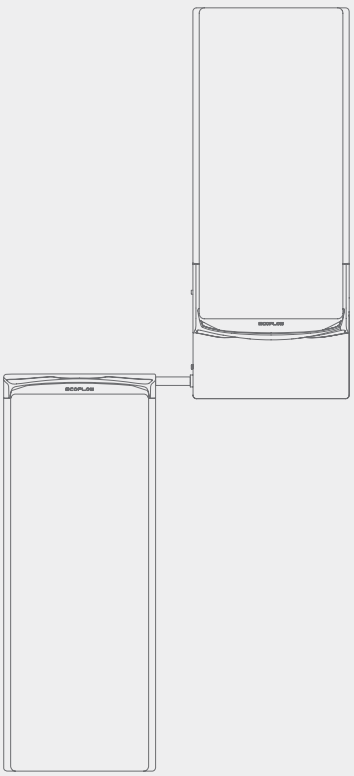
INSTALLATION GUIDE

V1.3

ECOFLOW OCEAN PRO

Solar Battery System



Documentation

User Manual

For the latest documents, please scan the QR code or visit:
https://homebattery.ecoflow.com/us/documentation

IMPORTANT

- Before installing, operating, and maintaining the equipment, read and follow Installation Guide and Safety Instructions.

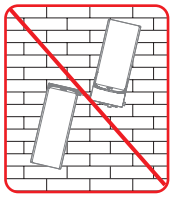
EN CONTENTS

SAVE THESE INSTRUCTIONS

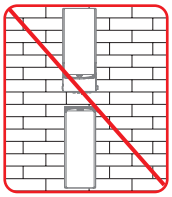
This manual contains important instructions that shall be followed during installation and maintenance.

Safety Instructions

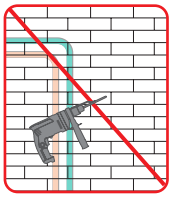
- Servicing instructions are for use by qualified personnel only. To reduce the risk of electric shock, do not perform any servicing other than that specified in the operating instructions unless you are qualified to do so.
- Personnel who plan to install or maintain EcoFlow equipment must receive thorough training, understand all necessary safety precautions, and be able to correctly perform all operations.
- Personnel who will install, operate, and maintain the equipment, including operators, trained personnel, and professionals, should possess the local national required qualifications in special operations such as high-voltage operations, working at heights, and operations of special equipment.
- Before connecting cables, ensure that the equipment is intact. Otherwise, electric shocks or fire may occur.
- Before installing, operating, and maintaining the equipment, always disconnect it from all power supply.
- Wear proper PPE (Personal protective equipment) before any operations.
- EcoFlow OCEAN Pro Solar Battery System can be installed indoors or outdoors.
- The installation and use environment must meet relevant international, national, and local standards for Energy Storage System (ESS), and are in accordance with the local laws and regulations.
- When installing the device in a garage, keep it away from the driveway.
- The mounting structure where the device is installed must be fire resistant. Do not install the device on flammable building materials.
- Ensure that the mounting structure is solid enough to bear the weight of the device, with one of the following characteristics: Wood studs at regular intervals, Plywood sheeting of sufficient thickness, Solid concrete or masonry, Metal studs of sufficient gauge.
- Use a stud finder to help find stud. Make sure the device is mounted on the stud.
- Keep air vents free of obstructions.
- Consider noise level (typical: 45 dB(A), 60 dB(A)), when choosing where to install the device.
- If an EcoFlow OCEAN Smart Electrical Panel is present, it is best practice to install the panel first, then install the inverter, and finally install the battery.
- Plan an installation site with a strong and stable Wi-Fi signal, or where an Ethernet cable can be run directly to the customer's network router.
- Wiring and conduit (where required) must be provided by the installer and installed to comply with local codes.
- The conductors with regards to ampacity, rated temperatures, operating conditions and power loss must be made in accordance with the local standards and the National Electrical Code® ANSI/NFPA 70.



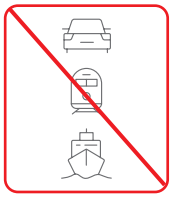
DO NOT MOUNT IN A CROOKED MANNER.



PLEASE AVOID VERTICAL INSTALLATION AS IT MAY AFFECT HEAT DISSIPATION PERFORMANCE.

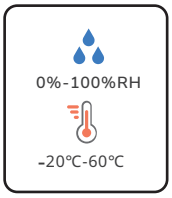


AVOID THE WATER PIPES AND POWER CABLES

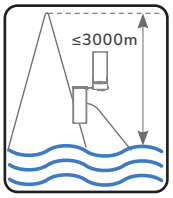


NOT INTENDED FOR MOBILE SCENARIO

AWAY FROM



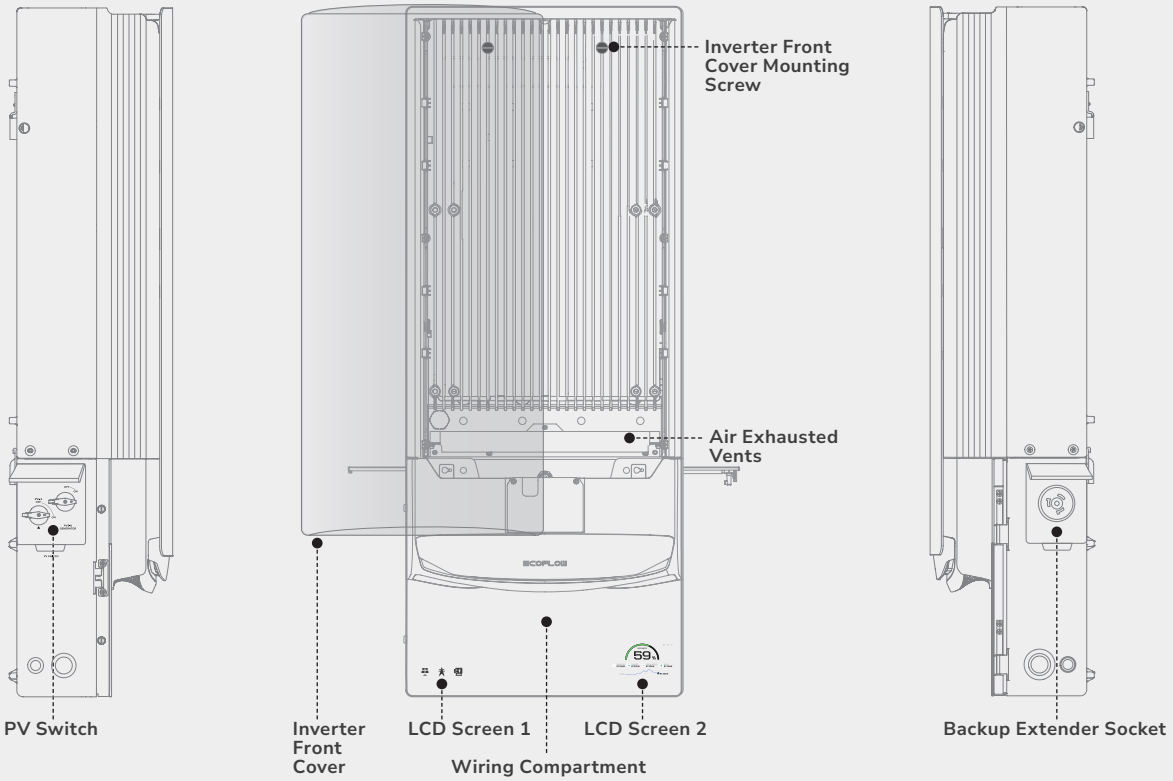
NEMA 3R



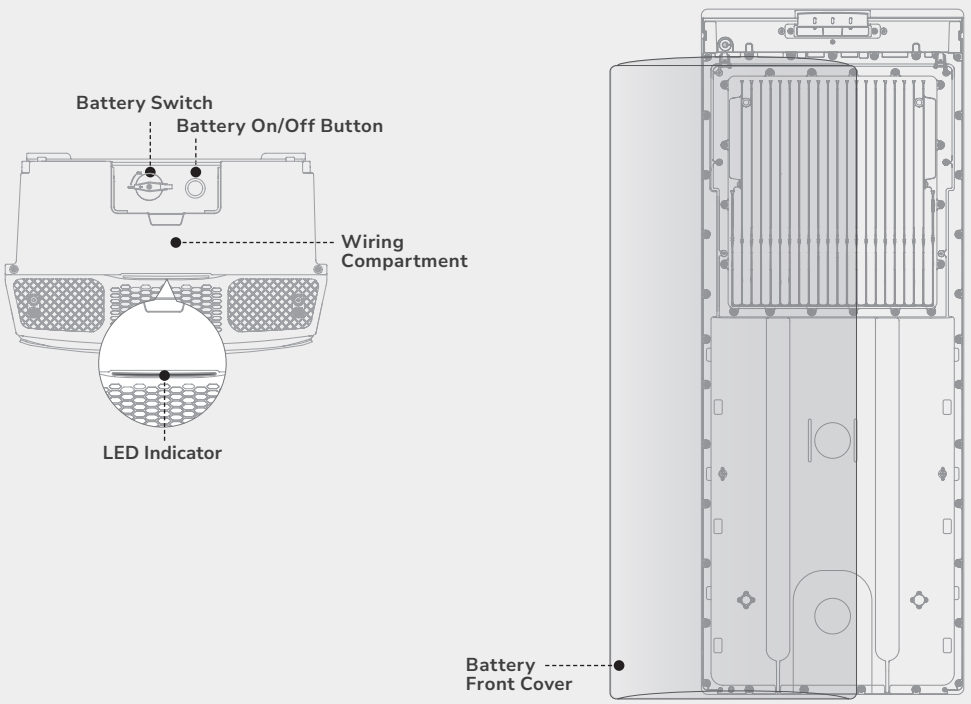
ALTITUDE

Product Overview

- **ECOFLOW OCEAN PRO HYBRID INVERTER**



- **ECOFLOW OCEAN PRO BATTERY**



What's In The Box

- Before unpacking, check the outer packing for damage, such as holes and cracks, and check the equipment model. If any damage is found, do not unpack the package and contact the supplier as soon as possible.
- After unpacking, check that the deliverables are intact and complete. If any item is missing or damaged, contact the supplier.
- Keep the original package for further needs.

• ECOFLOW OCEAN PRO HYBRID INVERTER

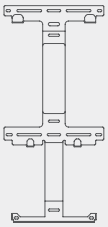
×1

EcoFlow Ocean Pro Hybrid Inverter

×1

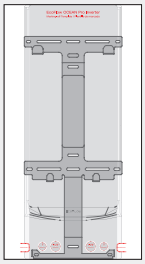
Front Cover

×1



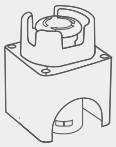
Wall Mounting Bracket

×1



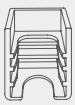
Marking-off template

×1



Emergency Stop Button

×3



AC terminal protective cover

×2

RJ45 terminal (CAT6)

×4

MPPT Jumper

×2

M5x36 Screw

×2

M5x16 Screw

• ECOFLOW OCEAN PRO BATTERY

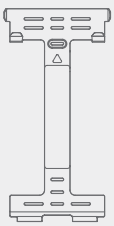
×1

EcoFlow Ocean Pro Battery

×1

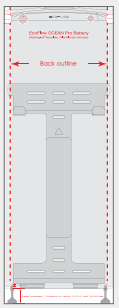
Front Cover

×1



Wall Mounting Bracket

×1



Marking-off template

×2

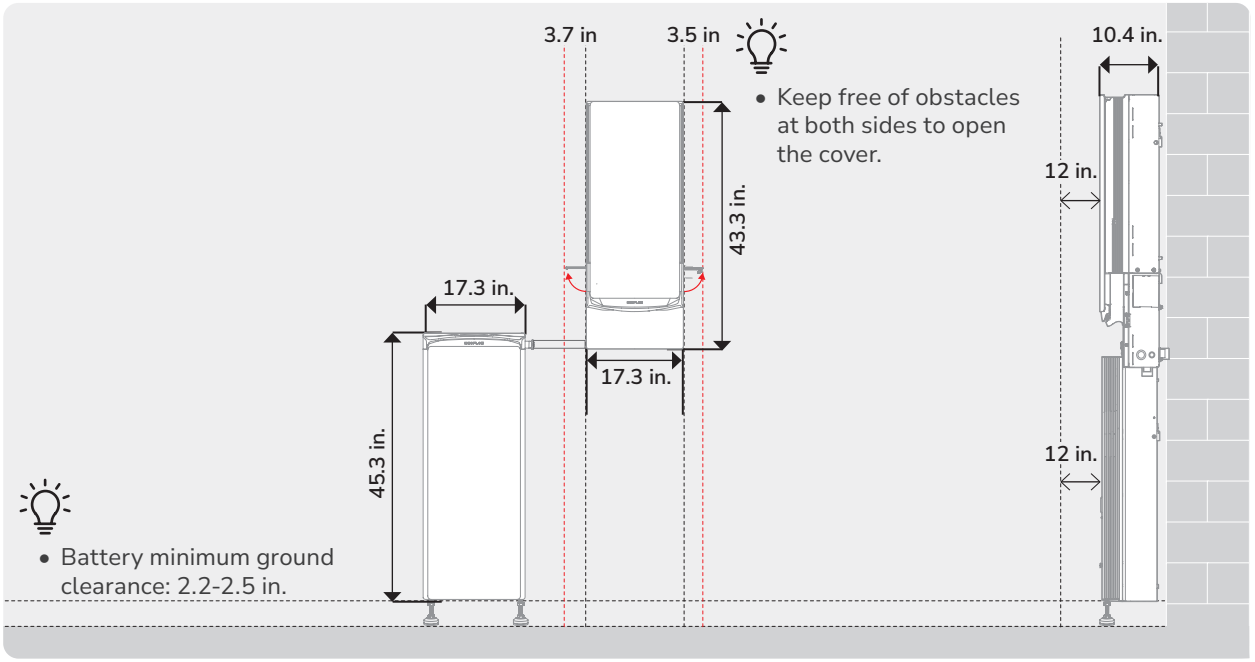
M6x14 Screw

System Installation

Minimum clearance Requirements

- **SINGLE INVERTER+BATTERY**

- The inverter has no specific minimum ground clearance requirement and should be determined based on site conditions.

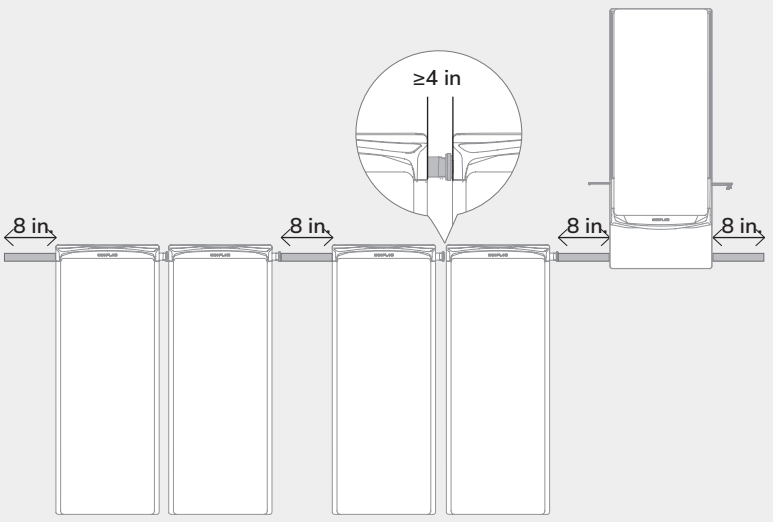


- Keep free of obstacles at both sides to open the cover.

- Battery minimum ground clearance: 2.2-2.5 in.

- **SINGLE INVERTER+MULTI BATTERIES**

- The minimum clearance between side-by-side batteries depends on the specific testing and standards which are certified under. UL 9540A testing can allow for 0" clearance, while UL 9540B, in general, requires 5.9 in.
- The minimum installation space requirement is 25.7 cubic meters.



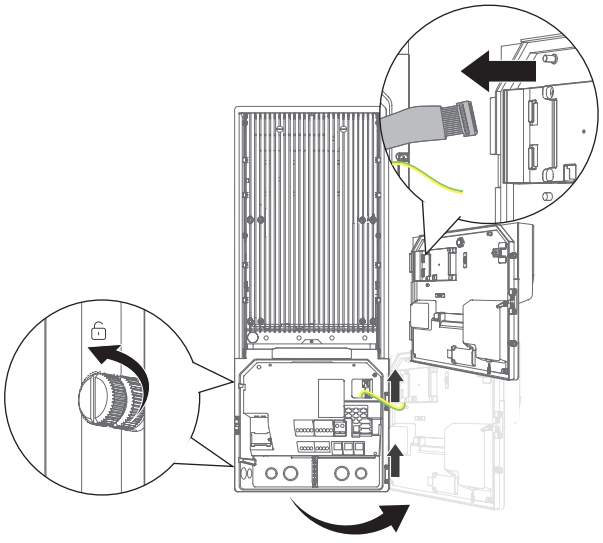
- Up to 8 battery units supported by 1 inverter

Installing Inverter

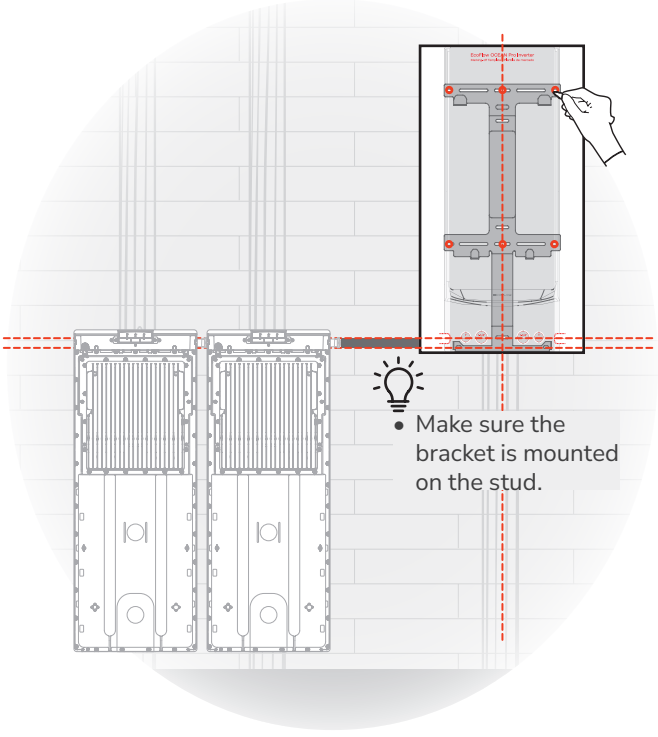
- **MOUNT THE INVERTER BRACKET TO THE SELECTED WALL**

- The installation should be completed by at least 2 persons.
- Handles must be used while lifting the battery or use a platform lifting device.
- The mounting bracket anchoring details below are minimum guidelines and are rot guaranteed to be applicable. Refer to local building codes to ensure the use of appropriate fasteners.
- **It is recommended to remove the door before installing the inverter to prevent screen and cables damage.**

1 First disconnect the power cable of screen and PE cable, then side the door out.

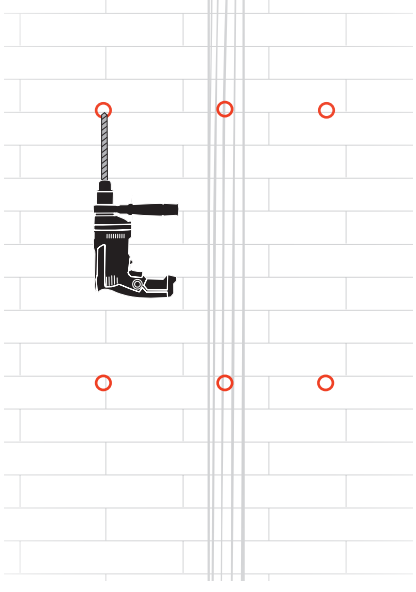


2 Mark the mounting hole on the stud using the marking-off temperate

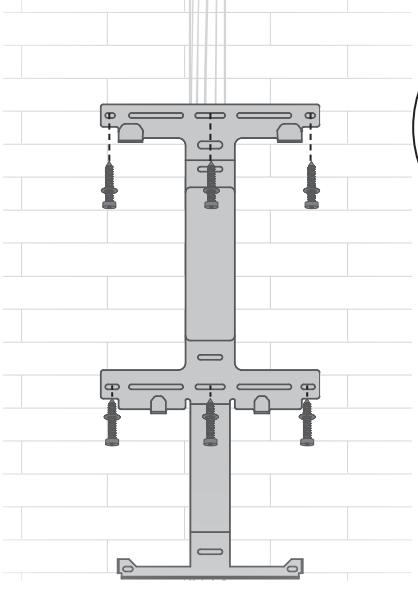


- Make sure the bracket is mounted on the stud.

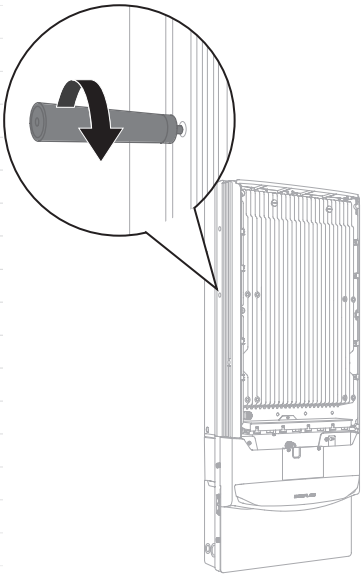
3 Drill the mounting holes using hammer-drill.



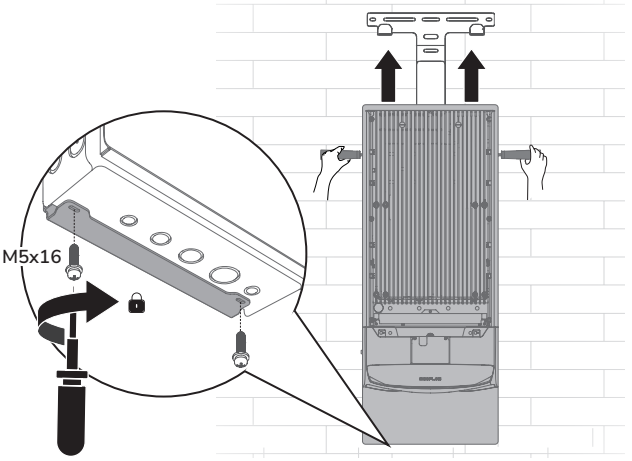
4 Secure the bracket using appropriate fasteners.



5 Tighten the screw-in handle to the inverter.



6 Position the inverter close to the wall and adjust the height of the inverter until its mounting cleats are just above the flanges on the bracket.
Lower the inverter until the top cleat engages the top&middle flange on the bracket and the bottom cleat aligns with the bottom flange.



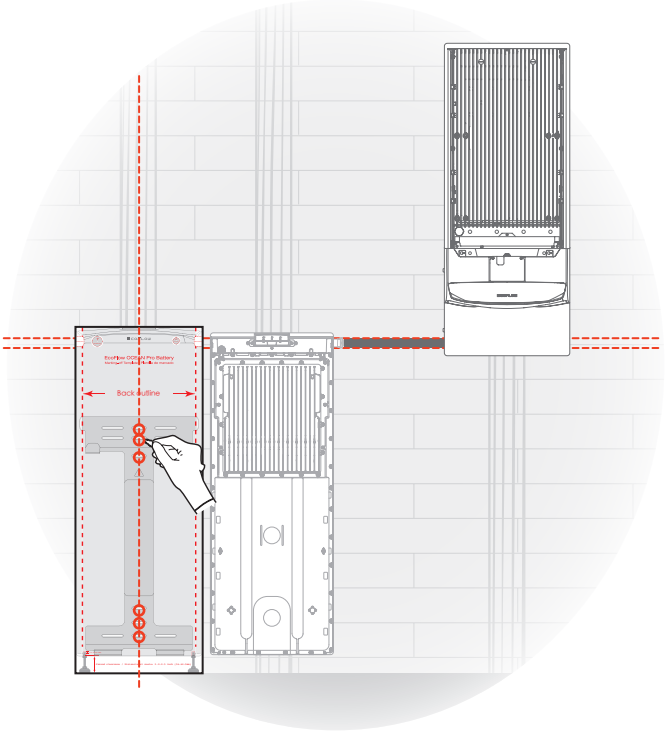
- Please remove the handles after the installation is complete.

I Installing Battery

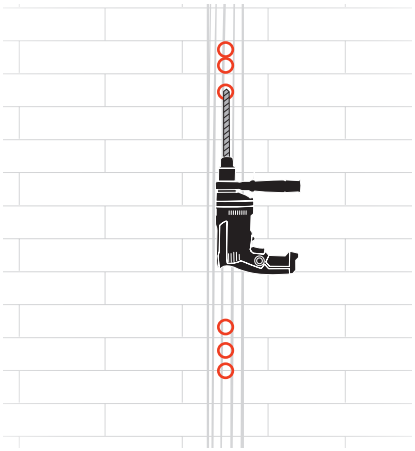
- The installation should be completed by at least 2 persons.
- Handles must be used while lifting the inverter or use a platform lifting device.
- If one side of the bracket is mounted on the sheathing instead of the stud, you are advised to secure that side using more screws, making it solid enough to bear the weight of the device.
- The mounting bracket anchoring details below are minimum guidelines and are rot guaranteed to be applicable. Refer to local building codes to ensure the use of appropriate fasteners.

- **WALL-MOUNTED INSTALLATION**

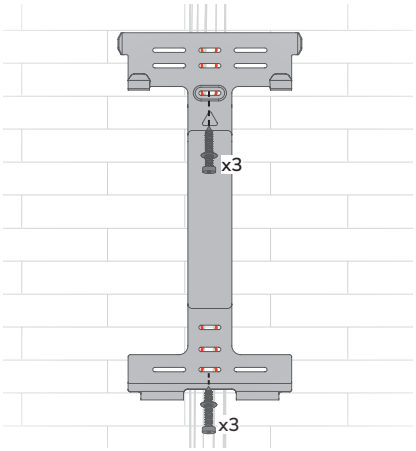
1 Mark the mounting hole on the stud using the marking-off temperate



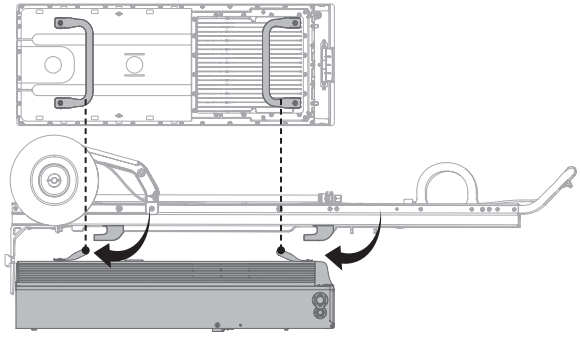
2 Drill the mounting holes using hammer-drill.

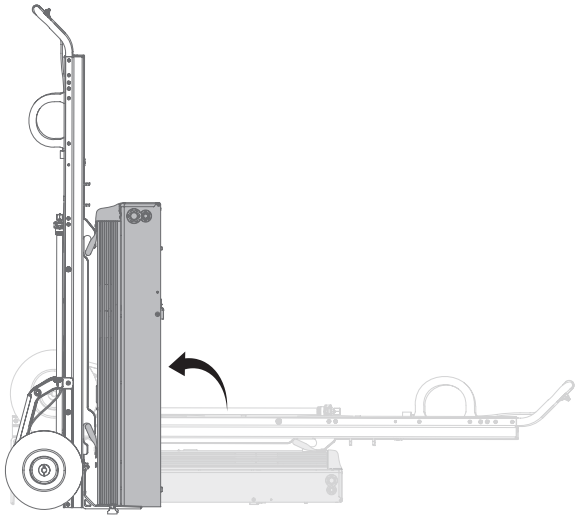


3 Secure the bracket using appropriate fasteners.

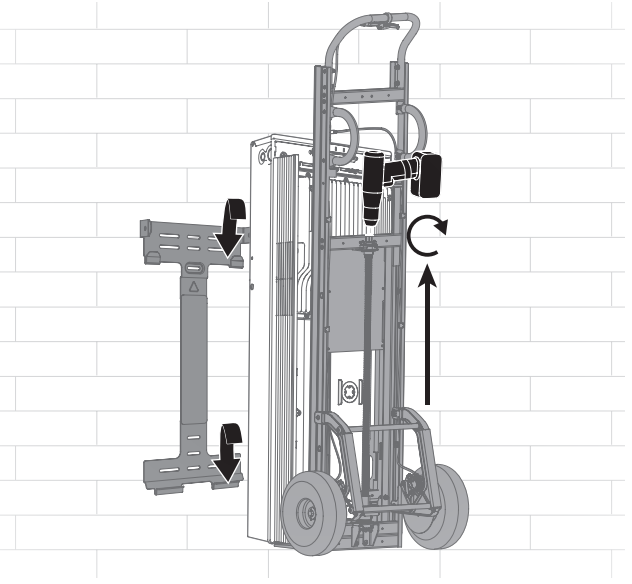


4 Mount the handles to the battery using the provided fasteners.
Slide the lifting device's hooks into place.

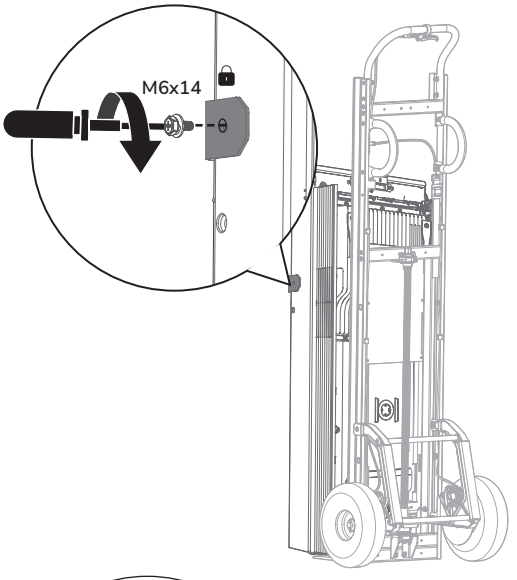




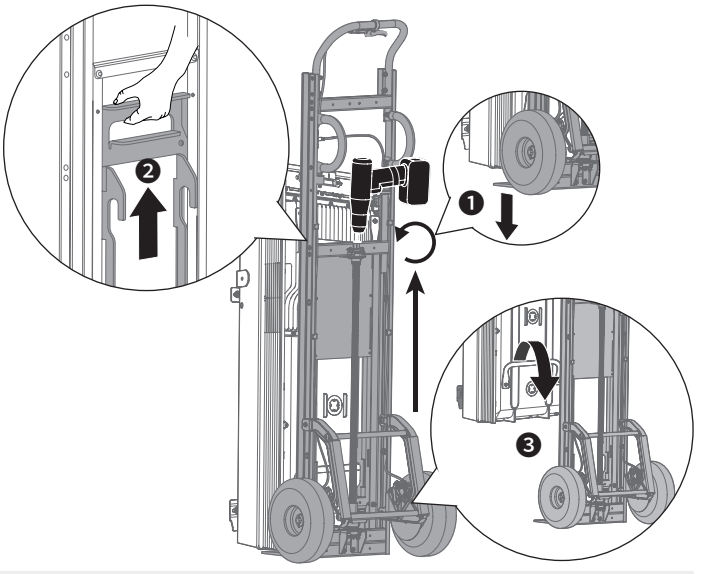
5 Using lifting device, position the battery close to the wall and adjust the height of the battery until its mounting cleats are just above the flanges on the bracket.
Lower the battery until the top cleat engages the top flange on the bracket and the bottom cleat aligns with the bottom flange.



6 Secure the bracket to the battery.



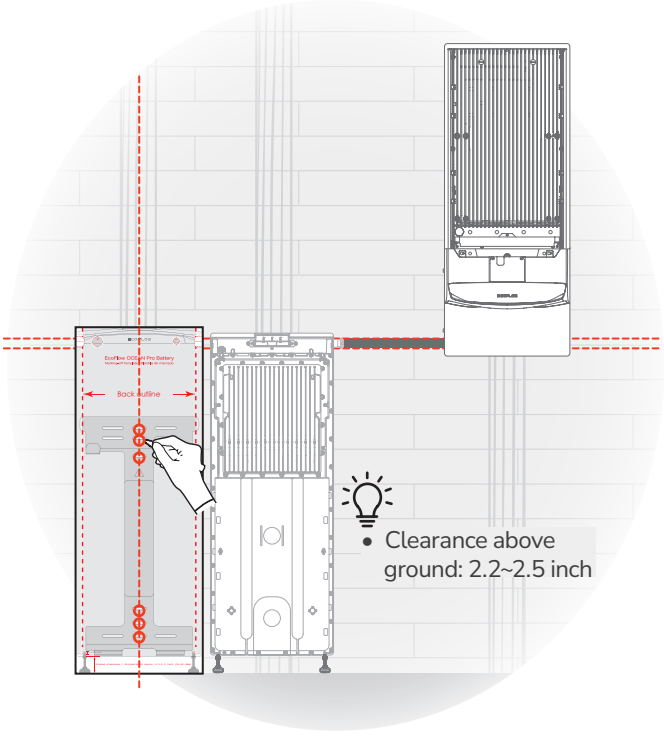
7 Remove the lifting device from the battery.



- Please remove the handles after the installation is complete.

- **(OPTIONAL) FLOOR-STAND INSTALLATION**

1 Mark the mounting hole on the stud using the marking-off temperate

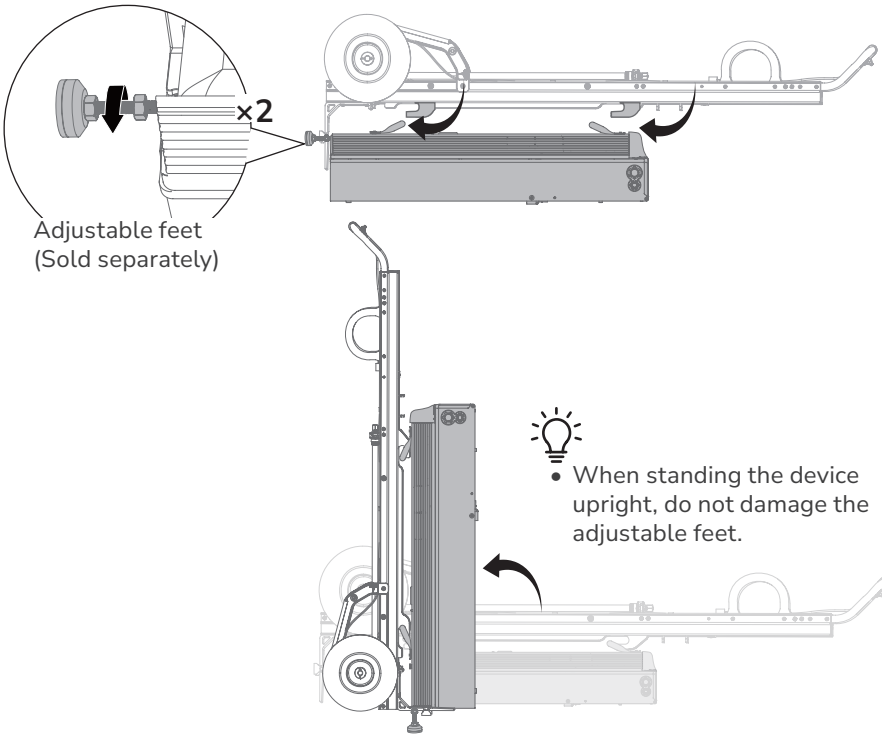


2 Drill the mounting holes using hammer-drill.

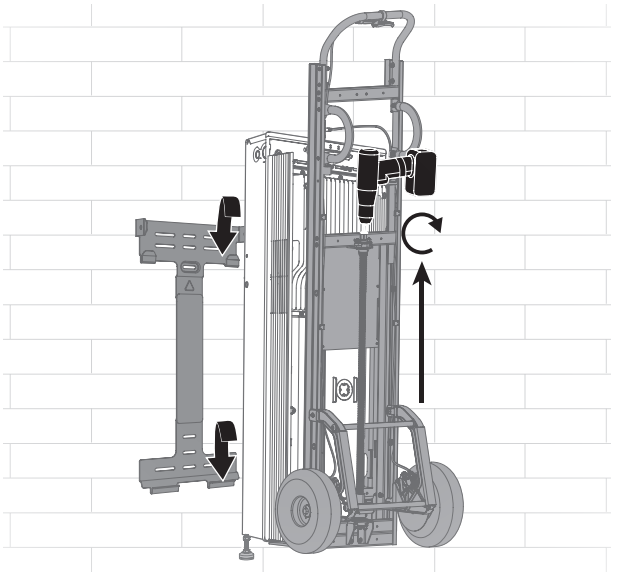
3 Secure the bracket using appropriate fasteners.

Please refer to the section **Wall-Mounted Installation**

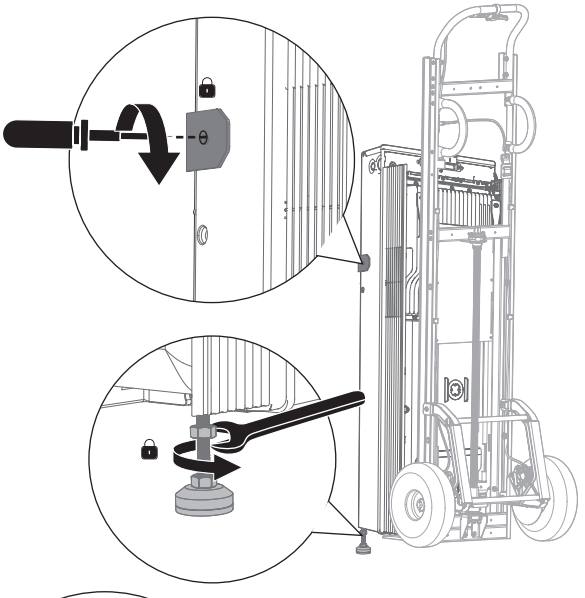
4 Mount the handles to the battery using the provided fasteners.
Slide the lifting device's hooks into place.



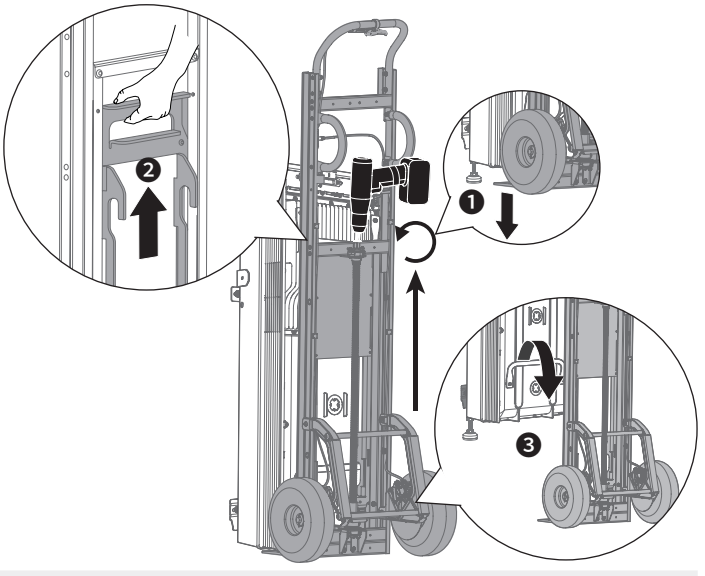
5 Using lifting device, position the battery close to the wall and adjust the height of the battery until its mounting cleats are just above the flanges on the bracket.
Lower the battery until the top cleat engages the top flange on the bracket and the bottom cleat aligns with the bottom flange.



6 Secure the bracket to the battery.



7 Remove the lifting device from the battery.



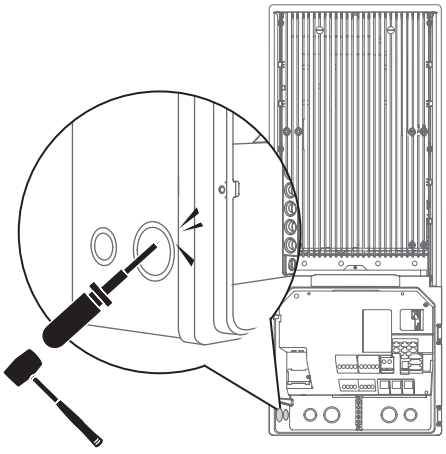
- Please remove the handles after the installation is complete.

Choose knockouts and install conduit

- Before removing knockouts, plan conduit routes and corresponding knockout locations and sizes on the enclosure. Be sure to allow adequate clearance for conduit routing and anchoring. Conduit installation must comply with applicable fill limits and electrical codes.
- Run conduit as needed and attach the conduit fitting to the wiring knockout then run the power / communication conductors and the equipment grounding conductor through the conduit or cable gland.
- Knockout on one side can either be used for only entry or exit of the cables. For example, if the cable is entering on the left side , then the cable outlet for the next unit in the circuit should always be on the right side and vice-versa.

- **ECOFLOW OCEAN PRO HYBRID INVERTER**

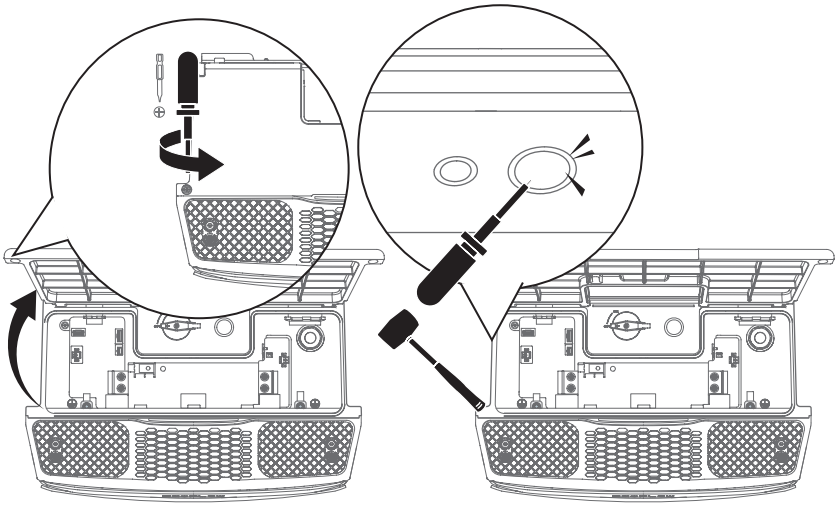
Choose side or bottom cable entry for inverter, then install conduits.



- **ECOFLOW OCEAN PRO BATTERY**

1 Open the compartment.

2 Choose side cable entry for battery, then install conduits.

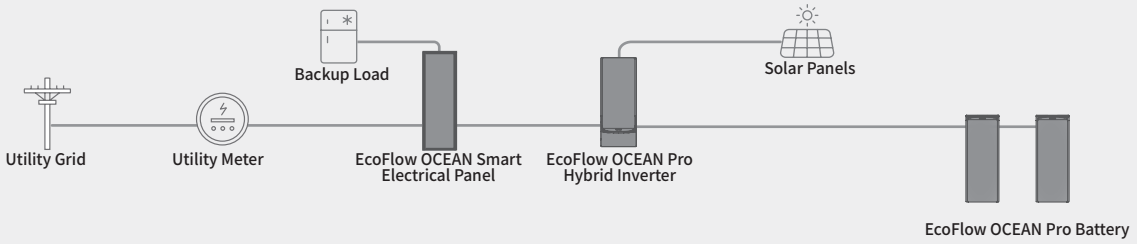


Electrical Connection

- All electrical connections must be carried out by a professionally trained and certified electrician.
- Please purchase cables that meet local certification standards.
- If there is faulty wiring, a system check after rewiring is required.
- The cable colors shown in the figures are for reference only. Select an appropriate cable according to the local standards.
- USE ONLY CU WIRE RATED TO MIN 90°C.

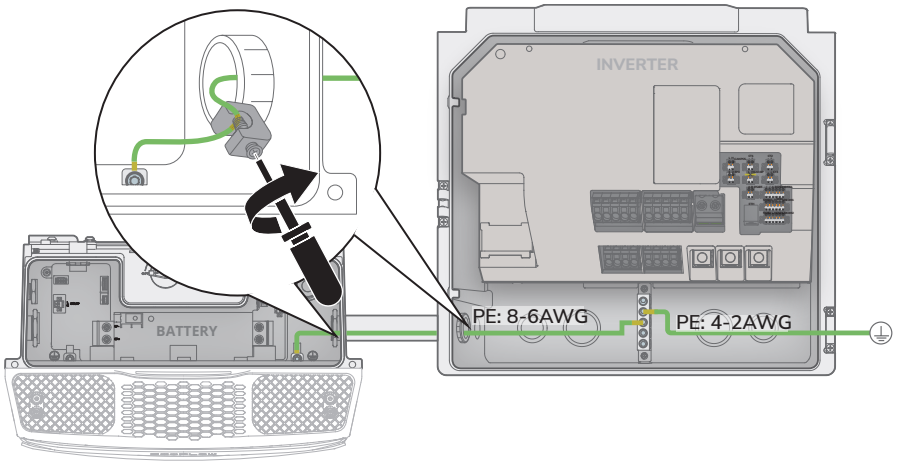
Whole Home Backup 1

In this setup, the grid connection status of the inverter is switched by using the smart electrical panel.

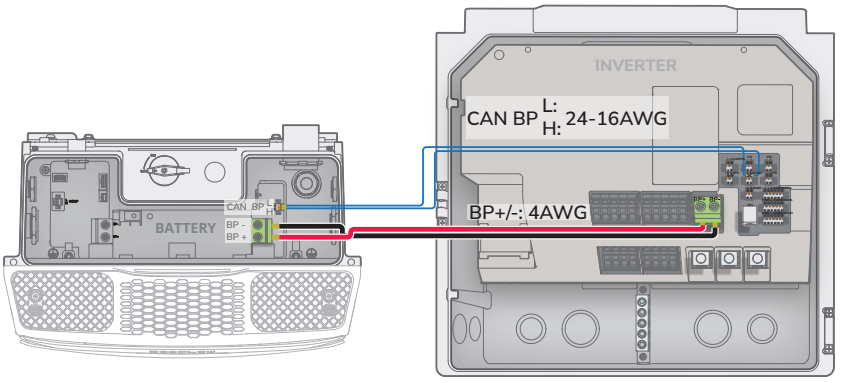


- **MAKE GROUND CONNECTION**

- The conduit should be grounded.

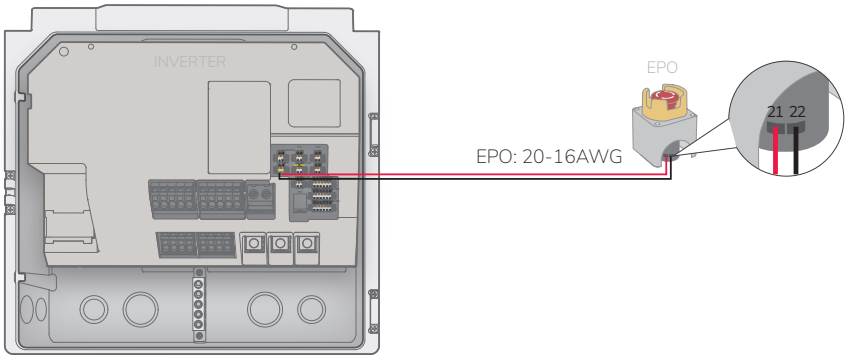


- **WIRING BETWEEN THE INVERTER AND THE BATTERY.**



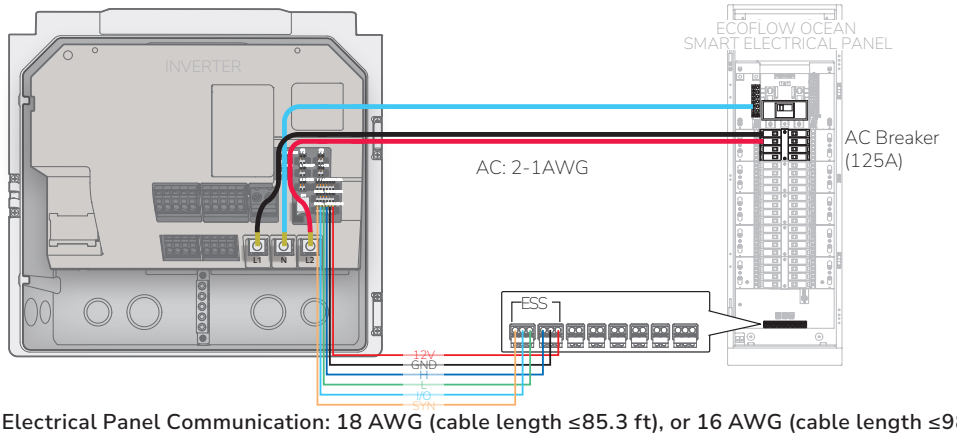
- **INSTALLING EMERGENCY POWER OFF BUTTON**

- The Emergency Power Off button is required to be installed in a visible and accessible position without any obstruction.



- **WIRING BETWEEN THE INVERTER AND THE ELECTRICAL PANEL.**

- Remove the termination resistor to use COM1/COM2 terminal, which should not be removed if they are not in use.

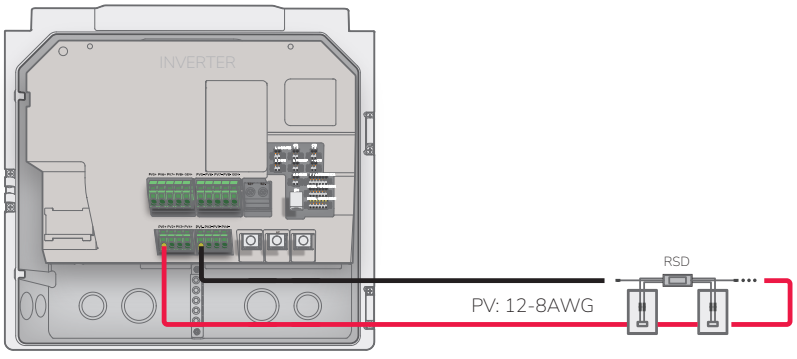


Electrical Panel Communication: 18 AWG (cable length ≤85.3 ft), or 16 AWG (cable length ≤98.4 ft)
Pole H and pole L: use twisted pair cable

- **CONNECTING SOLAR PANELS.**

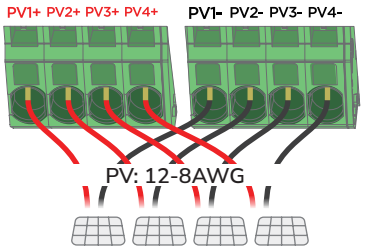
The inverter provides 8 PV terminals, which are controlled by its 2 PV switches. PV SWITCH (PV1-4) controls PV terminals 1–4, and PV SWITCH (PV5-8/GENERATOR) controls PV terminals 5–8.
The PV Switch 2 can not be turned off when using a portable generator.

- Confirm lack of voltage at the PV terminals before making any PV circuit connections.
- Use a multimeter to check PV terminal voltage for reverse connection.



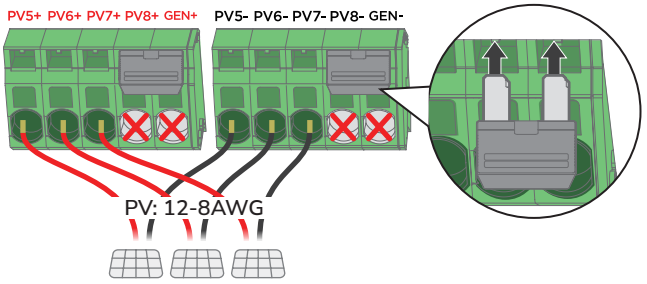
- **FOR A STRING WITH IMP ≤ 16 A**

Connect the strings to terminals [PV1+ and PV1-], [PV2+ and PV2-], [PV3+ and PV3-], or [PV4+ and PV4-].

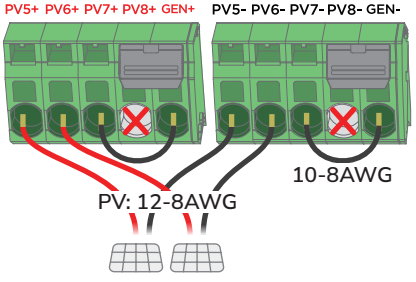


If PV5-PV8 terminals are used for solar power expansion, please remove the factory-installed jumpers (5-pin), then install the PV cables according to the following diagram, **a shorting wire (not included)** is required for field installation. **Otherwise, the charging function of the portable generator (if there is any) will fail.**

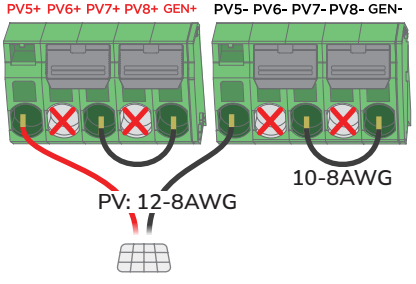
Optional 1



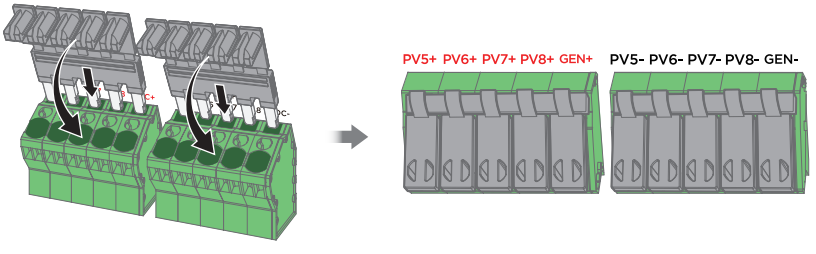
Optional 2



Optional 3



Optional 4



- The PV5-PV8 terminals cannot be used to connect parallel-connected solar panels.
- When all the PV5 - PV8 ports are used to connect solar panels, the generator interface will be disabled.

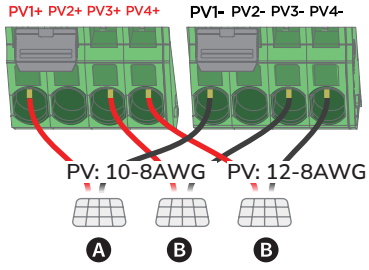
- **FOR A STRING WITH IMP > 16 A**

Where the PV input current exceeds the maximum current rating per MPPT (IMP) of 16 A, 2-pin jumpers can be used to parallel MPPTs to double the total PV input current capacity to 32 A.

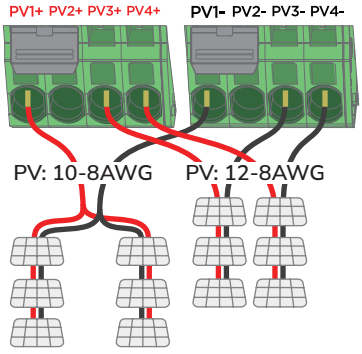
1. Connect the string to terminals [PV1+ and PV1-], or [PV3+ and PV3-].
2. Install a jumper to combine the MPPTs. Combine PV1 and PV2 (installing jumpers from 1+ to 2+ and from 1- to 2-) or combine PV3 and PV4 (installing jumpers from 3+ to 4+ and 3- to 4-).

Ⓐ in the following diagrams represents a string where IMP > 16A, so jumpers are installed from MPPT 1 to MPPT 2.

Ⓑ in the following diagrams represents a single string where IMP < 16A, so no jumpers are required.



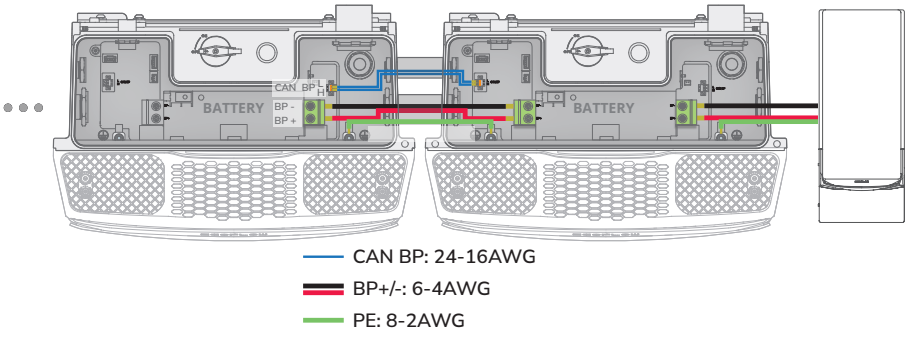
- The PV1-PV4 terminals can be used to connect series/parallel-connected solar panels.



- **WIRING BETWEEN SIDE-BY-SIDE BATTERY**

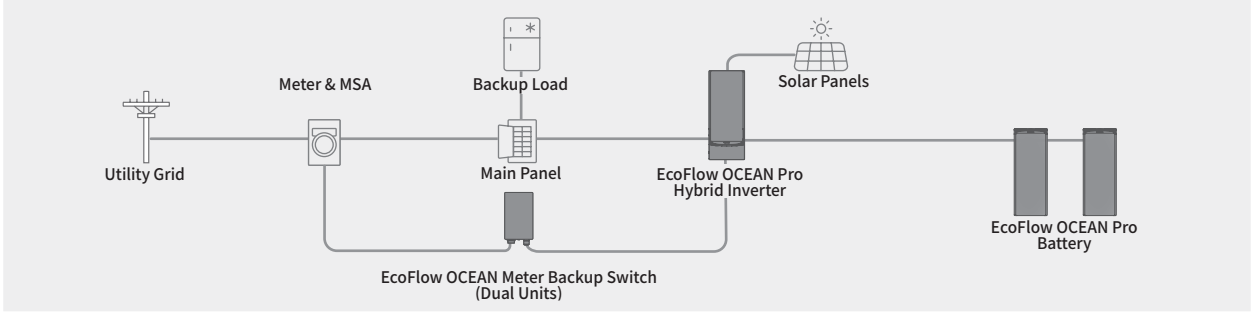
- UP to 8 battery units supported by 1 inverter

- Remove the termination resistor to use CAN BP terminals, which should not be removed if they are not in use.



Whole Home Backup 2

In this setup, the grid connection status of the inverter is switched by using the Meter Backup Switch.



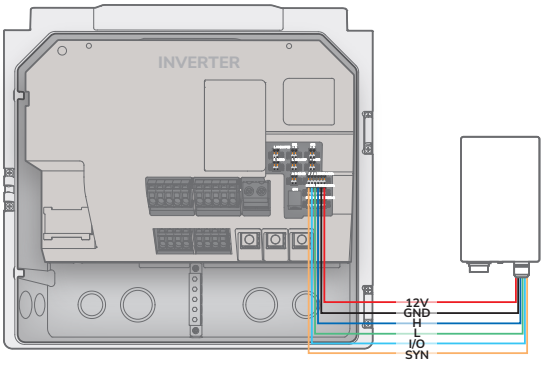
- **WIRING BETWEEN THE INVERTER AND THE BATTERY.**

Please refer to the section **Whole Home Backup 1.**

- **CONNECTING SOLAR PANELS.**

Please refer to the section **Whole Home Backup 1.**

- **WIRING BETWEEN THE INVERTER AND THE MBS-.**



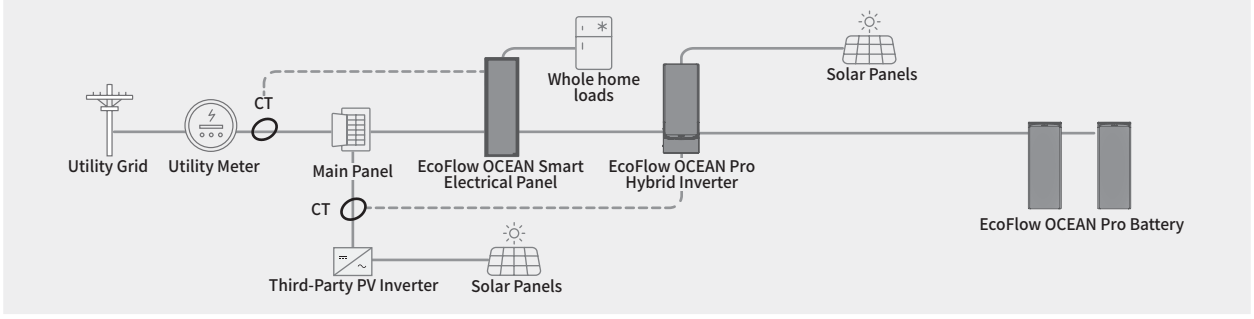
MBS: 24-16AWG Pole H and pole L: use twisted pair cable

- **WIRING BETWEEN SIDE-BY-SIDE BATTERY**

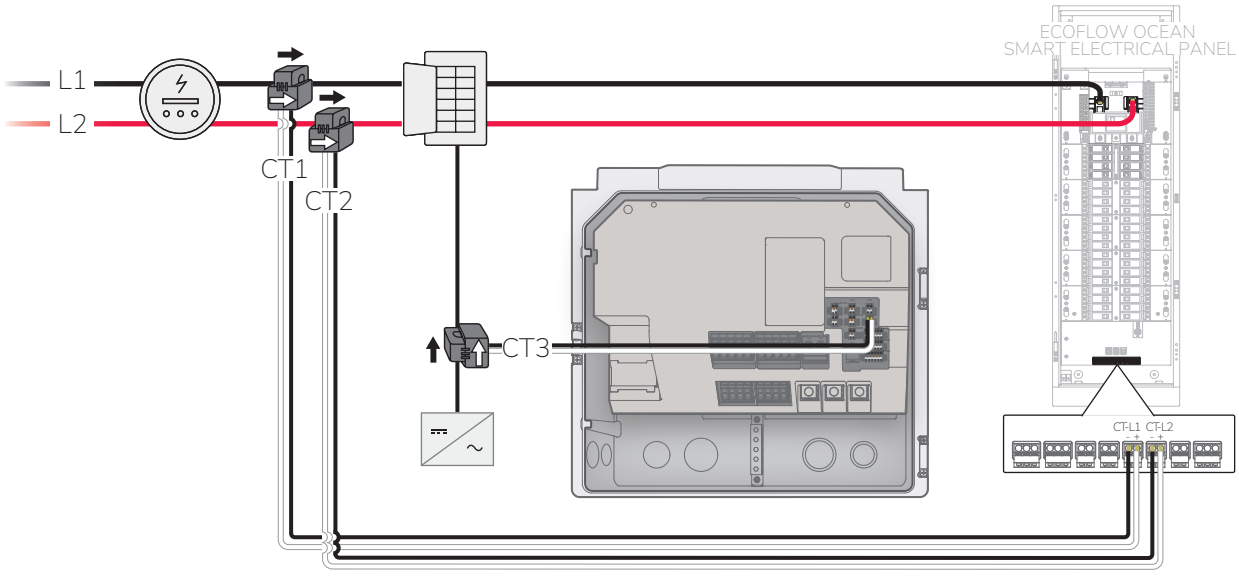
Please refer to the section **Whole Home Backup 1.**

Whole Home Backup 3

This Ocean Pro system can be integrated with the existing PV system, making it a new system for whole home backup. In this setup, 3 current transformers (CTs (not included)) are required to be connected respectively to CT1/2 terminal of the OCEAN panel and CT3 terminal of the OCEAN Pro inverter, which make metering simple with their built-in meters, to monitor production from the existing PV system. The grid connection status of the inverter is switched by using the smart electrical panel.

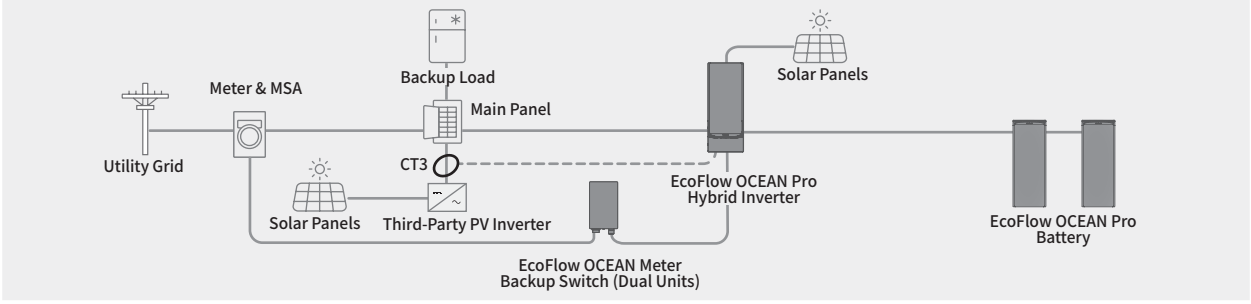


- **INSTALL CTs**

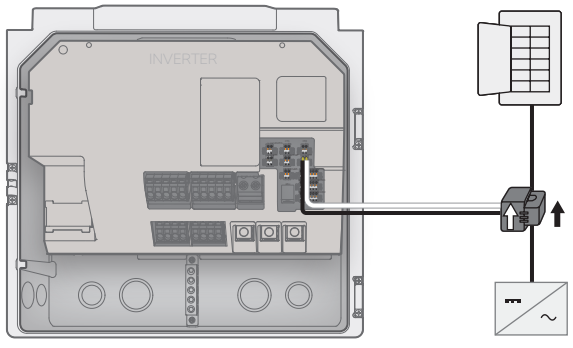


Whole Home Backup 4

This Ocean Pro system can be integrated with the existing PV system, making it a new system for whole home backup. In this setup, 1 current transformer (CT (not included)) is required to be connected to CT3 terminal of the OCEAN Pro inverter, which make metering simple with its built-in meter, to monitor production from the existing PV system. The grid connection status of the inverter is switched by using the Meter Backup Switch.



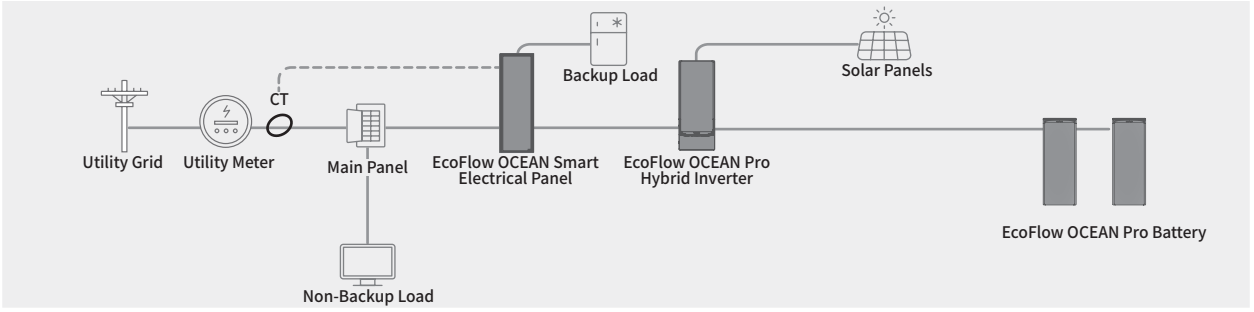
- **INSTALL CT**



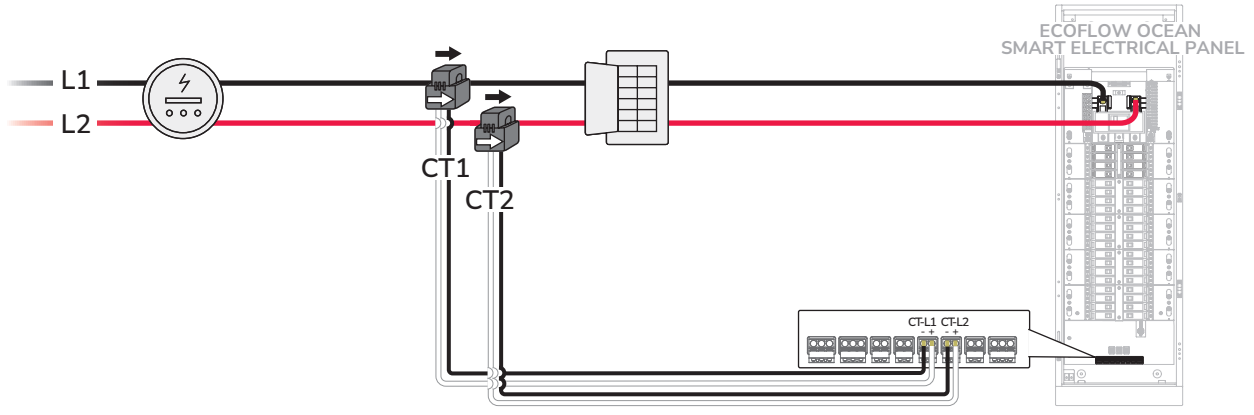
Partial Home Backup

A partial-home backup only backs up a portion of the home, typically the most critical circuits (such as the fridge, internet, lights, etc.). The backed up circuits are disconnected from the grid and are energized by the micro-grid created by the battery system.

In this setup, 2 current transformers (CTs (not included)) are required to be connected respectively to CT1/2 terminal of the OCEAN panel, which make metering simple with their built-in meters, to monitor grid consumption. The grid connection status of the inverter is switched by using the smart electrical panel.



- **INSTALL CTs**



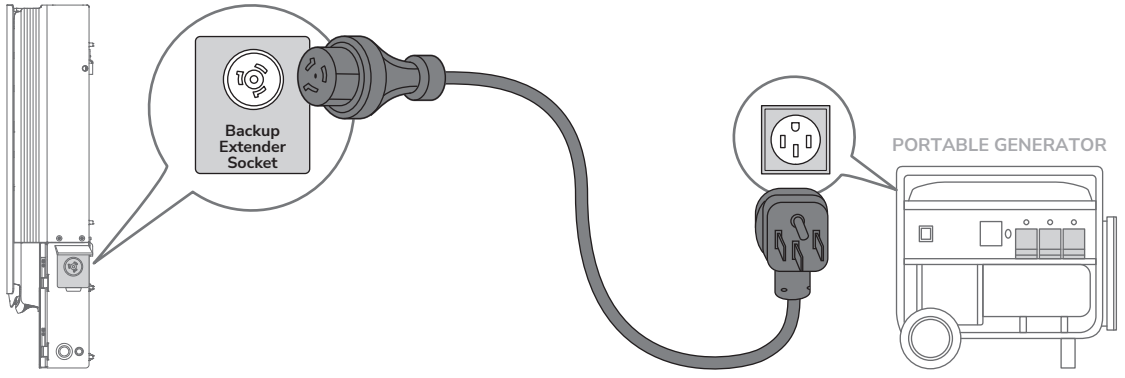
Use with Portable Generator

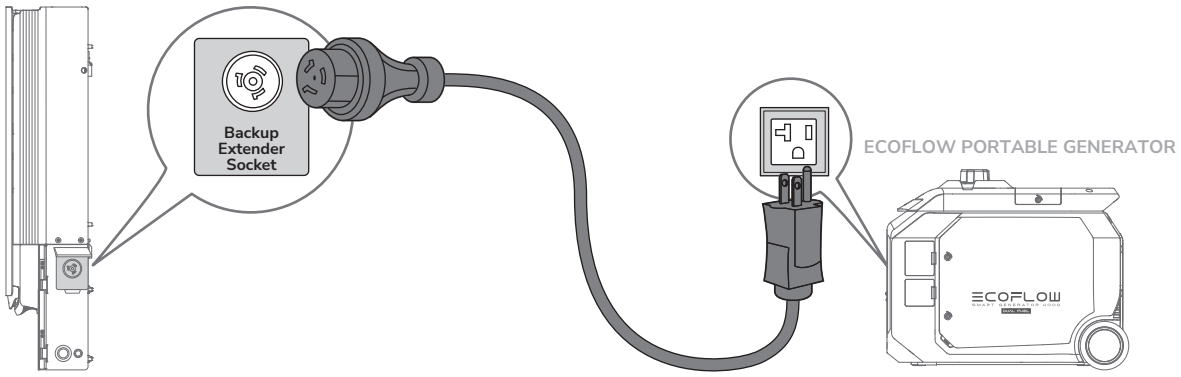
- The PV SWITCH 2 cannot be turned off when using with a portable generator..

Use this Ocean Pro system and EcoFlow portable generator or third-party portable generator to build a backup system and enhance home's energy efficiency. Directly connect the portable generator to the Backup Extender Socket of the inverter using an EcoFlow 50 Amp NEMA 14-50P TO SS2-50R Generator Cord (15 Feet) or a NEMA 5-15P to NEMA SS2-50R Electrical Power Adapter, then turn on the portable generator. The OCEAN Pro inverter supports a generator input specification of 2.5-10kW.

This setup can provide continuous power in case of a power outage or insufficient sunlight. In this setup, once power is restored after an outage, the homeowner will be notified by the EcoFlow App that the grid has been restored and is requested to turn off the generator. Disconnect the portable generator from the inverter after turning it off.

- **MAKE ELECTRICAL CONNECTION BETWEEN ECOFLOW OCEAN PRO HYBRID INVERTER AND PORTABLE GENERATOR**



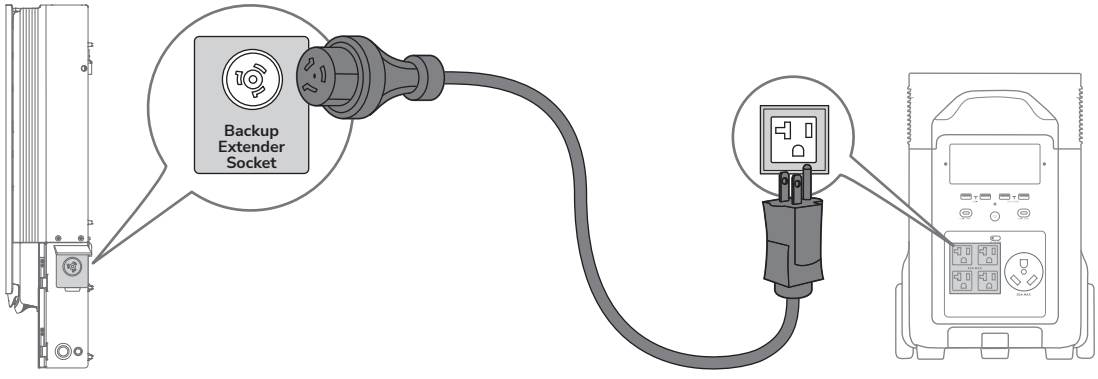


Use with EcoFlow Portable Power Station (PPS)

Connect this Ocean Pro system to an EcoFlow portable power station using an EcoFlow 50 Amp NEMA 14-50P TO SS2-50R Generator Cord (15 Feet). In this setup, the power from the portable power station will first be provided to the loads and then charge the battery.

Only DELTA Pro Ultra can be paired with OCEAN Pro system by connecting to the OCEAN Panel through the EcoFlow Smart Inlet Box, while other PPS products should be directly connected to the inverter through the Backup Extender Socket, in this setup, the portable power station is not controlled by the OCEAN Pro system, which is equivalent to just discharging a battery.

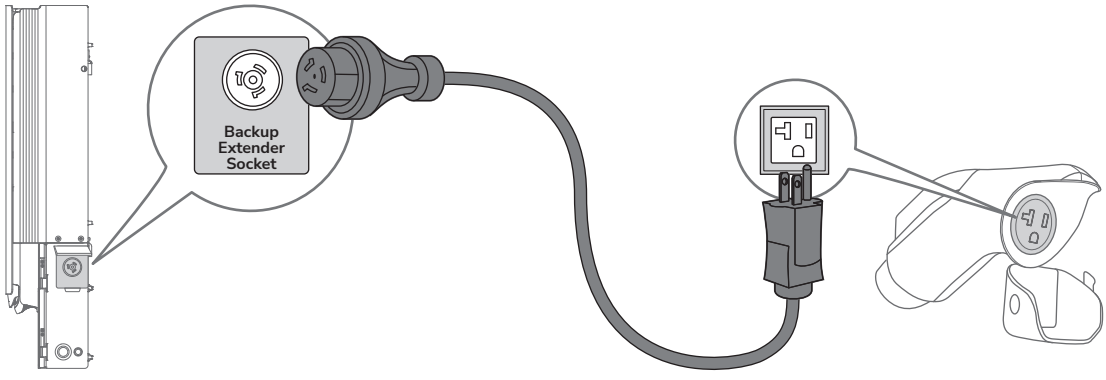
- **MAKE ELECTRICAL CONNECTION BETWEEN ECOFLOW OCEAN PRO HYBRID INVERTER AND ECOFLOW PORTABLE POWER STATION**



Use with V2L Electric Vehicles

Connect this Ocean Pro system to an V2L Electric Vehicle using an EcoFlow 50 Amp NEMA 14-50P TO SS2-50R Generator Cord (15 Feet). Please make sure that the cable is securely connected to the Backup Extender Socket. In this setup, the power from the portable power station will first be provided to the loads and then charge the battery.

- **MAKE ELECTRICAL CONNECTION BETWEEN ECOFLOW OCEAN PRO HYBRID INVERTER AND V2L ELECTRIC VEHICLES**

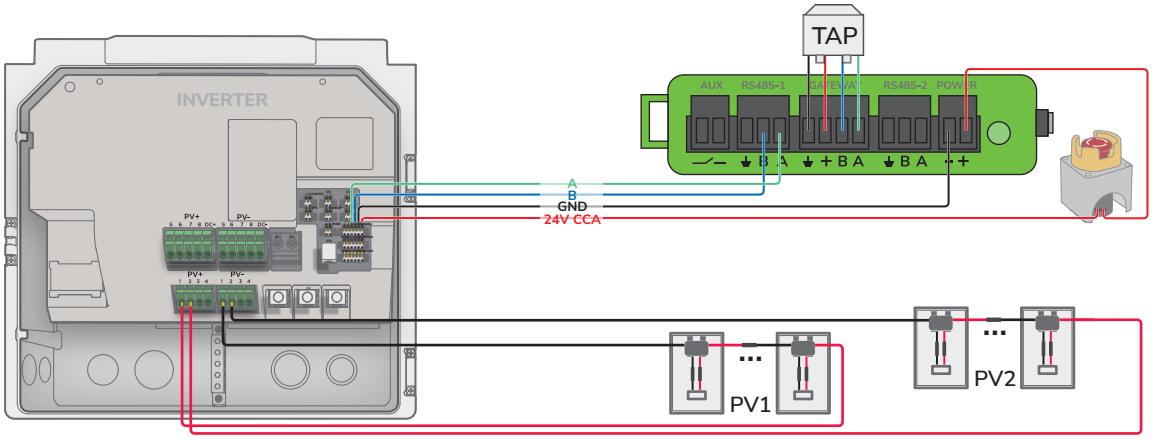


(Optional) Install TIGO Optimizer

This Ocean Pro system is compatible with TIGO optimizer (TS4), which gets the maximum energy output from your array and minimize the losses from shading, module mismatch, degradation.

Tigo TS4 units are connected to each module. Tigo's Cloud Connect Advanced (CCA) is the data hub for TS4s and other devices (inverter, battery, etc.). It connects with an RS485 cable to the TAP which wirelessly communicates with TS4s.

- **MAKE ELECTRICAL CONNECTION BETWEEN ECOFLOW OCEAN PRO HYBRID INVERTER AND TIGO OPTIMIZER**



Complete installation

Plan Internet Connection.

There are three methods to allow you to make an internet connection for your energy storage system:
1. Wi-Fi
2. Ethernet
3. 4G

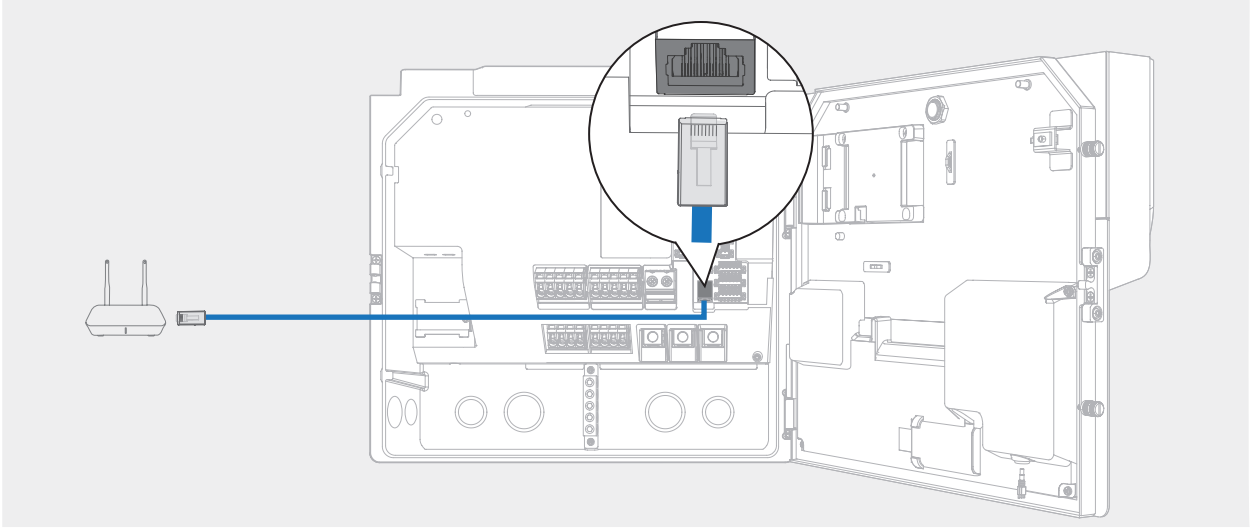
Once E7 has been registered via the EcoFlow App/Pro App, installers or end-users can configure and manage the three internet connections using the the EcoFlow App/Pro App.

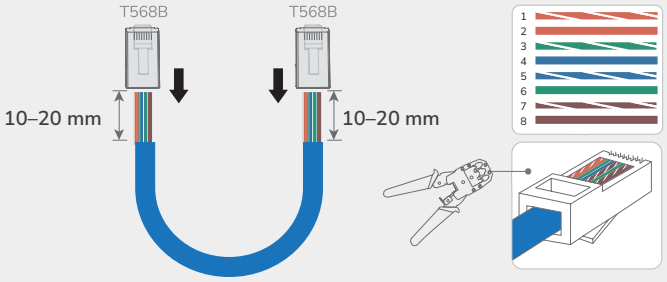
- **METHOD 1: WI-FI.**

See the section System Commissioning Via EcoFlow App on Page 23.

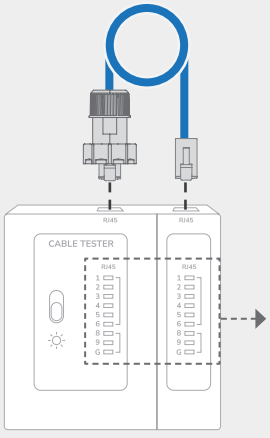
- **METHOD 2: CONNECT NETWORK CABLE.**

For installation sites without a strong Wi-Fi connection, install an Ethernet connection as follows.

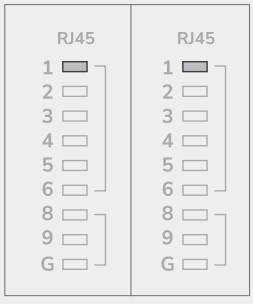




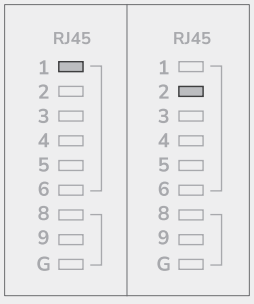
Test network cable connection. If the LEDs of the two RJ45 ports light up in sequence, it indicates that the network cable is correctly wired and should be fully operational.



Ethernet Cable Tester



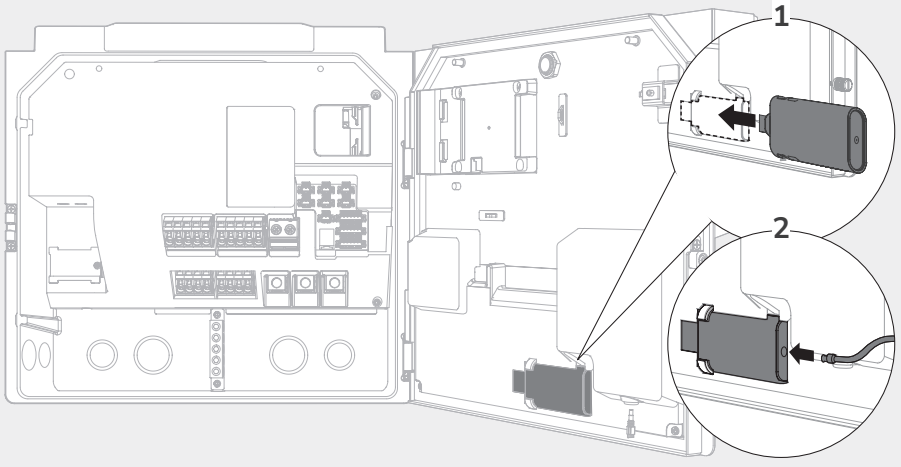
Ideal connection



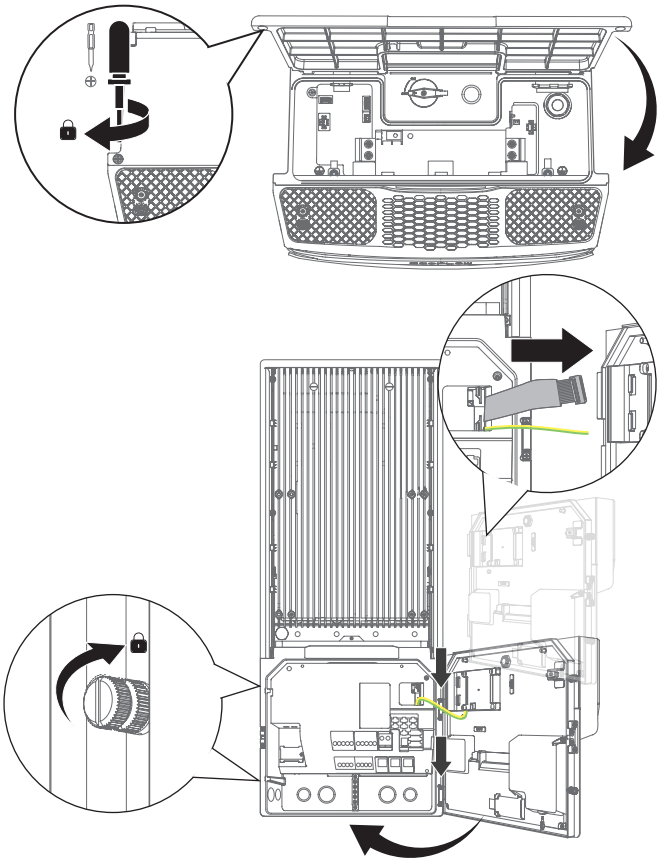
Incorrect wiring standard

Poor connection

- **(OPTIONAL) INSTALL 4G DONGLE (SOLD SEPARATELY).**

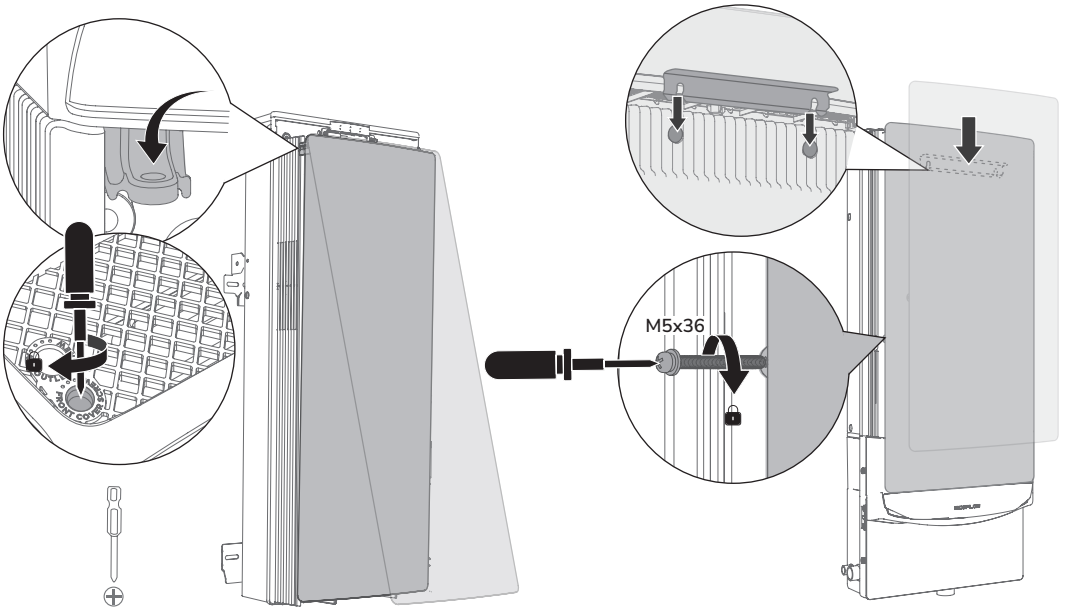


Close the wiring compartments



- Slide the door into place, then reconnect the cable.

Install the front covers



System Power-On

I Check before Power On

	Check Item	Acceptance criteria
☐	**Equipments**	Equipments are installed correctly and securely.
☐	**Grounding**	The PE cable is connected correctly, securely, and reliably.
☐	**Switch**	All the switches connecting to the system are OFF.
☐	**Cable connection**	Please make sure there are no exposed cables in the entire system.
☐	**Wiring compartments**	Please ensure that all the wiring compartments of the products are closed and locked.

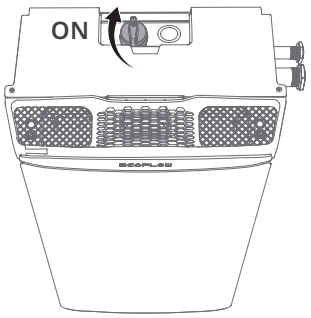
I Power on

Observe the dispaly screen to check the inverter operating status.

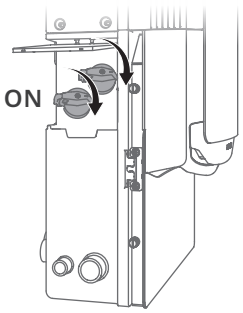
- If a second black-start is required, please wait for 10 seconds and then operate again.

- **ON GRID**

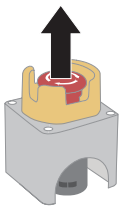
1 Set the BATTERY SWITCH to **ON** position.



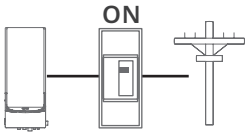
2 Set the PV SWITCH to **ON** position.



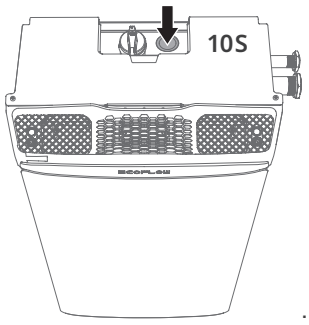
3 Confirm that the EPO is in an closed-circuit state.



4 Turn on the AC switch between the inverter and the power grid.



5 (ONTIONAL: For off-grid scenario only)
Press and hold the button for 10 seconds until the indicator is on.



POWER-OFF PROCEDURE

1. Push the Emergency Power-Off button to shut down the system.
2. Turn off the AC switch between the inverter and the power grid.
3. Set the PV SWITCH to OFF position.
4. Set the BATTERY SWITCH to OFF position.

- After the system powers off, use a multimeter to confirm no AC/DC power is present, then carry out maintenance work.

System Commissioning Via EcoFlow App

1 DOWNLOAD AND INSTALL ECOFLOW PRO APP (FOR INSTALLER ONLY)

Scan the QR code or download at:
https: //download.ecoflow.com/ecoflowproapp

- Only installers certified under EcoFlow will have access to the installation and commissioning app.

EcoFlow Pro
Available on the Google Play
Download on the App Store

2 DOWNLOAD AND INSTALL ECOFLOW APP (HOMEOWNER)

Scan the QR code or download at:
https://download.ecoflow.com/app

EcoFlow App
Available on the Google Play
Download on the App Store

3 SCAN THE QR CODE FOR COMMISSIONING TUTORIAL AND OTHER OPERATIONS.

https://pro-portal.ecoflow.com/pro/us/en/main/learnCenter/capabilityInfo?capabilityId=1945329947133939713