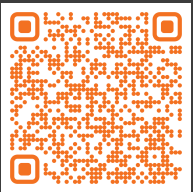


IQ Battery 10C

Quick install guide

Scan for the latest guide



MODEL
IQBATTERY-10C-1P-NA

VERSION 2.0
JANUARY 2025



140-00379-02



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1. Safety information

IMPORTANT SAFETY INSTRUCTIONS. SAVE THESE INSTRUCTIONS.

This guide contains important instructions that you must follow during the installation and maintenance of the Enphase IQ Battery(ies). Failing to follow any of these instructions may void the warranty (enphase.com/warranty). Refer to the MSDS document and safety datasheet at enphase.com/en-us. Read these instructions carefully and retain them for future use. If the ownership of IQ Battery 10C is transferred, then these instructions must be included.

In case of fire or other emergency

In all cases:

- If safe to do so, switch off the AC breaker for the IQ Battery 10C circuit, and if a disconnect switch is present, switch off the AC disconnect for the IQ Battery 10C circuit.
- Contact the fire department or other required emergency response team. Evacuate the area.
- Contact Enphase Support by calling (877) 797-4743 and selecting option 2, or by visiting <https://enphase.com/contact/support>.

In case of fire:

- When safe, use a fire extinguisher. Suitable types are A, B, and C dry chemical fire extinguishers. Additional extinguishing media include carbon dioxide or alcohol-resistant foams.

In case of flooding:


- Stay out of the water if any part of the IQ Battery(ies) or wiring is submerged.
- If possible, protect the system by finding and stopping the source of the water and pumping it away.
- If water has contacted the battery, call your installer to arrange an inspection. If you are sure that water has never contacted the battery, let the area dry completely before use.

In case of unusual noise, smell, or smoke:

- Ensure nothing is in contact with the IQ Battery(ies) or in the venting area of the IQ Battery(ies).
- Ventilate the room.

In case of electrolyte exposure:

The Enphase IQ Battery 10C has a lithium iron phosphate (LFP) battery that contains organic electrolytes and is sealed in a protective case. The leaked electrolyte is toxic and flammable. The leaked electrolyte is colorless and has a sweet odor. Electrolyte fluid tends to evaporate quickly, leaving behind a white grainy substance. If an odor is obvious, proceed to the following steps:

 **DANGER:** DO NOT TOUCH OR INGEST ANY LIQUID SUSPECTED TO BE BATTERY ELECTROLYTE.

- Evacuate personnel to a safe area and keep unauthorized personnel away.
- Isolate the spill area to a minimum distance of 75 feet (25 m).
- Eliminate all ignition sources (no smoking, sparks, flames, or hot equipment) in the immediate area around the spill.
- Do not touch or walk through spilled material.
- Avoid breathing vapors. Ensure adequate ventilation. Use personal protective equipment.
- Emergency telephone number (ChemTel): Inside United States Territories and Canada: (800) 255-3924 Outside United States Territories and Canada: +01 (813) 248-0585

1.1 Safety and advisory symbols



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



WARNING: This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.



NOTE: This indicates information particularly important for optimal system operation. Follow instructions carefully.

1.2 Safety instructions



DANGER: Risk of electric shock. Risk of fire. Only qualified electricians should install, troubleshoot, or replace the IQ Battery(ies).



DANGER: Risk of fire or explosion. Only qualified personnel using personal protective equipment (PPE) should transport or handle the IQ Battery(ies).



DANGER: Risk of explosion. Do not dispose of IQ Battery(ies) in a fire or by burning. The IQ Battery(ies) can explode.



DANGER: Risk of fire or explosion. This product is designed for stationary installation only and should be used accordingly. It is not designed for mobile applications such as installation on vehicles and trailers and should not be used in such applications.



DANGER: Risk of fire. During use, when stored, or during transport, keep the IQ Battery(ies) in an area that is well-ventilated and protected from the elements, where the ambient temperature and humidity are within -4°F to 131°F (-20°C to 55°C) and 5% to 95% RH, non-condensing, preferably out of direct sunlight. Do not install the IQ Battery(ies) at elevations over 9,842 feet (3,000 m) above sea level.



DANGER: Risk of fire. If the IQ Battery(ies) generate smoke, remove AC power from the Enphase system and turn the control switch to the off position so that charging/discharging stops.



DANGER: Risk of electric shock. Do not use Enphase equipment in a manner not specified by the manufacturer. Doing so may cause death or injury to persons or damage to equipment.



DANGER: Risk of electric shock. Do not install the IQ Battery(ies) without first removing AC power from the

photovoltaic system. Disconnect the power coming from the photovoltaics before servicing or installing.



DANGER: Risk of electric shock. Always de-energize the AC branch circuit during an emergency and/or before servicing the IQ Battery(ies).



DANGER: Risk of electric shock. Risk of high short-circuit current. Observe the following precautions when working on batteries:

- Remove watches, rings, or other metal objects.
- Use tools with insulated handles.
- Wear insulating gloves and boots.
- Do not lay tools or metal parts on top of batteries.



DANGER: Risk of electric shock. Risk of fire. Do not work alone. Someone should be in the range of your voice or close enough to come to your aid when you work with or near electrical equipment.



DANGER: Risk of fire. Do not allow or place flammable, sparking, or explosive items near the IQ Battery(ies).



DANGER: Risk of electric shock. In areas where flooding is possible, install the IQ Battery(ies) at a height that prevents water ingress.



DANGER: Risk of electric shock. AC voltage is present at the output when the DC switch is on.



DANGER: Risk of electric shock. Branch circuit protection must be off before switching DC power on or off.



DANGER: Risk of electric shock. The DC switch must be in the OFF position for shipping and service.



WARNING: Multiple risks. Follow all local standards and regulations set forth by the Utility companies and Authority Having Jurisdiction (AHJ).



WARNING: Risks of electric shock, energy hazard, and chemical hazard. Do not disassemble.



WARNING: Risk of equipment damage. During use, storage, transport, or installation, always keep the IQ Battery(ies) in an upright position.



WARNING: You must install the IQ Battery(ies) only on a suitable wall using an Enphase mounting bracket.



WARNING: Before installing or using the IQ Battery(ies), read all instructions and cautionary markings in this guide and on the equipment.



WARNING: Do not install or use the IQ Battery(ies) if it has been damaged in any way.



WARNING: Do not exceed the maximum number (1) of IQ Battery 10C without PCS or maximum number (2) of IQ Battery 10C with PCS in a 40 A AC branch circuit



WARNING: Do not exceed the maximum number (2) of IQ Battery 10C without PCS or maximum number (4) of IQ Battery 10C with PCS on 80 A AC branch circuit.



WARNING: Do not sit on, step on, place objects on, or insert objects into the IQ Battery(ies).



WARNING: Do not place beverages or liquid containers on top of the IQ Battery(ies). Do not expose the IQ Battery(ies) to liquids or flooding.



WARNING: Risk of injury and equipment damage. The total lifting weight is 125.6 lb (57 kg). Handles (SKU: B05C-LH-0180-O) must be used while lifting the battery. Two-person manual lifting is allowed only if permitted by local laws. Otherwise, use mechanical lifting.



WARNING: Risk of injury and equipment damage.

- Do not lift the IQ Battery 10C battery units by holding onto the microinverters. This may damage the unit permanently.
- Do not lift the packaging with the battery inside after the plastic straps are cut.
- Do not mount an IQ Battery 10C on a bracket that is not properly mounted.



WARNING: Multiple risks. While drilling, make sure not to drill into electric wiring or water pipes in the wall.



WARNING: Risk of equipment damage. Use an electric drive; do not use impact drives/impact drills while tightening fasteners provided along with the product. Ensure that fasteners are torqued to the recommended limits.



WARNING: Risk of injury. Wear personal protective equipment for handling lithium batteries as required by local safety standards during installation and handling of IQ Battery.



WARNING: Limitation of use. Your IQ Battery 10C unit is not intended for use as a primary or backup power source for life-support systems, other medical equipment, or any other use where product failure could lead to injury, loss of life, or catastrophic property damage. Enphase disclaims any and all liability arising out of any such use of your IQ Battery 10C unit. Further, Enphase reserves the right to refuse to provide support in connection with any such use and disclaims any and all liability arising out of Enphase's provision of, or refusal to provide support for your IQ Battery 10C device in such circumstances.



WARNING: When placing the IQ Battery(ies) in storage, ensure that AC power is not present and that the DC switch is in the OFF state (LED not on). While in storage, damage to the battery can occur from over-discharge. If the battery state of charge falls to 0%, the IQ Battery(ies) can be damaged or destroyed. Because of this, the IQ Battery(ies) must only be stored for a limited amount of time.

- The IQ Battery(ies) must be installed and energized by the "Must Energize By" date on the shipping box label.
- The IQ Battery(ies) must have a SoC (State of Charge) of no more than 30% when placed in storage. To do this, the IQ Battery(ies) must be switched OFF when it reaches 30% SoC.
- If the IQ Battery(ies) has already been installed, it must be discharged to 30% SoC and be switched OFF prior to uninstalling. A battery in OFF state can be stored for a maximum of two months from the time it was switched OFF.



NOTE: Inspect the packaging and the IQ Battery(ies) for any signs of damage, such as cracks, dents, or electrolyte leaks. Do not install or use the IQ Battery(ies) if it has been dropped or damaged in any way. If it is damaged, contact your distributor for replacement.



NOTE: These mounting instructions are for the included mounting bracket only. If you wish to install IQ Battery 10C in a floor-mount configuration, order the pedestal accessory (B05C-PI-0550-O) and refer to the floor-mount instructions shipped with the product. This product must be installed with clearance at the left, right, top, bottom, and front, as shown in section – minimum clearances.

- ✓ **NOTE:** Perform installation and wiring, including protection against lightning and resulting voltage surges, in accordance with all applicable local electrical codes and standards.
- ✓ **NOTE:** Using unapproved attachments or accessories could result in damage or injury.
- ✓ **NOTE:** Install properly rated overcurrent protection as part of the system installation.
- ✓ **NOTE:** To ensure optimal reliability and to meet warranty requirements, the IQ Battery(ies) must be installed and/or stored according to the instructions in this guide.
- ✓ **NOTE:** The Enphase IQ Battery 10C system requires an internet connection through the IQ Gateway Metered located inside IQ Combiner 6C. Failure to maintain an internet connection may have an impact on the warranty. See <http://www.enphase.com/warranty> for full terms.
- ✓ **NOTE:** When replacing the Enphase IQ Battery(ies), you must replace it with an IQ Battery(ies) of the same type with the same AC current rating.
- ✓ **NOTE:** When disconnected and stored, no automatic charge of the battery is possible.
- ✓ **NOTE:** Properly mount the IQ Battery(ies). Ensure that the mounting location is structurally suited to bearing the weight of the IQ Battery(ies).
- ✓ **NOTE:** During use, storage, and transport, keep the IQ Battery(ies):
 - Properly ventilated.
 - Away from the water, other liquids, heat, sparks, and direct sunlight.
 - Away from excessive dust, corrosive and explosive gases like ammonia, and oil smoke.
 - Away from direct exposure to gas exhaust, such as from motor vehicles.
 - Free of vibrations.
 - Away from falling or moving objects, including motor vehicles. If mounted in the path of a motor vehicle, we recommend a 36 in (914 mm) minimum mounting height.
 - At an elevation of less than 9,842 feet (3,000 m) above sea level.
 - In a location compliant with fire safety regulations.
 - In a location compliant with local building codes and standards.
- ✓ **NOTE:** Conditions for the IQ Battery 10C installation site also apply to storage conditions.
- ✓ **NOTE:** Enphase Energy System requires a utility grid connection for commissioning and operation.
- ✓ **NOTE:** Recycle packaging according to local guidelines.

Environmental Protection



ELECTRONIC DEVICE: DO NOT THROW AWAY.
Waste electrical products should not be disposed of with household waste.

Proper disposal of batteries is required. Refer to your local codes for disposal requirements.

2. Introduction

To install the Enphase IQ Battery 10C, read and follow all warnings and instructions in this quick installation guide (QIG). Safety warnings are listed at the start of this guide. These instructions are not meant to be a complete explanation of how to design and install an energy storage system. All installations must comply with national and local codes and standards. Only Enphase-certified installers shall install, troubleshoot, or replace the IQ Battery 10C.

The IQ Battery 10C system includes the battery cell pack with integrated IQ Microinverters (SKU: IQ8BL, IQ8BN) and the battery management system (BMS). The system requires IQ Combiner 6C and IQ Meter Collar for the backup operation. The IQ Gateway inside the combiner measures PV production, IQ Battery 10C charge/discharge power, and home energy consumption, and it senses when it is optimal to charge or discharge the battery so that energy is stored when it is abundant and used when it is scarce.

Key specifications	
Rated (continuous) output power	7.08 kVA
Rated output current (@240 V _{L-L} AC~)	29.5 A ¹
Rated neutral current (@120 V _{L-N} AC~)	24 A ²
Interconnection	Single-phase
Nominal voltage	240/ 120 VAC~
Nominal frequency	60 Hz
Usable capacity ³	10.0 kWh
Ambient operating temperature range (charging) ⁴	–4°F to 122°F (–20°C to 50°C) Non-condensing
Ambient operating temperature range (discharging) ⁵	–4°F to 131°F (–20°C to 55°C) Non-condensing
Chemistry	Lithium iron phosphate (LFP)
Mounting	Wall-mount or pedestal-mount (sold separately)
Dimensions (H × W × D)	24.5 in × 28 in × 14.4 in (621 mm × 708 mm × 362 mm)
Maximum lifting weight	125 lb (57 kg)
Total installed weight	317 lb (144 kg)

¹ 7.08 kVA, 29.5 A for the balanced 240V L-L loads.

² A maximum of 24 A, 120V L-N unbalanced loads can be supported along with 5.5 A, 240V L-L loads.

³ The battery's usable capacity supports loads, and turns PV on (when off-grid), in normal daily operation. The usable capacity includes a safety critical limit of 2% that safeguards the customer's asset in case of a long-duration grid outage. An additional 3% capacity is maintained for powering battery electronics at night. Refer to http://link.enphase.com/iqbattery_usable_capacity_en_na for more information.

⁴ A reduction in charging power occurs at temperatures below 15°C and above 45°C.

⁵ A reduction in discharging power occurs at temperatures below 5°C and above 50°C.

3. IQ Battery 10C installation scenarios

This section provides details on IQ Battery 10C installation scenarios.

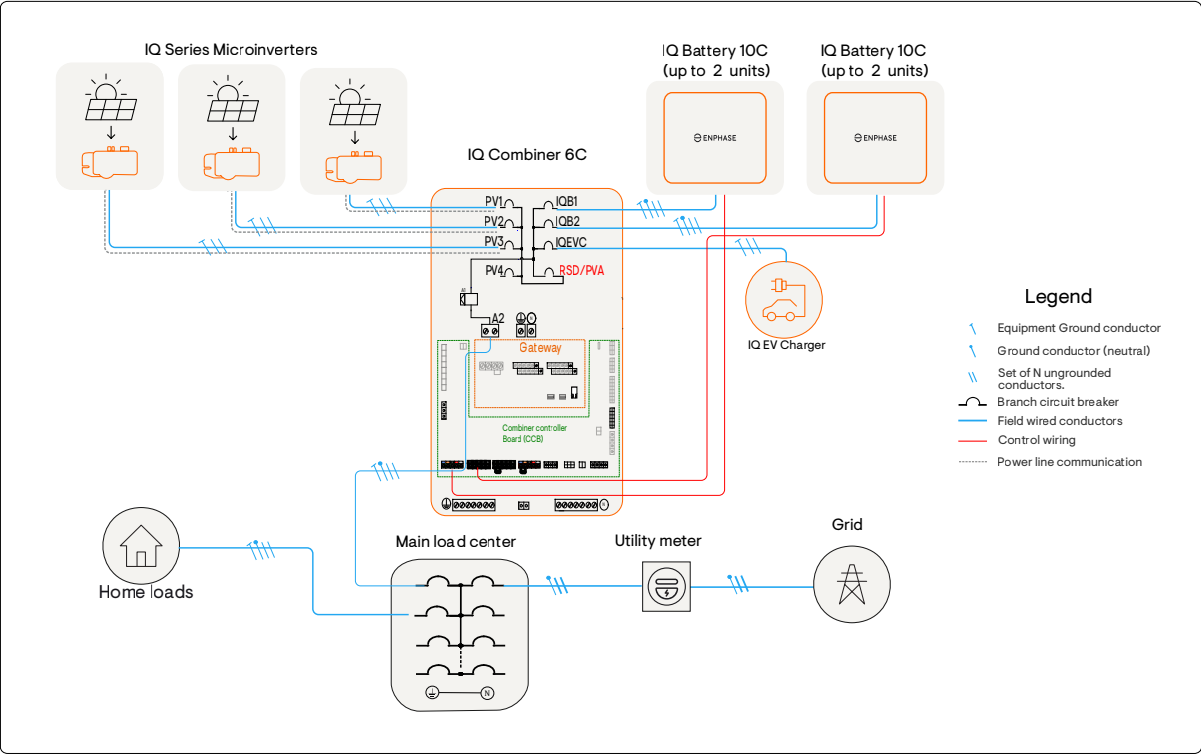


Figure 1: Grid tied system- PV + Battery only with main load center

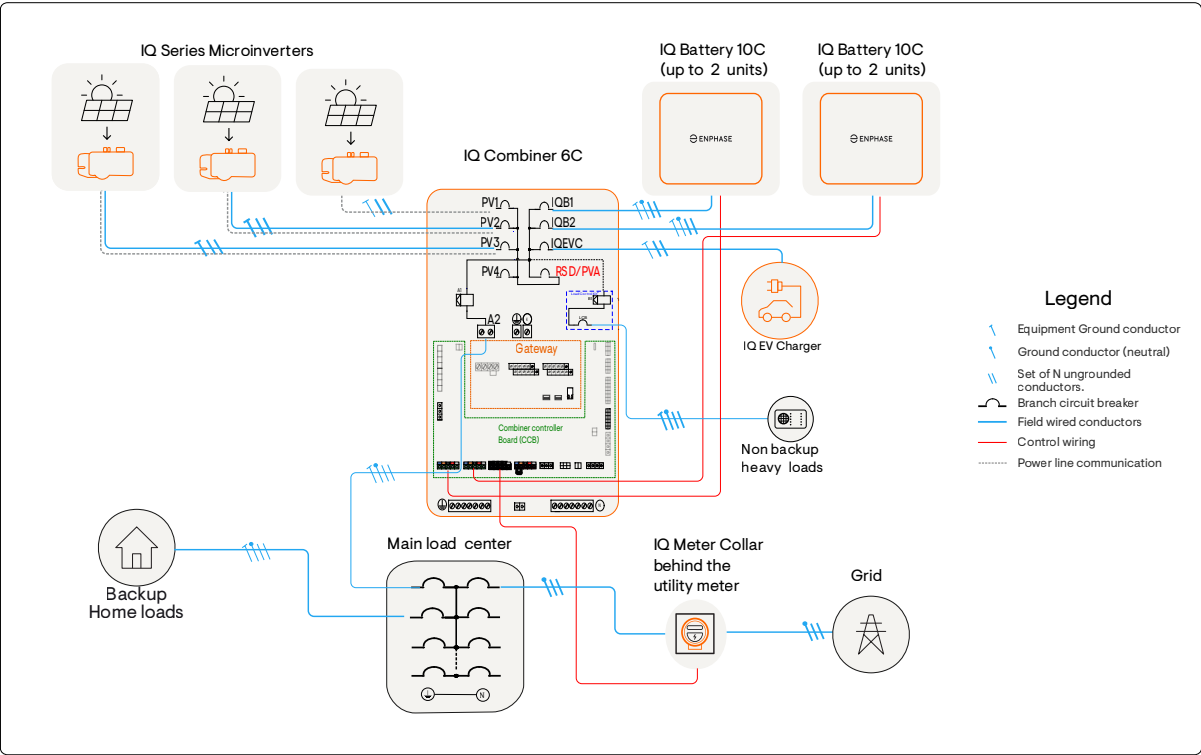


Figure 2: Grid forming system - IQ Meter Collar behind utility meter in a meter socket



NOTE: Refer to the IQ Combiner 6C (SKU: X-IQ-AM1-240-6C) quick install guide for details on combiner connections.

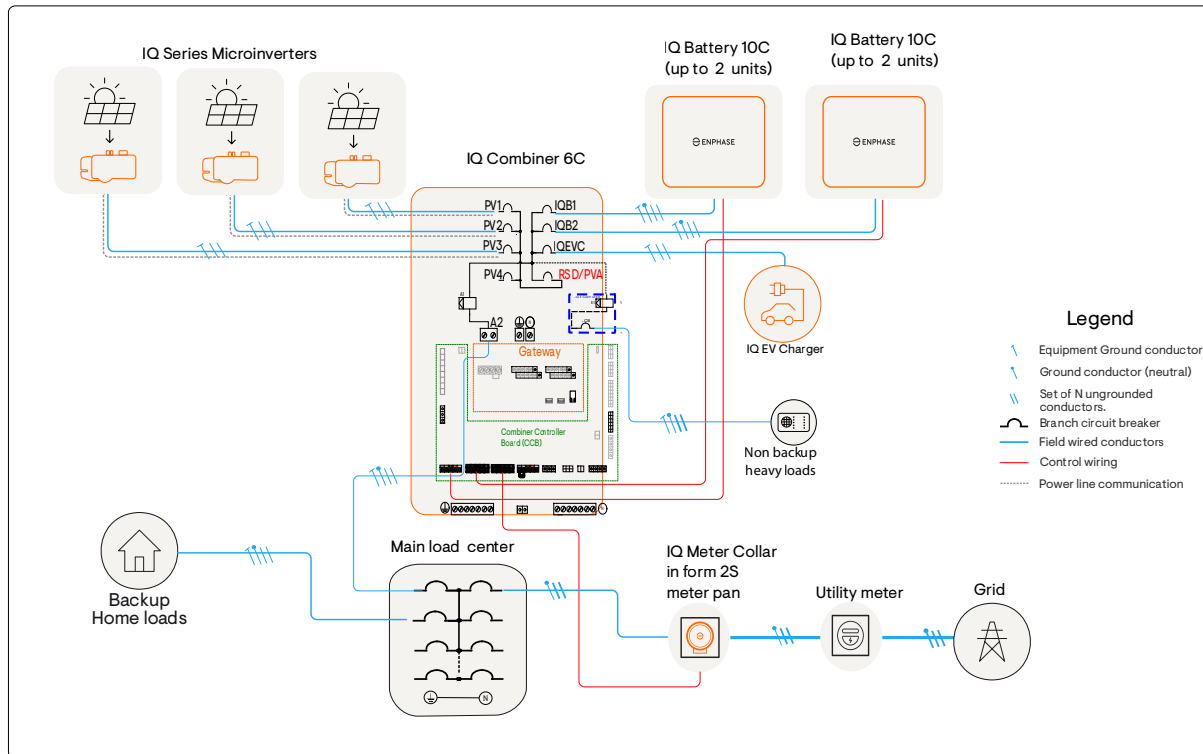


Figure 3: Grid forming system - IQ Meter Collar in a separate meter pan

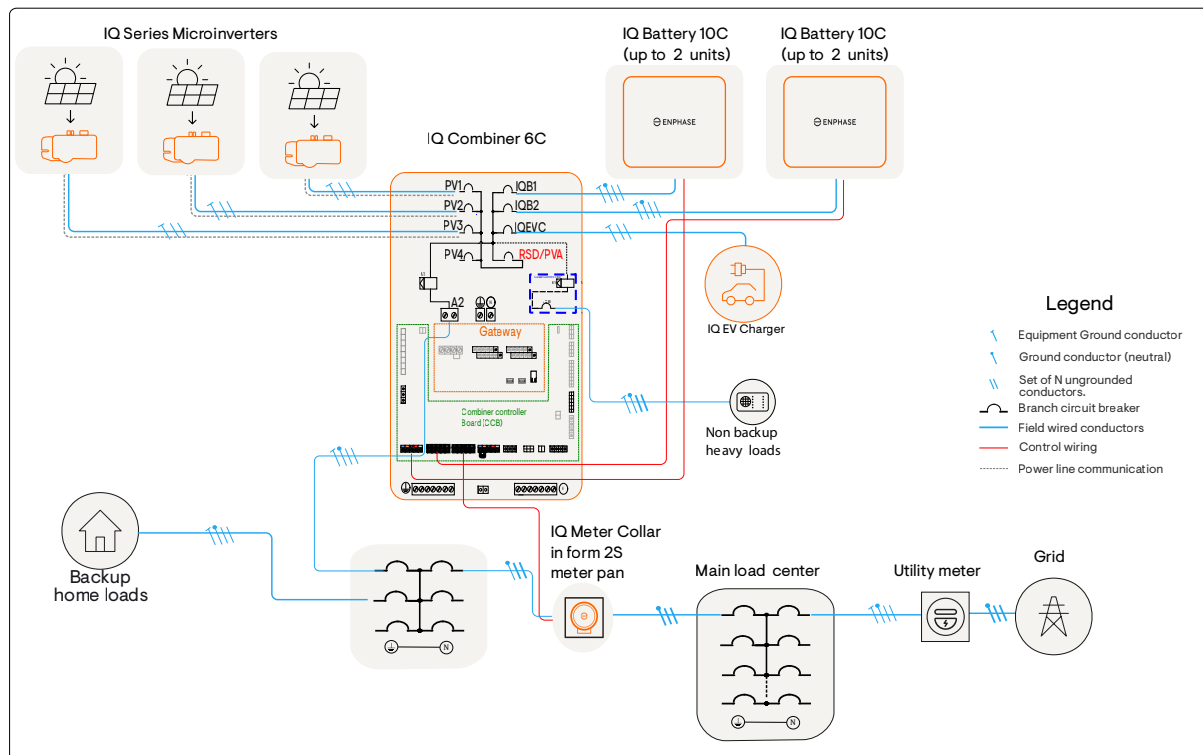


Figure 4: Grid forming system - IQ Meter Collar in a separate meter pan as mains supply is more than 200 A



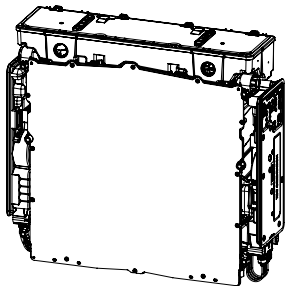
NOTE: Refer to the IQ Combiner 6C (SKU: X-IQ-AM1-240-6C) quick install guide for details on combiner connections.

4. What's in the box

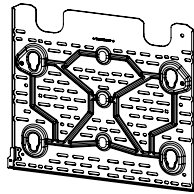
Each IQ Battery 10C (Order Code: IQBATTERY-10C-1P-NA) ships in three separate boxes.

- Two boxes – each containing a 5 kWh battery unit (B05-C01-US00-1-3)
- One box - containing the IQ Battery 10C cover kit (B10C-NC-0708-O)

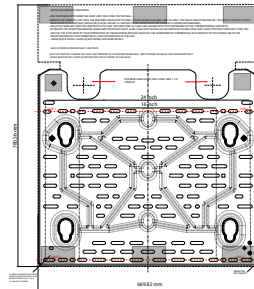
4.1 What's in each 5 kWh battery unit box (B05-C01-US00-1-3)



1 × 5 kWh battery unit



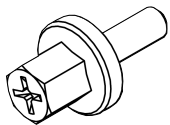
1 × Mounting bracket



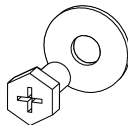
1 × Drill template



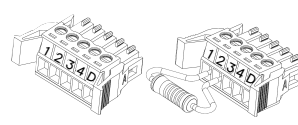
1 × Quick install guide



2 × Seismic screws

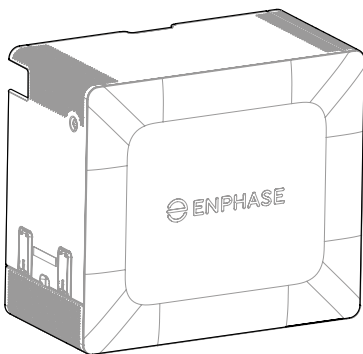


6 × M8 hex screws with washers for second mounting bracket installation (only 6 required)

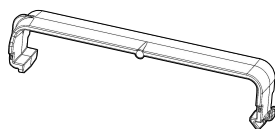


Preinstalled control connectors

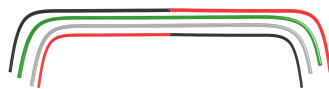
4.2 What's in cover kit box (B10C-NC-0708-O)



1 × IQ Battery 10C cover



2 × Cable holder



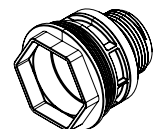
Interconnect power cables (L1, L2, N- 4 AWG, GND- 8 AWG)



2 × Conduit cover



Interconnect control cable with one preinstalled control connector



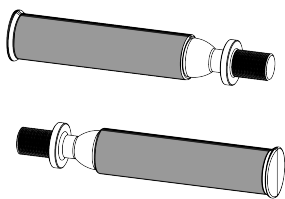
2 × Raceway adapter



Control connector with resistor

5. Tools required

Enphase accessory:



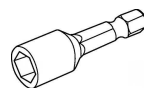
Lifting handles: B05C-LH-0180-O



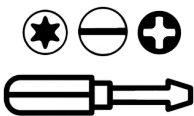
Measuring tape



Pencil and level



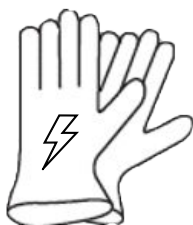
Hex drives



Screwdriver - At least 8" long



Drill



Protective gloves

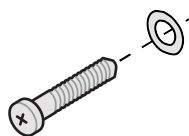


Torque wrench

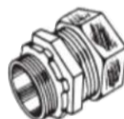


Cable stripping tool

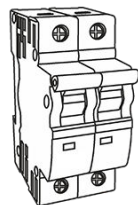
6. Additional items required



6x #20 (5/16") lag bolts or screws with washer to install the mounting bracket on the wall



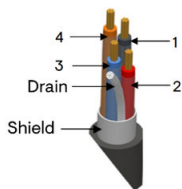
Conduits and fittings Up to 1.25 in (32 mm)



AC breaker - 40 A for one IQ Battery 10C or 80 A for two IQ Battery 10C (used inside IQ Combiner 6C)



Copper conductors- No. 8-3 AWG (11 mm or 7/16" strip length) (rated at 90°C) for terminals



Enphase SKU for control cable: CTRL-SC3-NA-01

✔ **NOTE:** Conduit fittings must be NEMA Type 3R certified when installing outdoors.

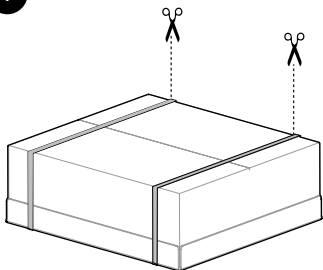
7. Unboxing the IQ Battery 10C

Each IQ Battery 10C comes with two 5 kWh battery unit boxes and one IQ Battery 10C cover kit box.

Before unboxing IQ Battery 10C - 5 kWh battery unit, check the “Energize By” label on the shipping box to verify that the IQ Batteries will be installed by the date shown. If the date has passed, contact your distributor for next steps.

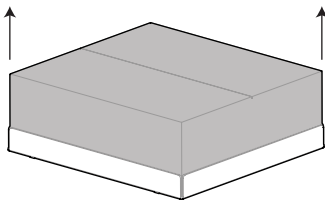
Follow the steps, as shown in the following image:

1



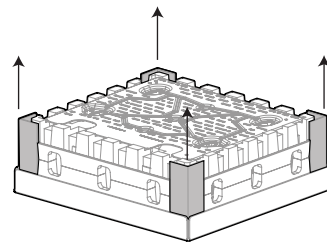
Cut open the straps

2



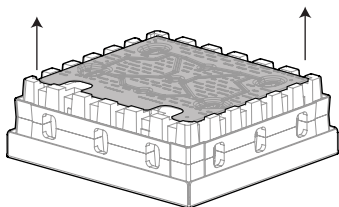
Remove the top box cover

3



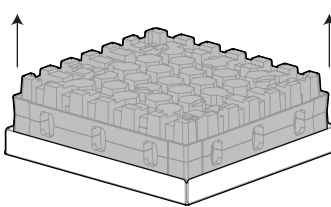
Remove the four corner guards

4



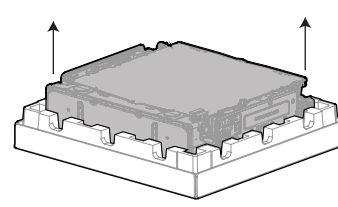
Carefully take out the mounting bracket
and keep it aside

5



Remove the top paper tray

6



Open the polythene bag and take out the
battery unit with the help of handles



NOTE: Follow the steps mentioned in [section 7.4](#) for handle installation and lifting of the unit.

Ensure to take out the accessories bag included in the IQ Battery packaging and store it securely for use during the installation.

Inspect the packaging and the IQ Battery(ies) for any signs of damage, such as cracks, dents, or electrolyte leakage. Do not install or use the IQ Battery(ies) if it has been dropped or damaged in any way. If the battery is damaged, contact your distributor for a replacement.



WARNING: Do not lift the IQ Battery 10C by holding onto the microinverters or the wiring compartment section. This may damage the unit permanently. Always use handles (SKU: B05C-LH-0180-O) to lift the IQ Battery 10C.


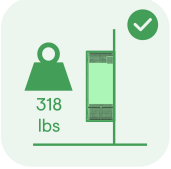





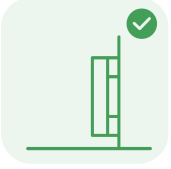
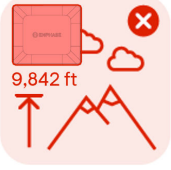





WARNING: Do not lift the packaging with the battery inside after cutting the plastic straps.

8. Planning installation layout

Planning the installation layout is an important step to make sure the IQ Battery 10C is installed and mounted correctly as per the specifications.

8.1 Choosing a location for the IQ Battery array

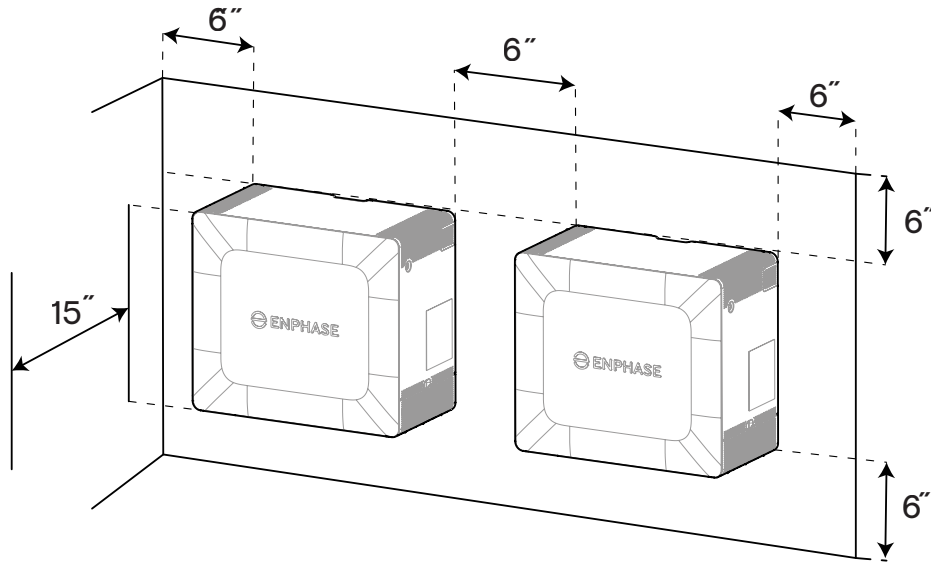
-  IQ Battery 10C is NEMA Type 3R rated and can be installed Indoor or outdoor. The terminal blocks on the IQ Battery 10C accept a maximum conductor size of 3 AWG for L1/L2/N terminals and 8 AWG for the Ground terminal.
NOTE: Enphase IQ Batteries have been evaluated to UL 9540A standard for outdoor and non-habitable indoor residential installations. Units are only intended to be installed in attached or detached garages, sheds, and locations more than 152.4 cm (5 ft) from dwelling units, and are not intended for installation in habitable spaces and living spaces in dwelling units.
-  318 lbs
• Make sure the installed location can sustain the total weight of 318 lb (144 kg) per IQ Battery 10C. The wall must contain blocked studs that can bear the battery weight or be made of masonry or other suitable structures.
-  • When installing on a wooden wall, it is suggested to use a flame-inhibition plate between the wooden wall and IQ Battery 10C. Consult the regional building regulations for any additional requirements.
-  • Make sure there are no pipes or electrical wires where you plan to drill.
-  +131°F
-4°F
• Provide heat or smoke alarms in residence in accordance with building, fire, and installation codes.
-  • Follow local standards, choose a non-habitable indoor location (like a 2-car garage) or an outdoor location where the ambient temperature and humidity are within -4°F to 131°F (-20°C to 55°C) and 5% to 95% RH, non-condensing. Avoid direct sunlight to ensure the temperature stays in the optimal operating range. This ensures charging and discharging currents are not de-rated due to temperature. The full performance will occur within 59°F to 113°F (15°C to 45°C) while charging and within 41°F to 122°F (5°C to 50°C) while discharging.
-  • Consider the dimensions of the IQ Batteries, easy access, height, and cable length when selecting the location.
-  • Select a location where you can easily make wiring connections of the IQ Battery 10C to the IQ Combiner 6C.
-  9,842 ft
• This product must not be installed at altitudes above 9,842 ft (3,000 m).
-  • Follow all local standards and regulations set forth by the Authority Having Jurisdiction (AHJ).
-  Max 2 in a daisy chain
• Up to two IQ Battery 10C units can be daisy-chained on a single branch circuit. IQ Combiner 6C supports up to a maximum of 80 A breakers for the IQ Battery 10C connection circuit.
NOTE: Up to four IQ Battery 10C units can be daisy-chained on a single branch circuit using battery oversubscription PCS. Ensure to add a PCS disclaimer label at all PCS-enabled IQ Battery 10C units.
-  • The maximum conductor size for IQ Battery 10C is 3 AWG for L1/ L2/N terminals and 8 AWG for ground terminals, and the maximum breaker rating with this conductor size is 80 A.

8.2 Minimum clearance

The mounting instructions provided are for the included mounting bracket only. If you wish to install IQ Battery 10C in a floor-mount configuration, order the pedestal accessory (Order code: B10C-PI-0550-O) and refer to the floor-mount instructions included with that product. This product must be installed with clearance at the left, right, top, bottom, and front of the product, as shown in the figure.

WARNING: If mounted in the path of a motor vehicle, Enphase recommends a minimum mounting height of 36 in (914 mm) above the floor.

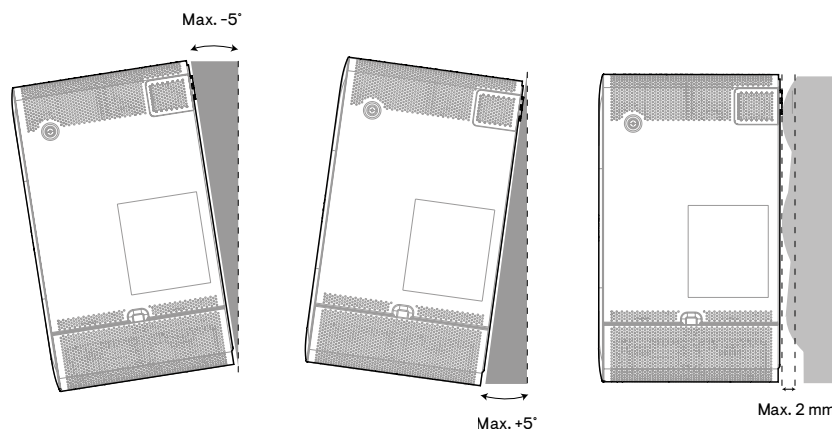
- NOTE:**
- The 6" clearances are per the UL 9540A evaluation; Enphase recommends 8" clearances on the side and the top of the unit for ease of service and adequate ventilation. Make sure to comply with all local compliance and regulation standards.
 - The indicated clearances should be measured with respect to external covers of the units.
 - Keep the IQ Battery 10C away from falling or moving objects, including motor vehicles.



IQ Battery 10C – Minimum clearance

8.3 Mounting surface

- NOTE:**
- Select a location where the tilt from vertical is less than 5°.
 - Make sure the mounting surface flatness is within 0.08 in (2 mm) between boundary lines.
 - Use spacers or unistruts if the undulations are more than 0.08 in (2 mm) deep.



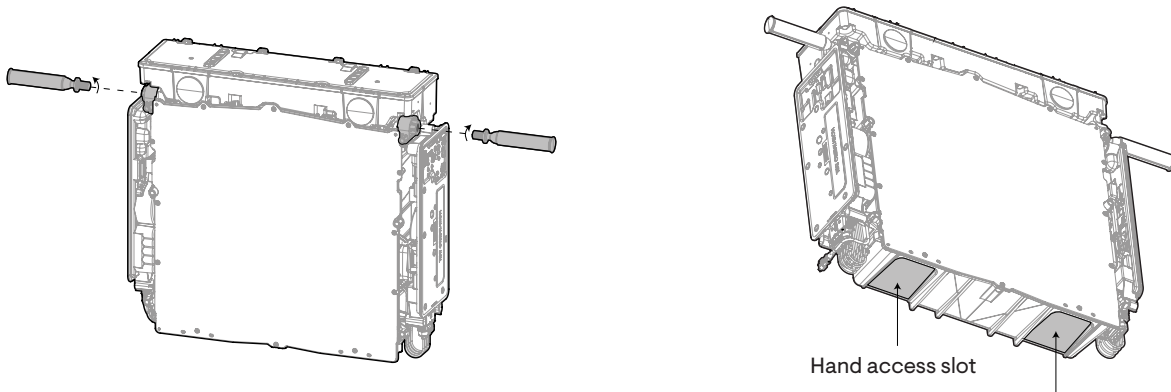
8.4 Installing the handles and lifting the 5 kWh unit



NOTE:

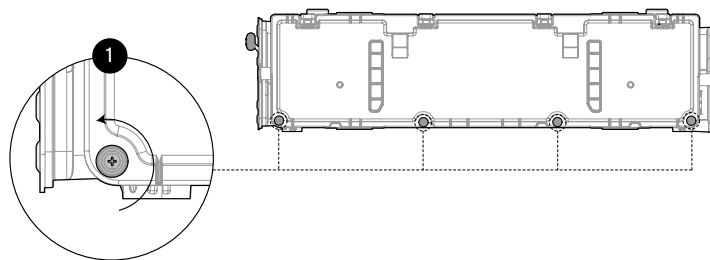
- A minimum of two people are required to lift the battery unit.
- Use lift assist if manual lifting is not permitted per local or national regulations, lifting weight – 125.6 lb (57 kg).

1. Insert and screw the handles onto the battery unit as shown to facilitate lifting the unit.

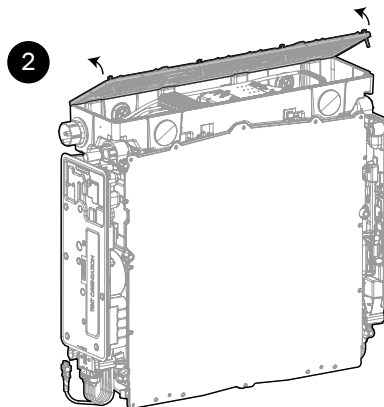


8.5 Removing the wiring cover

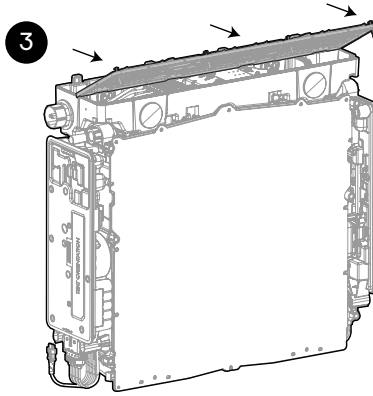
1. Loosen the four captive screws (torque to 19.5 in-lb or 2.2 N m).



2. Lift the front side of the wiring cover carefully.



3. Gently slide it forward to disengage it from the latches. Remove the wiring cover and keep it aside.



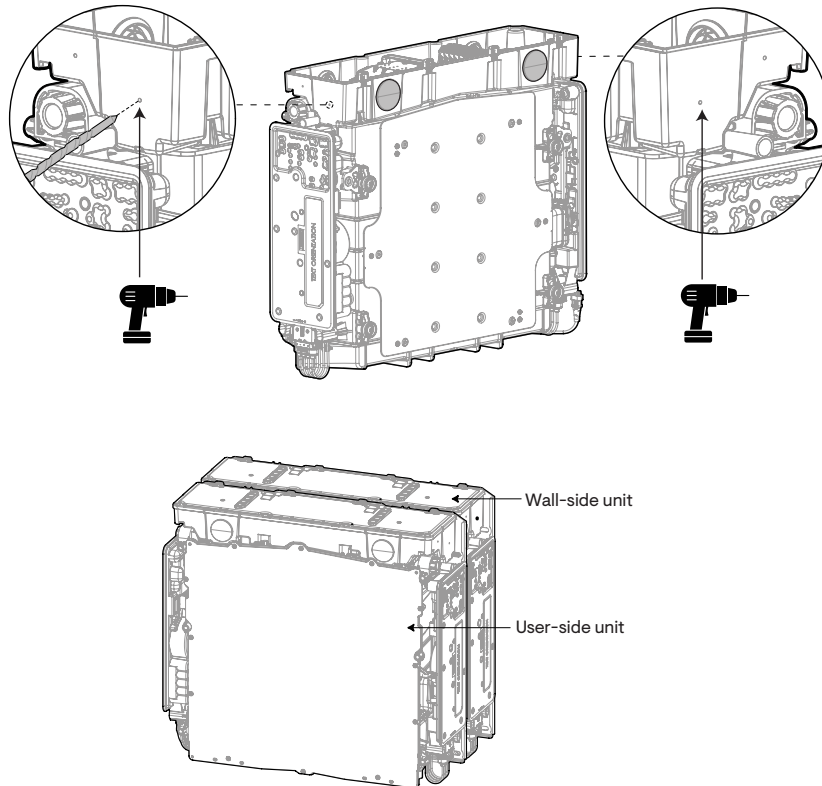
8.6 Selecting the conduit entry point and drilling



NOTE:

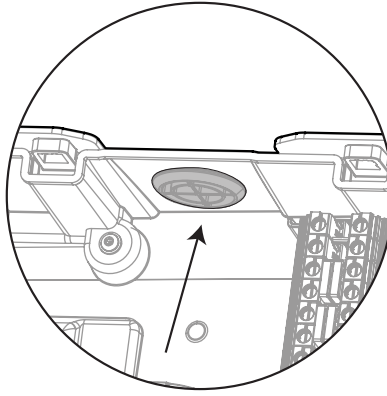
- All field wiring connections must be done on the wall-side unit only.
- Each battery unit has four conduit entry points in the wiring compartment – one on each side and two on the rear.
- Drilling is required if conduit entry is from the left and/or right sides. Conduit sizes up to 1.25" are supported.
- The rear side has predrilled 1.25" holes with conduit plugs inserted.
- The front side has predrilled 1" holes with conduit plugs inserted.
- Removal of wiring cover before drilling is essential to avoid damaging components.
- Clean any debris inside the wiring compartment after drilling.

1. For side entry, drill the wiring compartment at the marked indentation on wall-side unit only.



NOTE: The wall-side and user-side units are identical; it is the placement of the unit that determines whether it is a wall-side or user-side unit.

2. For rear entry, push the conduit plugs out from inside the wiring compartment.



3. Remove the front conduit plug of the wall-side unit and the rear conduit plugs from the user-side unit to install the raceway adapters.



NOTE: The front conduit plugs of the user-side units should not be removed.

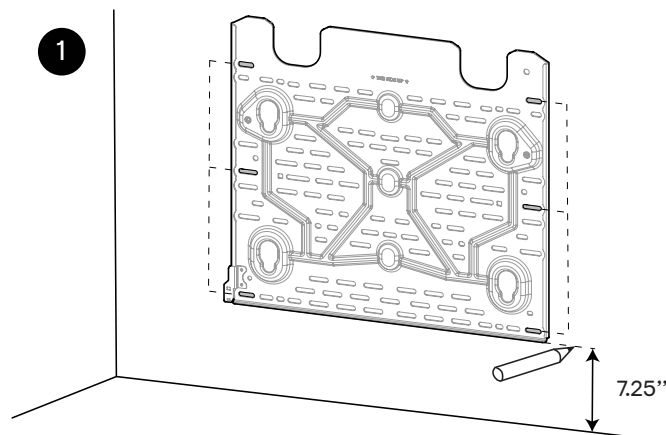
9. Mounting battery units on the wall

This section outlines the mounting requirements, positioning, and safety precautions to ensure proper setup and secure attachment of the IQ Battery 10C to the wall.



NOTE:

- Six uniformly distributed #20 (5/16") lag bolts or screws with washers are required to support the weight of IQ Battery 10C 317.5 lb (~144 Kgs).
 - If installed on wooden studs, each stud must have at least three bolts for uniform load distribution on the wall.
 - The mounting bracket supports 24" and 16" stud spacing.
 - Single-stud mounting is not supported.
1. Starting at the installation position closest to the power source, mark a level line on the mounting surface as a guide, at least 7.25" above the floor or ground.⁶

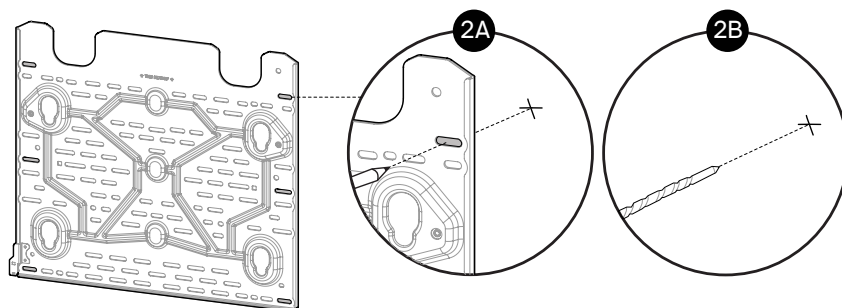


2. Align the bottom of the drill template with the mark made and use the drill template to mark the drilling points on the wall. Drill the holes on the mounting surface.

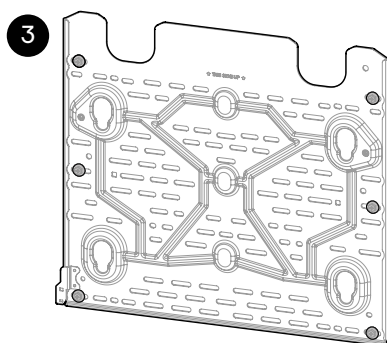


WARNING: Multiple risks. Make sure not to drill into electric wiring or pipes in the wall.

⁶ Positioning the mounting bracket 7.25 in from the ground ensures the battery unit is 6 in from the ground.

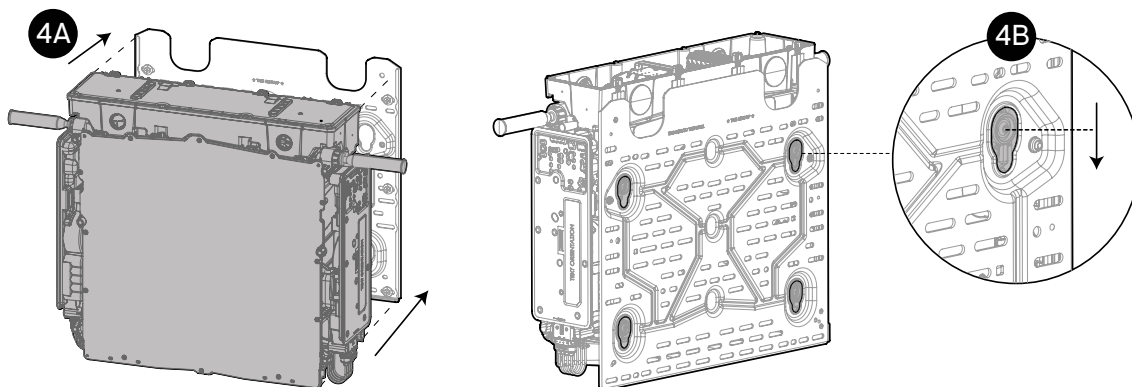


3. Fasten the mounting bracket to the wall with #20 (5/16") lag bolts or screws with washers.

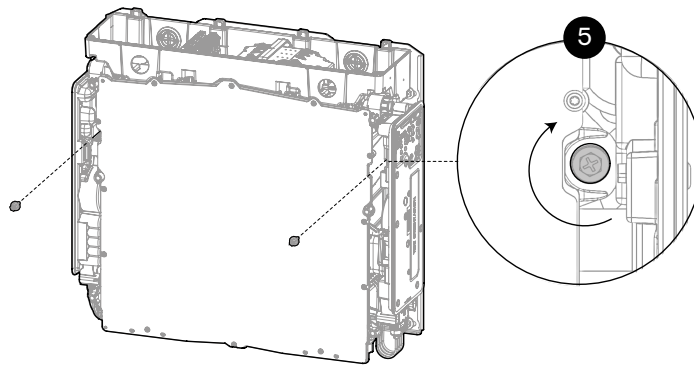


4. Lift the unit using the handles and bring it close to the already mounted mounting bracket. Hold the battery straight, align, and insert four mount bolts on the battery unit into the mounting bracket keyholes and slide it down. Unscrew the handles.

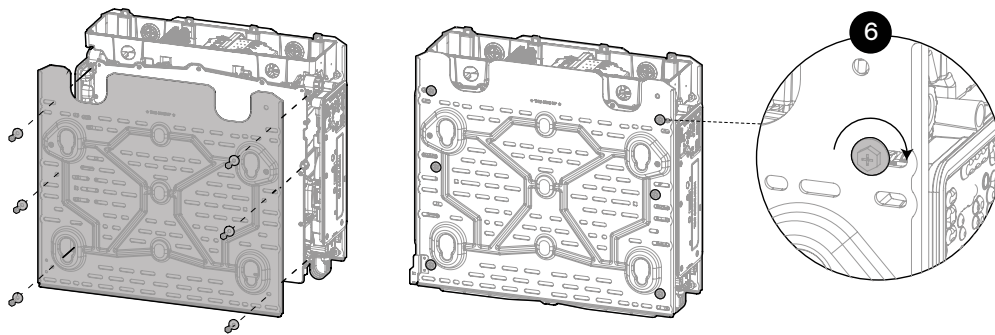
✓ **NOTE:** Use lift assist to avoid any mishap during lifting.



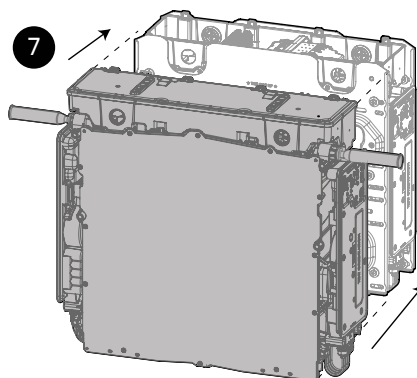
5. Fasten two seismic screws to the wall-side battery unit. Use a screwdriver or hex drive (size 0.5 in) extension if required (torque to 75.23 in-lb or 8.5 N m).



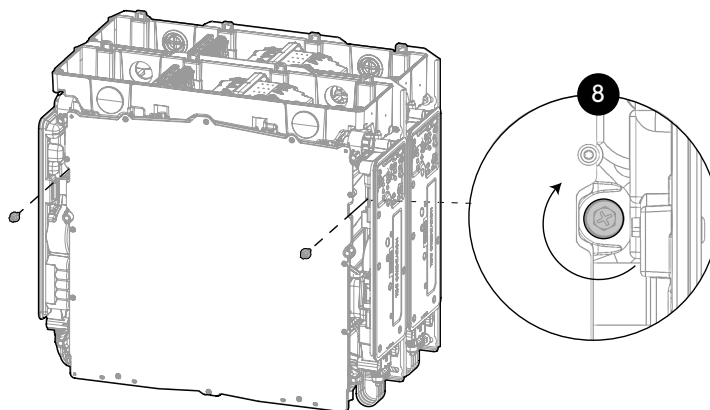
6. Use six M8 screws and washers (provided in the accessory kit) to fasten the second mounting bracket to the predefined points on the chassis of the already mounted battery unit (torque to 88.5 in-lb or 10 N m).



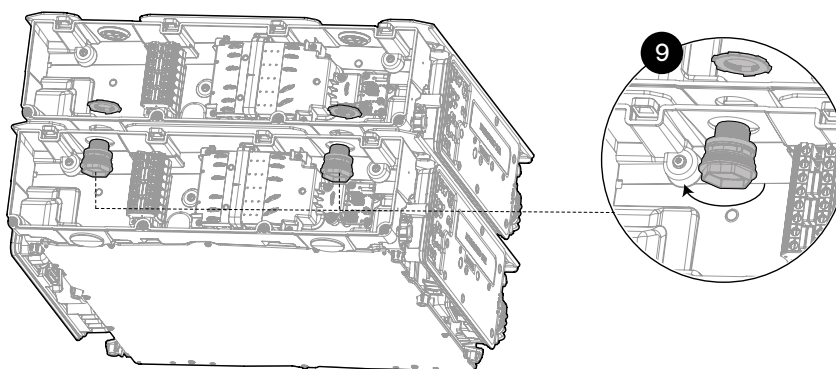
7. Lift the unit using the handles and install the user-side battery unit into the slots on the mounting bracket. Unscrew and remove the handles.



8. Fasten two seismic screws to the user-side battery unit. Use a screwdriver or hex drive (size 0.5 in) extension if required (torque to 75.23 in-lb or 8.5 N m).



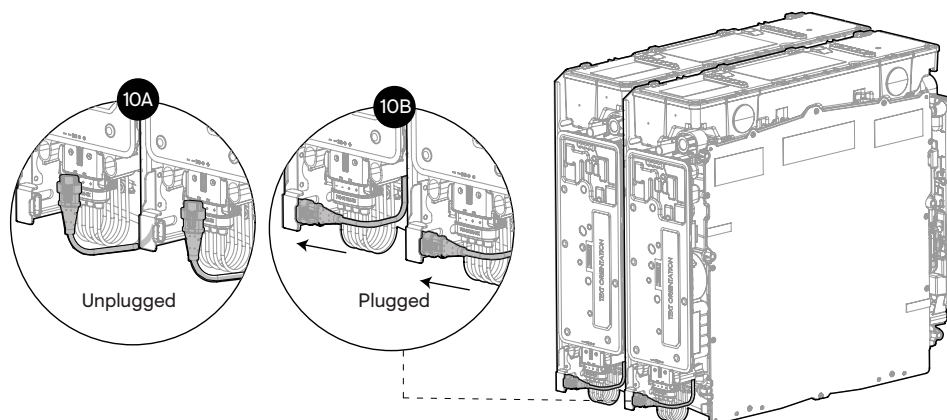
9. Install raceway adapters between the units by fastening locknuts as shown (torque to 53.1 in-lb or 6 N m).



✓ **NOTE:** It is essential to install both raceway adapters for proper cable management and ingress protection.

10. Plug two control switch connectors into the holders to protect it and the cable from pinching during cover installation.

✓ **NOTE:** Carefully cut the cable tie used for tying the control switch connector and the battery DC connector before plugging the control switch connector into the holders.



✓ **NOTE:**

- To prevent the control switch connectors from getting pinched and damaged during ID cover installation, it is essential to plug both connectors prior to installing the cover.
- Ensure that all the connectors are latched properly.

11. Follow the steps below when installing rigid conduits between two IQ Battery 10C units:
 - a. Mount only one IQ Battery 10C on the wall.
 - b. Add rigid conduit to it.
 - c. Adjust the rigid conduit in the first unit as needed, then mount the wall-side unit of the second IQ Battery 10C on the wall to complete the installation.
 - d. Install the user-side unit after adding the conduit between the wall-side units.

10. Wiring

This section provides detailed instructions for wiring and connecting components of the IQ Battery 10C system, including interconnect power cables, interconnect control cables, and field power cables. It outlines the required steps for proper cable routing, terminal connections, torque specifications, and system validation to ensure optimal performance and compliance with safety standards. Key considerations for cable management, resistor placement, and system configuration are also included, making this guide essential for a safe and efficient installation of the IQ Battery 10C and related components.

10.1 Connecting the interconnect power cables

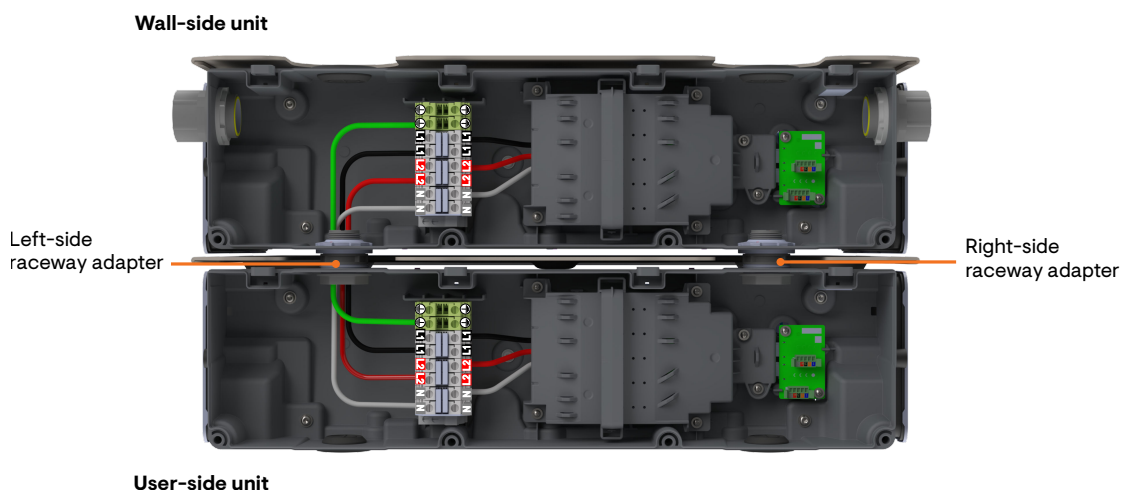


NOTE:

- The interconnect power cables are dual-colored, with L1 marked on the black part and L2 marked on the red part of the cable.
- For interconnect power cables the L1 terminal of the wall-side unit connects with the L2 terminal of the user-side unit and the L2 terminal of the wall-side unit connects with the L1 terminal of the user-side unit.
- Power and control interconnect cables will run through left and right side raceways respectively.

Assemble the cables in following sequence (torque to 22.1 in-lb or 2.5 N m):

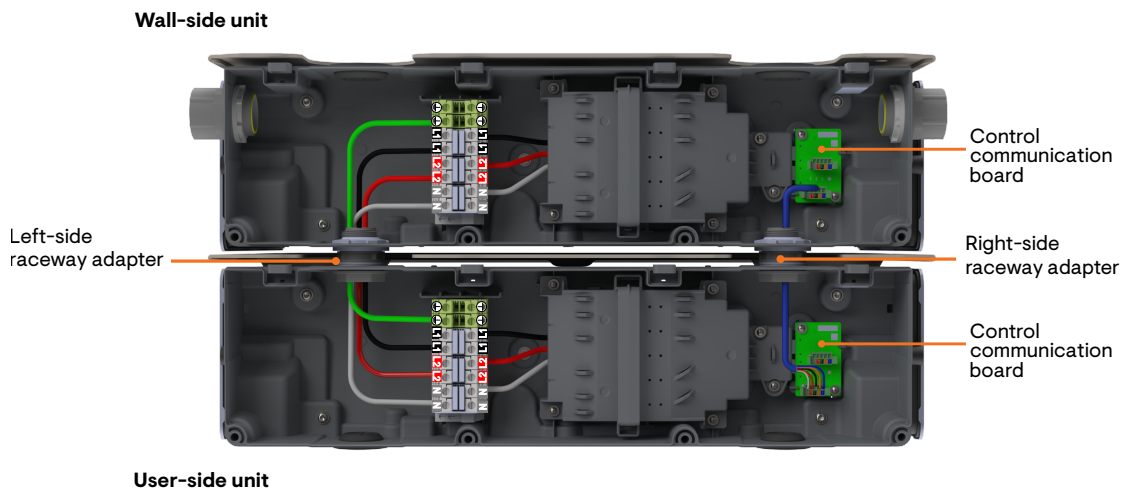
1. Route interconnect power cables (L1, L2, N, and GND) through the left raceway adapter.
2. Connecting the short L1-L2 cable:
 - Connect **red end** to the **L2 terminal** closer to the wall on the **wall-side unit**.
 - Connect **black end** to the **L1 terminal** closer to the user on the **user-side unit**.
3. Connecting the long L1-L2 cable:
 - Connect **black end** to the **L1 terminal** closer to the wall on the **wall-side unit**.
 - Connect **red end** to the **L2 terminal** closer to the user on the **user-side unit**.
4. Connecting the neutral cable:
 - Connect it to the **N terminal** closer to the wall on the **wall-side unit**.
 - Connect it to the **N terminal** closer to the user on the **user-side unit**.
5. Connecting the ground cable:
 - Connect it to the ground terminals on both units.



- ✓ **NOTE:** The ends of Interconnect power cables are labeled with the battery unit location (user-side/wall-side) and respective terminal (L1/L2). Insert the cables into their respective terminals (as per the label) for accurate and hassle-free installation.

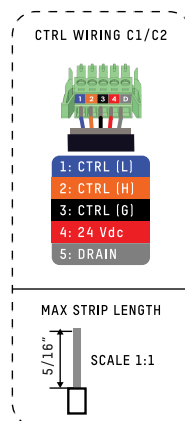
10.2 Connecting the interconnect control cable

- ✓ **NOTE:**
- The interconnect control cable comes with one preinstalled connector on one end, while the other end is left free for easy routing through the raceway adapter.
 - Power and control interconnect cables will run through left and right side raceways respectively.
- Route interconnect control cable through the right side raceway adapter.
 - The interconnect control cable comes stripped on one side and with a preinstalled connector on the other side. Connect the stripped end of the interconnect control cable to the control connector from the accessory kit (torque to 1.8 in-lb or 0.2 N m).
 - Connect the control connectors installed at the two ends of the interconnect cable on the control communication boards of the wall-side and user-side units.
 - For additional information on control wiring and to remove or add/keep a resistor on the control connector, refer to the section - [Wiring the Control \(CTRL\) cable between system components](#).



10.3 Wiring the Control (CTRL) cable between system components

- ✓ **NOTE:**
- The control cable must comply with UL 3003, UL 1277, and UL 83 standards. The Enphase control cable (SKU: CTRL-SC3-NA-01) has optimal impedance and has been validated for optimal system performance. Third-party cables may not have the correct characteristic impedance, and consequently, may not work reliably. Enphase cannot guarantee performance when a third-party control cable is used.
 - The same conduits can be used for power and control cable routing only when using an Enphase Control Cable.
 - Refer to the **CTRL wiring C1/C2** label available on the product for easy reference.



- Each component at the extreme end of the control network should have one header with a termination resistor installed.

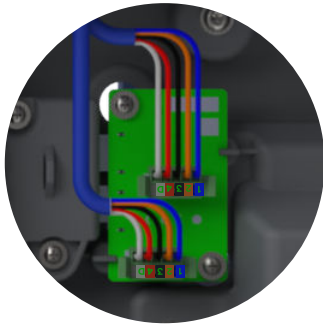


Figure 5: First and intermediate control communication boards

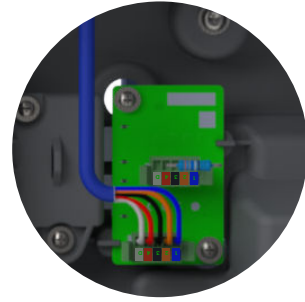
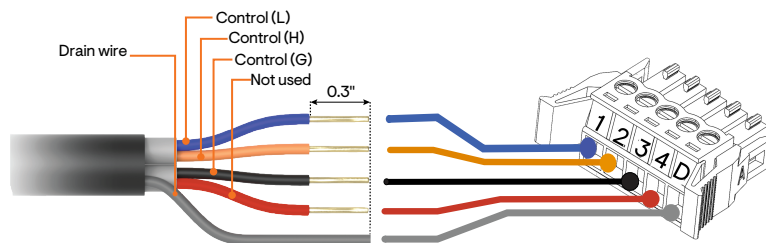
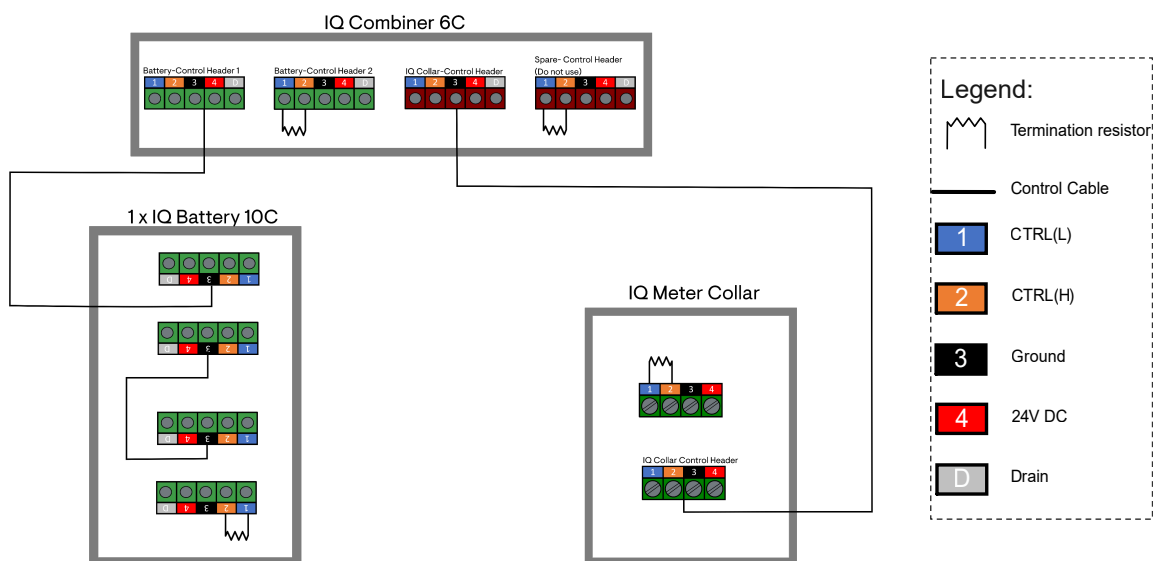


Figure 6: Last control communication board with resistor installed on one control connector

- Both control connectors (C1/C2) present on the control communication board are identical and can be used interchangeably.
 - The total length of control wiring across the system cannot exceed 250 feet to ensure the system operates as per specifications.
 - Make sure the drain wires do not come in contact with any live connection.
 - Ensure that all five wires (purple-L, orange-H, black-G, red-not used, gray-drain wire) are connected properly to the control connector.
 - For the control connector of the IQ Meter Collar, drain wire connection is not required.
1. After routing the control cable, connect it to the connectors (torque to 1.8 in-lb or 0.2 N m).

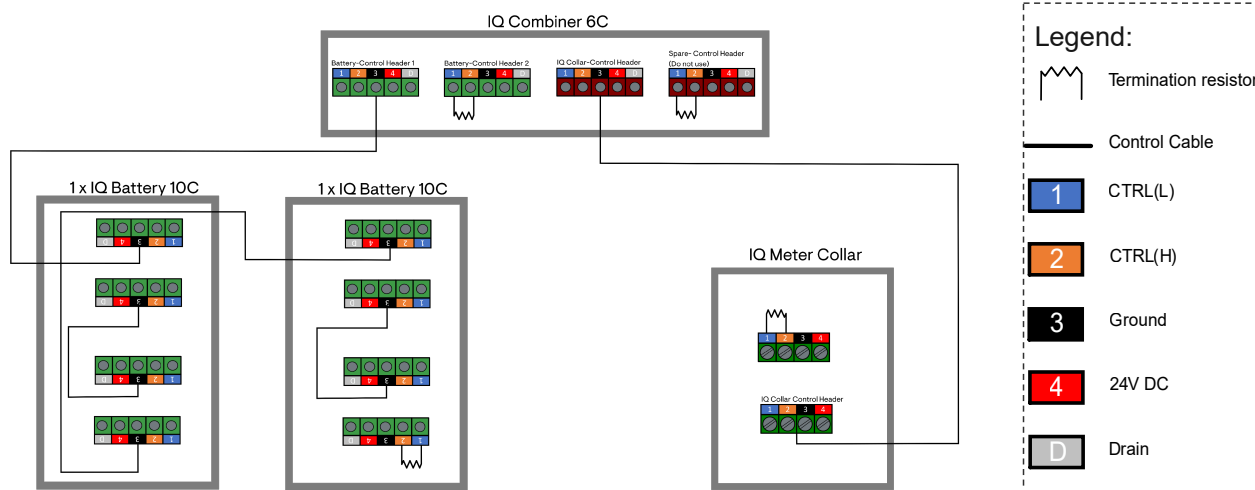


2. Plug in the connectors, and termination resistor and connect drain wires depending on the configuration.
 - a. One IQ Battery 10C with IQ Combiner 6C



NOTE: Use a termination resistor for all the unused control connection points.

- b. Two IQ Battery 10C units with IQ Combiner 6C



✓ **NOTE:** Use a termination resistor for all the unused control connection points.

10.4 Connecting the field power cables

✓ **NOTE:**

- The maximum conductor size for IQ Battery 10C is 3 AWG for L1/ L2/N terminals and 8 AWG for ground terminals.
- Interconnect power cable and control cable must be wired for all IQ Battery 10C units at the site before connecting the field power cables.
- Cable holders and anchor points are provided on each unit for wire managing the field cables.
- Cable ties are available in the accessory kit inside the battery unit packaging box. Anchor the cables as shown to ensure the proper cable routing, avoid wire separation from the terminals, and provide unrestricted access for the wiring cover assembly.
- Make sure no conductor is exposed once the wiring is complete.
- A maximum of two IQ Battery 10C can be daisy chained on a single branch circuit.
- In the case of only one IQ Battery 10C installation, the conduit entry is required only on one side.
- Do not disturb the factory connections on terminal blocks during field wiring.

1. Route field power cables as indicated between the wall-side of two IQ Battery 10C units or between IQ Combiner 6C and the wall-side of IQ Battery 10C unit.
2. Connect cables to respective terminal blocks (torque to 22.1 in-lb or 2.5 N m).
3. Repeat the above steps for all IQ Battery 10C units at the site and the IQ Combiner 6C.
4. Install cable holder for proper cable management. If required, secure the cables to the anchor points using cable ties.
5. Turn on the AC breaker to which the IQ Battery 10C units are connected. Using a voltmeter, check the voltage across L1–L2 (240 V), L1–N (120 V), and L2–N (120 V) terminal blocks to ensure that they are within the operating range mentioned in the data sheet.
6. If the AC voltage is within the normal range mentioned in the datasheet, turn off the power supply and proceed further. If the measured voltage is outside the normal range, check the supply from the mains or correct the field wiring.

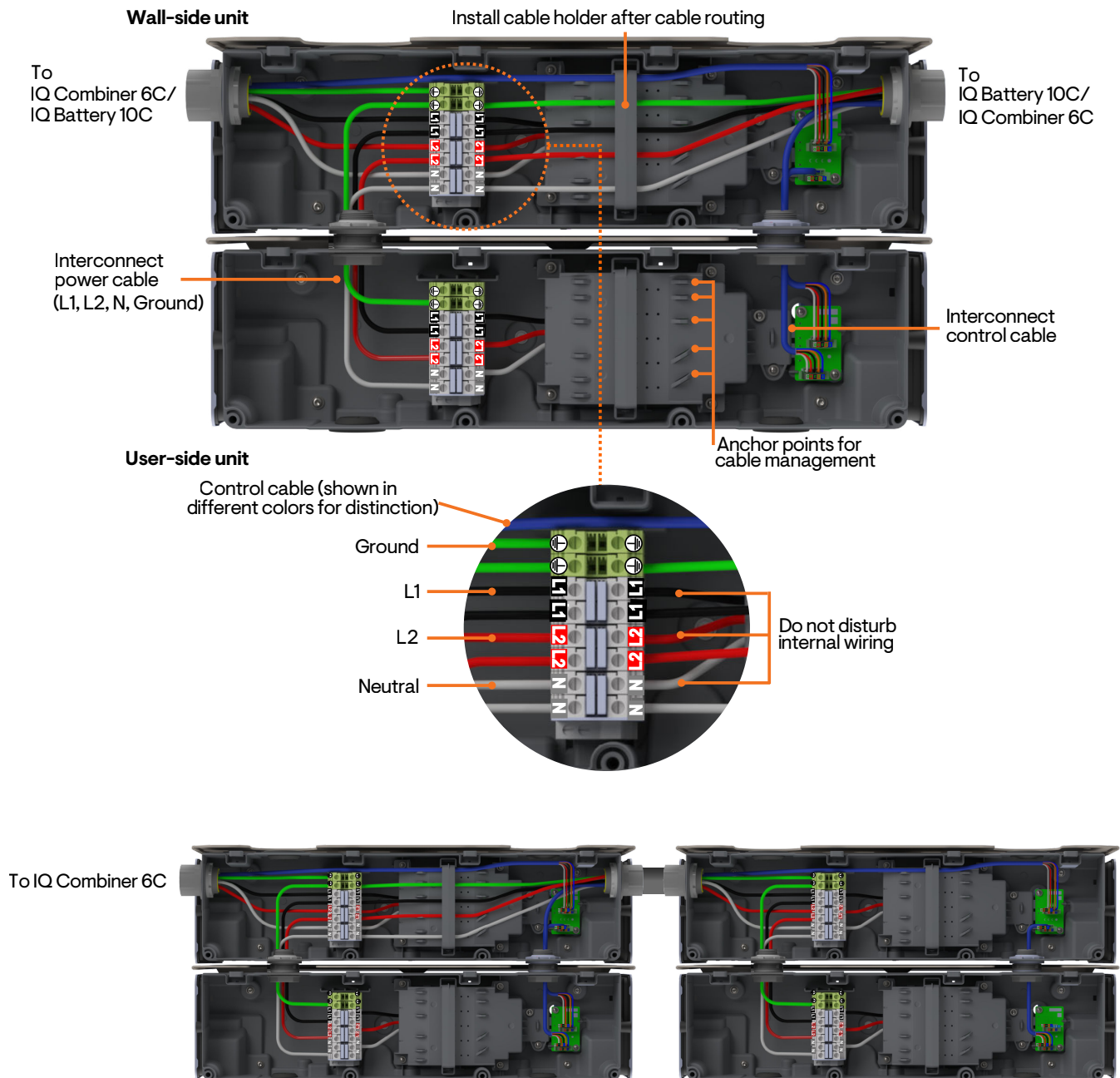


Figure 7: two IQ Battery 10C units daisy chained

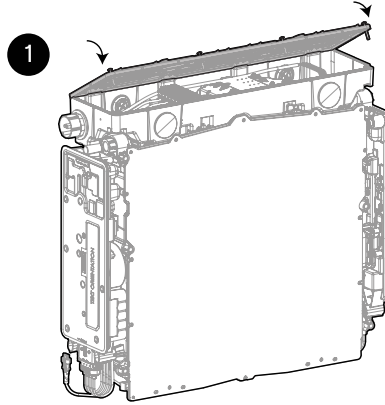
✓ **NOTE:** The above image shows field wiring entering through the left side of battery units. It can enter through the right side of battery units as well.

11. Closing and energizing the unit

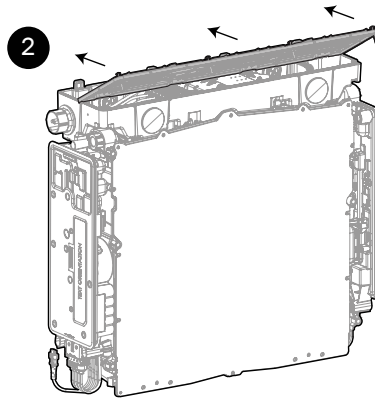
This section provides step-by-step instructions for closing and energizing the IQ Battery 10C unit. It covers the process of securing the wiring cover, connecting battery DC connectors, attaching the cover assembly, and connecting the control switches. Follow the outlined steps carefully to ensure proper installation and operation of the unit, while adhering to the specified torque requirements and safety precautions.

11.1 Closing the wiring cover

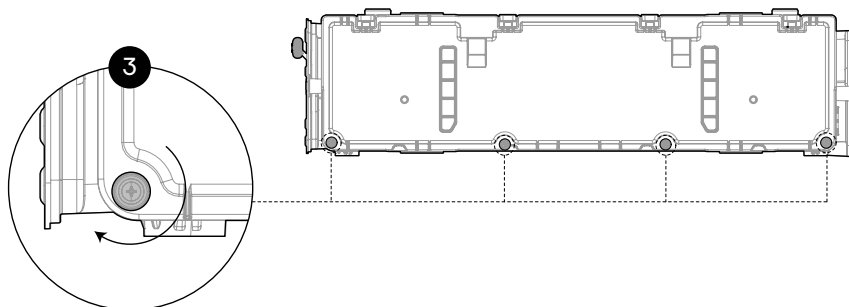
1. Tilt the wiring cover.



2. Slide the wiring cover under the latches.



3. Fasten the four encircled captive screws to close and secure the wiring cover (torque to 19.5 in-lb or 2.2 N m).

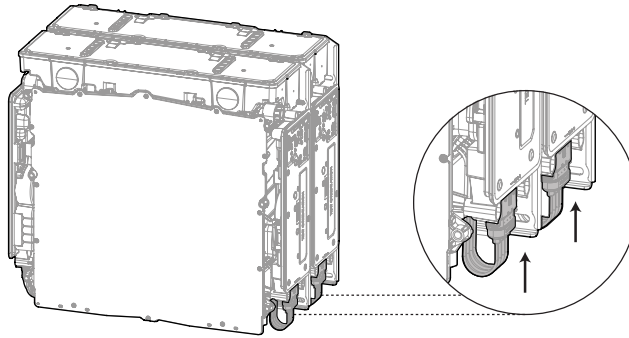


11.2 Connecting battery DC connectors

Connect all four DC connectors.



NOTE: Carefully cut the cable tie used for tying battery DC connector before connecting them.



NOTE: Each 5 kWh battery unit has one DC connector on each side. In total, four DC connectors are present in each IQ Battery 10C.

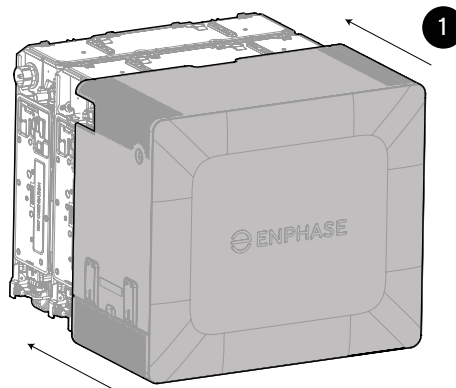
11.3 Attaching the cover assembly



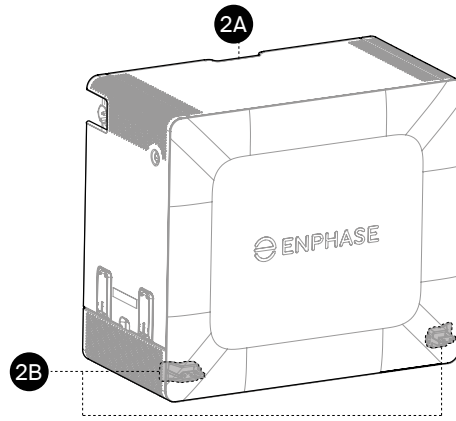
NOTE:

- Ensure that all four DC connectors are properly connected to the microinverters and that both control switch connectors are securely latched into the control switch connector holder on the two mounting brackets.
- Ensure that the DC and control switch cable harness are not in the way when sliding the cover over the units.

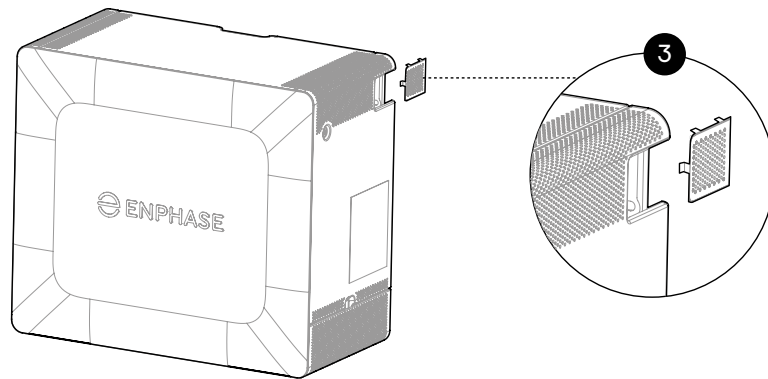
1. Slide the IQ Battery 10C cover over the battery units.



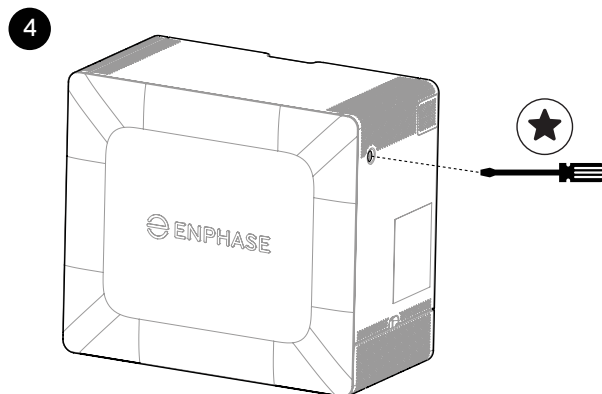
2. Move the cover over the latch at the top center and at the bottom on both sides.



3. Snap fit conduit plate on the unused opening of the IQ Battery 10C cover.



4. Fasten the cover locking screws using a torx screwdriver (torque to 53.1 in-lb or 6 N m) to lock the cover in place.

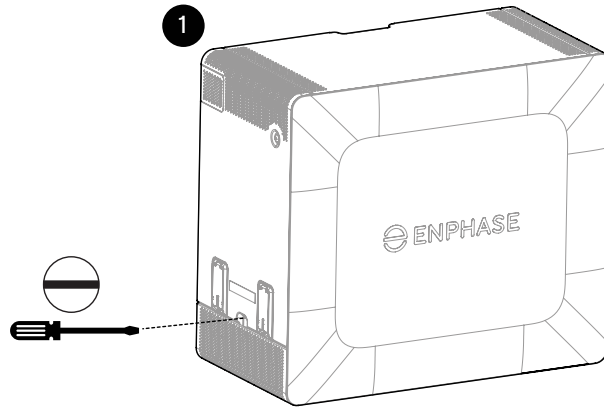


11.4 Connecting the control switch and energizing the unit

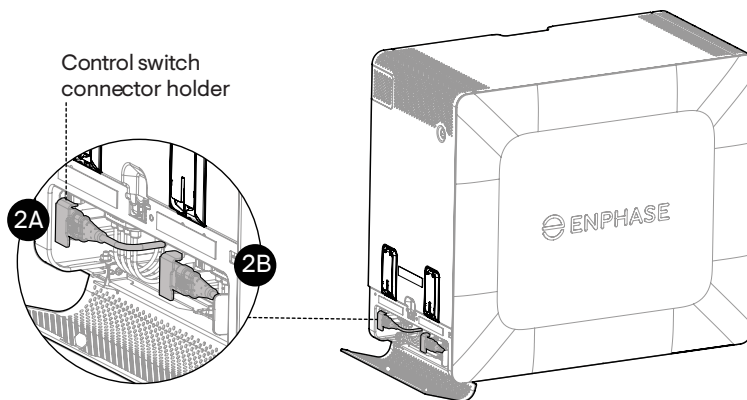


NOTE:

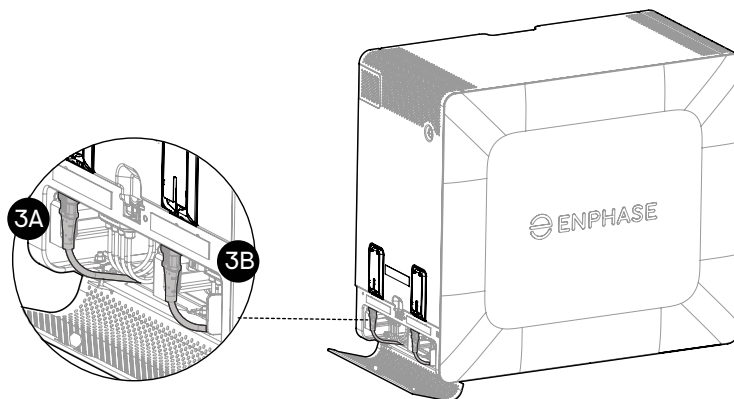
- Each IQ Battery 10C has two control switches. One each for the two 5 kWh battery units inside the IQ Battery 10C.
 - After connecting the control switch, do not leave the battery ON for long periods without AC power connected to avoid draining the battery and damaging it.
1. Open the bottom left side flap of the cover by pulling it with your finger/slot screwdriver using the access slot provided at the center.



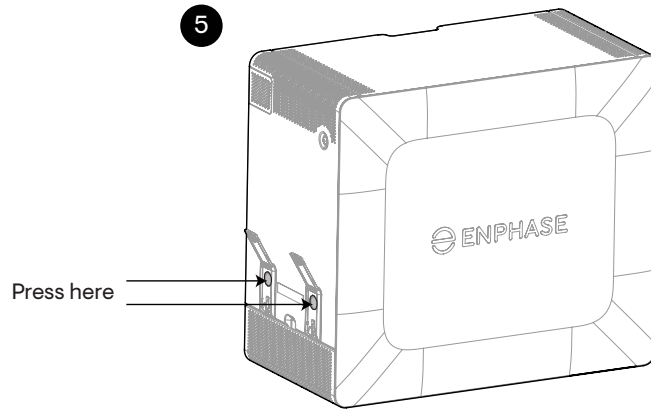
2. Disconnect the control switch connectors from the control switch connector holder on the mounting brackets.



3. Connect the two control switch connectors to the control switch slots located at the back of the wiring cover, as shown.



4. Close the flap and confirm that it is properly latched.
5. Press both control switches to turn on the IQ Battery 10C unit.



12. De-energizing the unit and removing the cover

This section provides step-by-step instructions for de-energizing the IQ Battery 10C unit and safely removing its cover. These procedures are intended for maintenance or troubleshooting purposes and are not part of the standard installation process. It is crucial to ensure the unit is completely de-energized, with all AC breakers and control switches turned off, before proceeding. Follow the instructions carefully to avoid damage to the unit and ensure safety during the process.

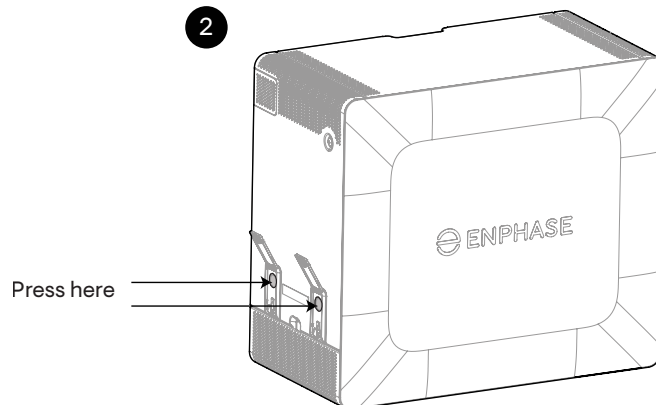
12.1 Disconnecting IQ Battery 10C control switch and de-energizing the unit



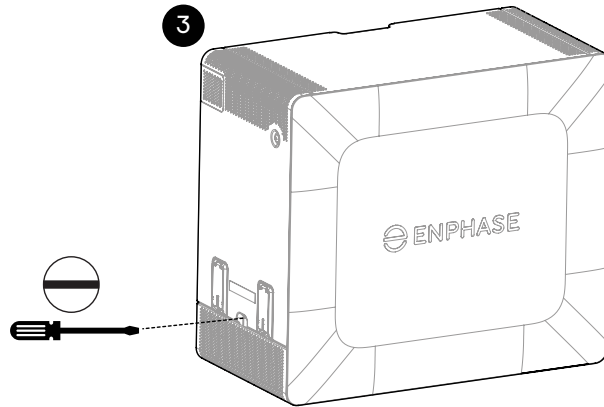
NOTE:

- These steps are not part of the installation. Refer to these instructions only when battery cover removal is required.
- The AC breaker to which IQ Battery 10C is connected must be OFF before disconnecting the control switch connector.
- When de-energized (AC breaker to which battery is connected and DC control switch are turned OFF), the LED of the IQ Battery 10C must be OFF.

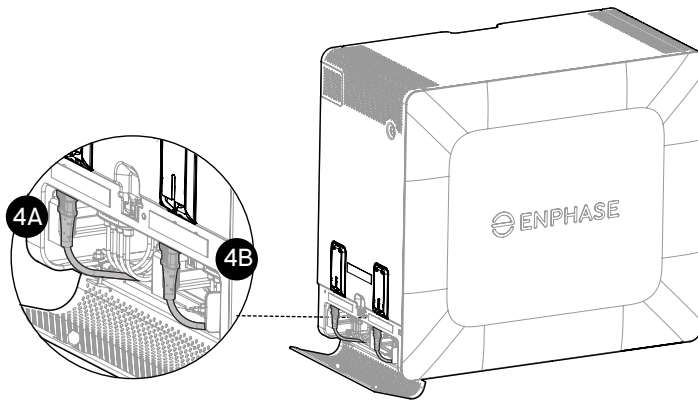
1. Turn OFF the AC breaker connected to IQ Battery(ies).
2. Turn OFF both the control switches on each unit to de-energize the IQ Battery(ies). Ensure that the LEDs on both units are OFF.



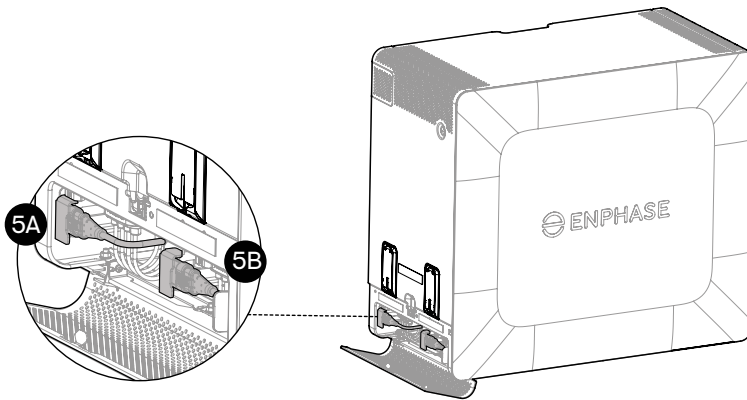
3. Pull out the left bottom flap on the cover with your finger/slot screwdriver by accessing the slot provided in between the control switches.



4. Disconnect the control switch connectors from both batteries.



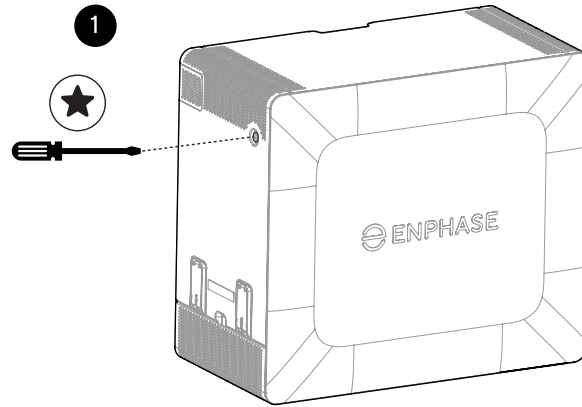
5. Connect the control switch connectors on the respective connector holders available on the mounting brackets.



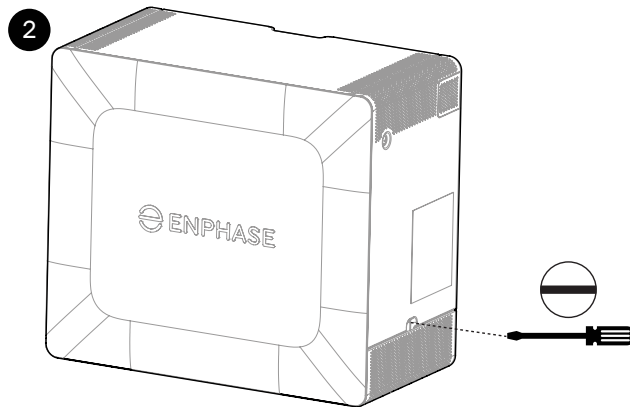
12.2 Removing the IQ Battery 10C cover

- ✓ **NOTE:**
- These steps are not part of the installation. Refer to these instructions only when battery cover removal is required.
 - IQ Battery 10C must be de-energized before removing the cover.
 - The control switch connector must be disconnected before removing the cover.
 - When de-energized (AC breaker to which battery is connected and DC control switch are turned OFF), the LED of the IQ Battery 10C will be OFF.

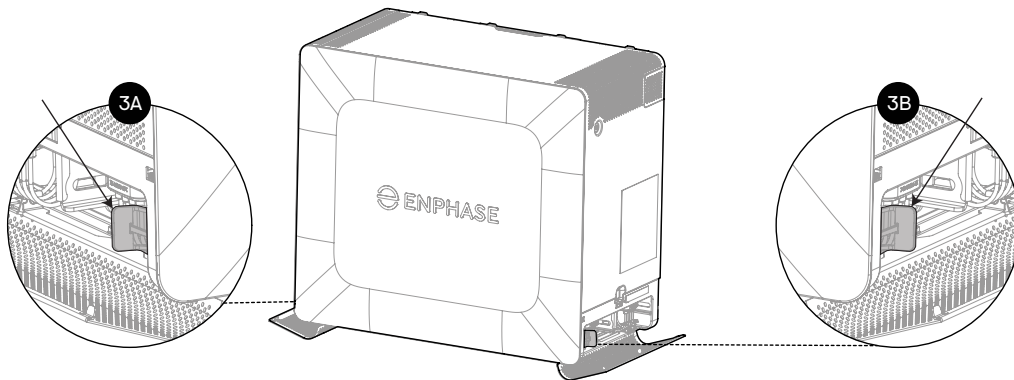
1. Unscrew the cover locking screws present on both sides. Stop unscrewing once the screw begins to rotate freely, carefully remove it and keep it aside.



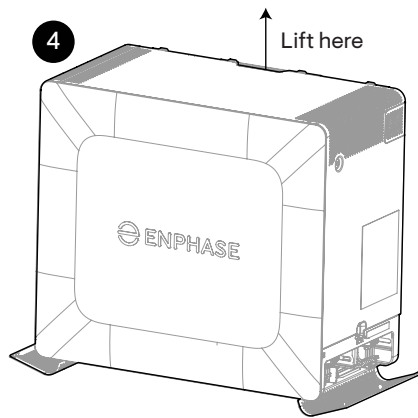
2. Pull out the bottom side flaps with your finger/slot screwdriver by accessing the slot provided above the flaps.



3. Pull the cover bottom snaps (towards the user) (highlighted) on both sides to release the cover.

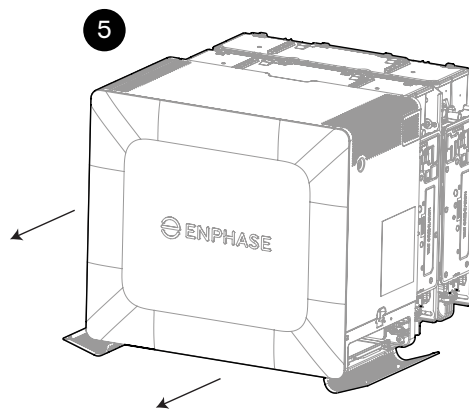


4. Using the hand access, lift and tilt the cover slightly as shown to release the lock.



✓ **NOTE:** Make sure the cover is slightly inclined from the top after step 4.

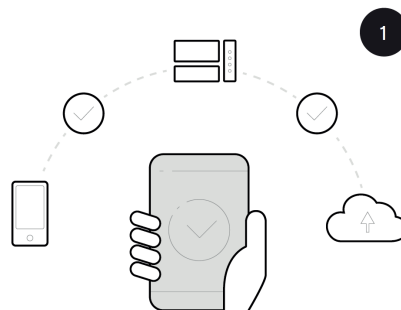
5. Pull the cover off in the indicated direction and carefully keep it aside without damaging the open flaps.



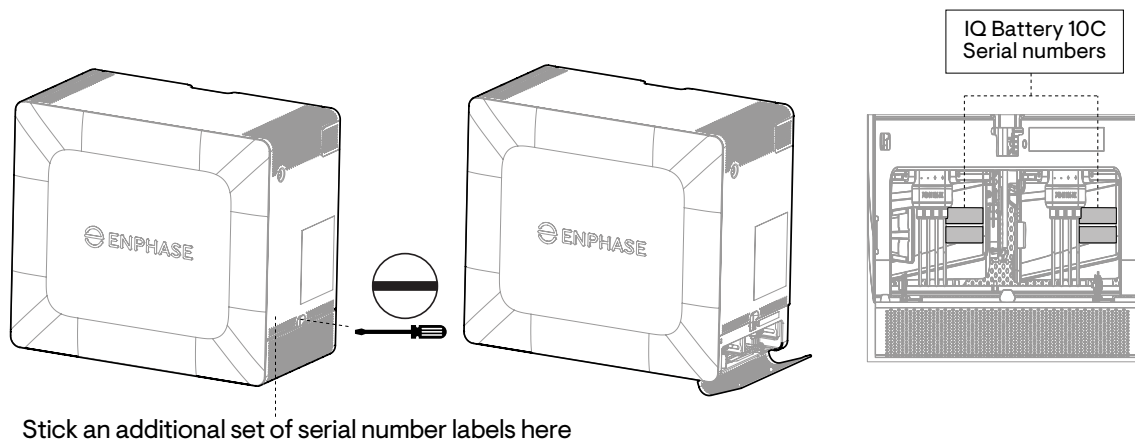
13. Operation

13.1 Configuring and activating the unit

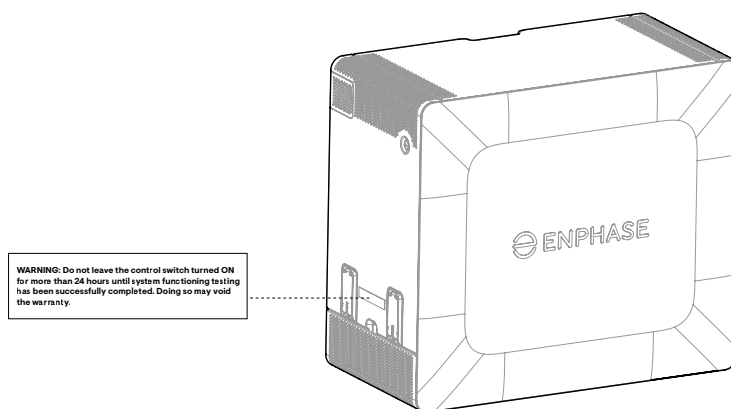
1. Use the Enphase Installer App to commission the IQ Battery(ies). Once connected to the IQ Gateway, refer to the Enphase Installer App help topics for more information.



Each 5 kWh unit of IQ Battery 10C is provided with two sets of serial number stickers. One set of serial number stickers will be pasted on the bottom right corner of the chassis and the other is provided in the accessory bag.



2. Peel off the warning sticker after the functional test is complete.



After the IQ Gateway has detected the IQ Battery(ies), the IQ Battery 10C LEDs operate as described in the following section.

13.2 LED overview

- After being commissioned, the LED flashes yellow while each 5 kWh unit of IQ Battery 10C boots up. If the LED rapidly flashes green for more than two minutes, the battery is in trickle charge mode and will remain so until it reaches a minimum state of charge (up to 30 minutes).
- After the 5 kWh unit is booted up, the LED becomes blue or green, depending on the charge level. If the LED flashes yellow after one hour or changes to a flashing red state, contact Enphase Support at enphase.com/contact/support.

State	Description
Uncommissioned	
Flashing blue	After booting up, the 5 kWh unit has paired with an IQ Gateway but has not passed the commissioning three-way handshake to confirm that it is an Enphase device
Flashing green	After passing the three-way handshake with the IQ Gateway
After commissioning (normal operation)	
Rapidly flashing yellow	Starting up/establishing communications
Red double flash	Error. See “ Troubleshooting ”
Solid yellow	Not operating due to high temperature. See “ Troubleshooting ”
Solid blue or green	Idle. Color transitions from blue to green as the state of charge increases. Check Enphase Installer Platform for charge status.

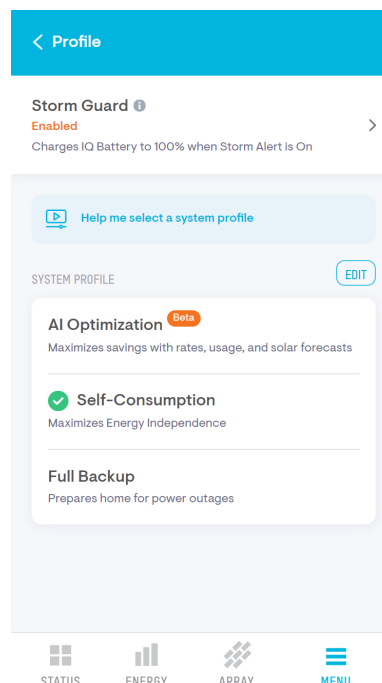
After commissioning (normal operation)

Soft pulse blue	Discharging
Soft pulse green	Charging
Soft pulse yellow	Sleep mode
Red triple flashes	DC switch OFF
Red one-second flash	Rapid shutdown mode
Off	Not operating. See “Troubleshooting”

13.3 Operating mode and set points

IQ Battery 10C supports multiple storage interactive system modes based on usage.

1. Using the Enphase App, select **Menu > Settings > Profile**
2. Select one of three three modes:
 - **Self-Consumption** mode (default, no setting change required)
 - **AI Optimization**
 - **Full Backup**



For more information on operation modes, refer to the storage system owner’s guide at <https://enphase.com/en-us>.

13.4 Troubleshooting

If the IQ Battery(ies) are not operating correctly, follow these troubleshooting steps. If the issue persists, contact Enphase at <https://enphase.com/contact/support>

1. If the IQ Battery(ies) does not operate, check the temperature in the room and increase cooling and/or ventilation as required. Check that the sides of IQ Battery 10C have at least 6" (15 cm) clearance from the wall, and the top and bottom have at least 8" (20 cm) clearance from the wall.
2. If the IQ Battery 10C LED is off, turn off the AC breaker to which IQ Battery 10C is connected on the branch circuit, wait for at least one minute, and turn it back on.
 - ✓ **NOTE:** IQ Battery 10C has multiple field-replaceable parts. These must be replaced by trained service personnel. Contact Enphase Support before replacing any part.
 - ✓ **NOTE:** For grid-tied batteries during a brownout or blackout, IQ Battery 10C powers down automatically. This is normal. When power is restored, it automatically starts up again.
3. If you do not see IQ Battery 10C information in the Enphase App, check that the IQ Gateway and the internet connection are working.
4. If the issue persists, contact Enphase Support at <https://enphase.com/contact/support>.

Revision history

Revision	Date	Description
140-00379-02	January 2025	Updated the "Wiring the Control (CTRL) cable between system components" section.
140-00379-01	November 2024	Initial release.

Enphase Support: <https://enphase.com/contact/support>.

140-00379-02-EN-2025-01-29
Applicable regions: North America

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