

IQ Battery 10CS

Quick install guide

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IQBATTERY-10CS-1P-NA

VERSION 4.0
MAY 2026



140-00448-04



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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 (<https://enphase.com/warranty>). Refer to the MSDS document and safety data sheet at <https://enphase.com/installers/resources/documentation/storage>. Read these instructions carefully and retain them for future use. If the ownership of IQ Battery 10CS 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 10CS circuit, and if a disconnect switch is present, switch off the AC disconnect for the IQ Battery 10CS 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:

- If water has contacted the battery or wiring,
 1. Stay out of the water
 2. Contact Enphase Support
 3. Contact your installer to arrange an inspection
- If water has not contacted the battery or wiring, protect the system by:
 1. Switching off the AC breaker for the IQ Battery 10CS system if it is safe to do so
 2. Locating and stopping the source of the water or pumping it away
 3. Allowing the affected area to dry completely before using the battery

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

(4) of IQ Battery 10CS 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 10CS battery units by holding onto the microinverters. This may damage the unit permanently.
- Do not lift the packaging containing the battery once the plastic straps have been removed.
- Do not mount an IQ Battery 10CS on a bracket that is not properly mounted.



WARNING: Multiple risks. While drilling, ensure 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 the installation and handling of IQ Battery.



WARNING: Limitation of use. Your IQ Battery 10CS 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 10CS 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 10CS 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) have already been installed, it must be discharged to 30% SoC and be switched OFF prior to uninstalling. A battery in an 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:** 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 10CS system requires an internet connection through the IQ Gateway Metered located inside the 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 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, and heat.
 - 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 10CS 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.
- ✓ **NOTE:** All Enphase IQ Batteries are constructed with sealed lithium-iron cells and utilize lithium-iron phosphate (LiFePO₄) chemistry. This chemistry does not produce flammable gases during normal charge and discharge operations. Therefore, no additional ventilation is required for indoor installations, in compliance with North American code requirements:

NFPA 70, NFPA 855, International Residential Code, and International Fire Code.



NOTE: The Enphase microinverter features field-adjustable voltage and frequency trip points that may need to be set according to local requirements. Only a competent authorized installer with permission and following the requirements of the regional electrical authorities should make some adjustments.



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 10CS, 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 10CS.

Each IQ Battery 10CS is a 10 kWh energy storage unit, composed of two 5 kWh units—designated as Part A and Part B. Each unit integrates a battery cell pack with IQ Microinverters (SKU: IQ8BL, IQ8BN) and a Battery Management System (BMS), enabling efficient energy conversion and intelligent control. The IQ Battery 10CS system is designed to support multiple Part A and Part B units, delivering balanced performance and scalable energy capacity to meet diverse application needs.

 **NOTE:** The 5 kWh unit, including its enclosure, is not available as a standalone SKU and can only be purchased as part of the complete IQ Battery 10CS system.

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 10CS 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 ¹
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
Dimensions (H × W × D)	Two units of 24.5 in × 28 in × 7.2 in (621 mm × 708 mm × 183 mm)
Maximum lifting weight	125 lb (57 kg)
Total installed weight	326 lb (148 kg): Two units of 163 lb (74 kg)

¹ 7.08 kVA, 29.5 A for the balanced 240 V_{L-L} loads.

² A maximum of 24 A, 120 V_{L-N} unbalanced loads can be supported along with 5.5 A, 240 V_{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 assets in case of a long-duration grid outage. An additional 3% capacity is maintained for powering battery electronics at night. Refer to <https://enphase.com/download/iq-battery-usable-capacity-tech-note> 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 0°C and above 50°C.

3. IQ Battery 10CS installation scenarios

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

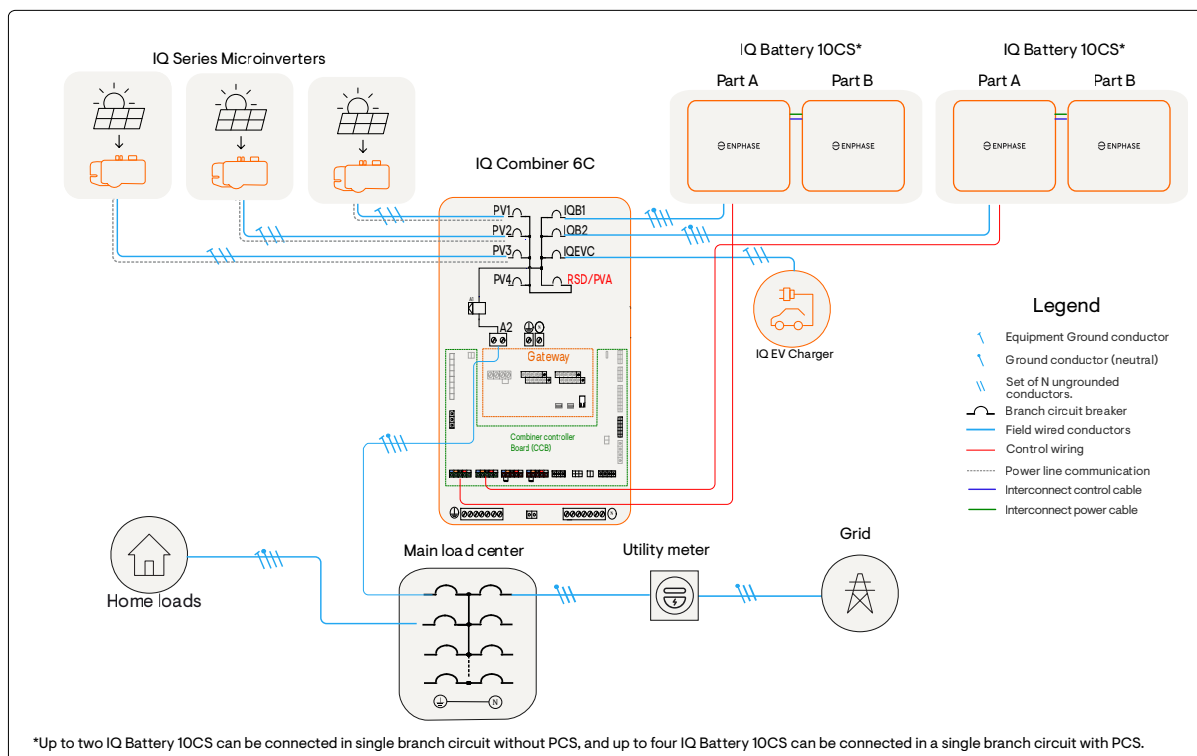


Figure 1: Grid-tied system - PV + battery only with main load center

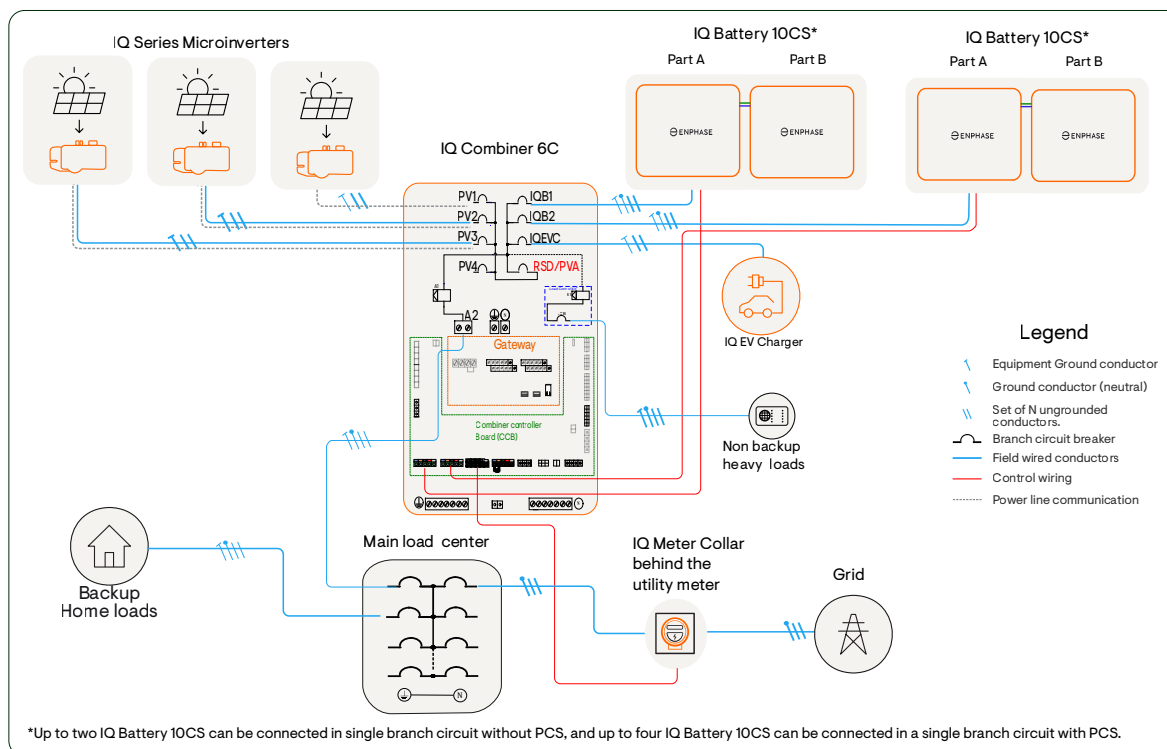


Figure 2: Grid-forming system - IQ Meter Collar behind utility meter in a meter socket



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

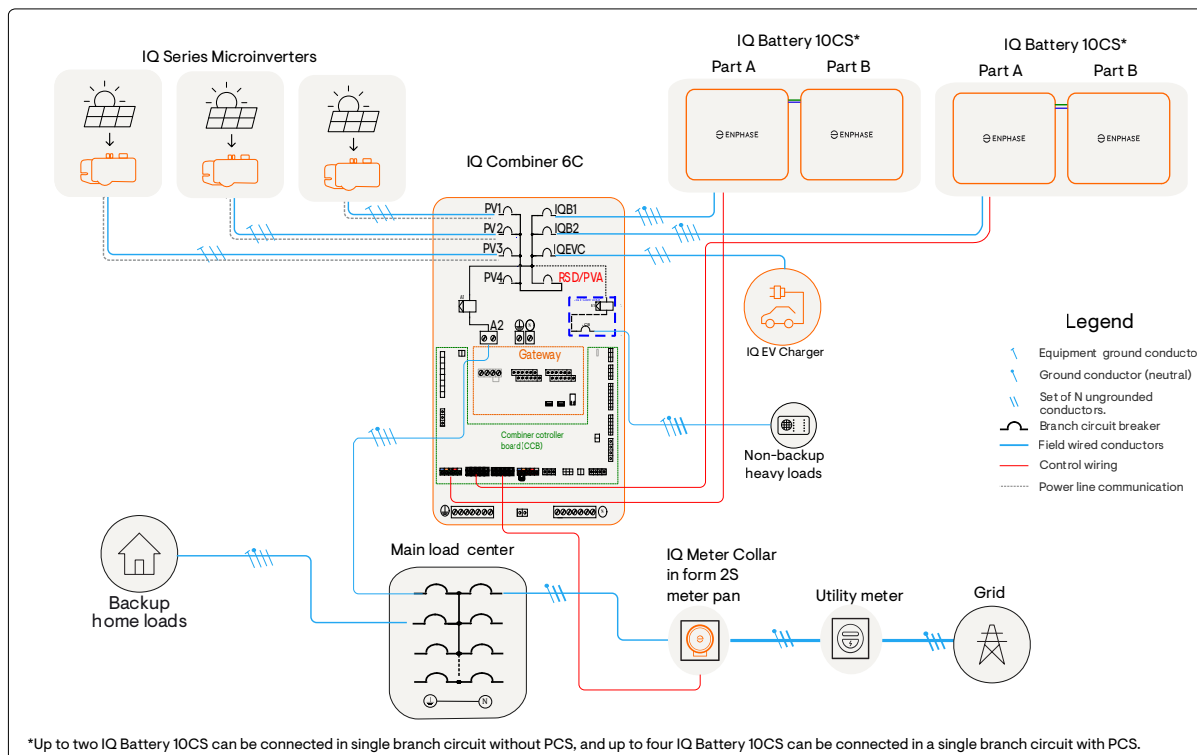


Figure 3: Grid-forming system - IQ Meter Collar in a separate meter pan

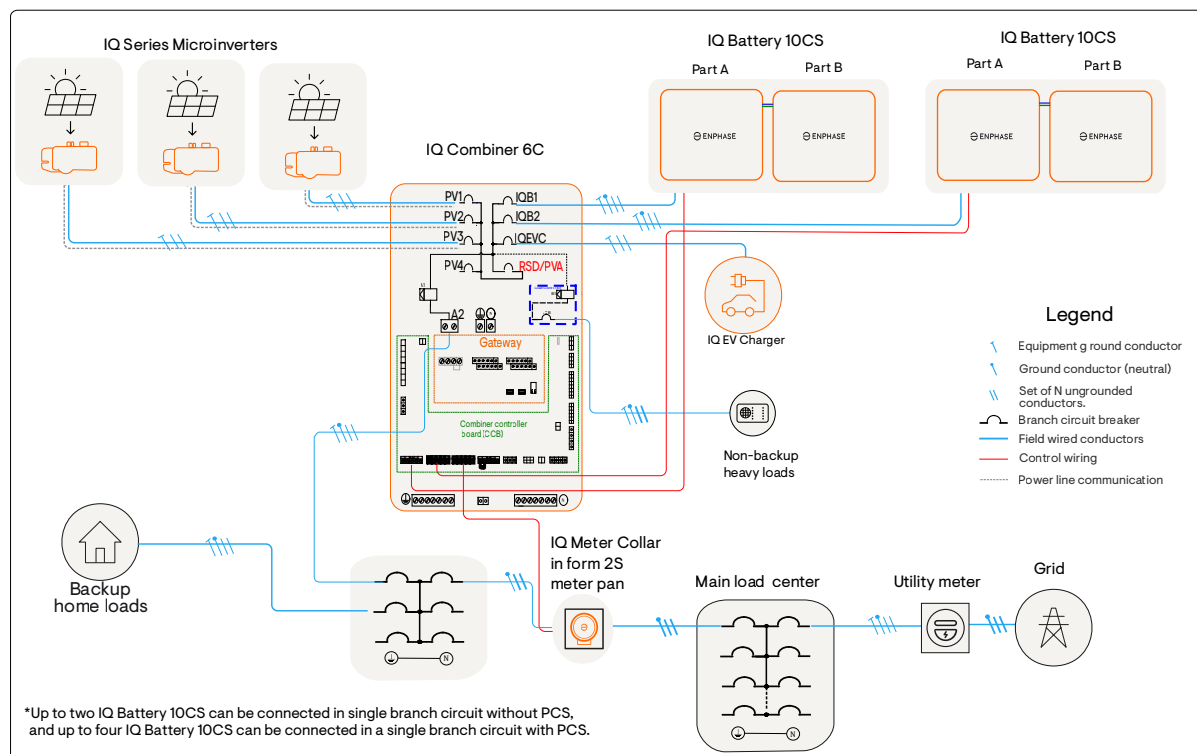


Figure 4: Grid-forming system - IQ Meter Collar in a separate meter pan, as the mains supply is more than 200 A



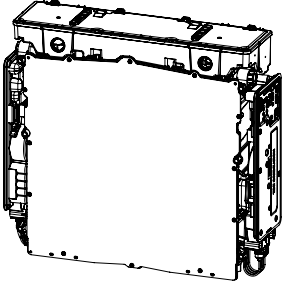
NOTE: Refer to the IQ Combiner 6C (SKU: X-IQ-AM1-240-6C) QIG for details on combiner connections.

4. What's in the box

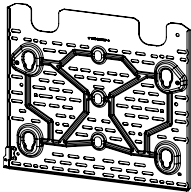
Each IQ Battery 10CS (IQBATTERY-10CS-1P-NA) ships in three separate boxes.

- Two boxes—each containing a 5 kWh battery unit (B05-C01-US00-1-3)
- One box—containing the IQ Battery 10CS cover kit (B10CS-NC-0708-O)

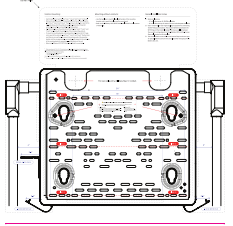
4.1 What's in each 5 kWh battery unit box (B05-C01-US00-1-3)



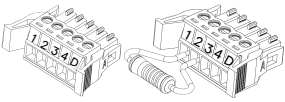
1 × 5 kWh battery unit



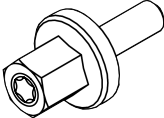
1 × mounting bracket



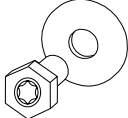
1 × drill template



Pre-installed control connectors and one spare connector are provided in the accessory bag

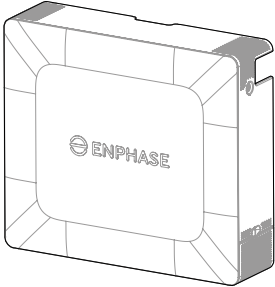


2 × seismic screws (Torx T25 or 1/2" hex drive)

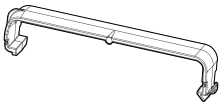


6 × M8 hex screws (Torx T25 or 1/2" hex drive) with washers for second mounting bracket installation (not required for IQ Battery 10CS installation)

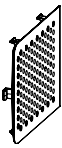
4.2 What's in the cover kit box (B10CS-NC-0708-O)



2 × 5 kWh battery unit covers of IQ Battery 10CS



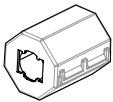
2 × Cable holder



4 × Conduit cover



4 × Cover locking screws



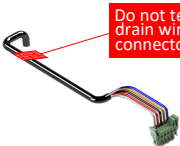
2 × Ferrite core



1 × Quick install guide



1 × Spare control connector with resistor



One 8.2 ft (2.5 m) long interconnect control cable assembly for connecting two battery units of IQ Battery 10CS, having a pre-installed control connector (without a resistor) at one end

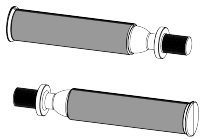


One 8.2 ft (2.5 m) long interconnect power cable assembly for connecting two battery units of IQ Battery 10CS (L1, L2, N-4 AWG, GND-8 AWG) and one 3.3 ft (1 m) long interconnect ground cable of 8 AWG⁶

⁶ For each IQ Battery 10CS installation, only one of the two supplied grounding conductors is required. Select the appropriate length based on site-specific installation requirements.

5. Tools required

Enphase accessories:



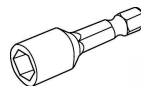
Lifting handles: B05C-LH-0180-O



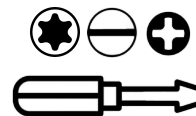
Measuring tape



Pencil and level



Hex drives⁷ (1/2", 7/16" for wooden wall, 3/8" for concrete wall, or 9/16" for CMU wall)



Screwdriver: At least 8" long



Drill with drill bit: 5/32" pilot hole (for medium wood), 3/8" for concrete, or 1/2" for CMU block wall



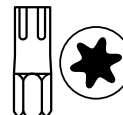
Protective gloves



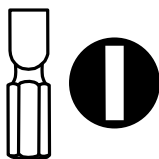
Torque wrench (1.8–88.5 in-lb or 0.2–10 N m)



Cable stripping tool



T25 Torx bit

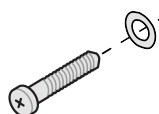


3/32" flat head bit



Milwaukee type ECX 1 or similar, or 7/32" flat head, or #2 square drive

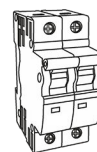
6. Additional items required



6 × 1/4" lag screws with a washer to install the mounting bracket on the wooden wall, or 6 × 1/4" anchor bolt for concrete wall, or 6 × 1/4" anchor bolt for CMU block wall



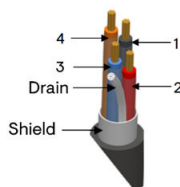
Conduits and fittings Up to 1.25 in (32 mm)



AC breaker: 40 A for one IQ Battery 10CS or 80 A for two IQ Battery 10CS (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:** See [Mounting battery units on the wall](#) on page 19 to check the embedded depth of mounting screws.

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

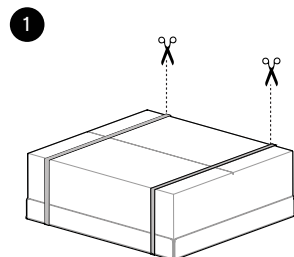
⁷ An 8" extension bar or drive is required for use with a 1/2" socket during seismic screw installation.

7. Unboxing the IQ Battery 10CS

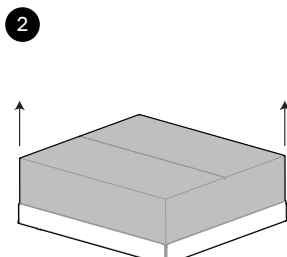
Each IQ Battery 10CS comes with two 5 kWh battery unit boxes and one IQ Battery 10CS cover kit box.

Before unboxing the 5 kWh battery unit boxes of the IQ Battery 10CS, 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.

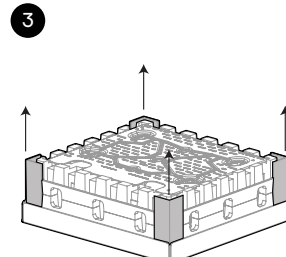
Follow the steps, as shown in the following image:



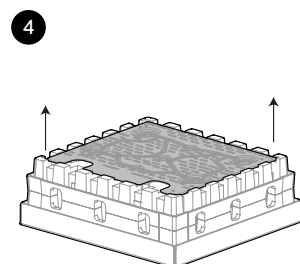
Cut open the straps



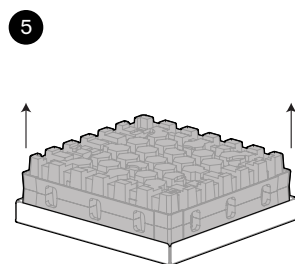
Remove the top box cover



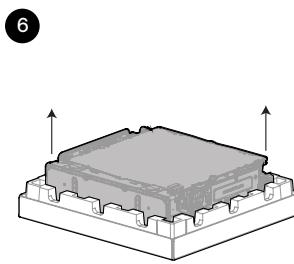
Remove the four corner guards



Carefully take out the mounting bracket and keep it aside



Remove the top paper tray



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

 **NOTE:** Follow the steps mentioned in [Installing the handles and lifting the 5 kWh unit](#) on page 16 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 10CS 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 10CS.

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

8. Planning the installation layout

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

8.1 Choosing a location for the IQ Battery array

- IQ Battery 10CS is NEMA Type 3R rated and can be installed indoors or outdoors. The terminal blocks on the IQ Battery 10CS accept a maximum conductor size of 3 AWG for L1/L2/N and Ground terminals.

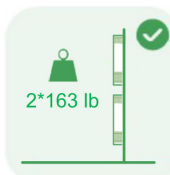
 **NOTE:** The Enphase IQ Batteries have been evaluated and listed to UL 9540 and tested in accordance with UL 9540A (BV report LIT21250840, issue date: 02/21/2025) for outdoor and non-habitable indoor residential installations.



Units are intended to be installed only in:

- Detached garages and accessory structures.
- Attached garages.
- Outdoors on the exterior side of exterior walls or ground-mounted.
- Indoor wall or floor mounted in non-habitable spaces such as enclosed utility closets, basements, storage, or utility spaces within the dwelling units.

Refer to local code requirements for these locations. Units should not be installed in sleeping rooms or indoor locations that open directly into sleeping rooms.



- Ensure the installed location can sustain the total weight of 326 lb (148 kg) per IQ Battery 10CS. The wall must contain blocked studs that can bear the battery weight or be made of masonry or concrete walls with a minimum of 4.5" thickness or other suitable structures.
- When installing on a wooden wall, it is suggested to use a flame-inhibition plate between the wooden wall and the IQ Battery 10CS. Consult the regional building regulations for any additional requirements.
- Ensure there are no pipes or electrical wires where you plan to drill.



- Provide heat or smoke alarms in the residence in accordance with building, fire, and installation codes.
- Follow local standards, choose a non-habitable indoor location 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. Performance when installed in direct sunlight may not be optimal; however, batteries can be safely mounted in direct sunlight. Batteries are equipped with a safety feature that limits the power level while charging and discharging automatically to maintain safe operating temperature. The full performance will occur within 59°F to 113°F (15°C to 45°C) while charging and within 32°F to 122°F (0°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 10CS to the IQ Combiner 6C.



WARNING: Risk of injury. When the Battery is installed at a height that requires a ladder to access, two people must be present to safely remove the cover. Each person should use a stable ladder, maintain three points of contact, and coordinate movements to avoid injury. Never attempt removal alone or without proper ladder support.

- This product must not be installed at altitudes above 9,842 ft (3,000 m).



NOTE: Refer to the data sheet for all components used with IQ Battery 10CS to define the maximum altitude. For example, IQ Battery 10CS has a maximum altitude limit of 9,842 ft (3000 m) while IQ Meter Collar has the limit of 8,202 ft (2500 m). When used together, the maximum altitude shall be 8,202 ft (2500 m).

- Follow all local standards and regulations set forth by the Authority Having Jurisdiction (AHJ).





- Up to two IQ Battery 10CS 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 10CS connection circuit.



NOTE: Up to four IQ Battery 10CS units can be daisy-chained on a single branch circuit using battery oversubscription PCS. Ensure to add a PCS disclaimer label to all PCS-enabled IQ Battery 10CS units.

- The maximum conductor size for IQ Battery 10CS 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. This product must be installed with clearance at the left, right, top, bottom, and front of the product, as shown in the figure.

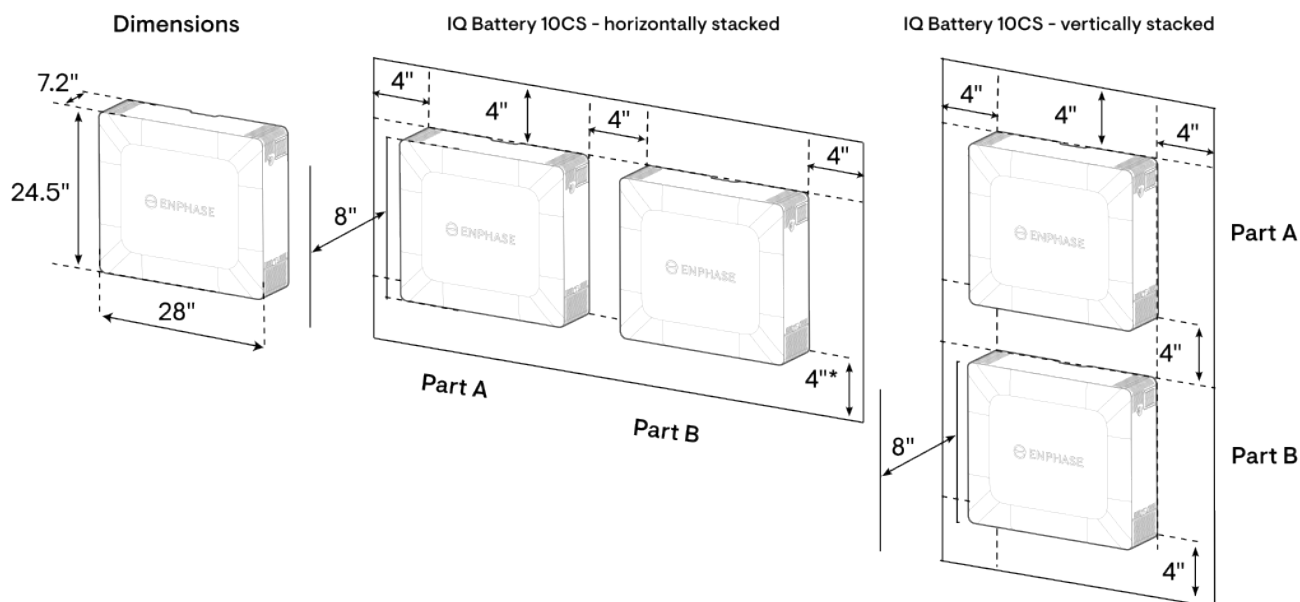


WARNING: If mounted in the path of a motor vehicle, Enphase recommends a minimum mounting height of 36 in (914 mm) above the floor.



NOTE:

- The 4" 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 natural air circulation. Ensure compliance with all local compliance and regulatory standards.
- The indicated clearances should be measured with respect to the external covers of the units.
- An 8" clearance in the front is recommended for ease of service. Follow the local and national regulations while planning.
- Keep the IQ Battery 10CS away from falling or moving objects, including motor vehicles.
- When two battery units are installed with only 4" of spacing between them, conduit should not be routed from the bottom. Instead, the batteries must be daisy-chained using side entry, which is the only supported method in this configuration. Please refer to the drill template for detailed spacing requirements necessary for side conduit routing.

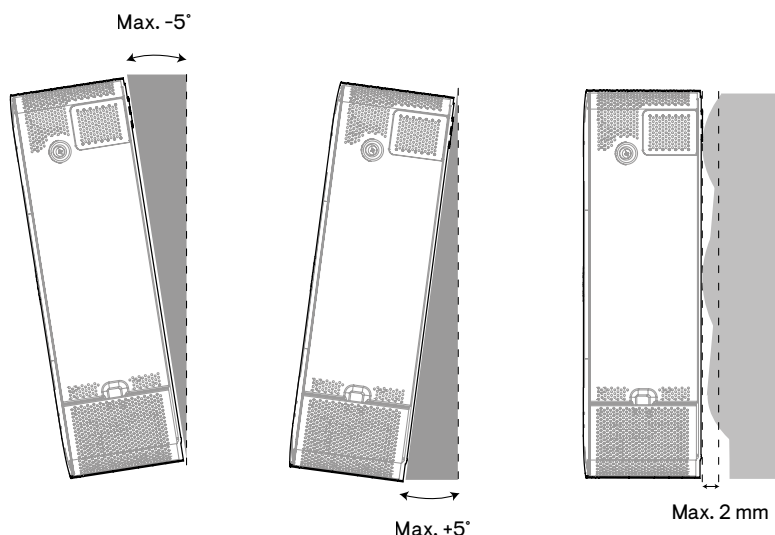


8.3 Mounting surface



NOTE:

- Select a location where the tilt from vertical is less than 5°.
- Ensure 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.

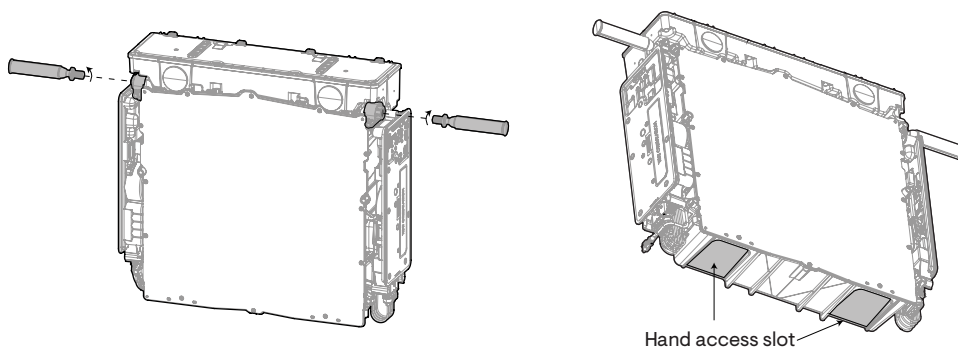


8.4 Installing the handles and lifting the 5 kWh unit

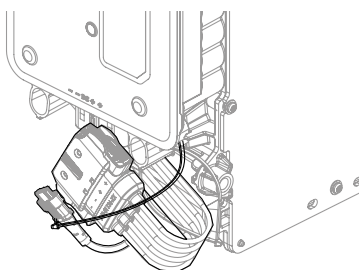
- ✓ **NOTE:**
- A minimum of two people is required to lift the battery unit.
 - Use lift assist if manual lifting is not permitted per local or national regulations, lifting weight: 125.6 lb (57 kg).

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

- ✓ **NOTE:** If the handle is stuck, then use a 15/16" spanner on the provided slot to remove it.

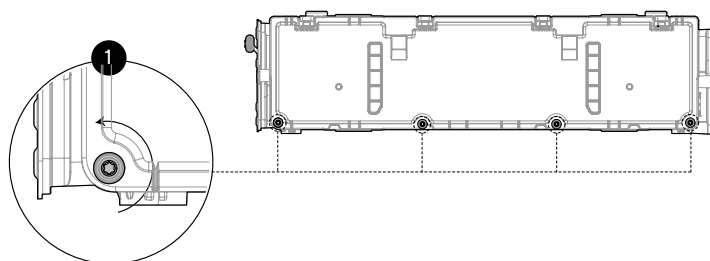


- ✓ **NOTE:** To prevent damage during on-site handling, the male DC input connectors on both sides and the associated control switch circuit wiring only on the left side of the unit are secured to their respective microinverter chassis using cable ties. Installers must sever these ties after installing the unit on the mounting bracket to facilitate the proper interconnection of the DC leads to the microinverter, thereby enabling the unit to be energized.

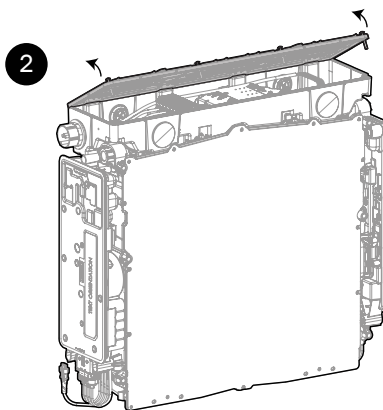


8.5 Removing the wiring cover

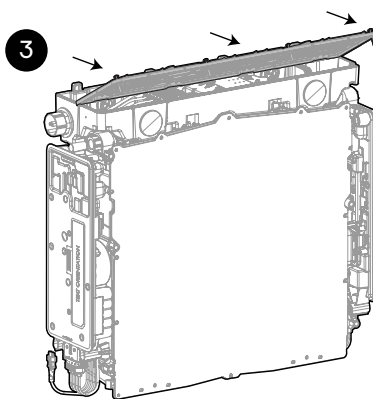
1. Loosen the four captive screws (torque to 19.5 in-lb or 2.2 N m).



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



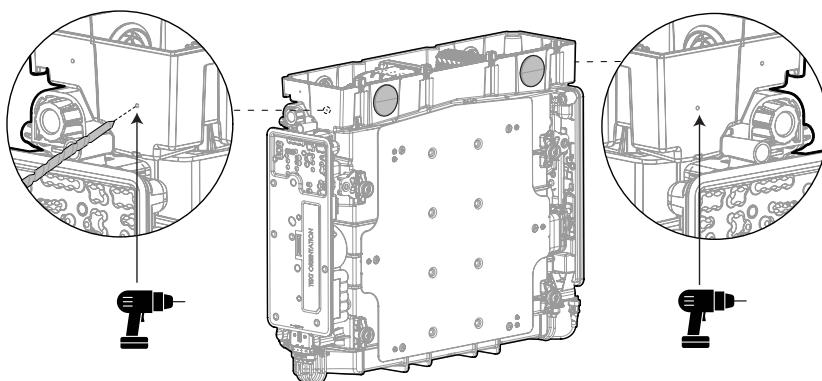
3. Gently slide it forward to disengage it from the latches. Remove the wiring cover and keep it aside.



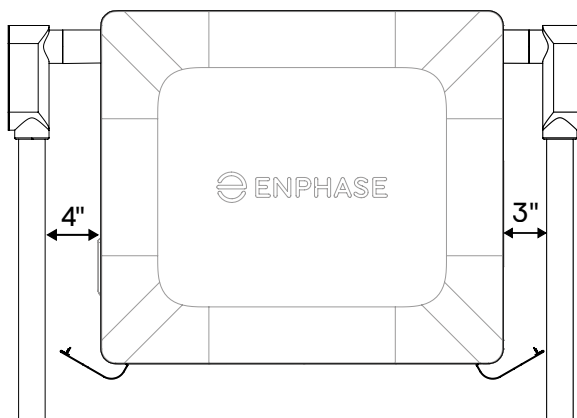
8.6 Selecting the conduit entry point and drilling

- ✓ **NOTE:**
- 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. These holes are not required for IQ Battery 10CS installation.
 - Removal of the 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 the 5 kWh battery unit.

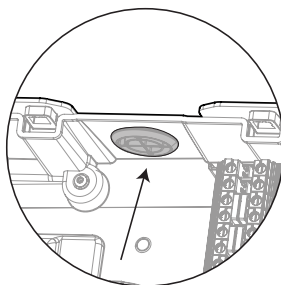


- ✓ **NOTE:** Ensure the conduit is appropriately sized to accommodate all four power conductors (L1, L2, N, and GND) as well as the control (CTRL) cable during the drilling process. Consider the fill factor for conduit (if required for the region).
- ✓ **NOTE:** Use a chase nipple and rigid coupling as spacers for connecting a 90° fitting to the battery. This avoids interference between the 90° fitting and the battery ID cover. This is also needed to avoid interference between the conduit running adjacent to IQ Battery 10CS and the cover flaps. Ensure the joints are properly fastened and are watertight.



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

- ✓ **NOTE:** When using 1" conduits, a standard off-the-shelf reducing washer (sized 1 1/4" to 1") will be required to ensure proper fitment.



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 10CS to the wall.



NOTE:

- The IQ Battery 10CS can be mounted on masonry or concrete walls with a minimum 4.5" thickness, or wall studs spaced at 24" or 16".
- Six uniformly distributed lag bolts or screws with washers are required to support the weight of each 5 kWh battery unit (163 lb or 74 kg) of IQ Battery 10CS.
- If installed on wooden studs, each stud must have at least three bolts for uniform load distribution on the wall.
- Single-stud mounting is not supported.

The following table highlights the fastener required for mounting the IQ Battery 10CS on various wall types.



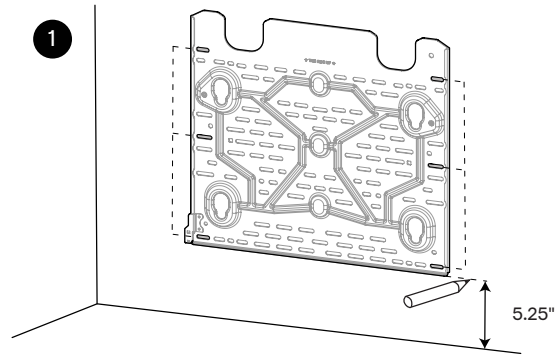
NOTE: These are recommendations, and installers have the flexibility to use equivalent ones and follow the recommendations as per the selected bolts manufacturer's data sheet. Follow the manufacturer's torque recommendation while fastening the anchor bolt/screws or lag screws. For additional information, refer to <https://enphase.com/installers/resources/documentation/storage>.

Serial no.	Wall type	Type of screw	Screw diameter	Drive size	Drill bit size	Min. thread embedment depth	Remark
1	Wooden wall with wood studs + sheetrock/gypsum board	Lag screw	1/4"	7/16" Socket drive	5/32" pilot hole ⁸	2.25" into the stud (2" x 4" or 2" x 6" stud)	Drill bit size will change based on the type of wood (soft, medium, hard)
2	Wooden wall with wood studs + horizontal wood blocks	Lag screw	1/4"	7/16" Socket drive	5/32" pilot hole ⁸	2.25" into the stud (2" x 4" or 2" x 6" stud)	Drill bit size will change based on the type of wood (soft, medium, hard)
3	Wooden wall with wood studs + sheetrock/gypsum board + unistruts	Lag screw	1/4"	7/16" Socket drive	5/32" pilot hole ⁸	2.25" into the stud (2" x 4" or 2" x 6" stud)	Drill bit size will change based on the type of wood (soft, medium, hard)
4	Wooden wall with wood studs + stone/brick veneer	Lag screw	1/4"	7/16" Socket drive	5/32" pilot hole ⁸	2.25" into the stud (2" x 4" or 2" x 6" stud)	Drill bit size will change based on the type of wood (soft, medium, hard)
5	Concrete or CMU blocks	Anchor bolt/ Screw anchor	1/4"	7/16" Wrench (Hilti, KH-EZ), 3/8" Wrench (Titen HD)	1/4"	2.5" into the concrete (Simpson, Titen HD) or 2.5" into the concrete or CMU blocks (Hilti, KH-EZ) (Min 4.5" concrete thk)	Determine the minimum embedded depth if any other anchor bolt is used. Refer to the manufacturer's data sheet for drill bit and wrench size.

1. Starting at the installation position closest to the power source, mark a level line on the mounting surface as a guide, at least 5.25" above the floor or ground.⁹

⁸ The pilot hole size is for medium wood. Follow the general guidelines for softwood and hardwood.

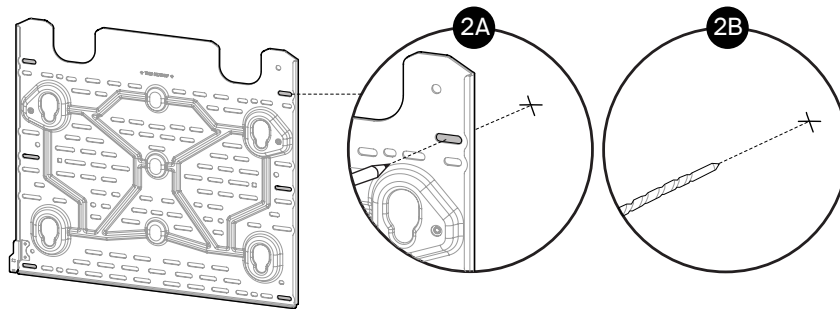
⁹ Positioning the mounting bracket 5.25" from the ground ensures the battery unit is 4" from the ground.



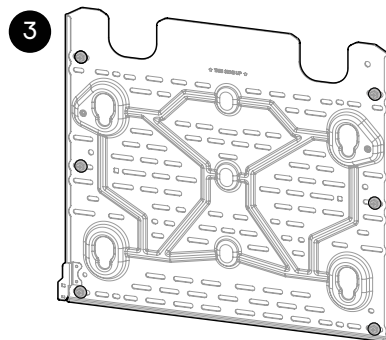
2. Align the bottom of the drill template with the mark made, and use the drill template to mark the drilling points in the wall. Drill the holes on the mounting surface.



WARNING: Multiple risks. Ensure not to drill into the electrical wiring or pipes in the wall.



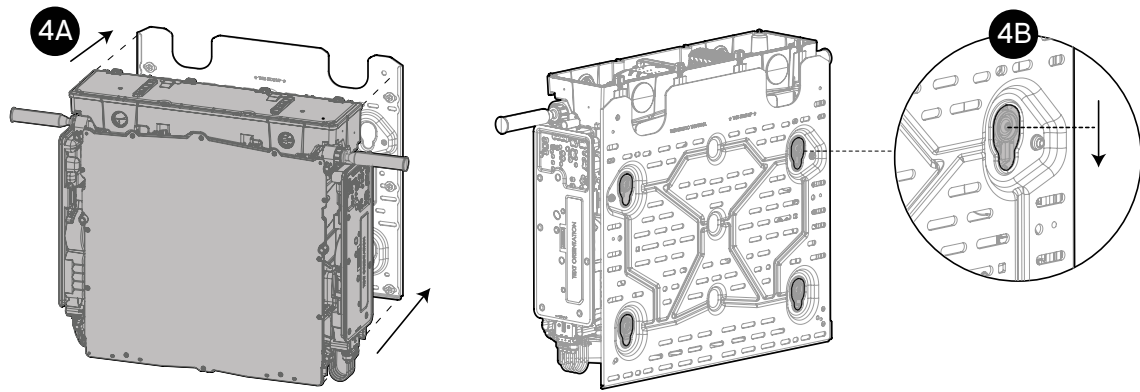
3. Fasten the mounting bracket to the wall with lag bolts or screws with washers.



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.

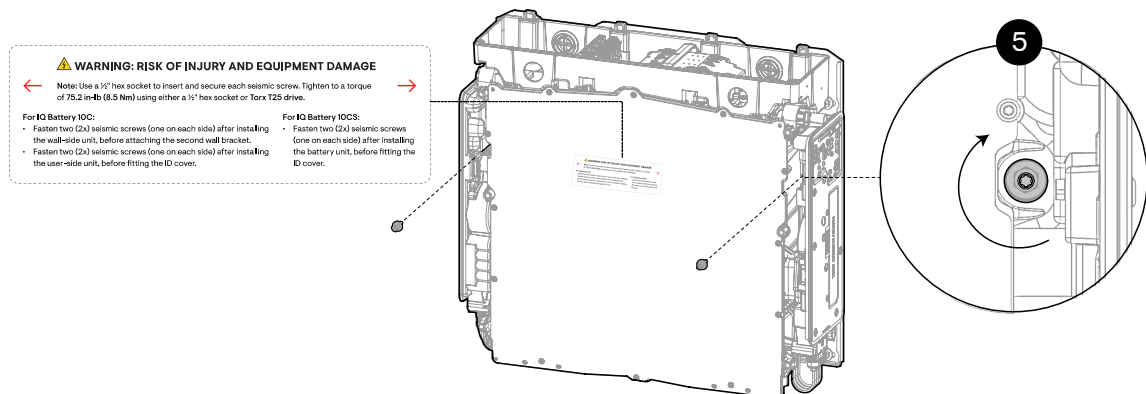


5. Repeat steps 1 to 4 to install the second 5 kWh battery unit of IQ Battery 10CS, and refer to step 9 in this section to install rigid conduits between the units.

6. Fasten two seismic screws on each 5 kWh battery unit. Use a screwdriver with a Torx T25 bit or hex drive (size 0.5 in) with an extension if required (torque to 75.23 in-lb or 8.5 N m).

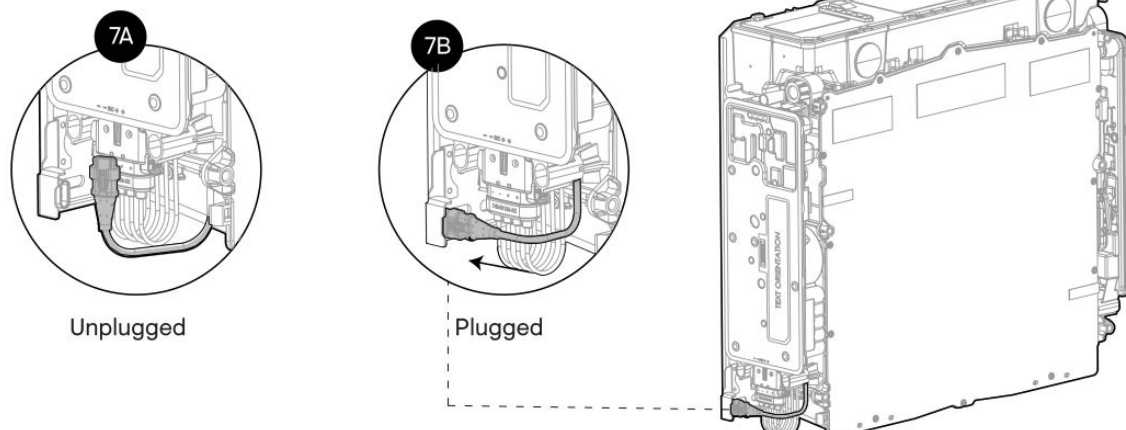
✓ **NOTE:** If multiple IQ Battery 10CS units are planned with rigid conduits between them, refer to step 9 in this section before securing the seismic screws.

✓ **NOTE:** Use a hex head socket to prevent the seismic screw from falling into the unit. If the screw drops inside, recovery is difficult and time-consuming. This best practice helps ensure a safer and more efficient installation.



7. Plug the control switch connectors of both 5 kWh battery units into the holders on the mounting brackets to protect them and the cable from pinching during cover installation.

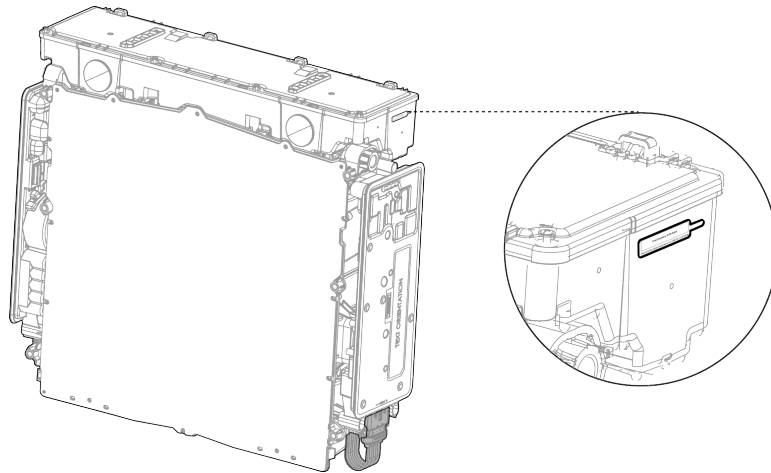
✓ **NOTE:** Carefully cut the cable tie used for tying the control switch connector and the battery DC connector before plugging the control switch connector into the holders on the mounting brackets.



**NOTE:**

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

8. Paste peel-off serial number labels of two 5 kWh units of IQ Battery 10CS in the space provided in the [Installer notes](#) on page 43 of this quick install guide. This will be helpful during the commissioning activity.



9. Perform the following steps when installing rigid conduits between part A and part B of IQ Battery 10CS or between two IQ Battery 10CS units:
 - a. Mount the first 5 kWh unit of the IQ Battery 10CS onto the wall. At this stage, do not install the seismic screws to allow for necessary adjustments.
 - b. Mount the second 5 kWh unit of the IQ Battery 10CS onto the wall, similarly, without installing the seismic screws.
 - c. Slightly tilt both units to create clearance, then carefully slide the rigid conduit into the designated connection point between them.
 - d. Adjust and securely fasten the rigid conduit to ensure proper alignment and connection. Once the conduit is secured, install the seismic screws on both units and tighten them fully.

10. Wiring

This section provides detailed instructions for wiring and connecting components of the IQ Battery 10CS 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 10CS and related components.

10.1 Connecting the interconnect power cables



NOTE:

- The interconnect power cables are dual-colored, with L1 marked on the cable's black part and L2 marked on the red part.
- For Interconnect power cables, the L1 terminal of part A unit connects with the L2 terminal of part B unit, and the L2 terminal of part A unit connects with the L1 terminal of part B unit.
- Each IQ Battery 10CS cover kit includes two lengths of ground cable - a 3.3 ft (1 m) short cable and an 8.2 ft (2.5 m) long cable.
- All cables are factory pre-stripped. Installers are advised to coil any excess cable length instead of trimming and manually stripping the cables. This recommendation may be relaxed for L1, L2, and N cables if the excess is substantial; however, trimming the ground cable is strictly prohibited.

1. Route the L1, L2, and N cables of the interconnect power cable assembly between parts A and B of the IQ Battery 10CS and trim the excess lengths.
2. Depending on spacing, choose the appropriate ground cable between the two options provided and route it through the conduits, and coil the excess cable.
3. Connect the cables to the respective terminals and torque to 22.1 in-lb or 2.5 N m.



WARNING: Risk of equipment damage. Improper wiring or loose connections may lead to thermal failures. Ensure that the cable is correctly inserted and secured to avoid potential damage and ensure optimal performance.



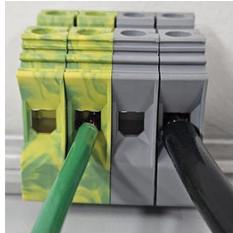
WARNING: Risk of electric shock. Enphase recommends stripping cable insulation by 11 mm to 13 mm, as excessive exposure of the conductor can lead to accidental contact with live parts, short circuits, or damage to the equipment.

Always open the screw slot completely



✓ ✗ ✓ ✗

Correct method to insert the cable in the terminal block



✓ ✓

Wrong method to insert the cable into the terminal block



✗ ✗



NOTE: The Milwaukee-type ECX-1 (or similar square/flat combo driver) provides the best grip and performance for torquing connections. A 7/32" flat head is good and acceptable for torquing. A #2 square drive is acceptable; however, it carries a risk of rounding the screw.



NOTE: Insert the cables into their respective terminals based on the sleeve color for accurate and hassle-free installation.

10.2 Connecting the interconnect control cable



NOTE: The interconnect control cable comes with one pre-installed connector on one end, while the other end is left free for easy routing through the raceway adapter.

1. Each IQ Battery 10CS cover kit includes one 8.2 ft (2.5 m) long interconnect control cable with a control connector connected on one end.
2. Installers must prefer using the interconnect control cable for control wiring between battery units of the IQ Battery 10CS system.
3. Installers should first route the cable through its free end and then trim the excess length. Connect the stripped end of the interconnect control cable to the control connector available on the control communication board (torque to 1.8 in-lb or 0.2 N m).

WARNING: Do not connect the drain wire on the free end of the interconnect control cable, as the drain wire is already connected to the pre-installed connector.

4. Connect the control connectors installed at the two ends of the interconnect cable on the control communication boards of parts A and B of IQ Battery 10CS.
5. For additional information on control wiring and to remove or add/keep a resistor on the control connector, refer to [Wiring the control \(CTRL\) cable between system components](#) on page 25.

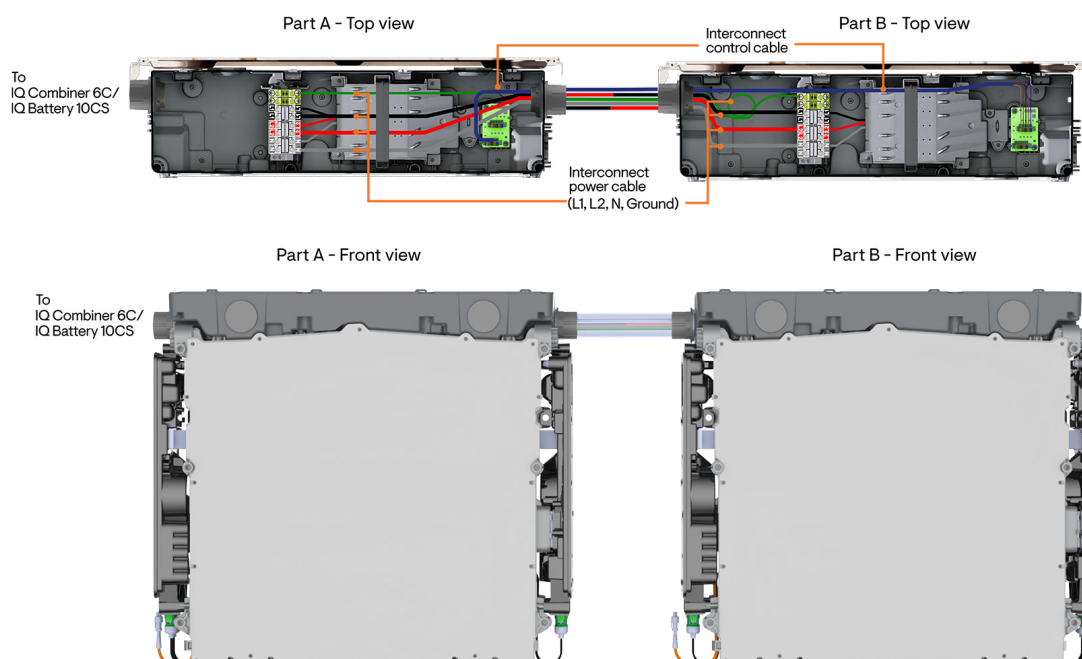


Figure 5: IQ Battery 10CS interconnect power and control cable installation - horizontally stacked

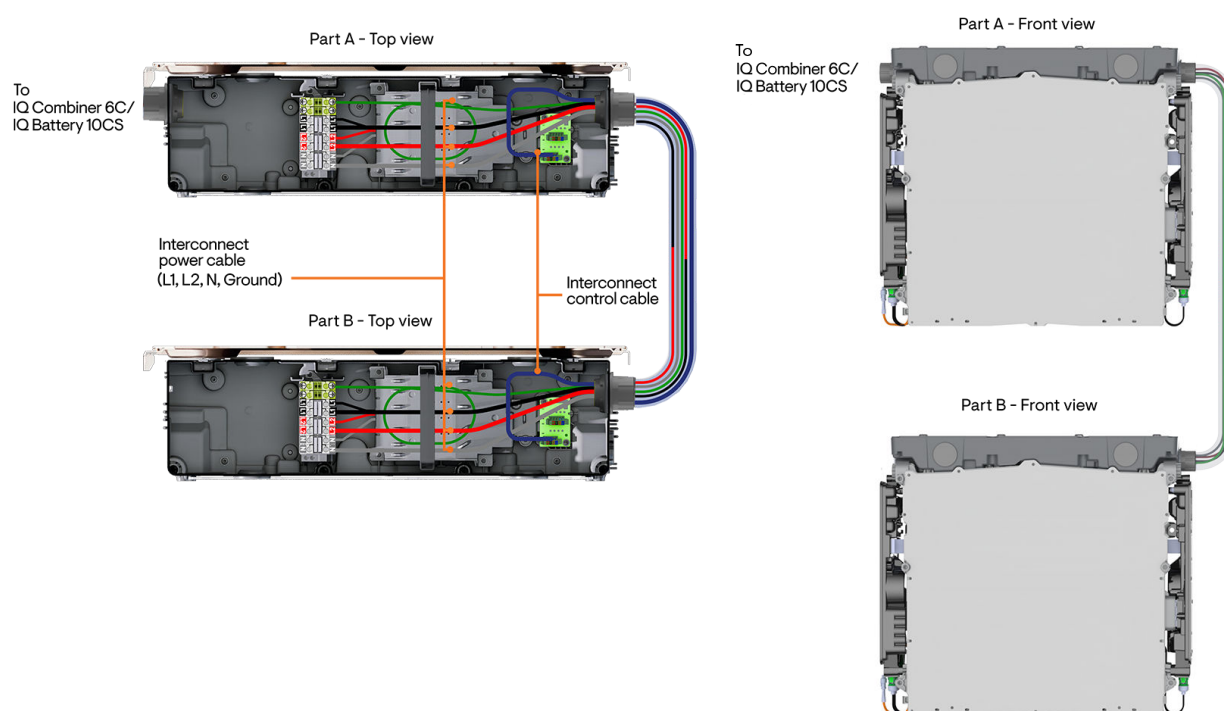


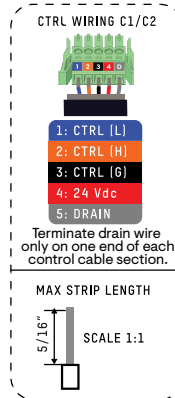
Figure 6: IQ Battery 10CS interconnect power and control cable installation - vertically stacked

10.3 Wiring the control (CTRL) cable between system components



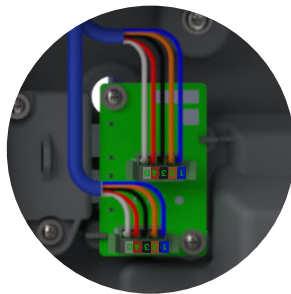
NOTE:

- 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.

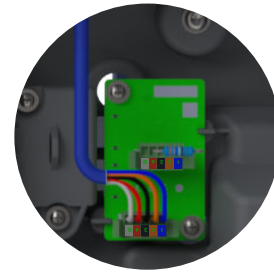


WARNING: Terminate the drain wire on only one end of each control cable section.

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



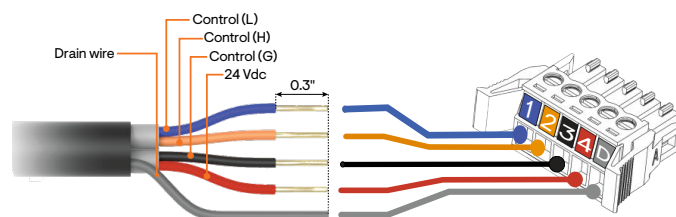
First and intermediate control communication boards



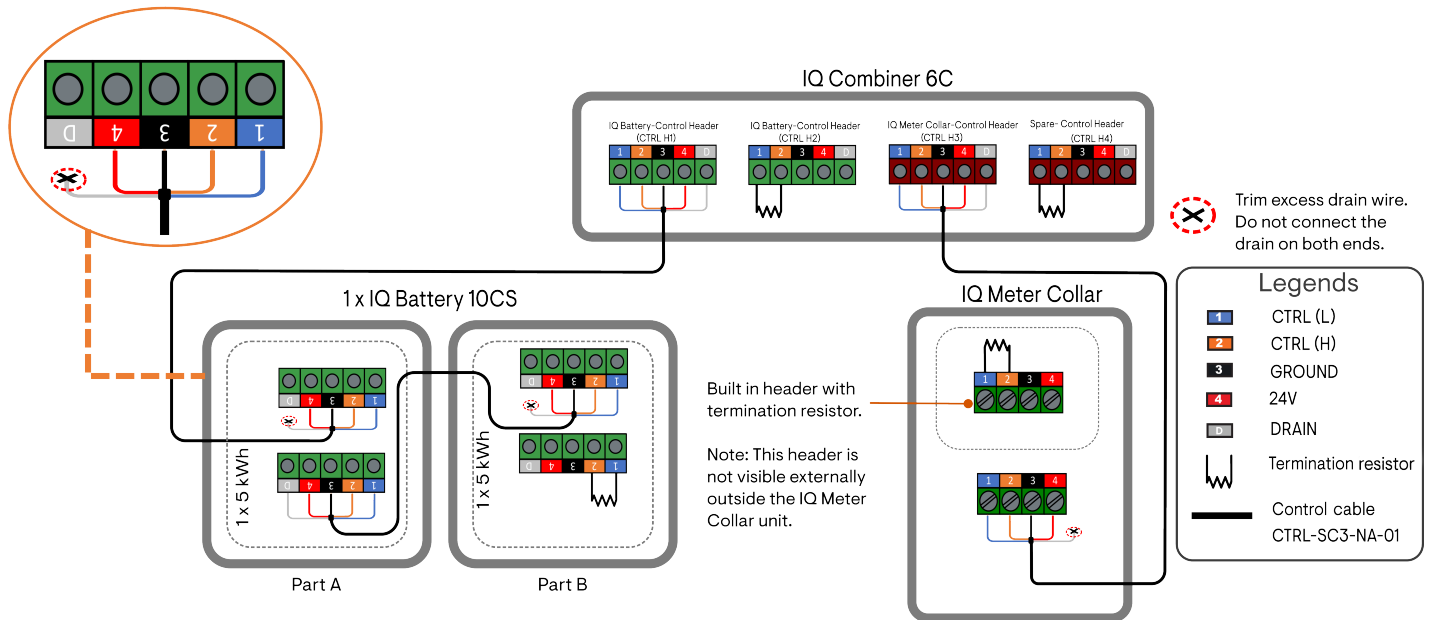
Last control communication board with a resistor installed on one control connector

- Both control connectors (C1/C2) present on the control communication board are identical and can be used interchangeably.
- Do not exceed a total control wiring length of 250 feet between the IQ Combiner 6C and the batteries.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and IQ Meter Collar/system components.
- Ensure the drain wires do not come in contact with any live connection.
- Ensure that blue-L, orange-H, black-G, and red-24 VDC are connected properly to the control connector. The gray-drain wire should only be connected on one end of the control wiring between system components.
- For the control connector of the IQ Meter Collar, a drain wire connection is not required.

- After routing the control cable, connect it to the connectors (torque to 1.8 in-lb or 0.2 N m).



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



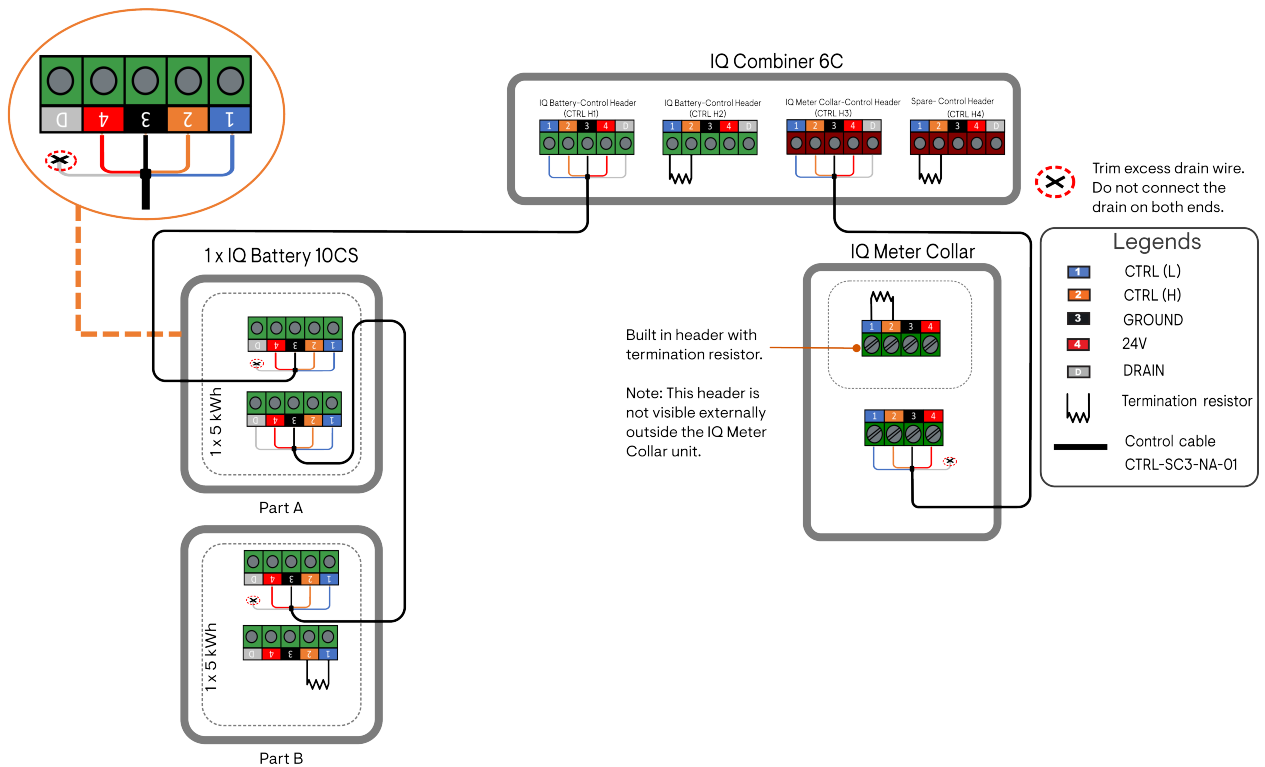
- The drain wire should only be terminated on one end of the control wiring between system components.
- Do not connect the drain wire on the IQ Meter Collar. The drain wire must terminate on IQ Combiner 6C.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and the batteries.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and IQ Meter Collar/system components.

✓ **NOTE:** There are multiple ways to connect the control wiring. The preceding figure illustrates one correct method.

⚠ **WARNING:** Terminate the drain wire on only one end of each control cable section.

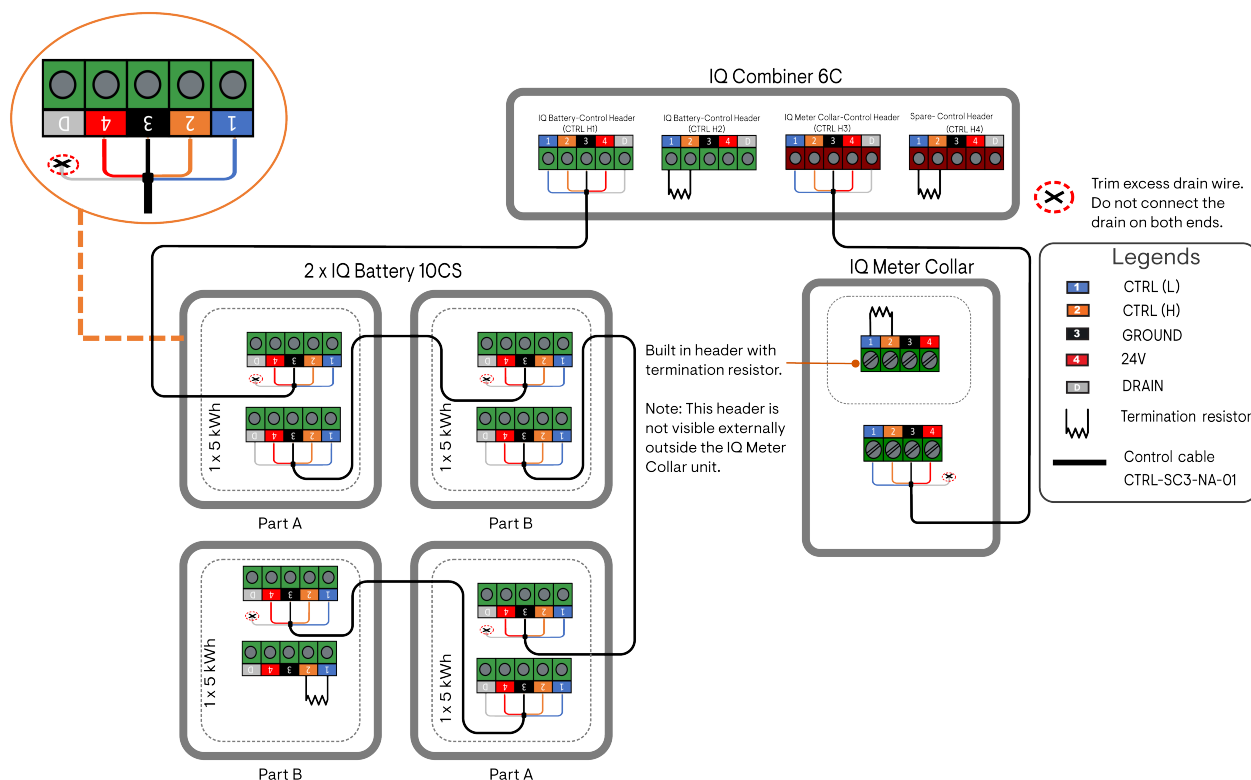
✓ **NOTE:** Use a termination resistor for all the unused control connection points.

b. One vertically stacked IQ Battery 10CS with IQ Combiner 6C



- The drain wire should only be terminated on one end of the control wiring between system components.
- Do not connect the drain wire on the IQ Meter Collar. The drain wire must terminate on IQ Combiner 6C.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and the batteries.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and IQ Meter Collar/system components.

c. Two IQ Battery 10CS units with IQ Combiner 6C



- The drain wire should only be terminated on one end of the control wiring between system components.
- Do not connect the drain wire on the IQ Meter Collar. The drain wire must terminate on IQ Combiner 6C.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and the batteries.
- Do not exceed a total control wiring length of 250 feet between IQ Combiner 6C and IQ Meter Collar/system components.

✓ **NOTE:** There are multiple ways to connect the control wiring. The preceding figure illustrates one correct method.

⚠ **WARNING:** Terminate the drain wire on only one end of each control cable section.

✓ **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 10CS is 3 AWG for L1/L2/N and Ground terminals.
- Interconnect power cable and control cable must be wired for all IQ Battery 10CS units at the site before connecting the field power cables.
- Cable holders and anchor points are provided on each unit for wire management.
- 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.
- Ensure no conductor is exposed once the wiring is complete.
- A maximum of two IQ Battery 10CS (20 kWh) can be daisy-chained on a single branch circuit without PCS, and up to four IQ Battery 10CS (40 kWh) can be daisy-chained on a single branch circuit with PCS.
- Do not disturb the factory connections on terminal blocks during field wiring.

1. Route field wires as indicated below and connect them to the terminal block of the 5 kWh battery unit closest to the IQ Combiner 6C.
2. Connect cables to respective terminal blocks (torque to 22.1 in-lb or 2.5 N m).

WARNING: Risk of electric shock. Enphase recommends stripping cable insulation by 11 mm to 13 mm, as excessive exposure of the conductor can lead to accidental contact with live parts, short circuits, or damage to the equipment.

- Repeat the above steps for all IQ Battery 10CS units at the site, refer to Figure 9: Two IQ Battery 10CS units - discrete stack.
- Install a cable holder for proper cable management. If required, secure the cables to the anchor points using cable ties.
- Turn on the AC breaker to which the IQ Battery 10CS 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.
- If the AC voltage is within the normal range mentioned in the data sheet, 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.

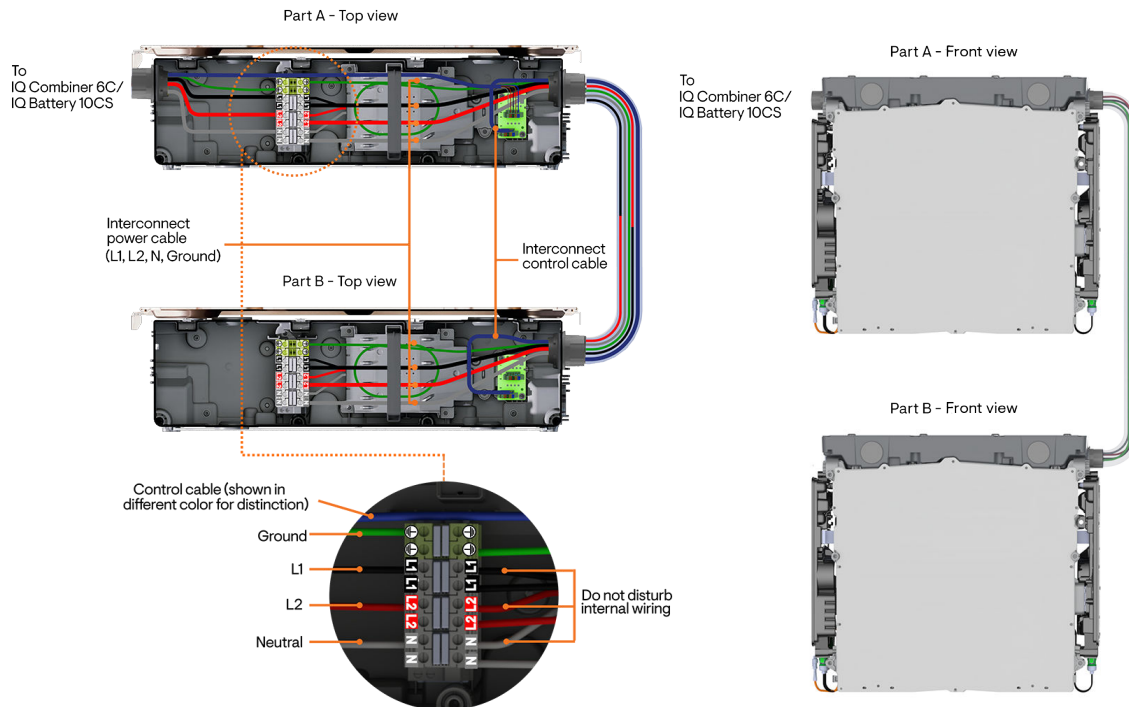


Figure 7: Single IQ Battery 10CS - vertically stacked

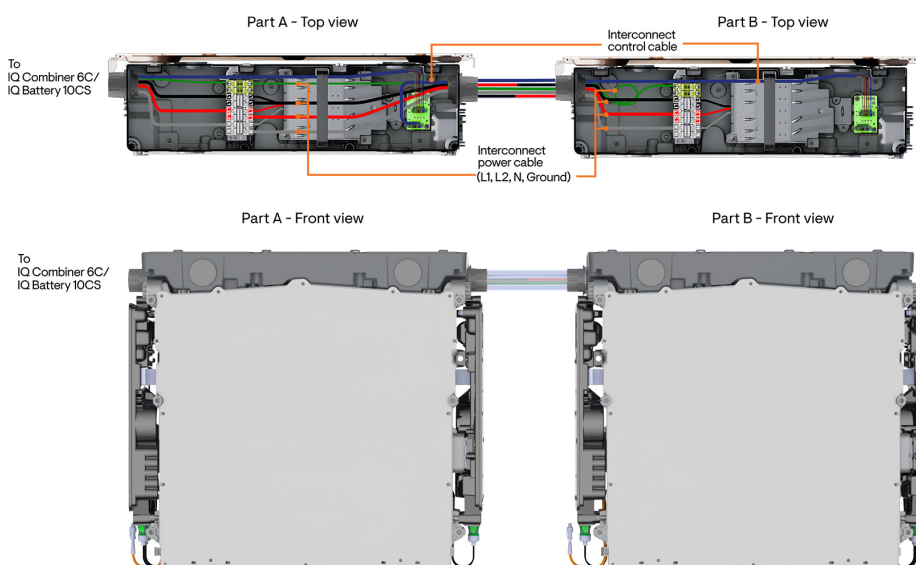


Figure 8: Single IQ Battery 10CS - horizontally stacked

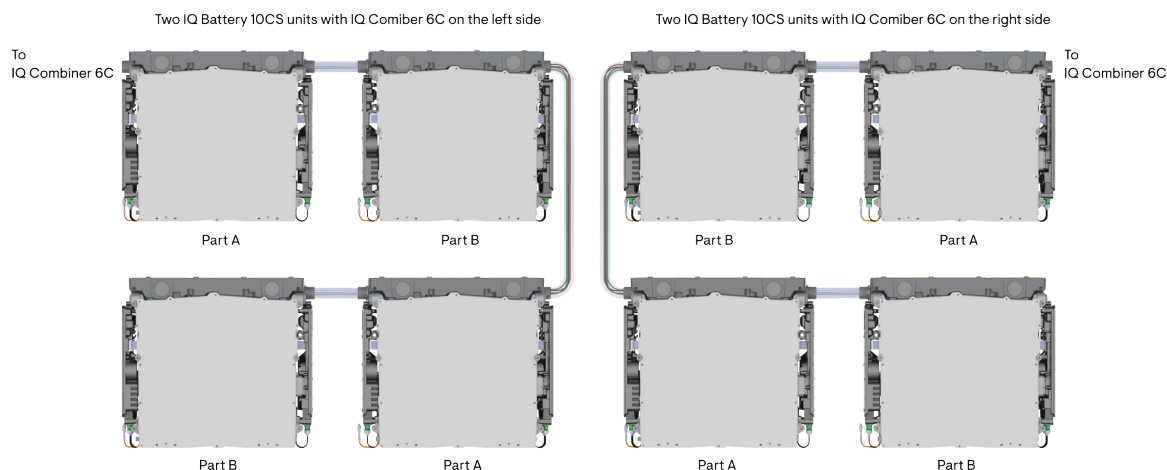
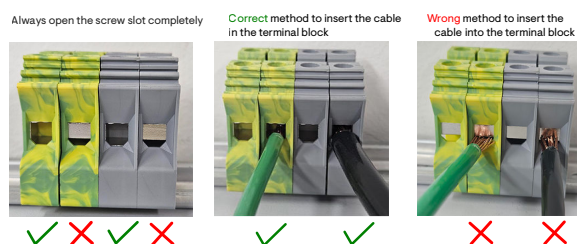


Figure 9: Two IQ Battery 10CS units - discrete stack

WARNING: Risk of equipment damage. Improper wiring or loose connections may lead to thermal failures. Ensure that the cable is correctly inserted and secured to avoid potential damage and ensure optimal performance.



- ✓ **NOTE:** The Milwaukee-type ECX-1 (or similar square/flat combo driver) provides the best grip and performance for torquing connections. A 7/32" flat head is good and acceptable for torquing. A #2 square drive is acceptable; however, it carries a risk of rounding the screw.
- ✓ **NOTE:** Insert the cables into their respective terminals based on the sleeve color for accurate and hassle-free installation.

10.5 Installing the ferrite core on control cables

Each IQ Battery 10CS cover kit includes two ferrite cores. Install one ferrite core on each 5 kWh battery unit, ensuring that each section of control cable has only one ferrite core, as shown in the illustrations below.

- ✓ **NOTE:**
 - Each 5 kWh battery unit must have only one ferrite core installed.

- Each control cable section must have only one ferrite core installed.

- In vertical configuration, install ferrite cores on each 5 kWh battery unit, ensuring that every section of control cable has only one ferrite core installed, as shown in the diagram below:

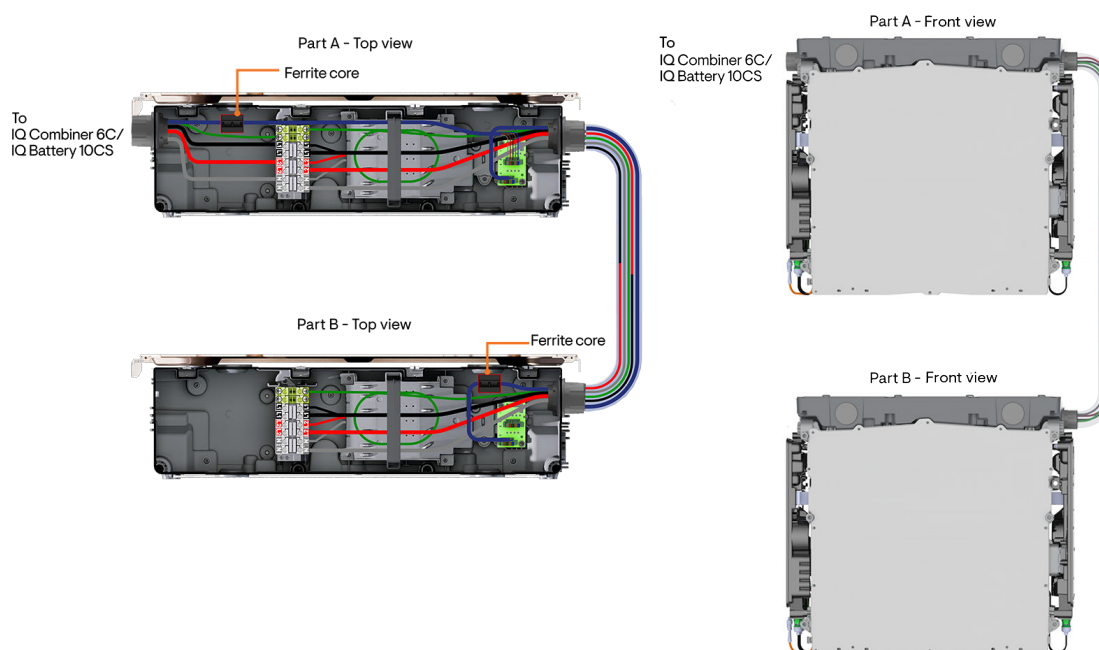


Figure 10: Single IQ Battery 10CS with ferrite core - vertically stacked

- In horizontal configuration, install ferrite cores on each 5 kWh battery unit, ensuring that every section of control cable has only one ferrite core installed, as shown in the diagram below:

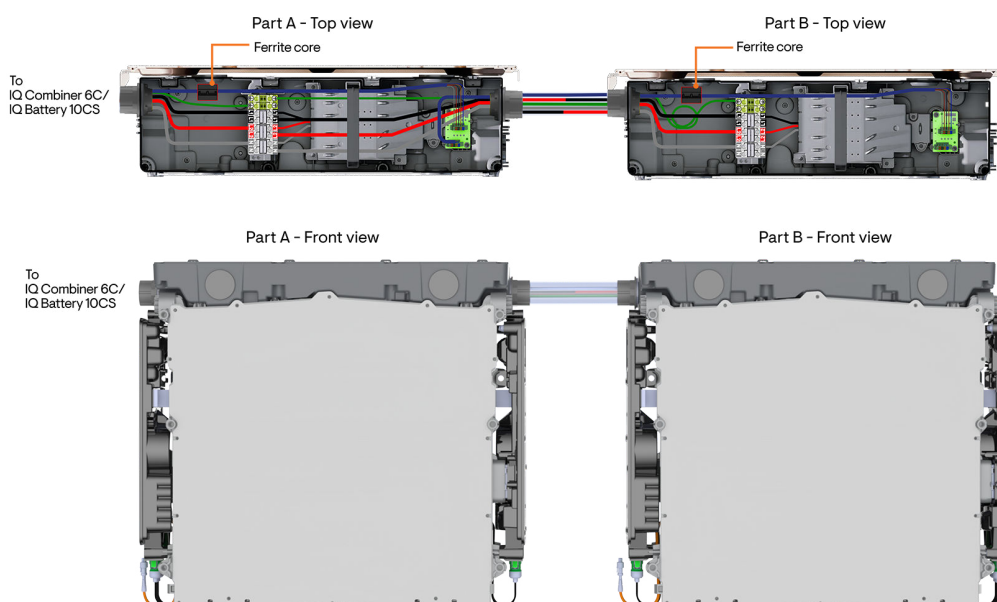


Figure 11: Single IQ Battery 10CS with ferrite core - horizontally stacked

3. In a discrete configuration, install ferrite cores on each 5 kWh battery unit, ensuring that every section of control cable has only one ferrite core installed, as shown in the diagram below. In this example, the IQ Combiner 6C is positioned on the left. If the IQ Combiner 6C is installed on the right; follow the same placement logic for the ferrite cores to maintain proper configuration.

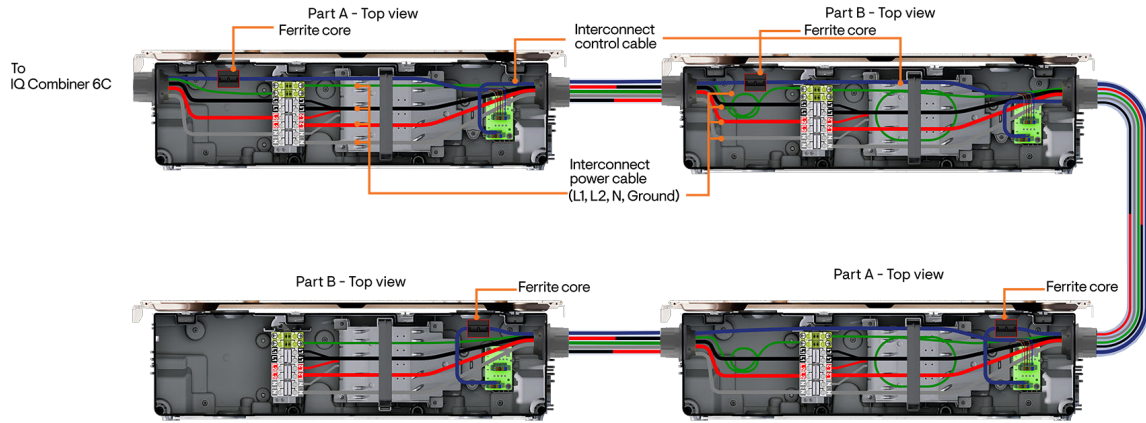


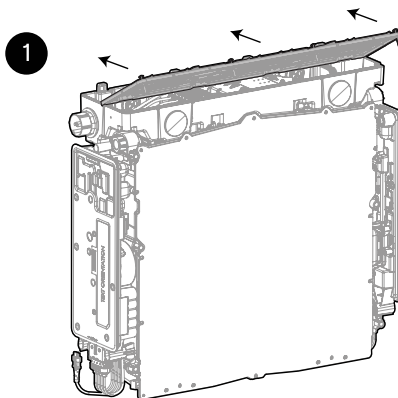
Figure 12: Multiple IQ Battery 10CS with ferrite core - discrete stacked and combiner is on the left side

11. Closing and energizing the unit

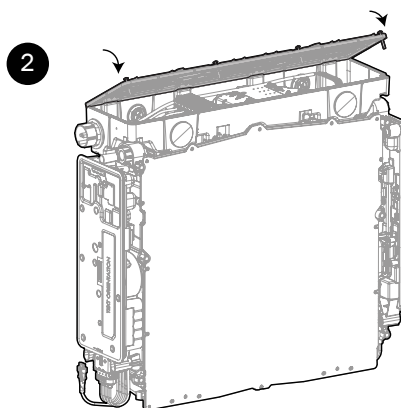
This section provides step-by-step instructions for closing and energizing the IQ Battery 10CS unit. It covers the process of securing the wiring cover, connecting the battery DC connectors, attaching the cover assemblies, and connecting the control switches. Follow the outlined steps carefully to ensure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

11.1 Closing the wiring cover

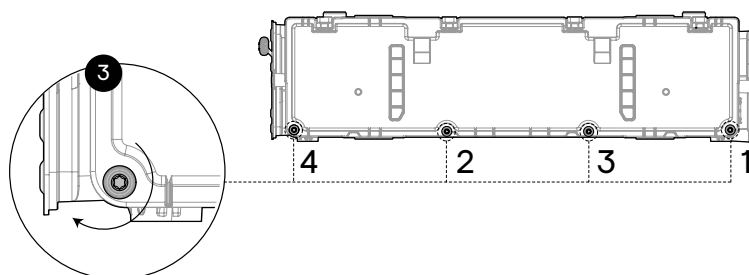
1. Slide the wiring cover under the latches.



2. Tilt the wiring cover.



3. Fasten the four encircled captive screws as shown in sequence to close and secure the wiring cover (Torx 25 bit, torque to 19.5 in-lb or 2.2 N m).

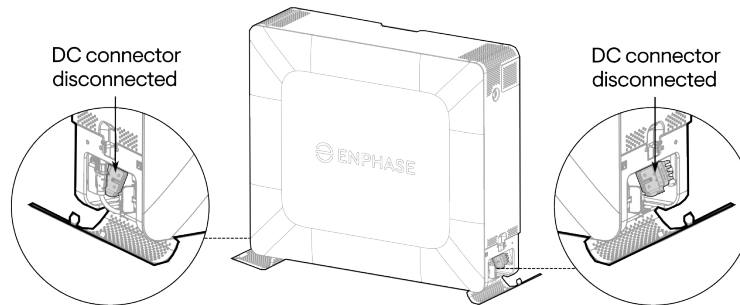


NOTE: These steps are to be repeated for both the 5 kWh units of IQ Battery 10CS.

11.2 Connecting the battery DC connectors

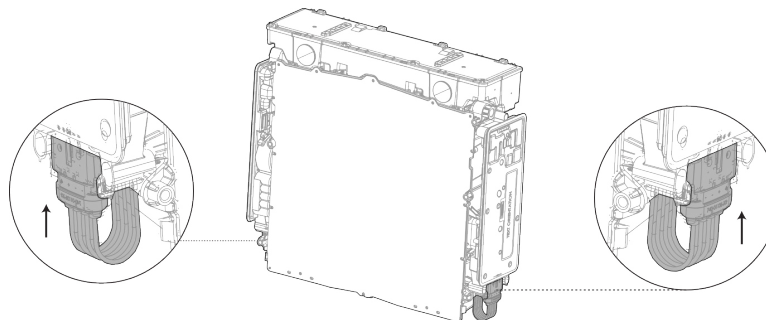
Each 5 kWh battery unit has one DC connector on each side. In total, four DC connectors are present in each IQ Battery 10CS.

- ✓ **NOTE:** Do not connect the DC connectors of the microinverters until the day of commissioning. Connecting them before commissioning may lead to battery depletion.
 - ✓ **NOTE:** All 5 kWh battery units come with DC connector caps pre-installed on their DC connectors. Likewise, dust covers are pre-installed on the DC connector slots of the microinverters. Do not remove these caps or covers unless commissioning is scheduled for the same day.
 - ✓ **NOTE:** If caps are missing, installers can order replacements using the following code: B05C-DCK-061-S. Installing these caps is essential to protect the connectors. Do not remove these caps or covers unless commissioning is scheduled for the same day.
1. Avoid cutting the DC connector zip ties unless commissioning the same day. If already cut, store connectors as shown in the image.

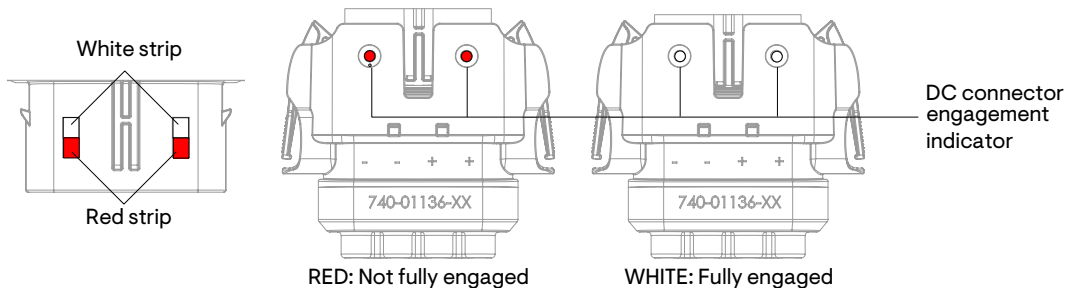


2. Connect all four DC connectors if commissioning the same day.

⚠ **WARNING:** Risk of equipment damage. Carefully cut the cable tie used for tying the battery DC connector without damaging any cables or cable ties used for the serial number label before connecting them.



- ✓ **NOTE:** Ensure the latches are latched properly, and check the indicators for confirmation.

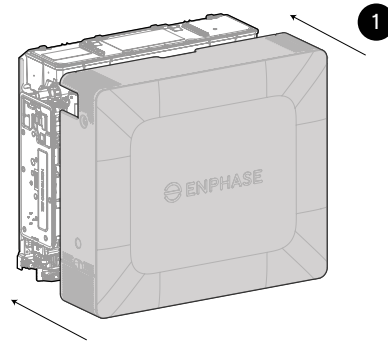


11.3 Attaching the cover assembly

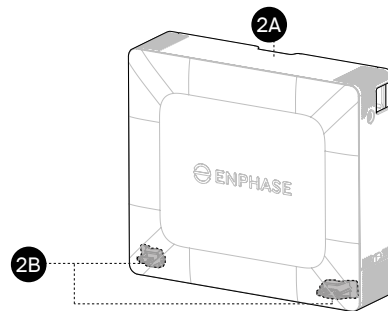

NOTE:

- 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 harnesses are not in the way when sliding the cover over the units.

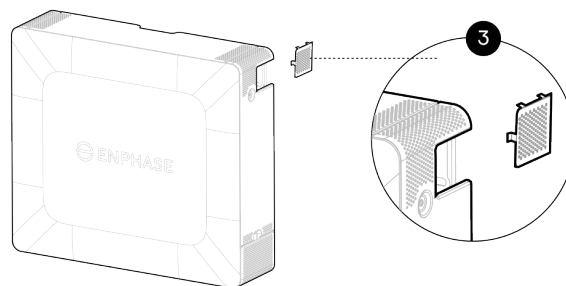
1. Slide the cover over the battery units.



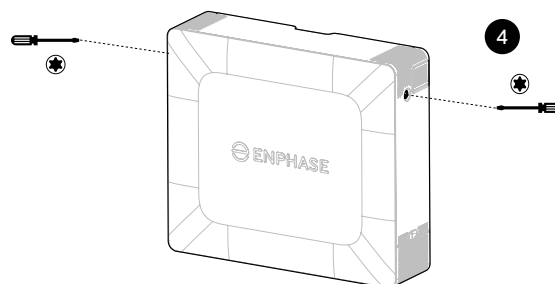
2. Move the cover over the latch at the top center and at the bottom on both sides.



3. Fit the conduit plate onto the unused opening of the IQ Battery 10CS cover.



4. Fasten the cover locking screws using a screwdriver (Torx 25, torque to 53.1 in-lb or 6 N m) to lock the cover in place.



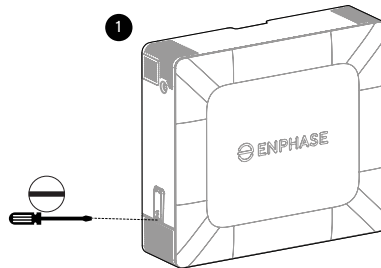
11.4 Connecting the control switch and energizing the unit



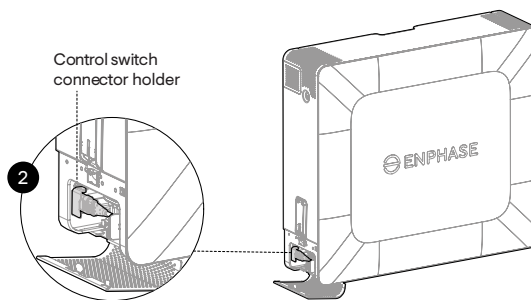
NOTE:

- IQ Battery 10CS Part A and Part B each have one control switch.
- 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.

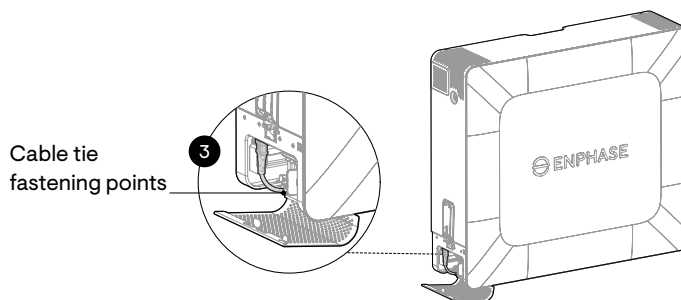
1. Open the bottom left side flap of the cover by pulling it with your finger/slot screwdriver using the access slot provided at the center.



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



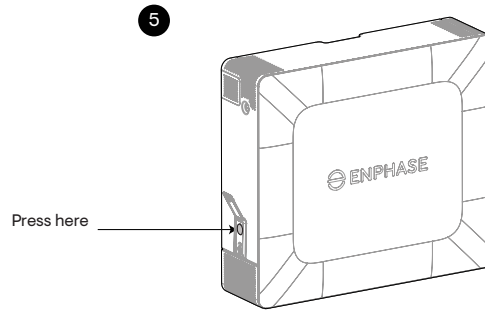
3. Connect the two control switch connectors to the control switch slots located at the back of the cover and fasten cable ties to secure the control switch cables to the provision provided on the cover.



4. Close the flap and confirm that it is properly latched.
5. Press the control switches on Part A and Part B to turn on the IQ Battery 10CS unit.

To power ON the IQ Battery 10CS units, press and hold the DC switch for 5 seconds. The LED will briefly light up green for approximately 1 second, followed by red to indicate the system is booting. After a few seconds, the LED will change to reflect the battery status:

- Red (solid): No AC power detected, or IQ8BN is not present after the power-on sequence.
- Blue (solid) or green (solid): Depending on the State of Charge.



WARNING: Risk of equipment damage. Do not leave the control switch ON for more than 24 hours until system functional testing has been completed. Doing so may void the warranty.

12. De-energizing the unit and removing the cover

This section provides step-by-step instructions for de-energizing the IQ Battery 10CS 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.

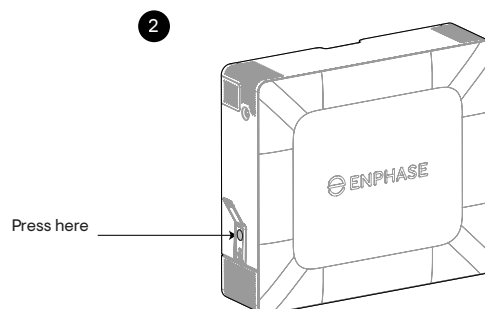
12.1 Disconnecting the IQ Battery 10CS control switch and de-energizing the unit

NOTE:

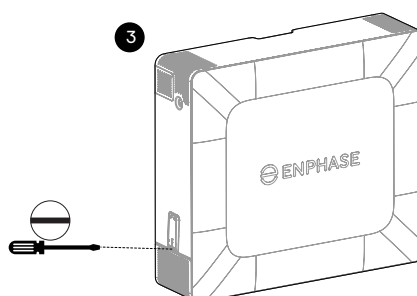
- These steps are not part of the installation. Refer to these instructions only when battery cover removal is required.
- The AC breaker to which the IQ Battery 10CS is connected must be off before disconnecting the control switch connector.
- When de-energized (the AC breaker to which the battery is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

1. Turn off the AC breaker connected to the 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 turned off.

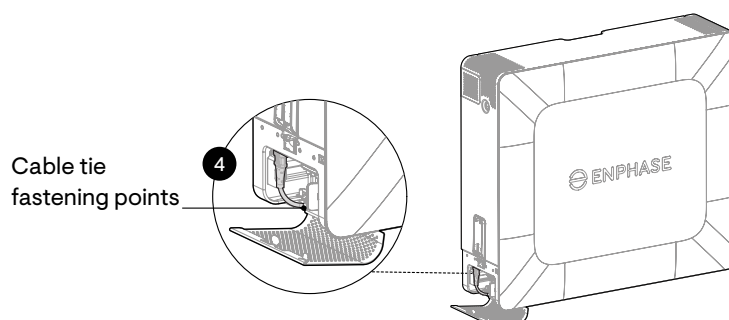
NOTE: To power OFF the IQ Battery 10CS unit, press and hold the DC switch for 5 seconds. The LED will begin flashing red in a sequence of three flashes, continuing for a few seconds. After this, the LED will turn off, indicating the unit has shut down.



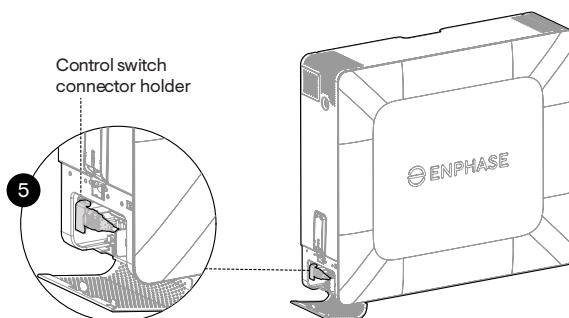
3. Pull out the left bottom flap on the cover with your finger/slot screwdriver by accessing the slot provided between the control switches.



4. Disconnect the control switch connectors from both batteries and cut the cable ties to free the control switch cables from the cover.



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

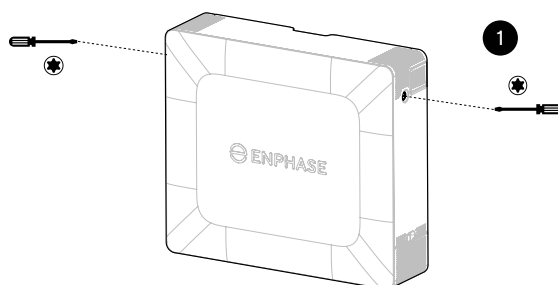


12.2 Removing the IQ Battery 10CS cover

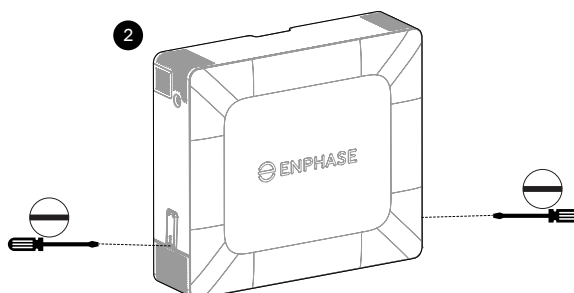


NOTE:

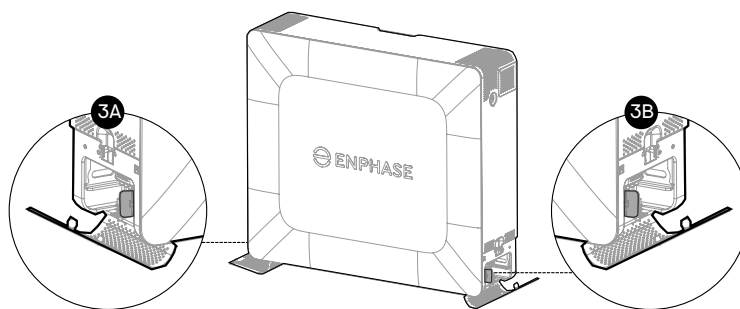
- These steps are not part of the installation. Refer to these instructions only when battery cover removal is required.
 - IQ Battery 10CS must be de-energized before removing the cover.
 - The control switch connector must be disconnected before removing the cover.
 - When de-energized (the AC breaker to which the battery is connected and the DC control switch are turned off), the LED of both Part A and Part B of IQ Battery 10CS will be off.
1. Unscrew the cover locking screws (Torx 25) present on both sides. Stop unscrewing once the screws begin to rotate freely, carefully remove the cover, and keep it aside.



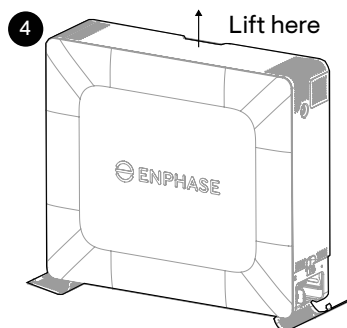
2. Pull out the bottom side flaps with your finger/slot screwdriver by accessing the slot provided above the flaps.



3. Pull the bottom snaps on both sides (highlighted) toward you to release the cover.

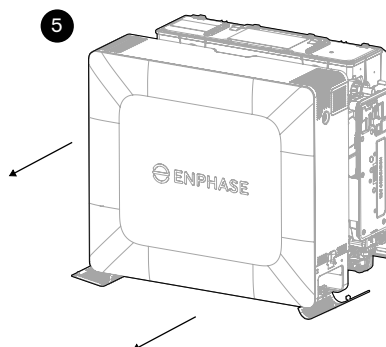


4. Using the hand access, lift and tilt the cover slightly as shown to release the lock.



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

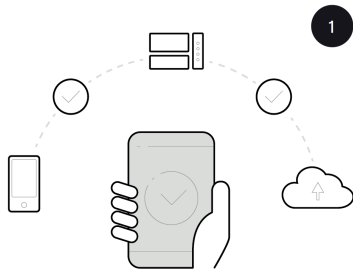
5. Pull the cover off in the indicated direction and carefully keep it aside without damaging the open flaps.



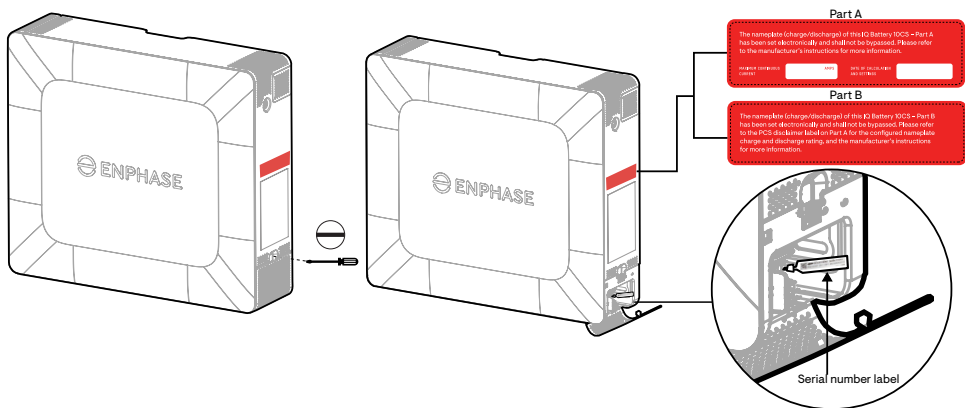
13. Operation

13.1 Configuring and activating the unit

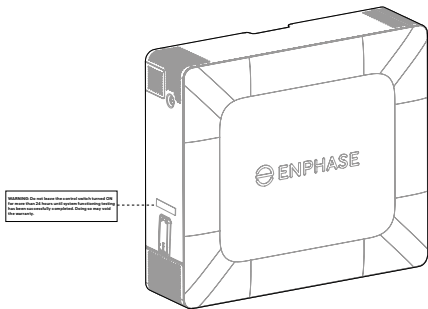
1. Use the Enphase Installer App to commission the IQ Battery(ies). Once connected to the IQ Gateway, refer to the Enphase Installer App help topics for more information.



Both Part A and Part B of the IQ Battery 10CS are provided with two sets of serial number labels. One set of serial number labels is pasted on a flag label attached to the DC connector cable located at the bottom right corner, and another as a peel-off label pasted on the wiring compartment side, as shown in step 11 of [Mounting battery units on the wall](#) on page 19.

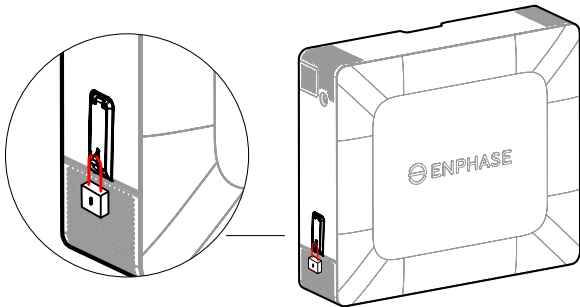


- ✓ **NOTE:** Stick a PCS disclaimer label for a PCS-enabled IQ Battery 10CS. Both Part A and Part B have a PCS disclaimer label; however, only the Part A label will contain all the configuration details.
2. Peel off the warning label after the functional test is complete.



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

- ✓ **NOTE:** IQ Battery 10CS control switches have a locking mechanism. When locked, it cannot be accessed.



13.2 LED overview

The IQ Battery features a set of intuitive LED indicators that provide real-time feedback on system status, operation mode, and error conditions. Understanding these LED signals is essential for efficient installation, system monitoring, and troubleshooting. This section outlines the meaning of each LED pattern to support a smooth installation process and ensure reliable system performance.

To power on the IQ Battery 10CS, press and hold the DC control switches of each 5 kWh battery unit of IQ Battery 10CS for 5 seconds. Depending on the battery firmware, the LEDs will indicate the following.

	FW 4.5.35	>FW 4.5.35
1	Blinking green: 2–3 seconds after pressing the control switch	Blinking green: 2–3 seconds after pressing the control switch
2	Blinking red: 8–9 seconds after pressing the control switch	Blinking red: 8–9 seconds after pressing the control switch
3	Solid blue or bluish green or greenish blue or green, depending on SoC: 14–15 seconds after pressing the control switch	Solid blue or bluish green or greenish blue or green, depending on SoC: 14–15 seconds after pressing the control switch, if the power-on sequence is successful or Solid red: 14–15 seconds after pressing the control switch if IQ8BN is NOT present after the power-on sequence or AC IS NOT present

To power off the IQ Battery 10CS unit, press and hold the DC switches of each 5 kWh battery unit of IQ Battery 10CS for 5 seconds. Depending on the battery firmware, the LEDs will indicate the following.

	FW 4.5.35	>FW 4.5.35
1	Blinking red (triple flash): 2–3 seconds after pressing the control switch	Blinking red (triple flash): 2–3 seconds after pressing the control switch
2	Blinking red (triple flash): 40 seconds after pressing the control switch	Blinking red (triple flash): 15 seconds after pressing the control switch
3	OFF: Indicating that the battery is off	OFF: Indicating that the battery is off

When the battery reaches very low SoC (VLS) or extremely low SoC (ELS) levels, it will automatically enter sleep mode, during which:

- The LED indicator turns off.
- The battery becomes inactive to conserve power.

Control switch operation:

- First press: Press and hold the control switch for 5 seconds to turn off the battery
- Second press (to wake the battery):
 - In VLS mode: Press and hold the control switch for 5 seconds to turn on the battery.
 - In ELS mode: Press and hold the control switch for 10 seconds to turn on the battery.

To make the IQ Battery 10CS form grid in extremely low State of Charge (ELS mode, less than 2% SoC), press and hold the DC control switches of each 5 kWh battery unit of IQ Battery 10CS for 10 seconds.

1	Blinking green: 2–3 seconds after pressing the control switch
2	Blinking red: 8–9 seconds after pressing the control switch
3	Solid blue: 14–15 seconds after pressing the control switch
4	Blue soft pulse: 6 minutes after pressing the control switch, indicating it is discharging

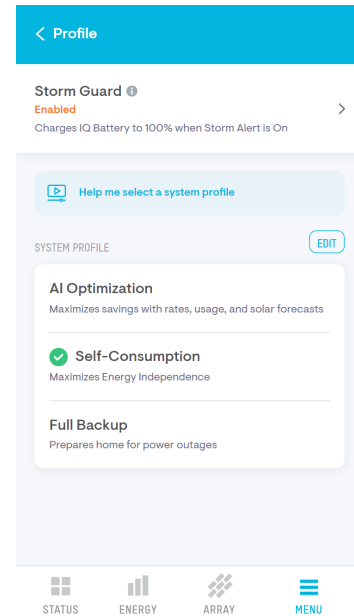
	FW 4.5.35	>FW 4.5.35
Error needs service (BMU L2 Errors)	Red double flash	Red solid
BMU L1 error or AC source off	Red soft pulse	Red solid
Upgrade fail	Red single flash	Red solid
ESS shutdown	Red one-second flash	Red solid
Intermittent state during the turn OFF sequence	Flashing red	
Not operating due to high temperature	Yellow solid. See Troubleshooting on page 41.	

	FW 4.5.35	>FW 4.5.35
No communication with the IQ Gateway	Yellow flashing	
Charging	Green soft pulse	
Discharging	Blue soft pulse	
Idle	Solid blue: SoC<25%	
	Greenish blue (BLUE—75%, GREEN—25%): SoC 25 to 50%	
	Bluish green (GREEN—75%, BLUE—25%): SoC 50 to 75%	
	Green: SoC>75%	

13.3 Operating mode and set points

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

1. In the Enphase App, select **Menu > Settings > Profile**
2. Select one of the 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://support.enphase.com/s/article/Enphase-storage-system-owners-guide>.

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) do not operate, check the temperature in the room and increase cooling and/or ventilation as required. Check that the sides of IQ Battery 10CS have at least 4" (10.2 cm) clearance on the left, right, top, and bottom.
2. If the IQ Battery 10CS LED is red (solid), turn off the AC breaker to which the IQ Battery 10CS is connected on the branch circuit, wait for at least one minute, and turn it back on. Ensure the AC supply is available on the battery terminals.
 - ✓ **NOTE:** IQ Battery 10CS 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 10CS powers down automatically. This is normal. When power is restored, it automatically starts again.
3. If you do not see IQ Battery 10CS 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
140-00448-04	May 2026	Updated "Wiring the control (CTRL) cable between system components" section.
140-00448-03	January 2026	- Updated "Connecting the battery DC connectors" section. - Added note in safety section. - Updated section 4.2 "What's in the cover kit box". - Added section 10.5 "Installing ferrite core on control cables". - Updated figures 5 and 6 in the 10.2 section.
140-00448-02	October 2025	Updated "What's in the box" section and "Wiring" sections.
140-00448-01	September 2025	Initial release.

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

Installer notes

 **IMPORTANT:** Paste the peel-off serial number labels of all 5 kWh IQ Battery 10CS units in the space provided below. This record will be helpful during the commissioning activity.

Battery units	Batteries connected on the IQ Battery 1 breaker in the IQ Combiner 6C	Batteries connected on the IQ Battery 2 breaker in the IQ Combiner 6C
IQ Battery 10CS unit	<Paste part A 5 kWh unit serial number>	<Paste part A 5 kWh unit serial number>
	<Paste part B 5 kWh unit serial number>	<Paste part B 5 kWh unit serial number>
IQ Battery 10CS unit	<Paste part A 5 kWh unit serial number>	<Paste part A 5 kWh unit serial number>
	<Paste part B 5 kWh unit serial number>	<Paste part B 5 kWh unit serial number>
IQ Battery 10CS unit	<Paste part A 5 kWh unit serial number>	<Paste part A 5 kWh unit serial number>
	<Paste part B 5 kWh unit serial number>	<Paste part B 5 kWh unit serial number>
IQ Battery 10CS unit	<Paste part A 5 kWh unit serial number>	<Paste part A 5 kWh unit serial number>
	<Paste part B 5 kWh unit serial number>	<Paste part B 5 kWh unit serial number>

140-00448-04-EN-2026-05-19
Applicable regions: North America

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