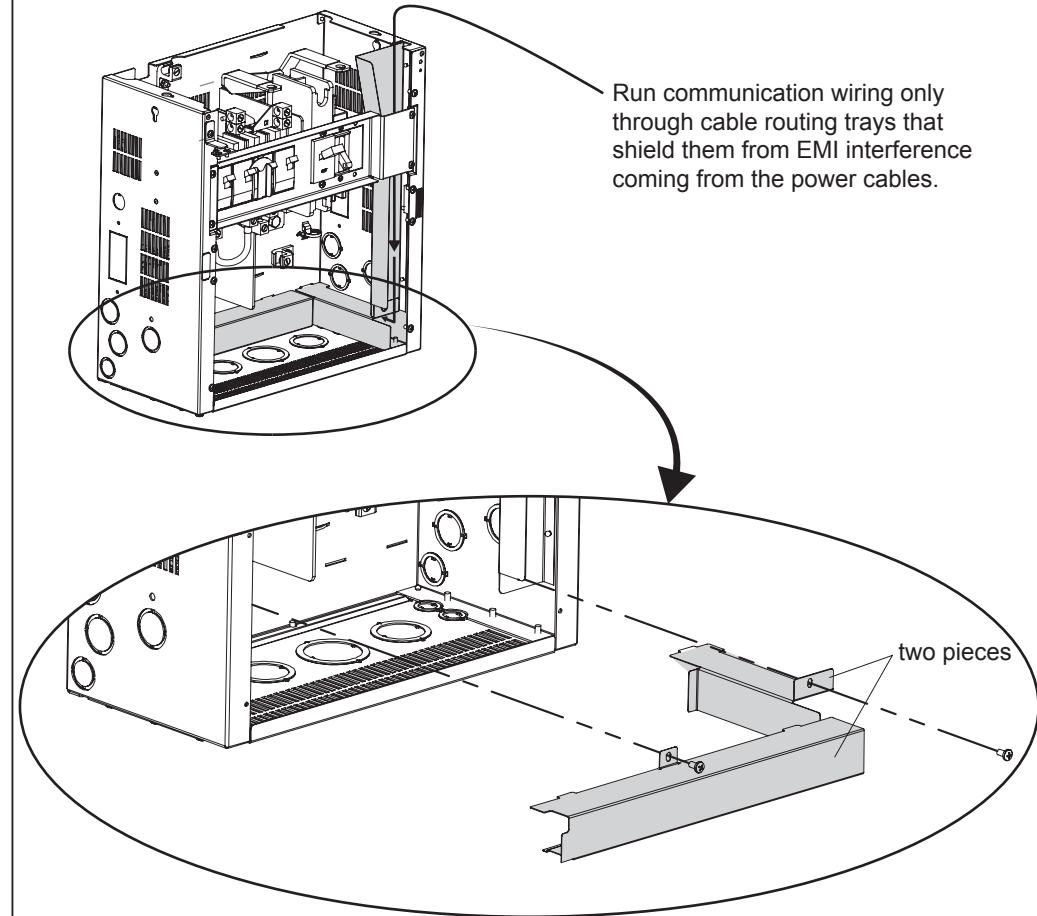
2 Complete all internal AC and DC wiring. See wiring diagrams on pages 4 and 5.

- Connecting AC wires to the inverter
- Connecting Generator AC wires to a fourth AC breaker and to the Inverter
- Connecting PV Inverter AC wires to a fourth AC breaker and to the Bypass terminals
- Connecting DC cables from the PV breaker to the MPPT 60 150 and to the PV array

3 Complete all communication and analog wiring (for example, Xanbus, AC sync, AUX, and BTS). Ensure all communication and analog wires are routed through the routing trays and barriers as shown.

For detailed communication and analog wiring instructions, see the *Conext XW/XW+ Inverter/Charger Installation Guide*

Remove the communication cable barriers for easy routing of communication wiring. Replace the barriers after wiring.



4 Replace the front faceplate of the Mini PDP. Replace the 8 screws previously set aside (step E1) to secure the faceplate.

5 Replace the door of the Mini PDP, if previously removed.

6 Replace the XW/XW+ AC access panel from step E1. Installation complete. Follow XW/XW+ Installation Guide instructions to complete unit commissioning.

Connecting AC wires to the inverter

NOTE: Connect the pre-installed AC wires (6 pieces) provided with the Mini PDP to the inverter's AC and Ground terminals. All other wires and/or cables are not provided.

1 Connect the labeled wire ends to the XW/XW+ unit's AC (L1-N-L2 LOAD and L1-N-L2 GRID) and Ground terminals (as shown).

3 Install AC wires (not provided) between the L1 and L2 bypass terminal lugs AND the AC load box. Route the wires through one of the knockout holes.

2 Install AC wires (not provided) between the L1 and L2 bypass terminal lugs AND the AC source box. Install Neutral and Ground wires (not provided) between the Neutral and Ground bus bars AND the AC source box. Route the wires through one of the knockout holes.

4 Install DC cables (not provided) between the battery terminals and the Mini PDP's battery terminal lugs.

Add UL/CSA approved strain relief clamps to knockout holes.

Use either bolted or screw terminals. Torque according to posted guidelines.

Connecting Generator AC wires to the Inverter for Off-Grid

NOTE: The breakers in this illustration are provided with the Mini PDP. No additional breaker is required. For "Connecting Generator AC wires to a fourth AC breaker" see the next section.

1 Connect the labeled wire ends to the XW/XW+ unit's AC (L1-N-L2 LOAD and L1-N-L2 GRID*) and Ground terminals (as shown).

3 Install AC wires (not provided) between the L1 and L2 bypass terminal lugs AND the AC load box. Route the wires through one of the knockout holes.

2 Install AC wires (not provided) between the L1 and L2 bypass terminal lugs AND the AC source box. Install Neutral and Ground wires (not provided) between the Neutral and Ground bus bars AND the AC source box. Route the wires through one of the knockout holes.

4 Install DC cables (not provided) between the battery terminals and the Mini PDP's battery terminal lugs.

Add UL/CSA approved strain relief clamps to knockout holes.

Use either bolted or screw terminals. Torque according to posted guidelines.

* the wires labeled GRID connect to AC IN GEN (AC2)

Connecting Generator AC wires to a fourth AC breaker and to the Inverter

NOTE: All wires, cables, and breakers in this illustration are not provided with the Mini PDP. See section B Materials List for information on DC breakers.

1 Install a fourth AC breaker (not provided) in the highlighted slot.

2 Connect L1 and L2 wire ends to the AC2 terminals (GEN) (as shown).

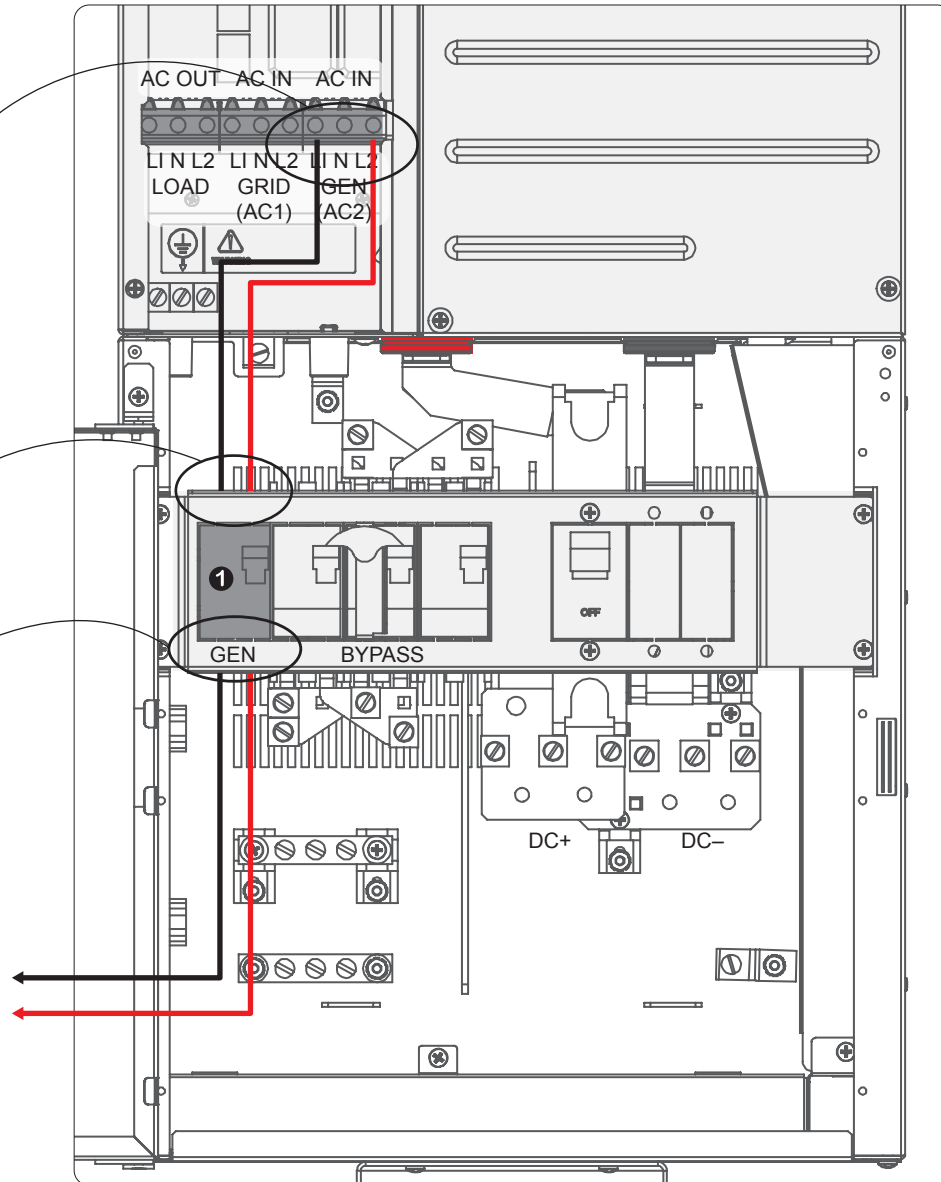
(1st pair)

3 Connect L1 and L2 wire ends to the breaker output terminals (as shown).

4 Connect L1 and L2 wire ends to the breaker input terminals.

(2nd pair)

5 Connect L1 and L2 wire ends to the generator's AC OUT terminals.
GENERATOR CONNECTION ONLY



Add UL/CSA approved strain relief clamps to knockout holes.

Connecting PV Inverter AC wires to a fourth AC breaker and to the Bypass terminals

NOTE: All wires, cables, and breakers in this illustration are not provided with the Mini PDP. See section B Materials List for information on DC breakers.

1 Install a fourth AC breaker (not provided) in the highlighted slot.

2 Connect L1 and L2 wire ends to the breaker output terminals.

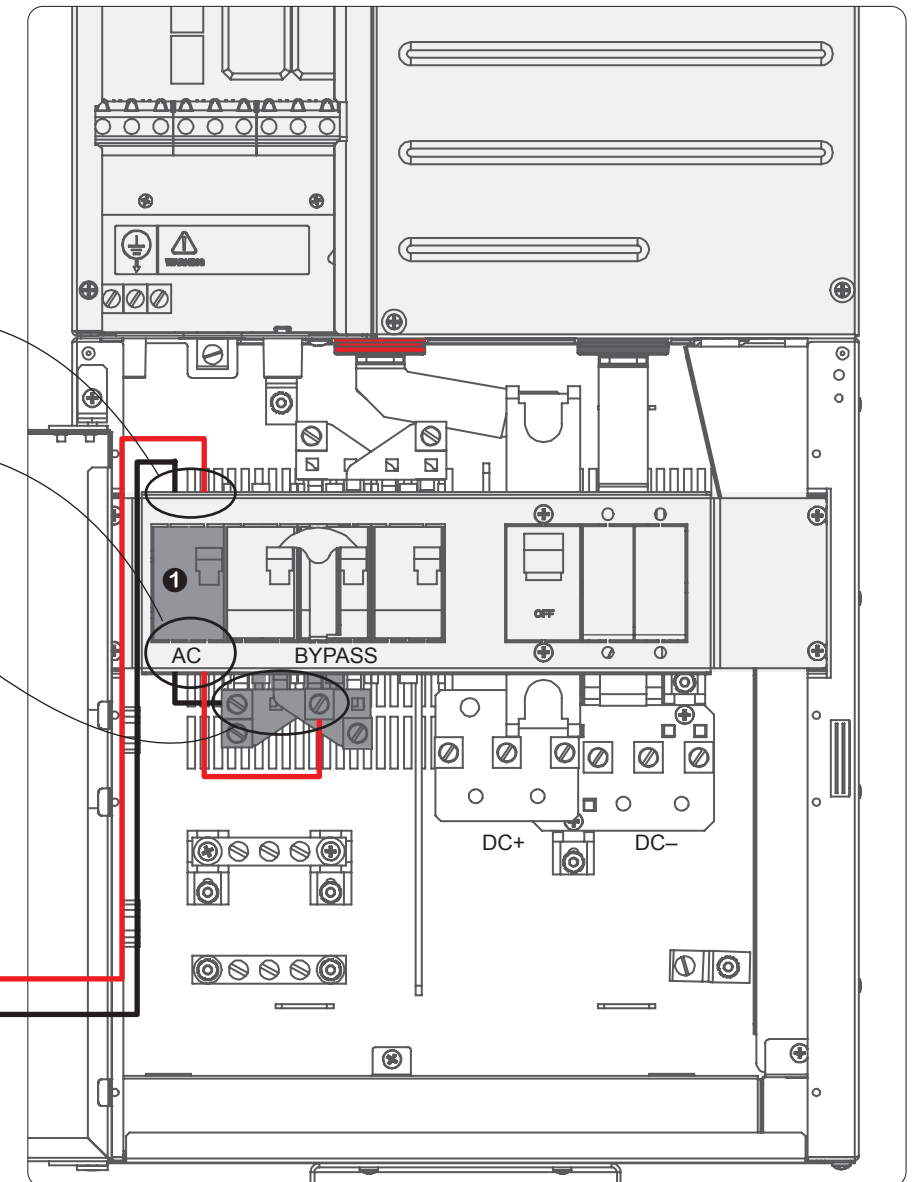
(1st pair)

3 Connect L1 and L2 wire ends to the breaker input terminals.

(2nd pair)

4 Connect L1 and L2 wire ends to the bypass terminals.

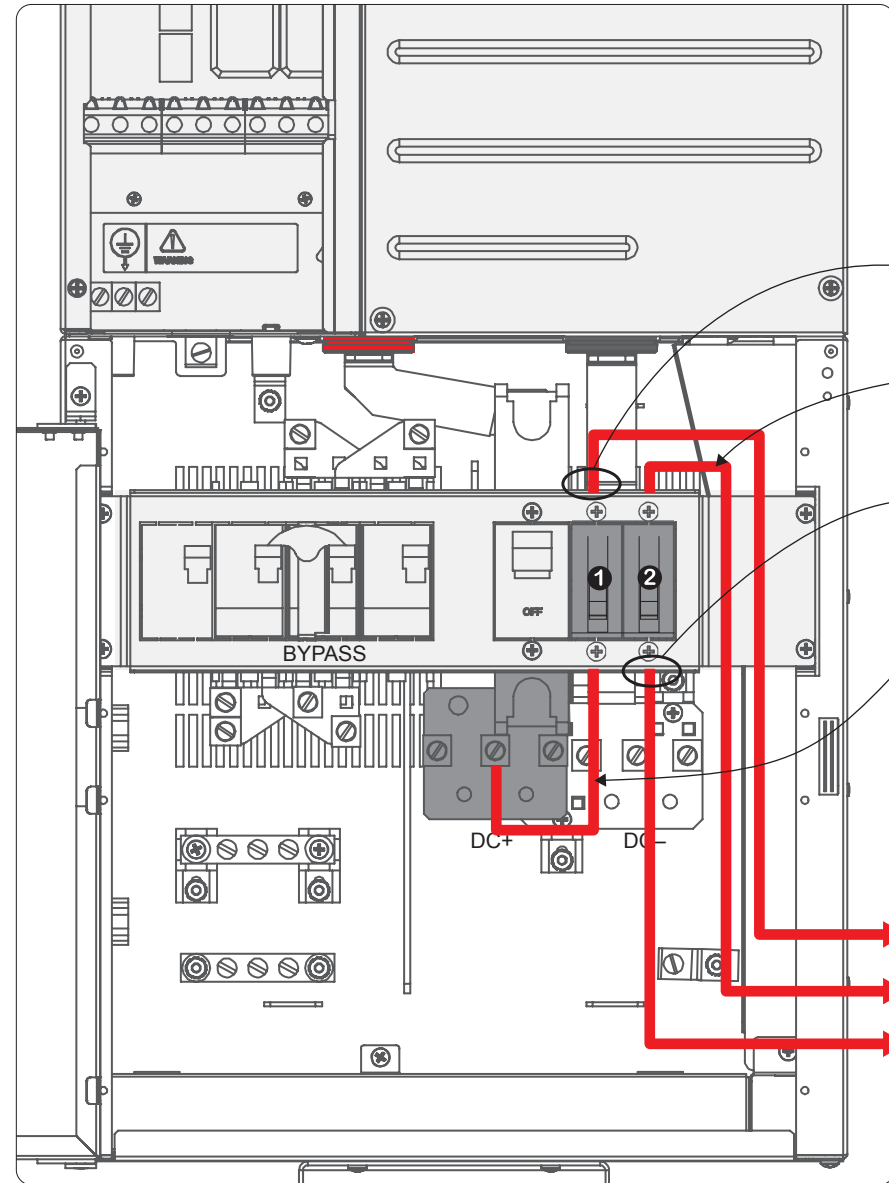
5 Connect L1 and L2 wire ends to the PV Inverter's AC OUT terminals.
PV INVERTER CONNECTION ONLY



Add UL/CSA approved strain relief clamps to knockout holes.

Connecting DC cables from the PV breaker to the MPPT 60 150 and to the PV array

NOTE: All wires, cables, and breakers in this illustration are not provided with the Mini PDP. See section B Materials List for information on DC breakers.



- 1 Install the battery breaker (not provided) as shown in the highlighted slot.
 - 2 Install the PV breaker (not provided) as shown in the highlighted slot.
 - 3 Connect the end of a DC cable (#1) to the battery breaker's in terminal.
 - 4 Connect the end of a DC cable (#2) to the PV breaker's in terminal.
 - 5 Connect the end of a DC cable (#3) to the PV breaker's out terminal.
 - 6 Install a DC cable (#4) between the battery breaker's out terminal and the Mini PDP's battery (+) lug.
 - 7 Route the DC cables through a knockout and connect them to their proper terminals.
- MPPT 60 150 Battery (+)
 MPPT 60 150 PV (+)
 PV Array PV (+)

Add UL/CSA approved strain relief clamps to knockout holes.