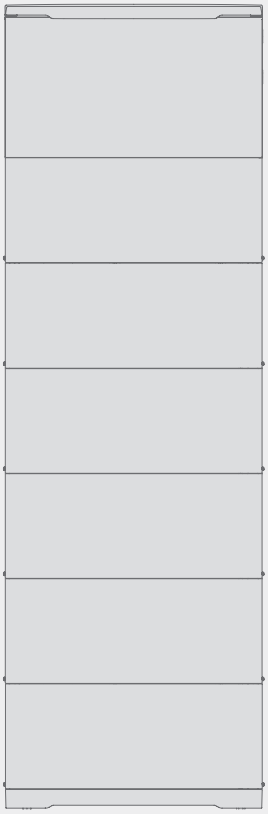
INSTALLATION GUIDE

V1.5

Issue Date: 2026-09-02

ECOFLOW OCEAN 2 THREE-PHASE
Solar Battery Storage Solution



Installation Guide

User Manual

For the latest documents, please scan the QR code.

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Disclaimer

This product includes essential printed documentation required for setup and basic usage. For detailed manuals, resources, and the most up-to-date information about the product, visit http://energy.ecoflow.com/eu/documentation/. Fully read and understand the product documentation prior to use. Improper use may result in serious injury, damage, or property loss. By using this product, you agree to and accept all terms outlined in the product documentation. EcoFlow is not liable for losses, damages, or injuries caused by misuse or non-compliance.

Safety Instructions

Symbol Conventions

Symbol	Description
DANGER	Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
CAUTION	Indicates a risk of electric shock.
WARNING	Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
CAUTION	Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
NOTICE	Indicates a potential hazard which, if not avoided, could result in equipment damage, data loss, performance deterioration, or unanticipated results. **NOTICE** is used to address practices not related to personal injury.
	Indicates additional information that promotes understanding of the product or a topic.

Safety Symbols

Icon	Name	Meaning
	Caution	Caution, risk of danger.
	Electric shock warning	Caution, risk of electric shock.
5 perc	Delayed discharge	Danger to life due to high voltages in the inverter; observe a waiting time of 5 minutes. High voltages that can cause lethal electric shocks are present in the live components of the inverter. Prior to performing any work on the inverter, disconnect it from all voltage sources as described in this document.
	Burn warning	Do not touch a running equipment because the enclosure is hot when the equipment is running.
	Refer to documentation	Reminds operators to refer to the documents delivered with the equipment.
	Grounding	Indicates the position for connecting the protective earthing (PE) cable.
	Symbol of a crossed-out trash can	WEEE designation Do not dispose of the product together with the household waste but in accordance with the disposal regulations for electronic waste applicable at the installation site.
CE	CE marking	The product complies with the requirements of the applicable EU directives.

Important safety instructions

- **GENERAL REQUIREMENTS**

DANGER

1. Do not work with power on during installation.
2. Before installing, operating, and maintaining the equipment, read and follow up the installation guide and safety instructions.
3. 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.
4. Installation, operation and maintenance must be carried out by trained and qualified personnel who understand all safety precautions , are capable of performing all operations correctly, and hold all legally required national qualifications for special operations, such as high-voltage operation, working at heights, and the operation of special equipment.
5. Before installing, operating, and maintaining the equipment, always disconnect it from all power sources.
6. Wear proper PPE (Personal protective equipment) before any operations.

WARNING

When the photovoltaic array is exposed to light, it supplies a d.c. voltage to the PCE.

CAUTION

The product must only be operated with PV modules of protection class II in accordance with IEC 61730, application class A. The PV modules must be compatible with this product. Do not ground the PV array positive/negative hole.

1. If the power cord of this equipment is damaged, it must be replaced by the manufacturer, customer service department or qualified personnel to prevent a safety hazard.
2. Do not touch the exposed cable with your hands.
3. Make sure the cables, connectors and ports are dry before starting up the equipment. Make sure all three are connected securely.
4. Do not install, use, or operate outdoor equipment and cables in harsh weather conditions such as lightning, rain, snow, and level 6 or stronger wind.
5. Tighten the screws to the specified torque using tools when installing the equipment.
6. After installing the equipment, remove the remnants of the device installation area, such as cardboard boxes, foam, plastic, wire ties, stripped insulation materials, etc.
7. All warning label and nameplates on the equipment should be visible after installation is complete. Do not scrawl, damage, or block any warning label on the device.
8. Understand the components and functioning of a grid-tied PV power system and relevant local standards.
9. Do not reverse engineer, decompile, disassemble, adapt, add code to the device software or alter the device software in any other way. Any other operation that violates the original design specifications of the device hardware and software is not allowed.
10. If there is a probability of personal injury or equipment damage during operations on the equipment, immediately stop the operations, take feasible protective measures.
11. Do not touch the energized equipment, as the enclosure is hot.
12. Before installing PV modules, please read its user manual carefully.
13. The system is not suitable for power supplying life-sustaining medical devices. It cannot guarantee backup power in all circumstances.
14. Do not connect loads between the inverter and the AC switch that directly connects to the inverter.

- **ELECTRICAL SAFETY REQUIREMENTS**

Grounding

1. For the equipment that needs to be grounded, install the ground cable first when installing the equipment and remove the ground cable last when removing the equipment.
2. Ground the PE hole of GRID connector, BACKUP connector and the equipment enclosure.
3. Do not damage the grounding conductor.
4. Do not operate the equipment in the absence of a properly installed grounding conductor.
5. Ensure that the equipment is connected permanently to the protective ground. Before operating the equipment, check its electrical connection to ensure that it is securely grounded.

General Requirements

DANGER

Before connecting cables, ensure that the equipment is intact. Otherwise, electric shocks or fire may occur.

1. Ensure that all electrical connections comply with local electrical standards.
2. Obtain approval from the local electric utility company before using the equipment in grid-tied mode.
3. Ensure that the cables installer prepared meet local regulations.
4. Use dedicated insulated tools when performing high-voltage operations.
5. Before connecting a power cable, check that the label on the power cable is correct. When fabricating cables and installing connectors on site, follow the respective instructions in this manual and the requirements of local laws and regulations.
6. Before operating the equipment, disconnect all power to the equipment and wait for the corresponding delayed discharge time to ensure that the equipment is completely deenergized.

Cabling

1. The cabling path must avoid the equipment cooling system and parts.
2. When routing cables, ensure that a distance of at least 30 mm exists between the cables and heat-generating components or areas. This prevents damage to the insulation layer of the cables.

3. Bind cables of the same type together. Mutual entanglement or cross-deployment is not allowed.
4. Ensure that the cables used in a grid-tied PV power system are properly connected and insulated and meet specifications.

- **INSTALLATION ENVIRONMENT REQUIREMENTS**
  1. Ensure that the equipment is installed in a well ventilated environment.
  2. To prevent fire due to high temperature, ensure that the ventilation vents or heat dissipation system are not blocked when the equipment is under operation.
  3. Do not expose the equipment to flammable or explosive gas or smoke. Do not perform any operation on the equipment in such environments.
  4. Do not place the equipment next to any heat source, fire source, or water source, and not to perform any operation on the equipment next to that heat source, fire source, or water source.

- **EQUIPMENT AND PERSONNEL SAFETY REQUIREMENTS**

  ### Move the inverter and battery
  1. When moving the equipment by hand, wear protective gloves to prevent injuries.
  2. Move the equipment with precaution as it is heavy. Two or more people are needed to assist in moving the equipment.
  3. Always be aware of the weight of the inverter and the battery.
  4. Avoid dropping the inverter or battery, or subjecting them to mechanical impact.
  5. Do not place the inverter or battery directly on a hard surface. Place protective materials such as a sponge pad or foam cushion underneath to prevent damage to the metal enclosure.
  6. Lift the inverter and the battery by holding both sides or its handles. Do not hold the terminals directly. Do not hold the terminals directly. Place protective materials, such as a sponge pad or foam cushion, underneath the terminals to prevent damage.
  7. Move and install the battery in an upright position. Do not place the battery upside down or tilt it.
  8. Do not release your the battery or inverter until it is placed securely and stably.

  ### Drilling Holes
  1. Wear goggles and protective gloves when drilling holes.
  2. When drilling holes, protect the equipment from shavings or dust. After drilling, clean up any shavings or dust that have accumulated at the installation site in a timely manner, otherwise, it may block the drilled hole.

- **GROUNDING CONDUCTOR MONITORING**
  1. The inverter is equipped with a grounding conductor monitoring device. This grounding conductor monitoring device detects when there is no grounding conductor connected and disconnects the inverter from the utility grid if this is the case. Depending on the installation site and grid configuration, it may be advisable to disable the grounding conductor monitoring. This can be necessary, if there is no neutral conductor present and you intend to install the inverter between two line conductors.
  2. Grounding conductor monitoring must be disabled after initial start-up depending on the grid configuration. Safety in accordance with IEC 62109 when the grounding conductor monitoring is deactivated. In order to guarantee safety in accordance with IEC 62109 when the grounding conductor monitoring is deactivated, you have to connect an additional grounding conductor to the inverter.
  3. Connect an additional grounding conductor that has an cross-section of at least 10 mm^2. Ground the PE hole of GRID connector and the equipment enclosure.



- **DISPOSAL**

  This marking indicates that this product should not be disposed of with other household waste within the EU. Recycle this product properly to prevent possible damage to the environment or a risk to human health via uncontrolled waste disposal and in order to promote the sustainable reuse of material resources. Please return your used product to an appropriate collection point or contact the retailer where you purchased this product. Your retailer will accept used products and return them to an environmentally-sound recycling facility.
  For information on the disposal of electrical and electronic equipment, please refer to the following website:
  https://eu.ecoflow.com/pages/electronic-devices-disposal

- **SETTING THE RATED RESIDUAL CURRENT OF THE RESIDUAL-CURRENT DEVICE**

  RCDs (Type A) with a rated residual operating current are recommended to install, 300mA on the AC-GRID side, and 30 mA on the AC-BACKUP side, while the use of an RCD with a lower rated residual operating current is also permitted if it is required by the specific local electrical codes.

- **EMC PROTECTION CLASS**

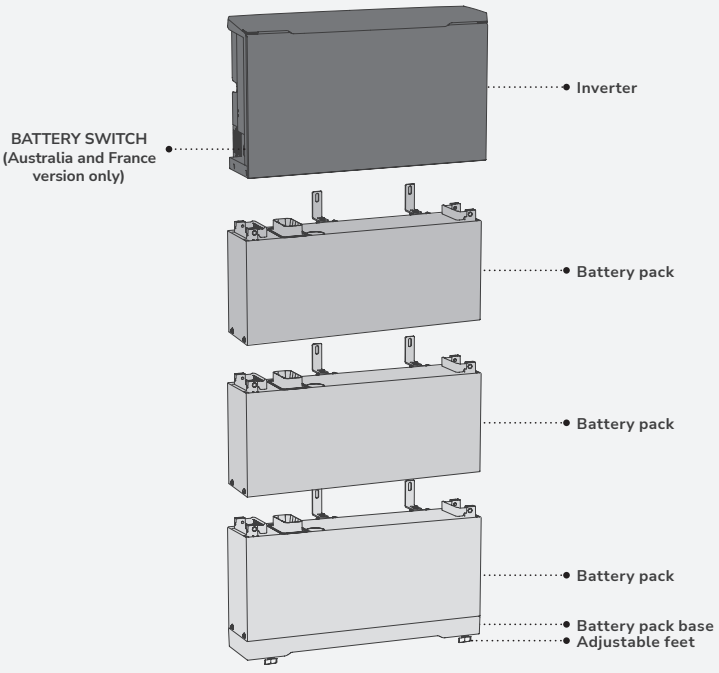
  Class B

Technical Specification

Technical parameters		EF HD-P3-5K0-S2/ EF HD-P3-5K0-S2F	EF HD-P3-6K0-S2/ EF HD-P3-6K0-S2F	EF HD-P3-8K0-S2/ EF HD-P3-8K0-S2F	EF HD-P3-10K0-S2/ EF HD-P3-10K0-S2F	EF HD-P3-12K0-S2/ EF HD-P3-12K0-S2F
PV Input	Number of MPP Trackers	3				
	Number of Strings per MPPT	1				
	Max. Input Power per MPPT (W)	8000				
	Max. Input Voltage[1] (V)	1000				
	PV Operating Voltage Range (V)	50-1000				
	Nominal DC input voltage (V)	600				
	MPPT Start-up Voltage (V)	120				
	Max. Total Input Power (W)	10000	12000	16000	20000	24000
	Max. Input Current per MPPT (A)	16				
	Max. Short Circuit Current per MPPT (A)	20				
	Overvoltage Category	II				
AC Input/ Output (On-grid)	Nominal Output Power (W)	5000	6000	8000	10000	12000
	Max. Output Apparent Power (VA)	5000	6600	8800	11000	13200
	Supported Power Grid Types	TN-S, TN-C, TN-C-S, TT systems				
	Nominal Voltage (V)	L-L: 380/400Vac; L-N: 220/230Vac; 3L+N+PE				
	Nominal Frequency (Hz)	50/60				
	Nominal Output Current (A)	7.2 @ 230V 7.6 @ 220V	8.7 @ 230V 9.1 @ 220V	11.6 @ 230V 12.2 @ 220V	14.5 @ 230V 15.2 @ 220V	17.4 @ 230V 18.2 @ 220V
	Max. Output Current (A)	8.9	10.7	14.3	17.8	21.4
	Max. Input Current (A)	63				
	Max. Short Circuit Current (A)	268				
	Power Factor	0.8 leading to 0.8 lagging				
	THDi at Full Load	≤3%				
	Overvoltage Category	III				
AC Output (Backup)	Nominal Output Power (W)	5000	6000	8000	10000	12000
	Nominal Voltage (V)	L-L: 380/400Vac; L-N: 220/230Vac; 3L+N+PE				
	Nominal Frequency (Hz)	50/60				
	Nominal Output Current (A)	7.2 @ 230V 7.6 @ 220V	8.7 @ 230V 9.1 @ 220V	11.6 @ 230V 12.2 @ 220V	14.5 @ 230V 15.2 @ 220V	17.4 @ 230V 18.2 @ 220V
	Off-grid THDu	≤2%				
	Overvoltage Category	III				
Parallel Installation	Max. On-grid Capacity[2]	Up to 5 cascaded inverters				
	Max. Off-grid Capacity	Up to 2 cascaded inverters				
Battery Input / Output	Rated Voltage (V)	800				
	Voltage Range (V)	720-960				
	Battery Capacity	Up to 12 battery modules (up to 6 battery modules per tower)				
	Communication Method	CAN				
	Max. Short Circuit Current (A)	420				
	Overvoltage Category	II				
Efficiency	Max. Efficiency	97.9%	98%			
	Deep Power Saving Mode[3] (W)	15				
	Self Consumption (Light-load scenario)[4] (W)	50				
Compliance	Safety Standards	IEC/EN 62109-1, IEC/EN 62109-2, AS 60947.3, ISO4892-4				
	Grid-tied Standards	VDE-AR-N 4105, EN 50549-1, EN50549-10, AS/NZS 4777.2, OVE-Richtlinie R, TOR Erzeuger (for Type A), PTPiREE (Type A), PPDS, CEI 0-21, G98, G99, G100, G98 NI, G99 NI, TR3.3.1, UNE 217001, UNE 217002, IEC 62116, NTS(Type A), C10/C11, SI 4777.2				
	EMC&RF	EN 300 328, EN 301 893, EN 301 489-1, EN 301 489-17 V3.3.1, EN IEC 61000-6-1, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 61000-6-4, EN IEC 61000-3-11, EN 61000-3-12, EN 55011, EN 62920, EN IEC 62311, EN 50665				

Protection	Grid to Off-Grid Switching Time[5] (ms)	0
	Off-Grid to Grid Switching Time[5] (ms)	0
	GFCI	Yes
	AFCI	Yes
	Emergency Power Off (EPO)	Yes
	PV Insulation Resistance Detection	Yes
	PV Reverse Polarity Protection	Yes
	AC Overcurrent Protection	Yes
	AC Short Circuit Protection	Yes
	AC Overvoltage Protection	Yes
	DC Surge Protection	Type II
	AC Surge Protection	Type II
General Data	Relative Humidity	0-100%
	Operating Temperature Range (°C)	–20 to 60
	Storage Temperature (°C)	–30 to 60
	Max. Operating Altitude (m)	3000 (>2000 derating)
	Ingress Protection Rating	IP66
	Communication Method	RS485, CAN, Wi-Fi, Bluetooth, WAN
	User Interface	LED, EcoFlow app
	Wi-Fi Frequency Range (MHz) Maximum Output Power (dBm)	2.4GHz: 2400-2483.5, 5GHz: 5150-5350, 5470-5725, 5725-5850 <20
	Bluetooth Frequency Range (MHz) Maximum Output Power (dBm)	2402-2480, <20
	Weight (kg)	Approx. 36.5
	Dimension (W×D×H mm)	680×203×406.5
	Environmental Category	Outdoor/Indoor
	Mounting Method[6]	Floor Stand/Wall Mounted
	Anti-theft	Supported

1. The PV input voltage should not exceed the specified maximum value. Exceeding this limit may trigger system protection or compromise normal operation.
2. In grid-connected parallel operation, load-side current is limited by the maximum input current rating of the GRID port.
3. In Deep Power Saving Mode, the hybrid inverter consumes 15W, and loads draw power from the grid.
4. 50W represents the system's self-consumption measured under light-load conditions (<300W total load) in a laboratory environment, for a configuration consisting of one OCEAN 2 12kW Inverter and two EcoFlow OCEAN 2 LFP Battery 5kWh units. In this mode, loads draw power from the battery.
5. This specification refers to the disruption time on the BACKUP side. This function is available only when the system's maximum output exceeds the BACKUP side total load and grid-connection regulations are satisfied. The performance was validated under stable grid conditions, where a grid outage does not cause a sudden voltage drop.
6. For floor-stand installation, a maximum of 6 batteries is supported; for wall-mounted installation, a maximum of 3 batteries is supported.



Unpacking and Preparation

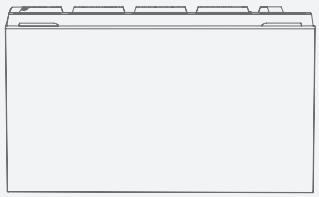
What's in the Box

NOTICE

- 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.
- It is recommended to keep the original package for further needs.

- **ECOFLOW OCEAN 2 HYBRID INVERTER THREE-PHASE**

A1 ×1



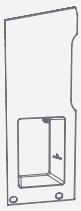
EcoFlow OCEAN 2 Hybrid Inverter Three-Phase

A2 ×1



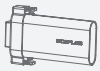
Top trim cover

A3 ×1



Side trim cover

A4 ×1



EcoFlow Ocean 2 Dongle
(Model: EF HD-P3-WIFI-S2)

A5 ×3



PV terminal (+)

A5 ×3



PV terminal (–)

A6 ×2



Disassembly and assembly tool

A7 ×1



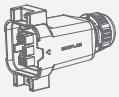
Communication terminals (20-pin)

A8 ×1



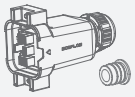
Communication terminals (16-pin)

A9 ×1



Grid connector

A10 ×1



Backup connector

A11 ×1



Marking-off template

A12 ×1



Expansion bolt
(M6*60)

A13 ×3



Grouding screw
(M5*12)

A14 ×2



OT terminal

A15 ×15



Wire Ferrule
(for wire gauge 16 mm²)

A16 ×18



Wire Ferrule
(for wire gauge 0.5mm²)

A17 ×3



Communication terminal

A18 ×1



Mounting bracket

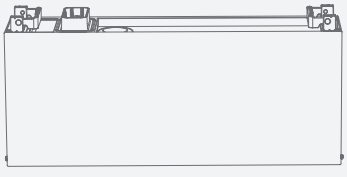
A19 ×1



Terminating resistor

- **ECOFLOW OCEAN 2 LFP BATTERY 5kWh**

B1 ×1



EcoFlow OCEAN 2 LFP Battery 5kWh

B2 ×2



Battery T-shaped/L-shaped mounting piece

B3 ×2



Expansion bolt
(M6*60)

B4 ×4



Screw
(M5*12)

- **ECOFLOW OCEAN 2 LFP BATTERY BASE**

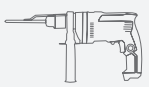
C1 ×1



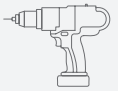
Battery base

Prepare Tools and Instruments

- **Required tools**



Hammer drill
(with a drill bit of 8mm)



Electrical screwdriver



Torque socket of 10mm



Multimeter
(DC voltage measurement range ≥ 1000 V DC)



Mallet



Screwdriver
(PH3)



Cable cutter



Open barrel crimping tool
(for PV terminals)



Wire strippers



RJ45 crimping tool



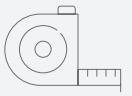
Square crimping tool
(for tubular terminals 0.5, 10 or 16 mm²)



Heat-shrink tubing



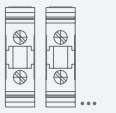
Marker



Steel measuring tape



Cable tie



Feed-through terminal blocks 6-8 pcs



Heat gun

- **Optional tools**



Level



Vacuum cleaner



Safety goggles



Safety shoes



Safety gloves



Dust mask

- **Cables**



16 mm^2 grounding cable
(copper conductor)



4-6 mm^2 PV input cable
(black, red)



16 mm^2 UL10269 power cable
(black, brown, blue, grey)



Cat 5e or higher shielded network cable



2*0.5 mm^2 twist pair cable

System Installation

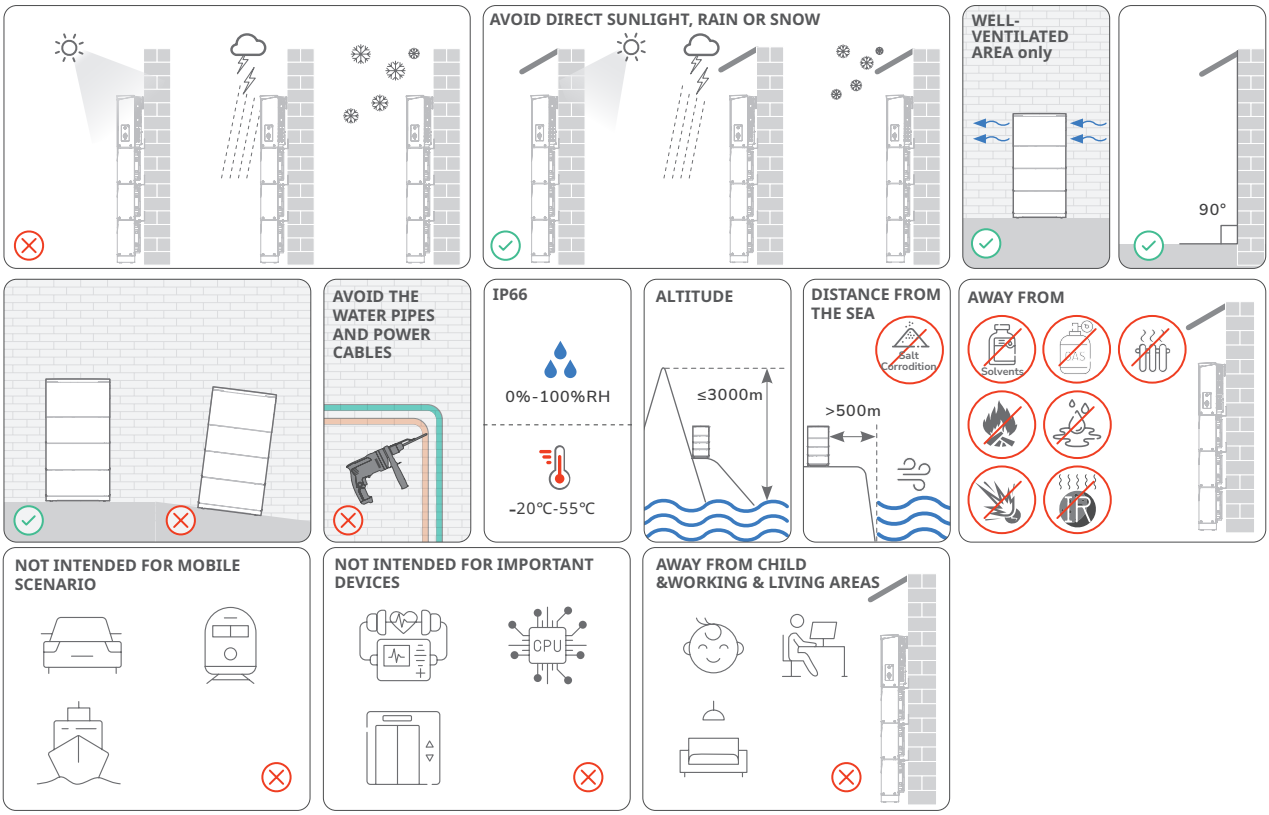
Installation Environment Requirements

WARNING

- The installation and operation environment must meet relevant international, national, and local standards for lithium batteries and the inverter.

NOTICE

- When installing the equipment in a garage, keep it away from the drive way.
- The mounting structure where the equipment is installed must be fire resistant. Do not install the equipment on flammable building materials. Suitably non-combustible materials are: brick or masonry block, concrete.
- The material shall have no vents or perforations within the zone required to be covered by the barrier.
- Ensure that the installation surface is solid enough to bear the weight of the equipment.
- Suitable locations for installation may include garages, storage rooms, a dedicated battery system room and verandas.
- The system shall not be installed:
  (a) in restricted locations, as defined for switchboards in AS/NZS 3000;
  (b) within 600 mm of any exit;
  (c) within 600 mm of any vertical side of a window or building ventilation that ventilates a habitable room;
  (d) within 600 mm of any hot water unit, air conditioning unit or any other appliance not associated with the pre-assembled integrated BESS;
  (e) within 900 mm below any of the items included in Items (b), (c) and (d);
  (f) in ceiling spaces;
  (g) in wall cavities;
  (h) on roofs, except where specifically deemed suitable;
  (i) under stairways;
  (j) under access walkways;
  (k) in an evacuation route or escape route.



Installation Clearance Requirements

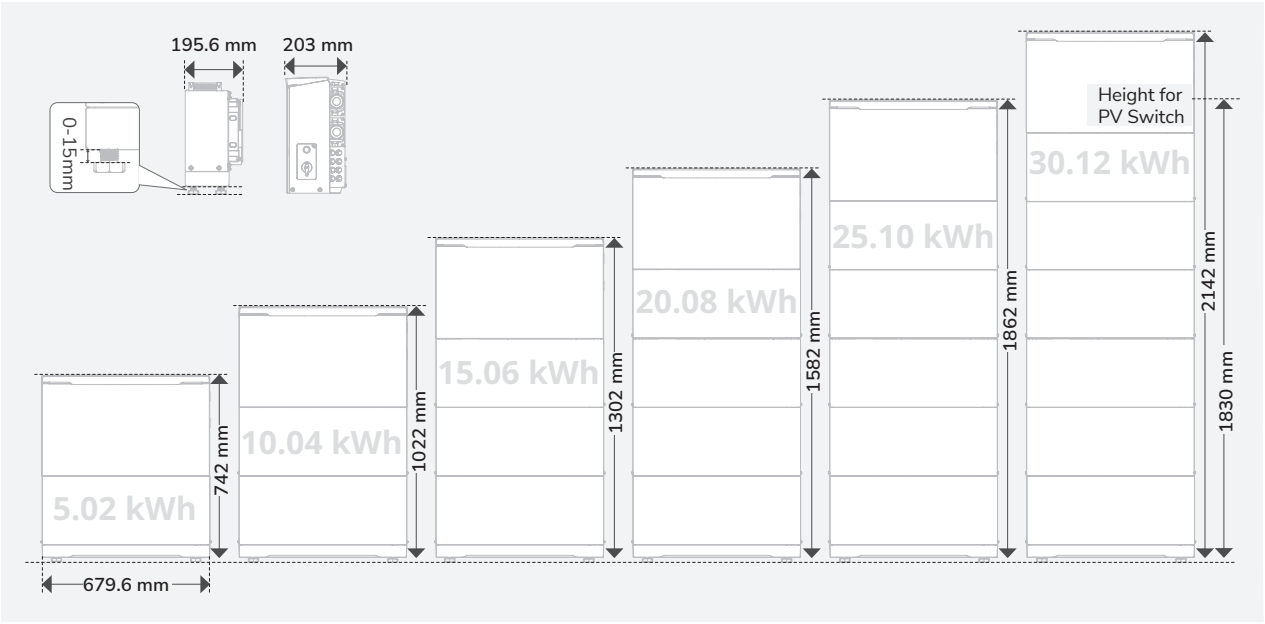
WARNING

- Reserve enough clearance around equipments to ensure sufficient space for installation and heat dissipation.
- To prevent fire due to high temperature, ensure that the ventilation vents or heat dissipation system are not blocked.

NOTICE

- Ensure there is enough space on both sides of the battery to facilitate the locking operation of the screws on the side of the battery.
- Battery system installed in any corridor, hallway, or lobby shall ensure sufficient clearance from the battery system for safe egress and be no less than 1 m.

- **DIMENSIONS**

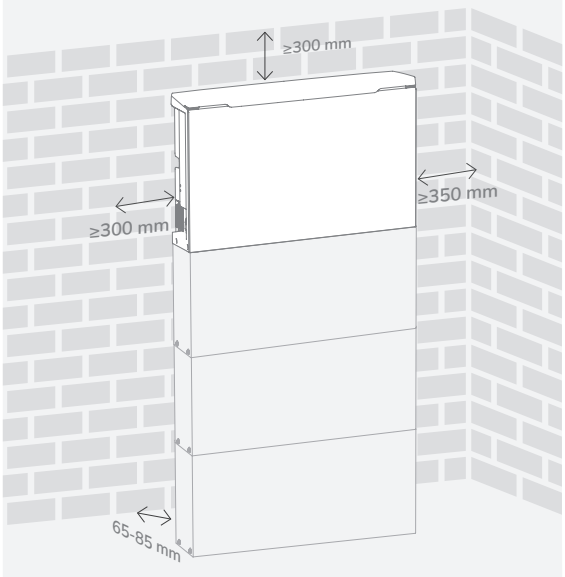


- **CLEARANCE**

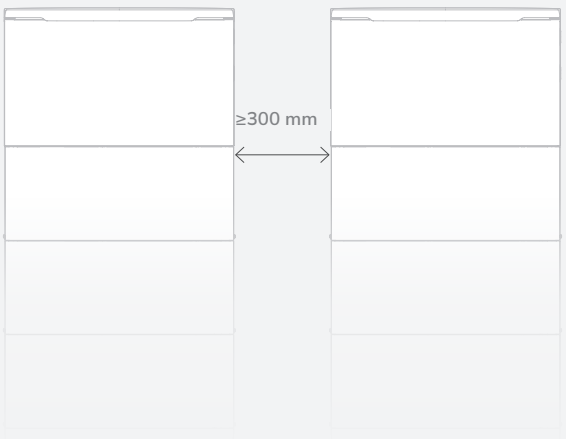
WARNING

- Minimum clearance should be maintained for good ventilation.
- Do not block the air exhaust on the left side of the inverter during operation.

Minimum clearance



Minimum clearance of cascaded inverter



Installing Battery

DANGER

- When drilling holes, avoid the water pipes and power cables buried in the wall and under the floor.
- When drilling holes, protect the battery base from shavings or dust.
- Before installing the battery, make sure that the click-on terminals on the top and bottom of the battery are free of foreign objects or any liquid.

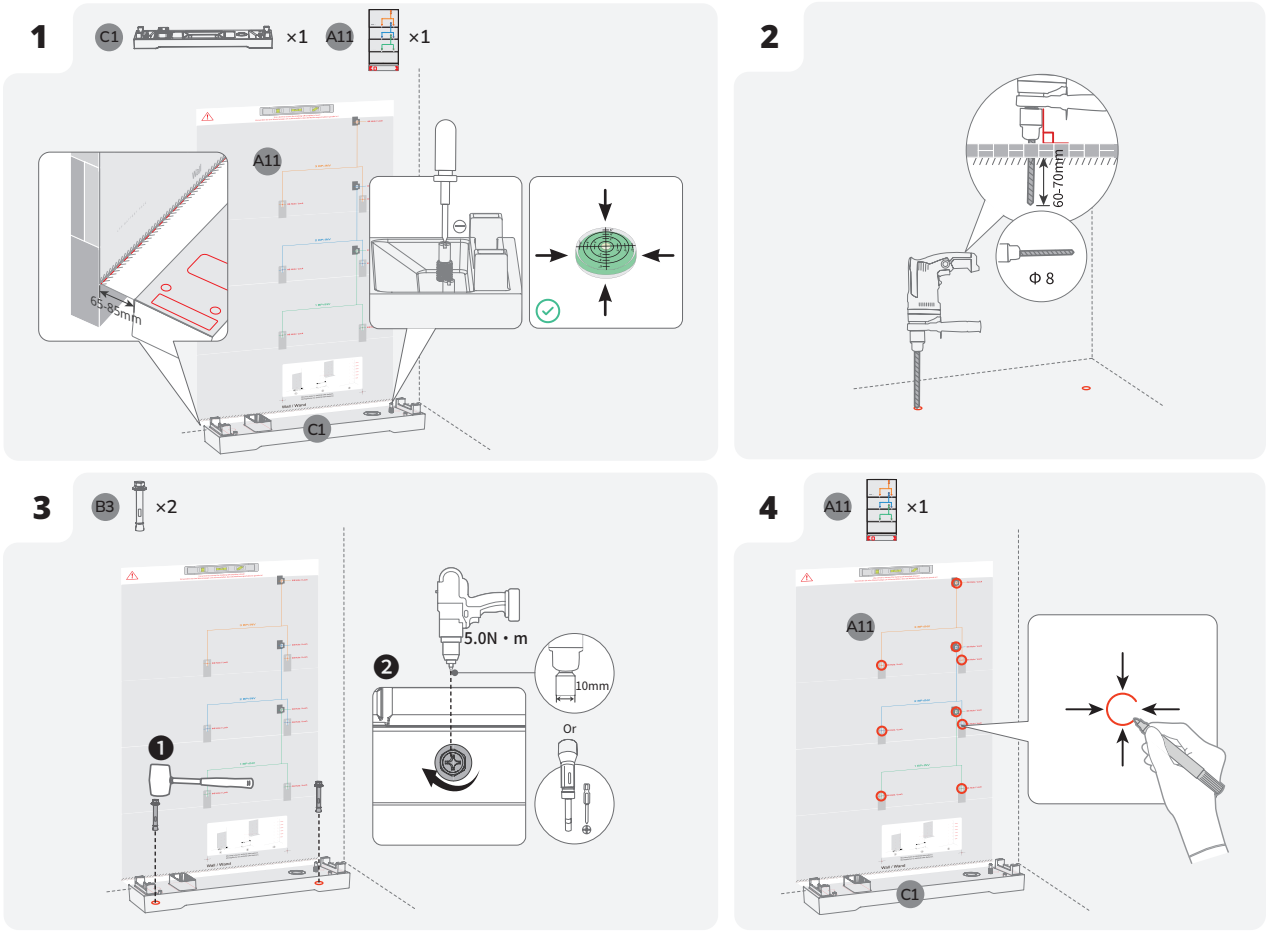
CAUTION

- Ensure the batteries are mounted on the wall to avoid falling over, tipping, or seismicity.
- Assign enough personnel (two or more) to move battery to avoid personal injury and battery damage.
- When moving battery, hold handles on top of the battery module.

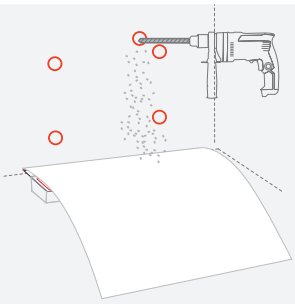
NOTICE

- The two M6×60 expansion bolts supplied with each battery may be used either to secure the battery itself or to fasten the battery base—options include fastening the battery with 1 bolt and fastening the base with 2 bolts, or fastening the battery with 2 bolts and leaving the base unfastened. Decide on-site according to actual installation conditions.
- For mixed-stack installations combining newer model batteries (EF BD-5-S2) and previous model batteries (EF BD-5.1-S1), it is recommended to prioritize using the previous model base (EF BD-B-S1). It is best practice to stack the previous model batteries on the base first, then stack the newer model batteries on top.
- If more than four battery packs are installed in one stack, verify compliance with local regulations and confirm that the current firmware supports up to six battery packs per stack.
- This inverter is only compatible with the EF BD-XX-S1, EF BD-8-S2A, EF BD-XX-S2battery series.

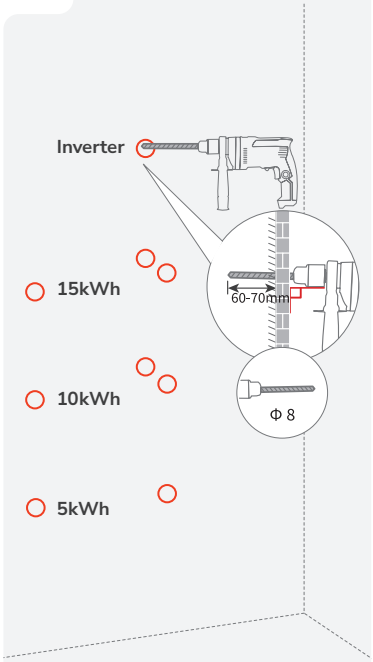
METHOD 1: FLOOR MOUNTED



When drilling holes, protect the battery base from shavings or dust. You are advised to cover the base with the marking-off template for protection.

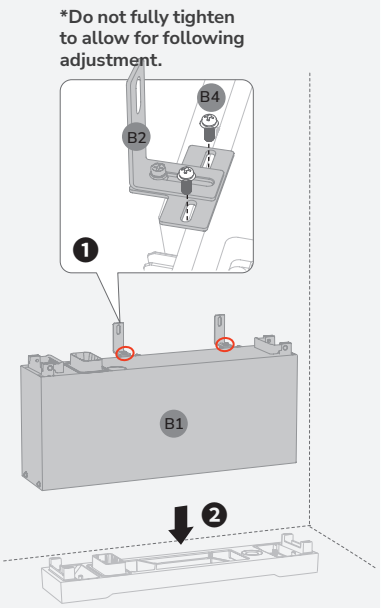


5



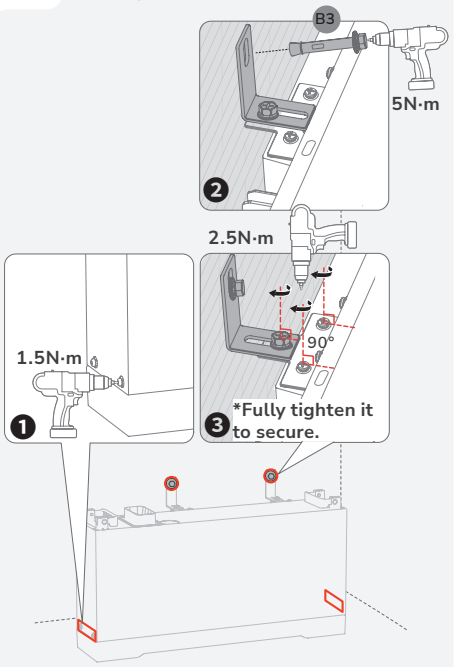
6

B1 ×1 B2 ×2 B4 ×4



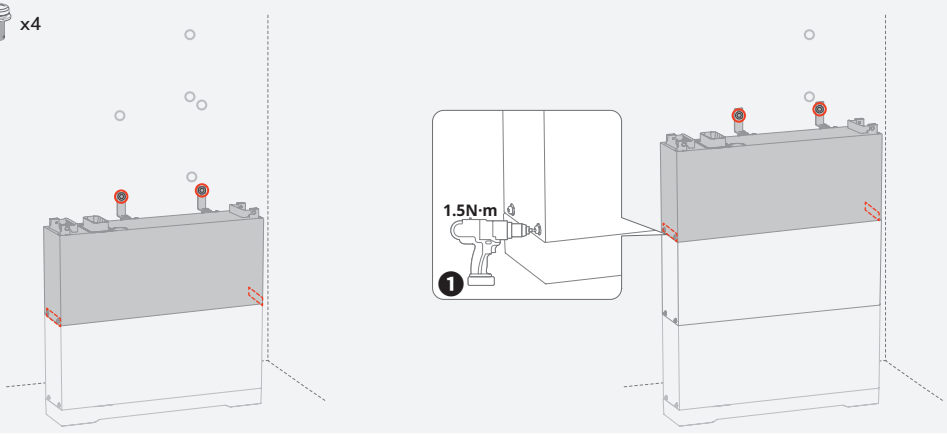
7

B3 ×2

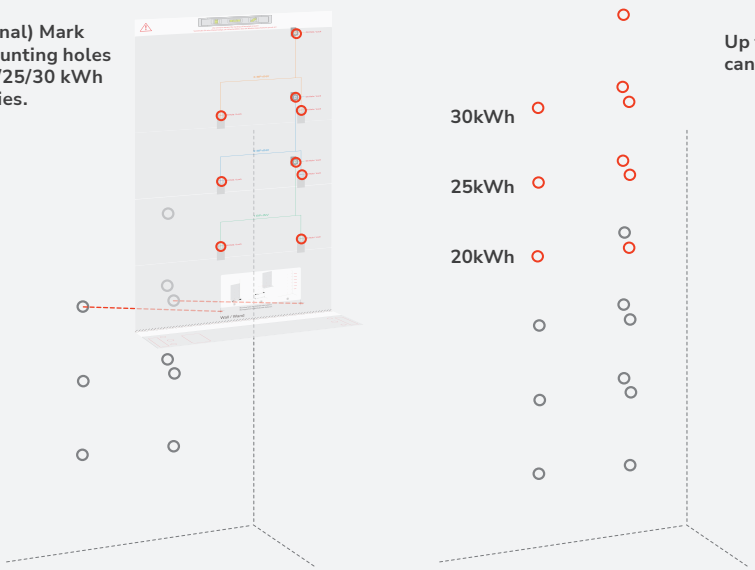


8

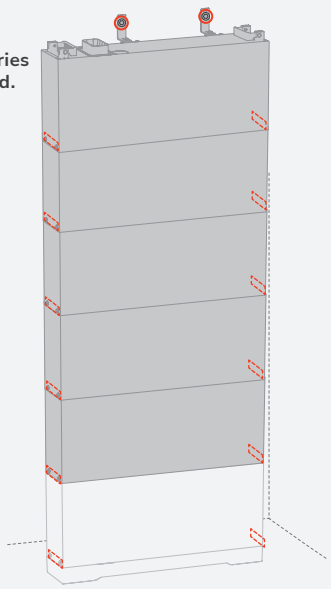
B4 x4



(Optional) Mark off mounting holes for 20/25/30 kWh batteries.



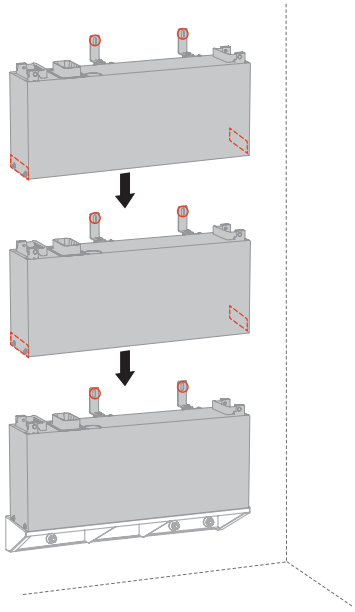
Up to 6 batteries can be stacked.



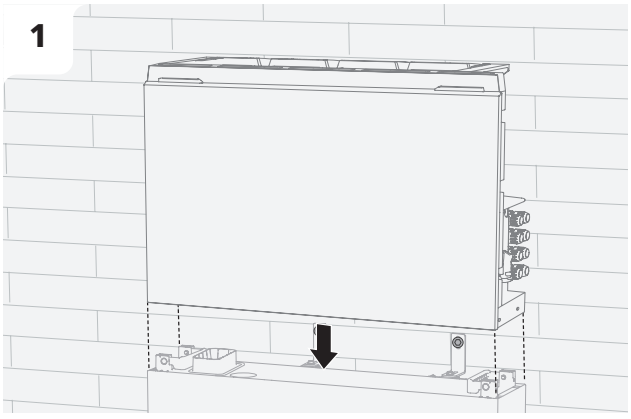
METHOD 2: WALL MOUNTED (OPTIONAL)

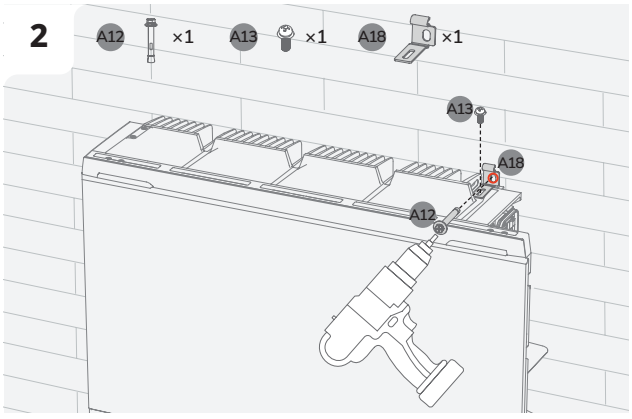
NOTICE

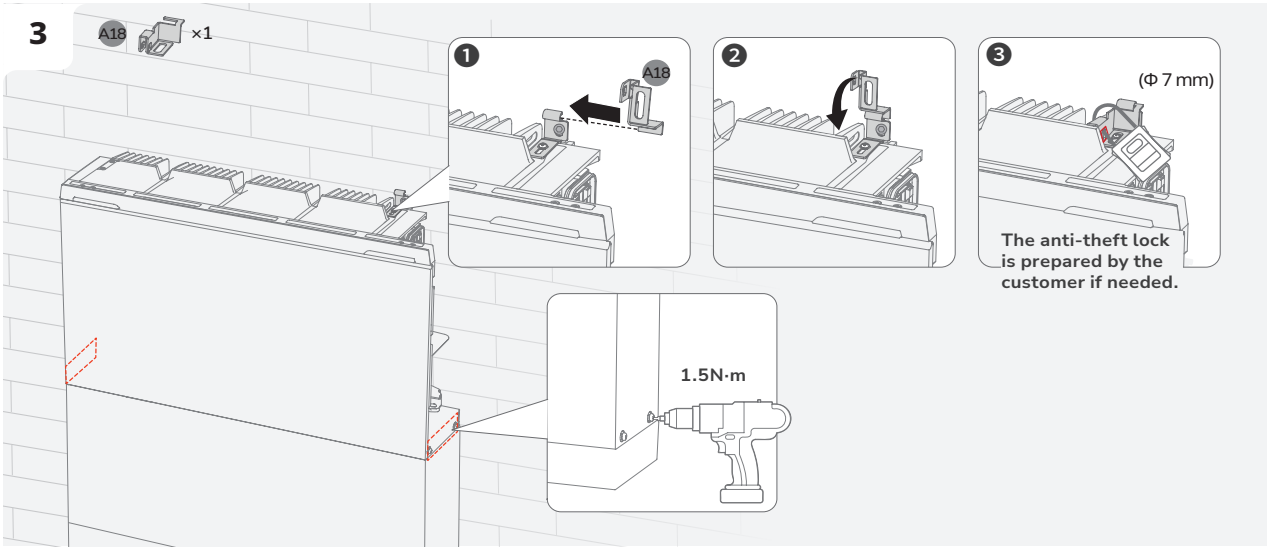
- For details about wall mounted installation, see the installation guide that comes together with the EcoFlow Wall-Mounted Battery Base. Then, install the remaining batteries and the inverter as shown in the method 1.
- The wall-mounted battery base (sold separately) supports stacking of up to three batteries.



Install Inverter





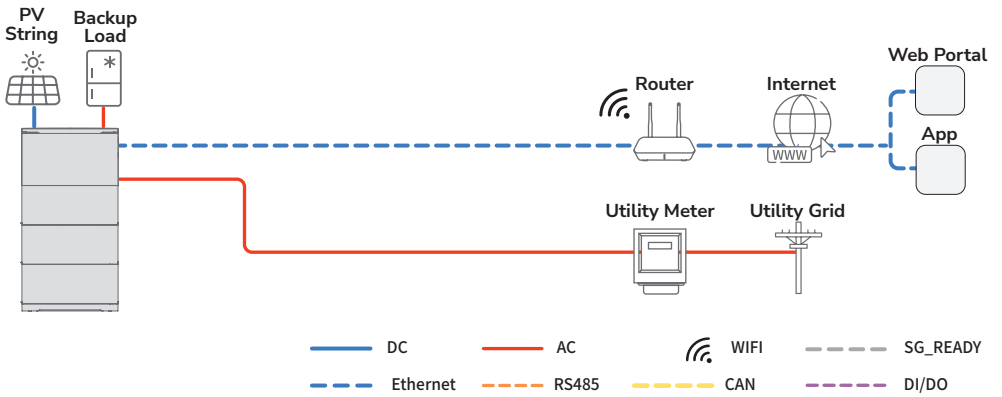


Application Scenarios

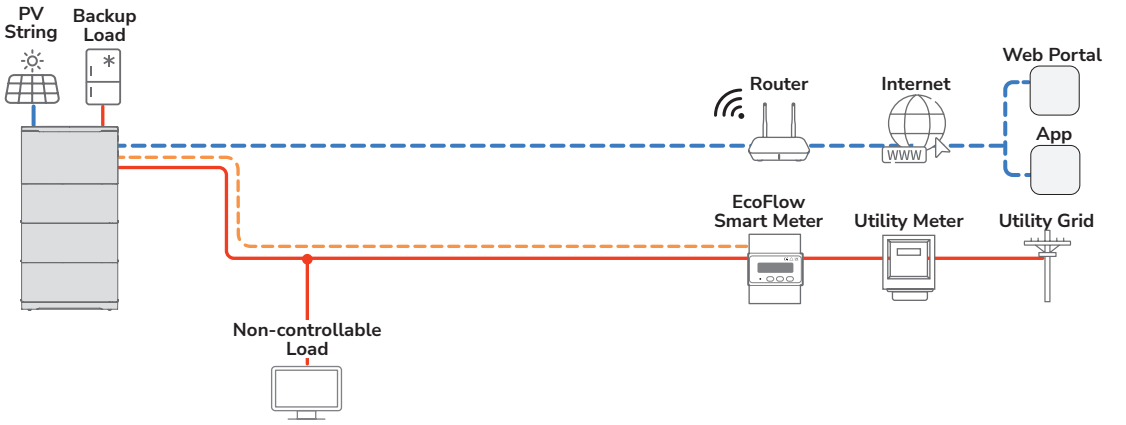
Single Inverter Setup

- **WHOLE HOME BACKUP SYSTEM**

NOTICE For whole-home backup installations, no external AC meter is required. Ensure "No AC meter installed" is selected during EcoFlow Pro App configuration; otherwise, an error will be triggered.



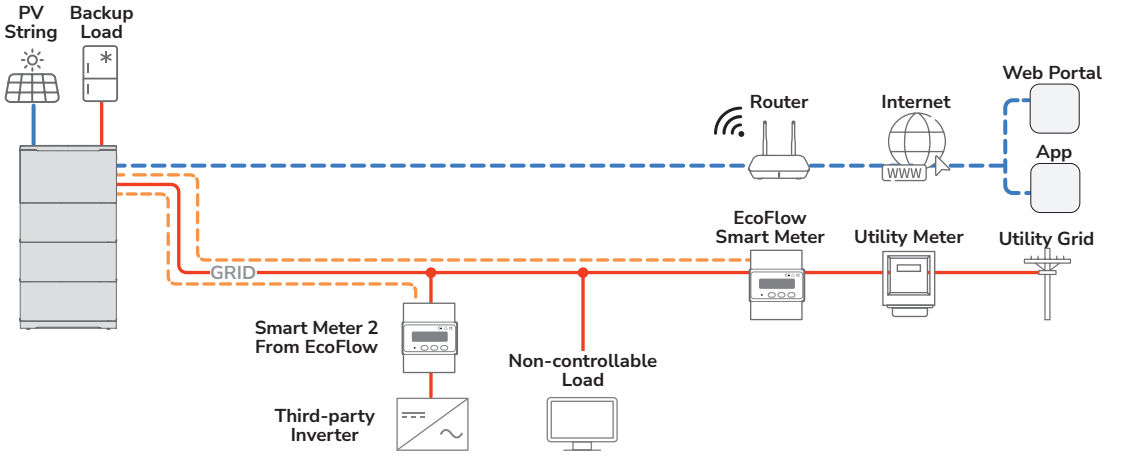
- **PARTIAL HOME BACKUP SYSTEM**



- **USE WITH EXISTING PV SYSTEM**

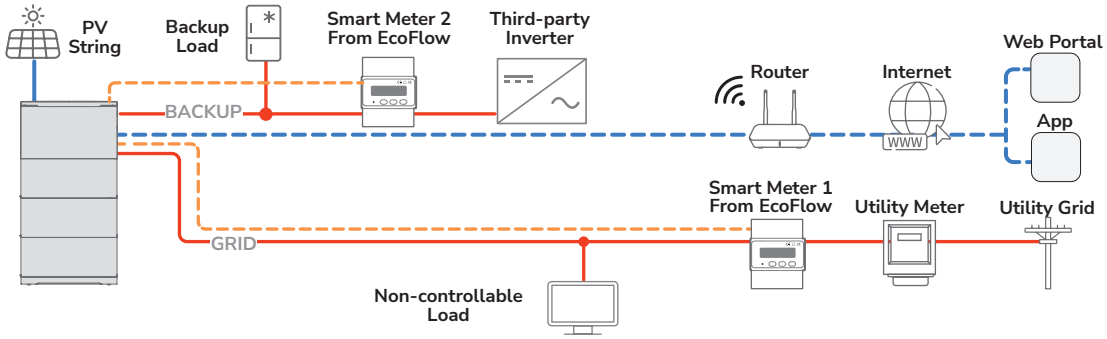
EcoFlow Ocean 2 system is compatible with single/three-phase PV grid-tied system. For a three-phase inverter connection, its rated power shall not exceed the rated power of the BACKUP/GRID port. For a single-phase inverter connection, its rated power shall not exceed one-third of the BACKUP/GRID port's rated power. The power generation from the existing PV inverter will be firstly provided to the loads and then charge the battery. Once the third-party PV inverter has been physically wired, it must also be configured via the EcoFlow Pro App. See section **Third-Party PV Inverter Setup** for configuration instructions.

- Connect via GRID port



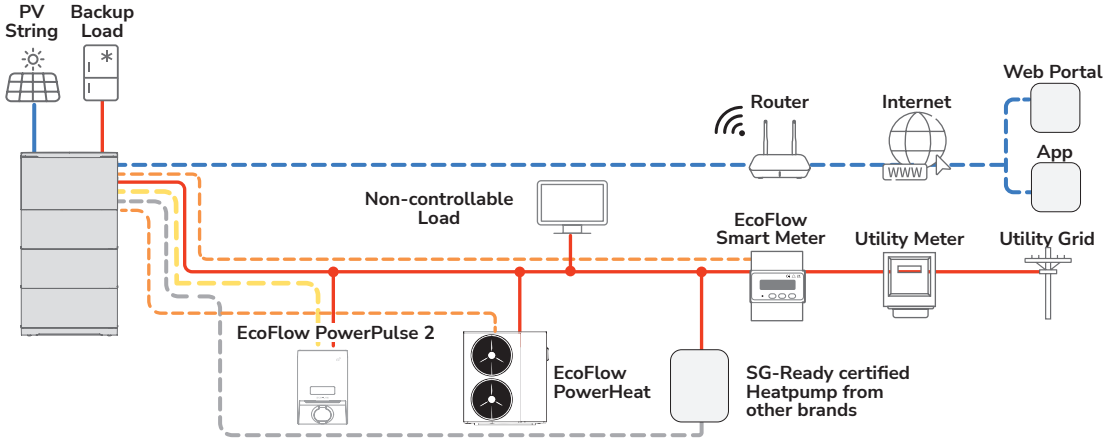
- Connect via BACKUP port (for Partial Home Backup)

- A third-party inverter connected must also support local safety regulations for over-frequency protection and over-frequency load reduction functions.
- In this setup, off-grid parallel operation is not supported.
- In this setup, via frequency regulation capability, the EcoFlow Ocean 2 system achieves derating control for third-party inverters in grid failure scenarios.



• USE WITH SG-READY CERTIFIED HEATPUMP OR EV CHARGER

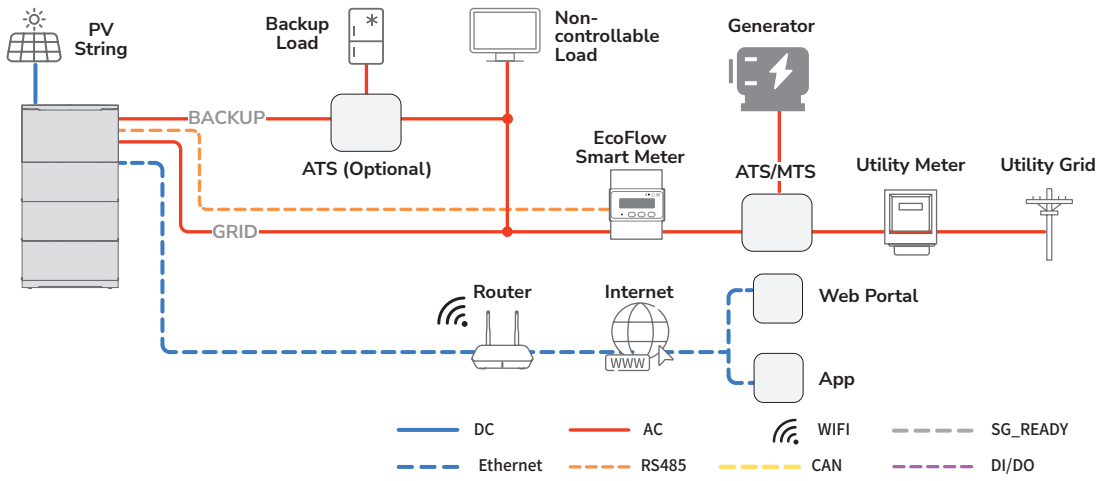
EcoFlow Ocean 2 system is compatible with EcoFlow EV Charger (PowerPulse 2), Heatpump (PowerHeat), any other SG-Ready certified Heatpump. When connected with the Ocean 2 system, a SG-Ready certified Heatpump or EV Charger will be powered by PV strings, battery and utility grid. With the self-powered mode of the EcoFlow Ocean 2 system, the self-consumption rate of the new system will be greatly improved, reducing electricity costs.



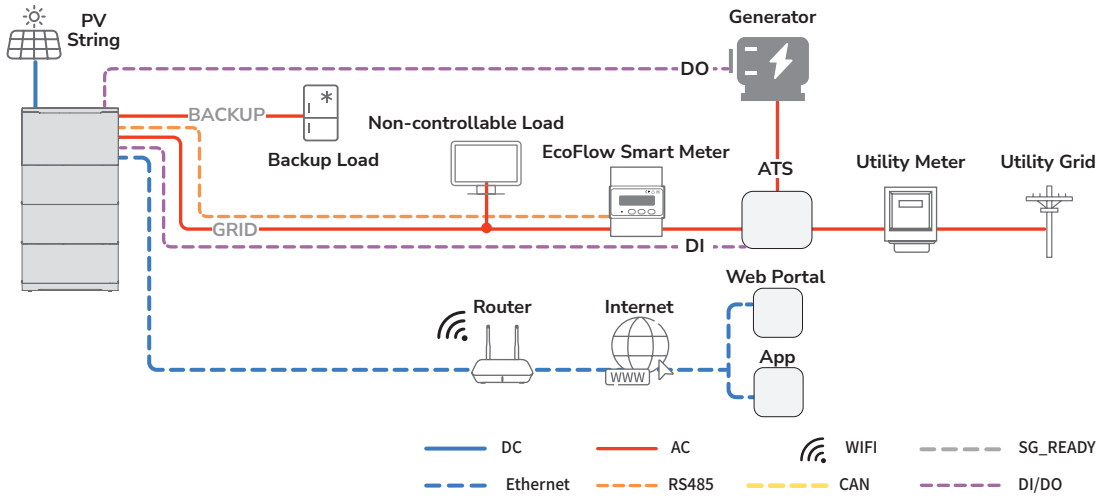
• USE WITH GENERATOR

EcoFlow Ocean 2 system is compatible with generator, users therefore can use this Ocean 2 system and generator to build a instant backup system and enhance home's energy efficiency. Once the generator has been physically wired, it must also be configured via the EcoFlow Pro App. See section **Third-Party Generator Setup** for configuration instructions.

- Without dry contact connection



- With dry contact connection



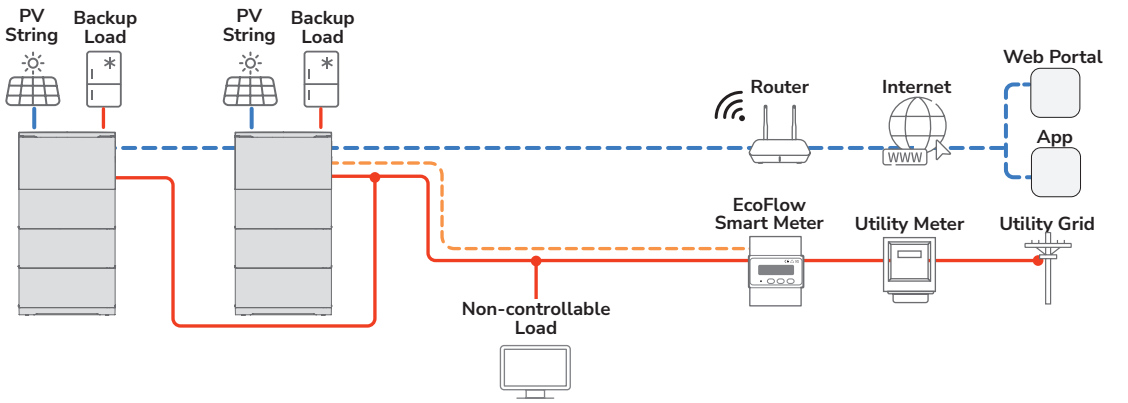
Multi Inverters Setup

This inverter has not been tested for compliance with AS/NZS 4777.2:2020 in multiple-inverter or multi-phase configurations. Multiple-inverter and/or multi-phase installations shall not be used.

- **2 INVERTERS CASCADING (SEPARATE LOADS)**

NOTICE

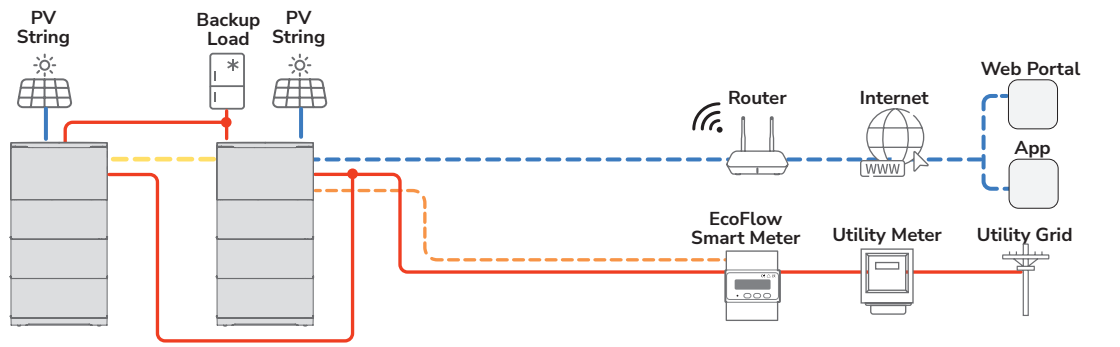
- Only cascading of inverters of the same model is supported.
- Cascading different Ocean 2 products is not supported.
- The BACKUP port remains inactive during off-grid operation of cascaded inverters without battery modules.
- Due to limitations in control real-time performance and sampling accuracy, a smart meter is required; otherwise, the system's anti-backflow capability may be compromised.



- **2 INVERTERS CASCADING (SHARING LOADS)**

NOTICE

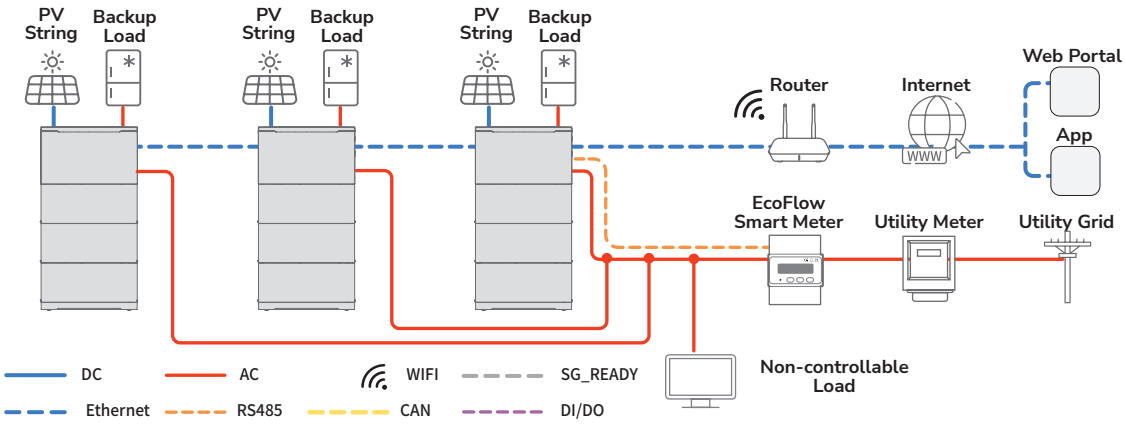
- Only cascading of inverters of the same model is supported.
- Cascading different Ocean 2 products is not supported.
- Both BACKUP ports are required to be connected together even if they are not connected with loads, otherwise, it will cause the system to fail.
- Due to limitations in control real-time performance and sampling accuracy, a smart meter is required; otherwise, the system's anti-backflow capability may be compromised.



- **3 INVERTERS CASCADING (SEPARATE LOADS)**

NOTICE

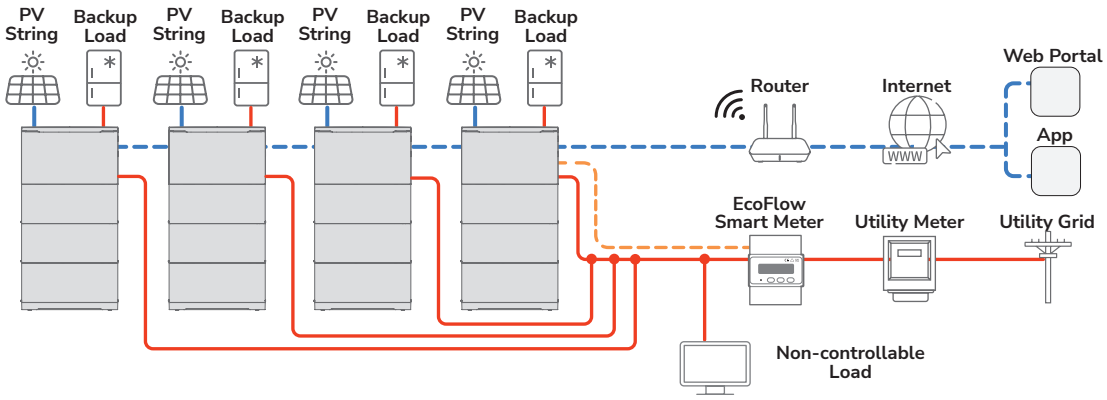
- Due to limitations in control real-time performance and sampling accuracy, a smart meter is required; otherwise, the system's anti-backflow capability may be compromised.



- **4 INVERTERS CASCADING (SEPARATE LOADS)**

NOTICE

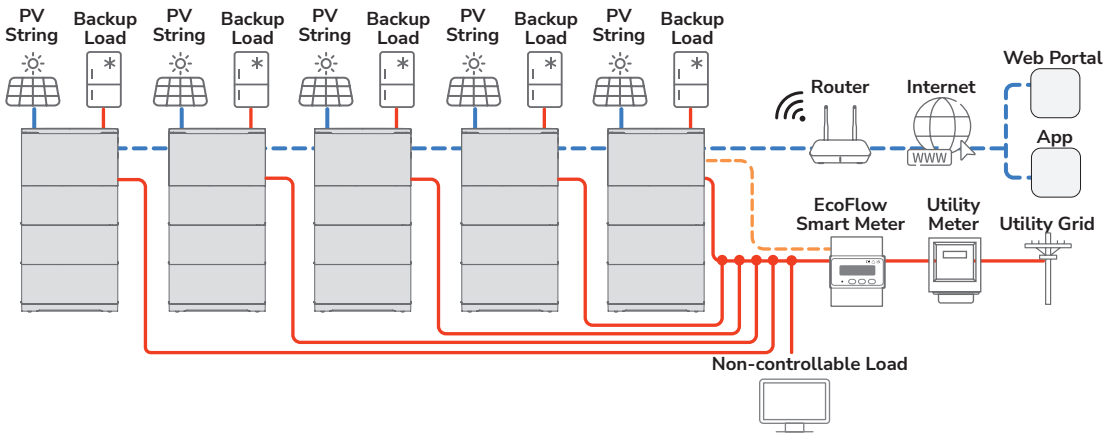
- Due to limitations in control real-time performance and sampling accuracy, a smart meter is required; otherwise, the system's anti-backflow capability may be compromised.



- **5 INVERTERS CASCADING (SEPARATE LOADS)**

NOTICE

- Up to 5 inverters can be cascaded.
- Due to limitations in control real-time performance and sampling accuracy, a smart meter is required; otherwise, the system's anti-backflow capability may be compromised.



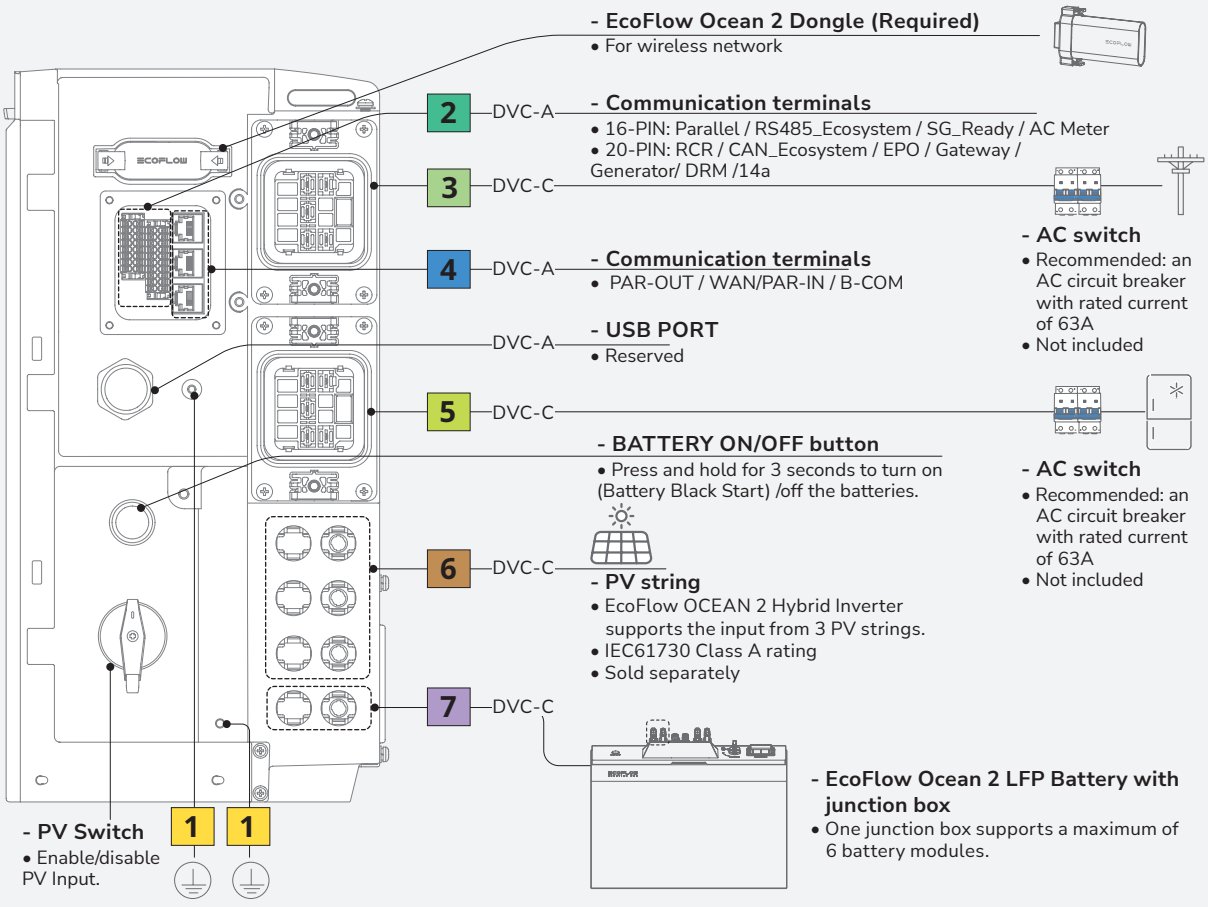
Electrical Connection

⚠ CAUTION

- All electrical connections must be carried out by a professionally trained and certified electrician.

NOTICE

- Prepare cables that meet local certification standards.
- Do not remove the protective cap of unused terminals. Otherwise, the IP rating of the inverter will be affected.
- The cable colors shown in the figures are for reference only. Select an appropriate cable according to the local standards.
- Based on the installation environment and mechanical performance requirements, rigid cables or flexible cables can be used.



LEGEND

1 **Ground cable**
10 mm²

2 **Communication terminals**
Shielded Twisted Pair 2*0.5mm²

3 **Grid power cable**
16 mm² cable rated for 63 A. Select the appropriate conductor size based on the grid service current, local electrical code, and inverter specifications.

4 **Communication terminals**
Cat 5e or higher shielded network cable

5 **Backup load power cable**
16 mm² cable rated for 63 A. Select the appropriate conductor size based on the grid service current, local electrical code, and inverter specifications.

6 **PV input cable**
4-6 mm² with a rated voltage greater than or equal to 1000V DC

7 **Battery power cable**
6-10 mm² with a rated voltage greater than or equal to 1000V DC

Wiring Diagram

NOTICE

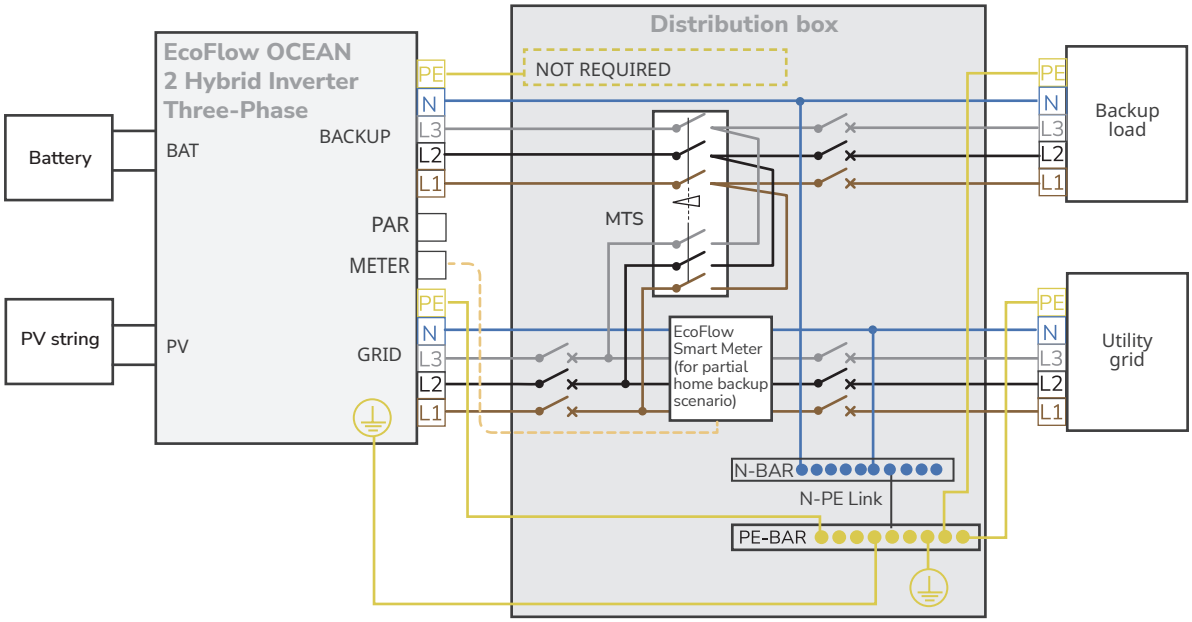
- N and PE wiring via GRID and BACKUP terminals of the inverter vary based on the regulation requirements of different regions. Refer to the specific requirements of local regulations.
- A 63A Manual Transfer Switch (MTS) is recommended for switching the power supply between the grid and the inverter in the whole home backup system.
- Installing surge protective devices (SPD) before connecting the PV strings and before connecting to the power grid are recommended.
- RCD installation shall comply with local electrical codes.

- **SINGLE INVERTER**

Method 1 N–PE Bonded at Main Panel (For Australia and New Zealand)

NOTICE

- For Australia and New Zealand, the N conductors on the GRID side and the BACKUP side must be bonded according to AS/NZS 3000 wiring rules. Otherwise, abnormal BACKUP operation and potential safety risks may occur. Therefore, the following diagram applies to installations in Australia, New Zealand, and other regions with similar wiring requirements.



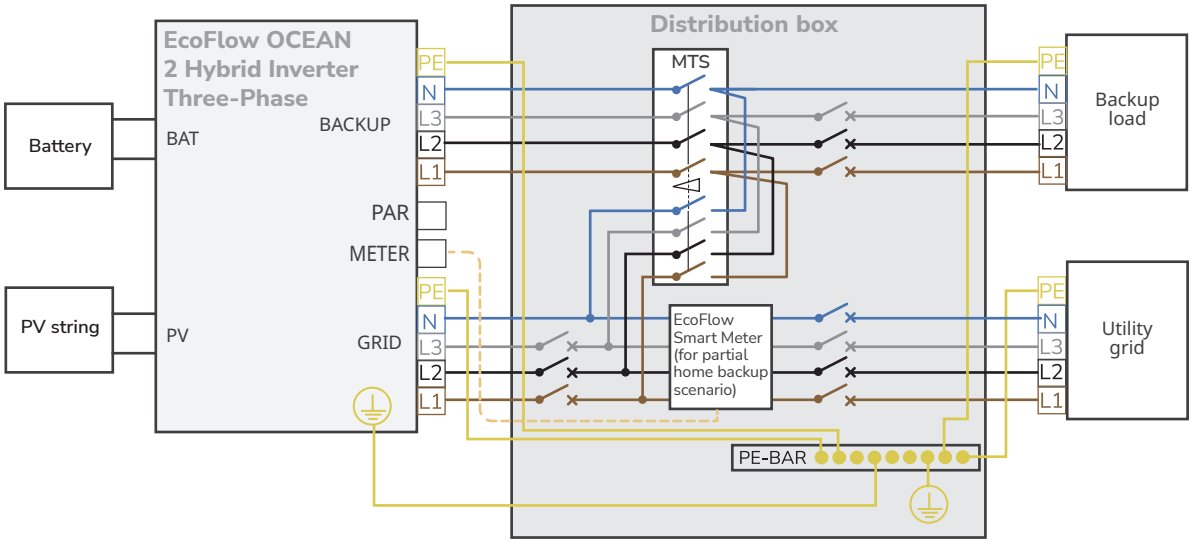
Method 2 N–PE Separate at Main Panel

CAUTION

- Do not connect the N busbar to the N-wire between the inverter and grid, otherwise the inverter operation may be abnormal.

NOTICE

- Do not connect the N-wires of the AC-backup side and AC-grid side, otherwise the system may operate abnormally. If connected in some houses, try disconnecting the N busbar from the grid and connecting the AC-GPID N terminal of inverter directly to the N terminal of the grid.

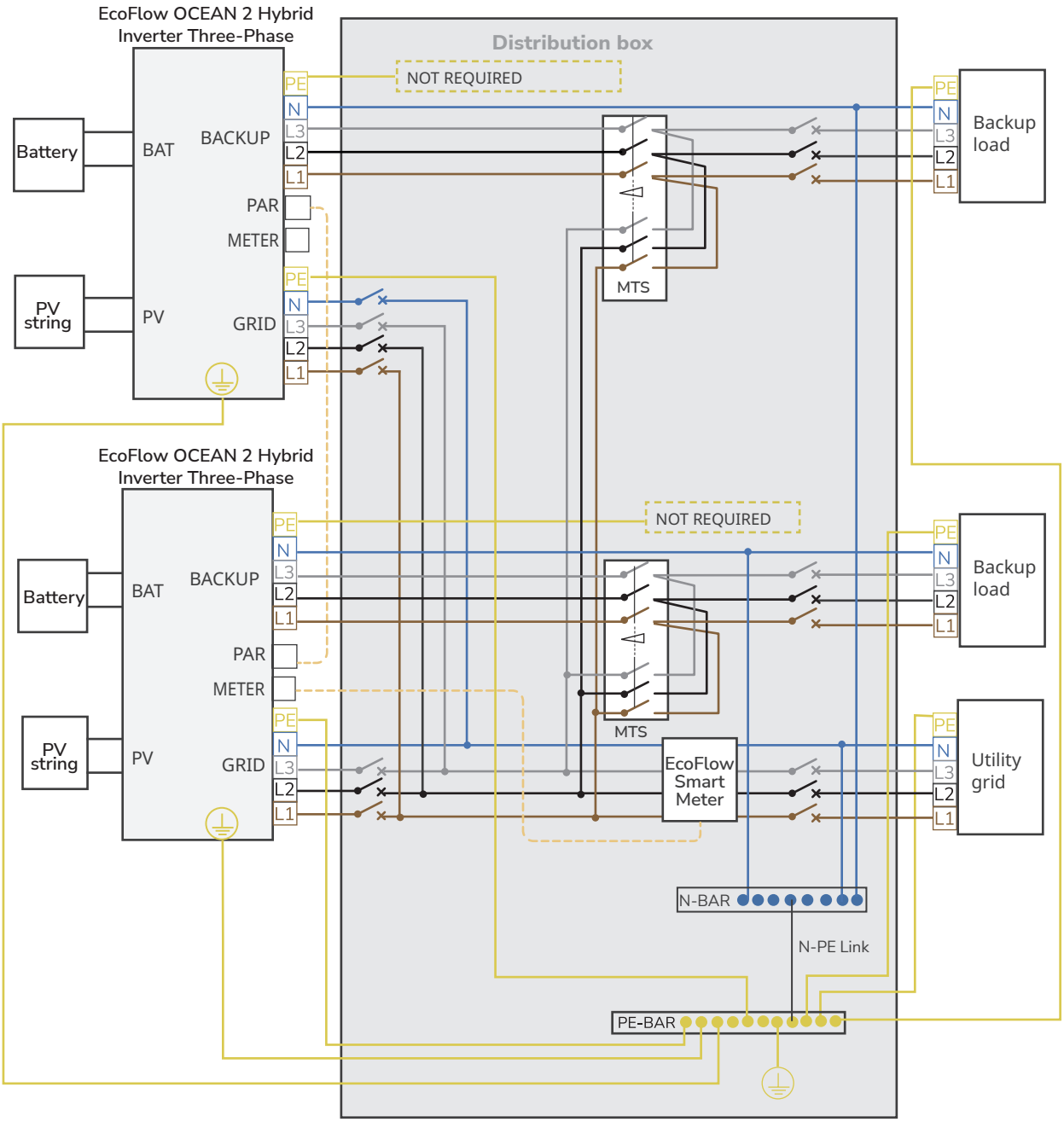


- **2 INVERTERS CASCADING (SEPARATE LOADS)**

Method 1 N–PE Bonded at Main Panel (For Australia and New Zealand)

NOTICE

- For Australia and New Zealand, the N conductors on the GRID side and the BACKUP side must be bonded according to AS/NZS 3000 wiring rules. Otherwise, abnormal BACKUP operation and potential safety risks may occur. Therefore, the following diagram applies to installations in Australia, New Zealand, and other regions with similar wiring requirements.



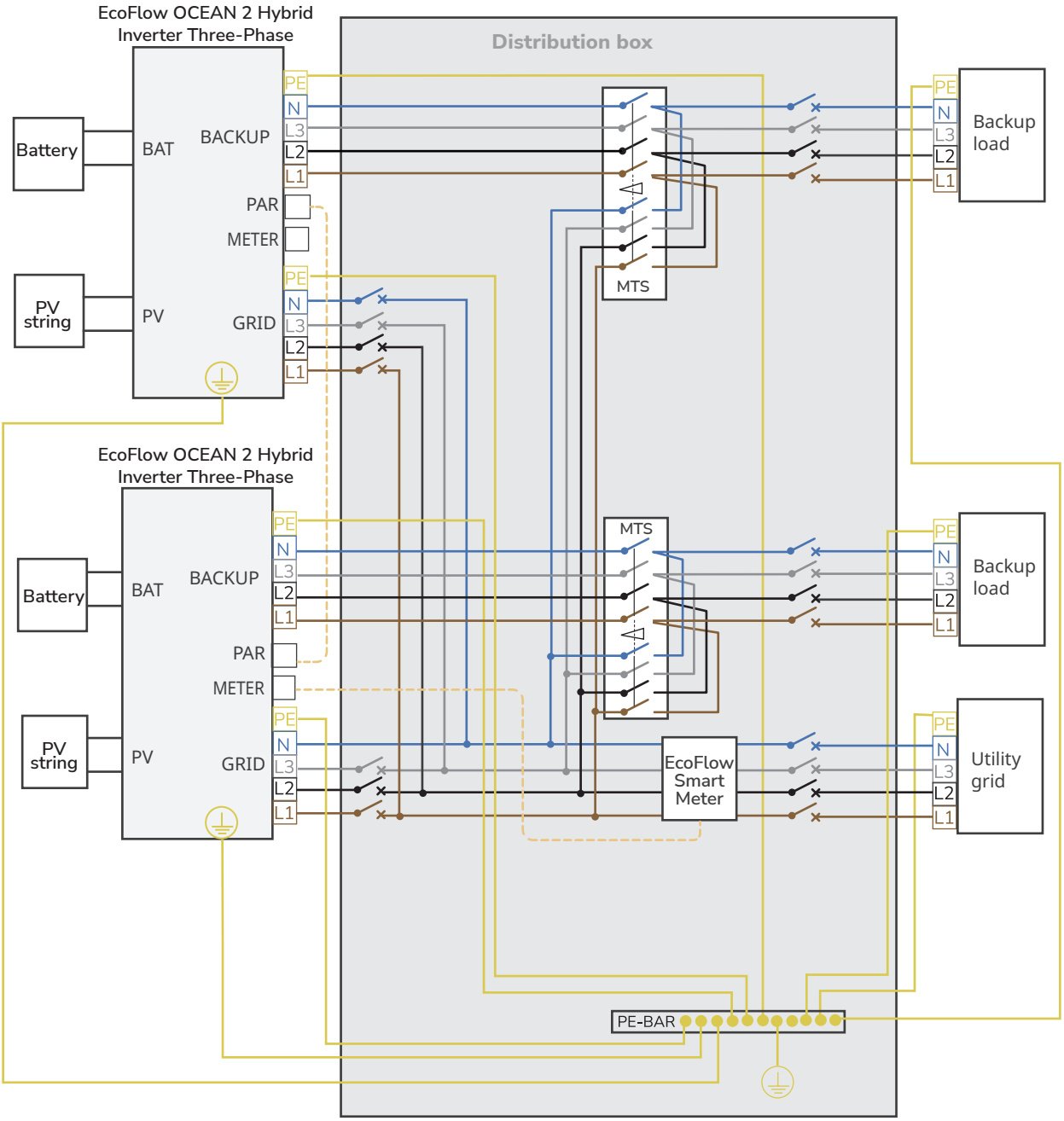
Method 2 N–PE Separate at Main Panel

CAUTION

- Do not connect the N busbar to the N-wire between the inverter and grid, otherwise the inverter operation may be abnormal.

NOTICE

- Do not connect the N-wires of the AC-backup side and AC-grid side, otherwise the system may operate abnormally. If connected in some houses, try disconnecting the N busbar from the grid and connecting the AC-GPID N terminal of inverter directly to the N terminal of the grid.

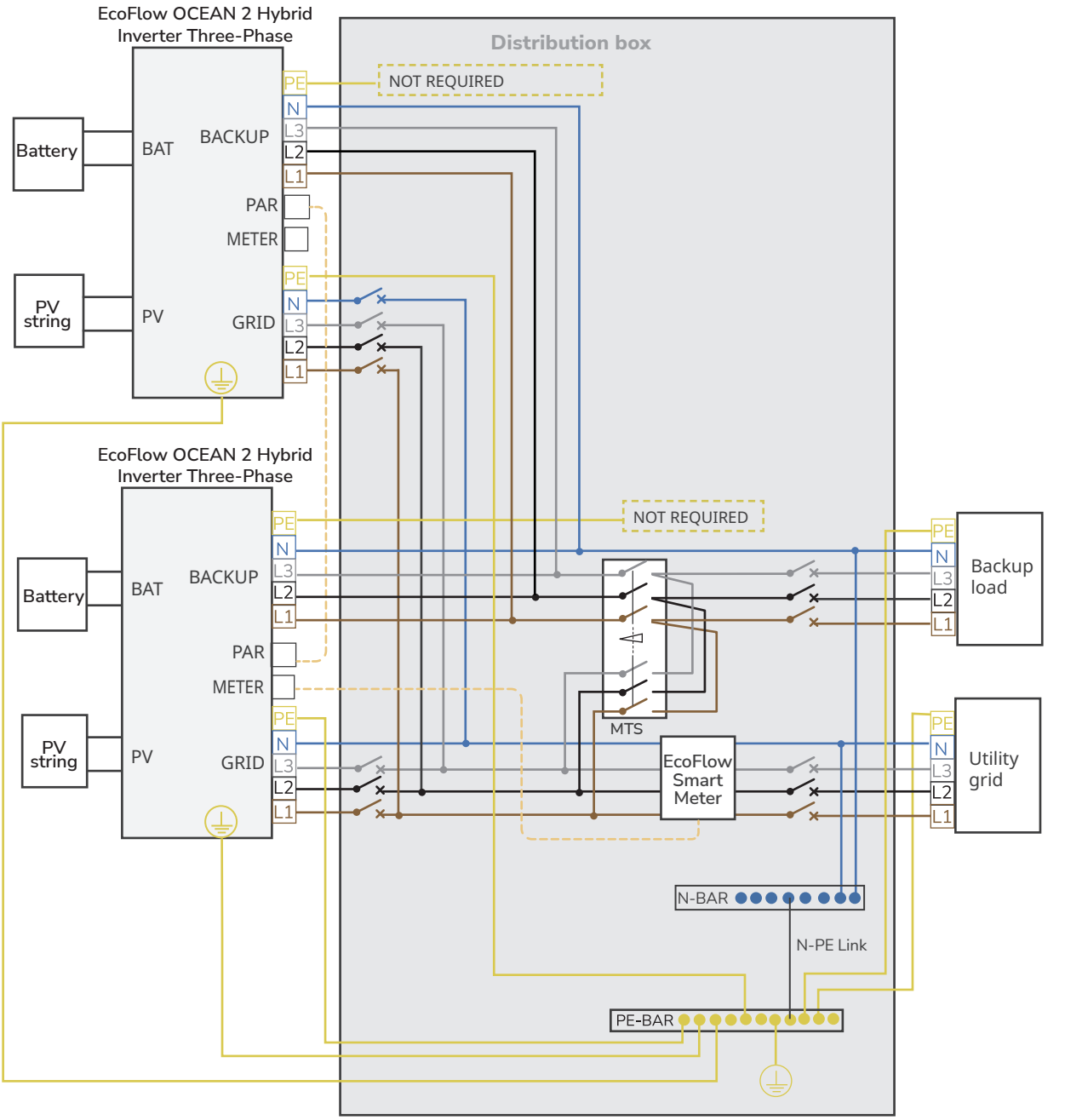


- **2 INVERTERS CASCADING (SHARING LOADS)**

Method 1 N–PE Bonded at Main Panel (For Australia and New Zealand)

NOTICE

- For Australia and New Zealand, the N conductors on the GRID side and the BACKUP side must be bonded according to AS/NZS 3000 wiring rules. Otherwise, abnormal BACKUP operation and potential safety risks may occur. Therefore, the following diagram applies to installations in Australia, New Zealand, and other regions with similar wiring requirements.



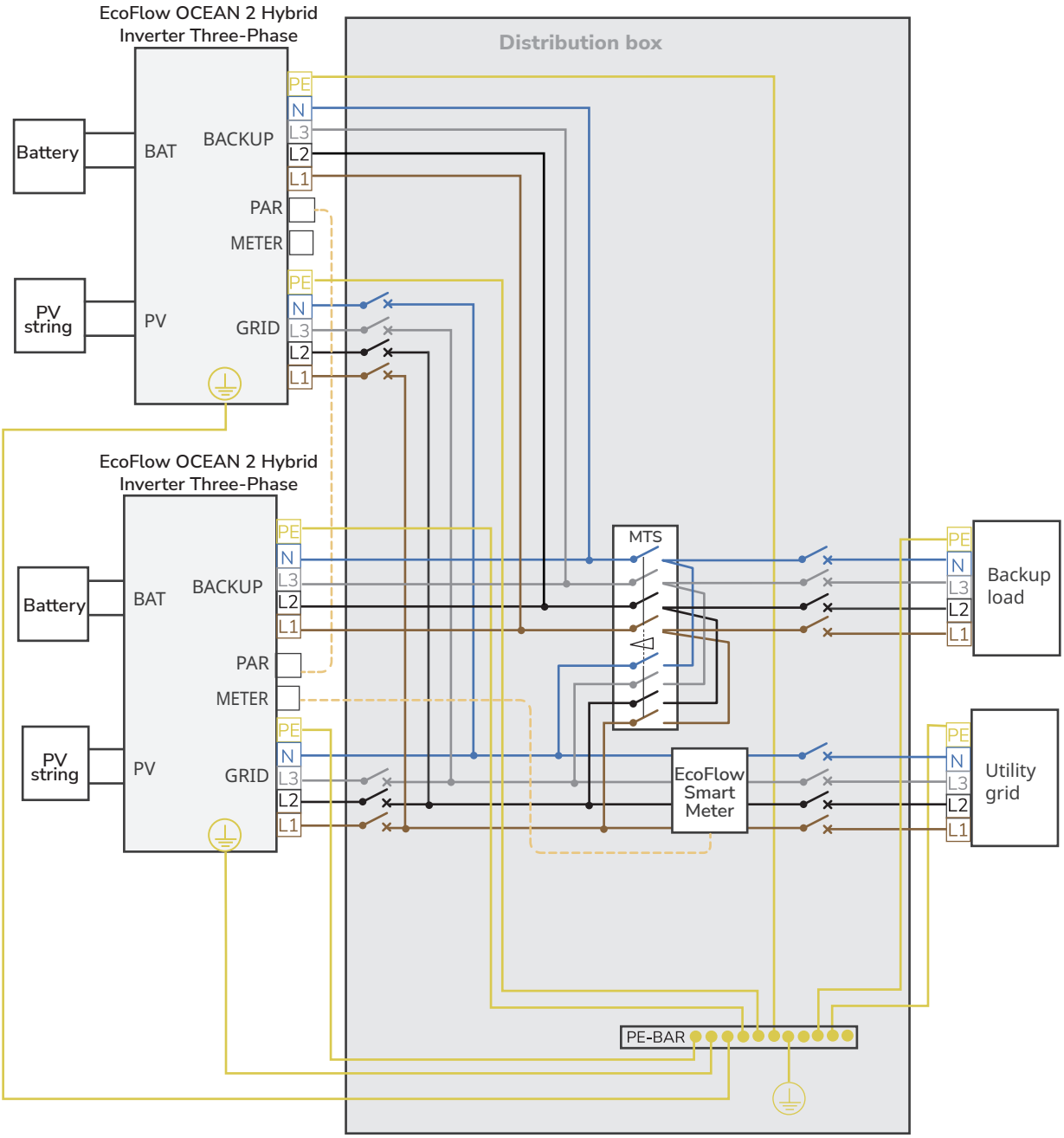
Method 2 N–PE Separate at Main Panel

CAUTION

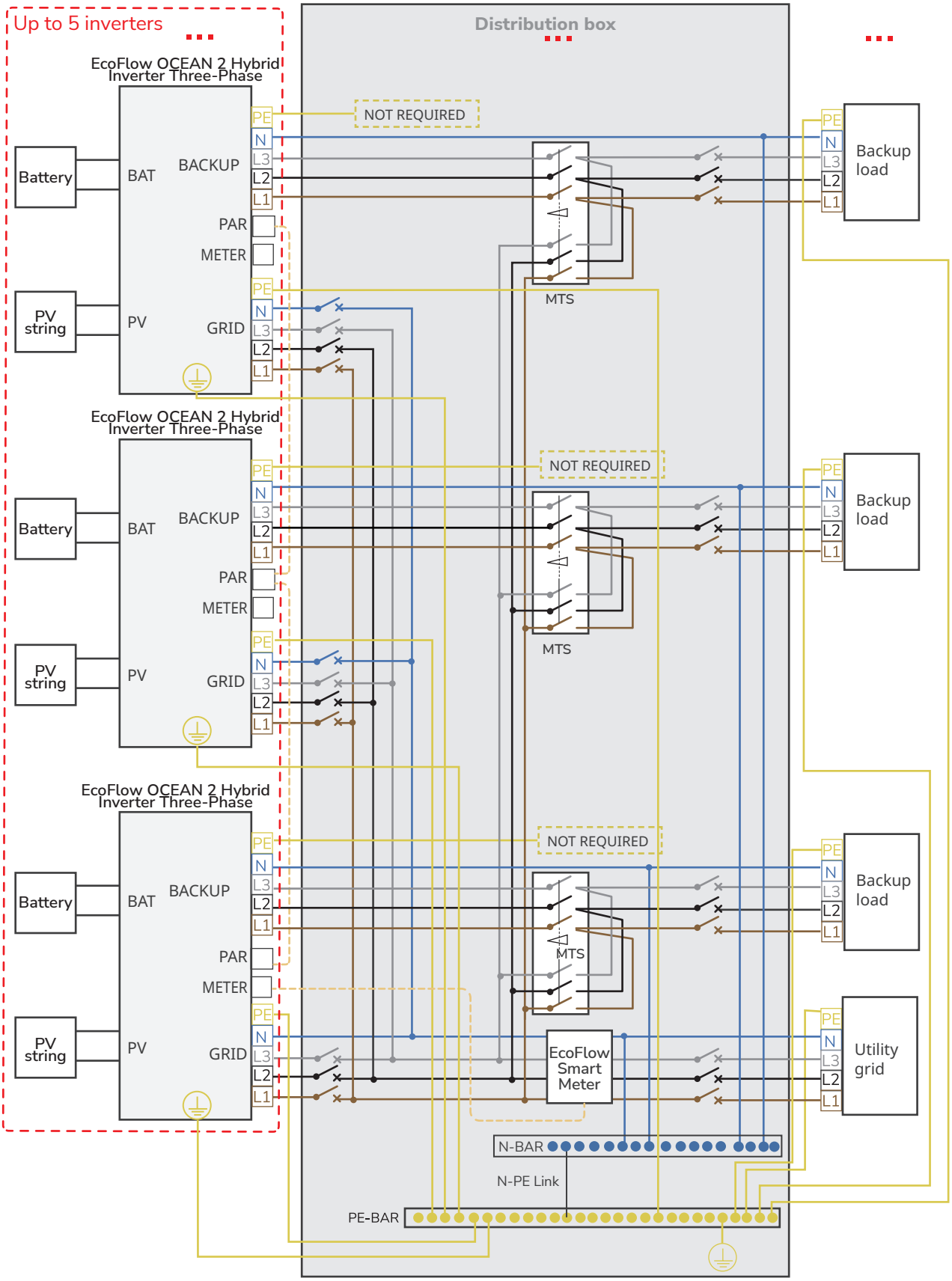
- Do not connect the N busbar to the N-wire between the inverter and grid, otherwise the inverter operation may be abnormal.

NOTICE

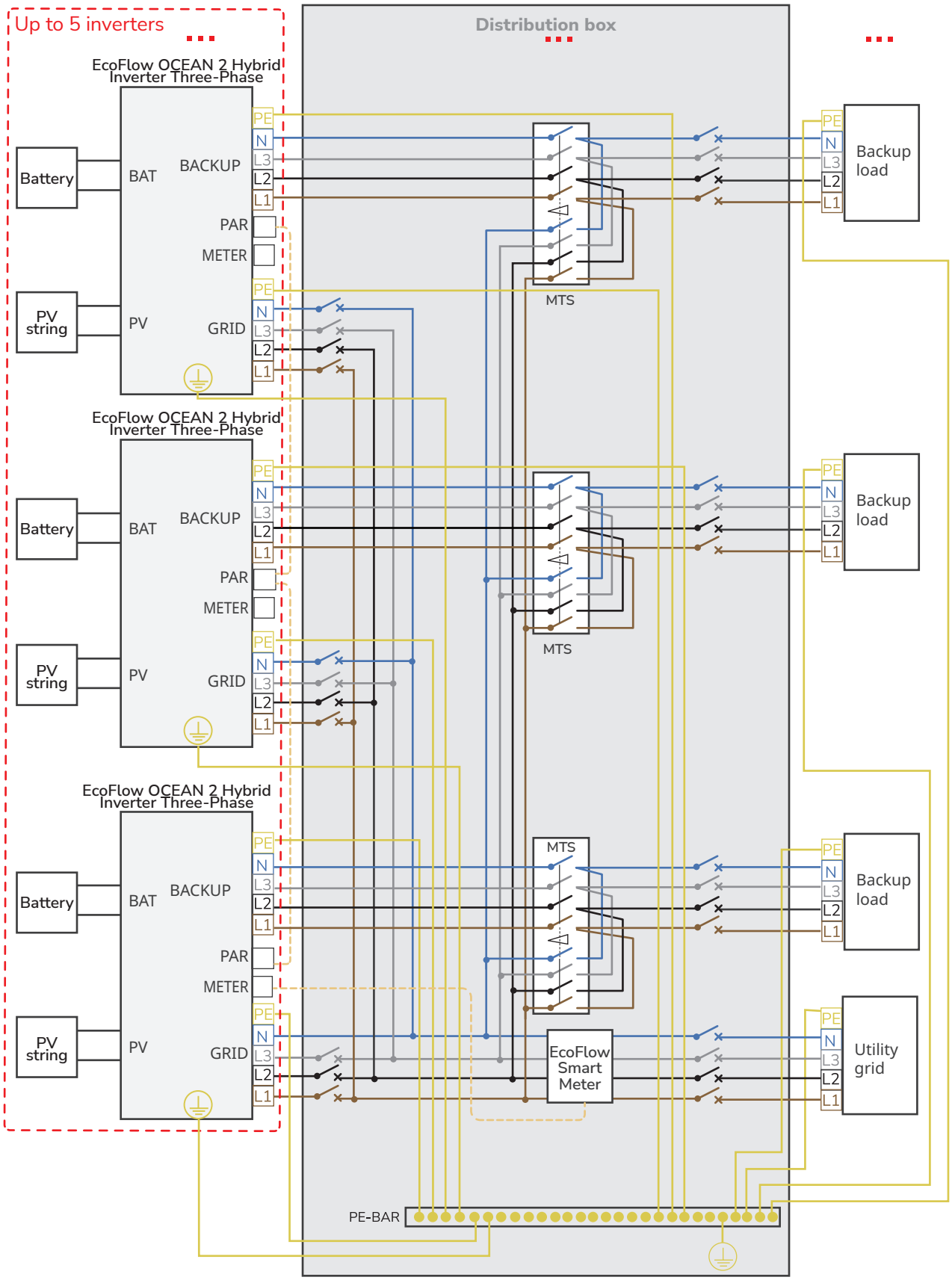
- Do not connect the N-wires of the AC-backup side and AC-grid side, otherwise the system may operate abnormally. If connected in some houses, try disconnecting the N busbar from the grid and connecting the AC-GPID N terminal of inverter directly to the N terminal of the grid.



- **3/4/5 INVERTERS CASCADING (SEPARATE LOADS)**
  Method 1 N–PE Bonded at Main Panel (For Australia and New Zealand)

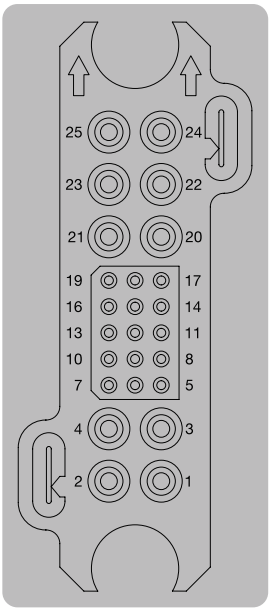


Method 2 N–PE Separate at Main Panel



Description of Inverter and Battery Stacking Interfaces

Both the inverter and battery adopt integrated stackable designs, eliminating the need for external wiring between them. The pin definitions for their stacking interfaces are as follows.

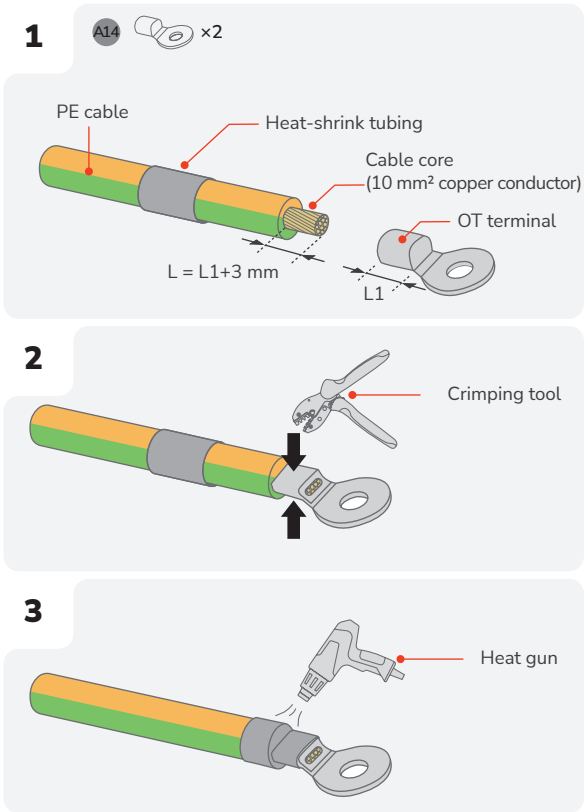


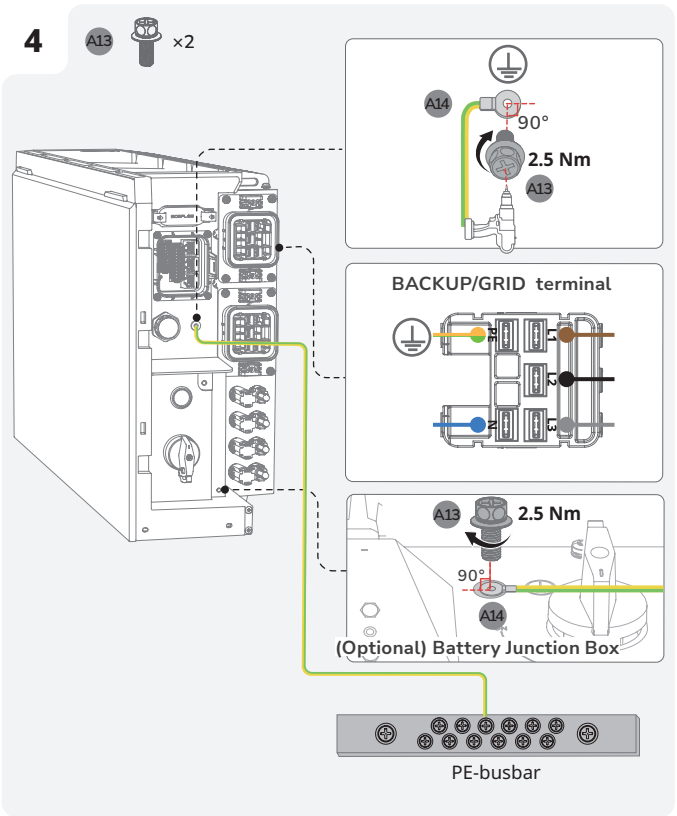
PIN	Description
1	**Ground**
5-10	**Battery Communication**
14-19	**Battery Button Control Signals and Link Check**
22-23	**Battery Output**

Connecting PE Cables

NOTICE

- Ensure that the PE cable is connected securely.
- Wrap the wire crimping area with heat shrink tubing or insulation tape. The heat shrink tubing is used as an example.
- When using a heat gun, protect the equipment from being scorched.
- It is recommended that silica gel or paint be used around the ground terminal after the PE cable is connected.
- The inverter features two grounding terminals. For single-stack installations, connect either terminal to the PE-busbar. In dual-stack configurations, connect one terminal to the PE-busbar and the other terminal to the junction box grounding terminal.





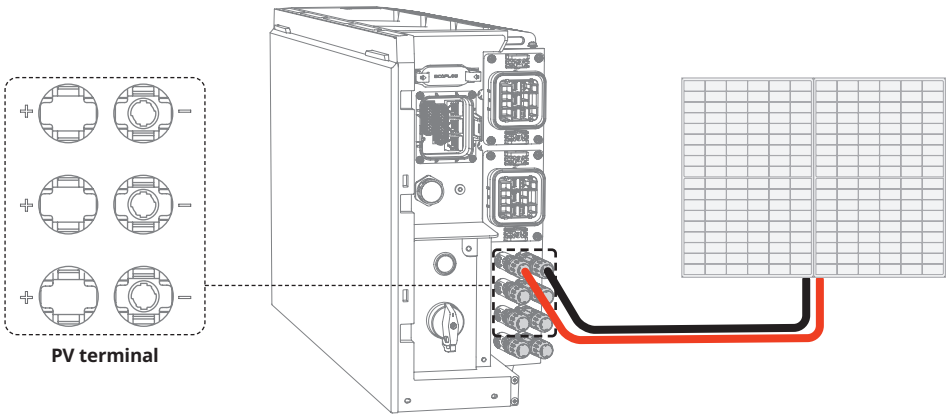
Connecting PV Input Cables

DANGER

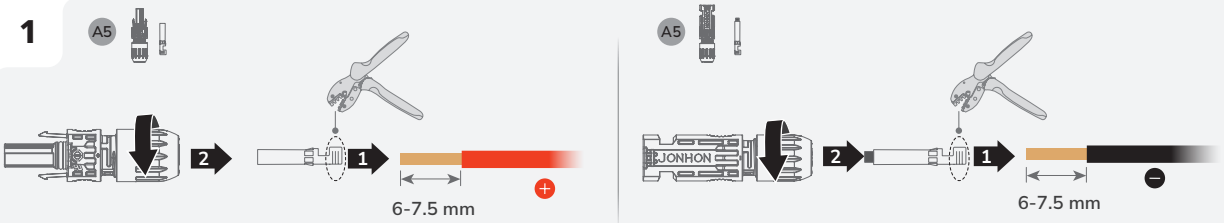
- Before connecting the PV input cables, ensure AC switch connected to the inverter and the PV SWITCH on the inverter are OFF. Failing to do so may result in electric shocks.
- The PV string will generate lethal high voltage when exposed to sunlight. Disconnect the PV cable of PV string before connecting DC power.
- Before connection, ensure the polarity of the output of the PV array matches "PV+"/"PV-" symbols.
- Before connecting the PV input cables, ensure that the impedance between the positive/ negative terminals of the PV string and earth are larger than 1 MΩ. Do not ground the PV array positive/negative hole.
- When the inverter is running, it is not allowed to work on the PV input cables, such as connecting or disconnecting a PV string or a PV module in a PV string. Failing to do so may cause electric shocks.
- Do not remove the protective cap from the unused PV input terminal. Otherwise, the IP rating of the inverter will be affected.
- Ensure that the maximum DC voltage and the maximum short-circuit current of any string do not exceed the allowed range specified in the "Technical Parameters" of the User Manual.

NOTICE

- In order to avoid malfunction, please do not connect any PV modules that have a risk of leakage current to the inverter.
- In order to avoid lightning damage to the inverter, it is recommended to add a surge protection switch at the PV junction box.
- After the positive and negative connectors snap into place, slightly pull the PV input cables back to ensure that they are connected securely.
- It is not recommended that connect different brands or models of PV modules to one MPPT circuit, or connect PV modules of different orientation or angles to one PV string.

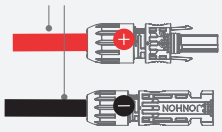


1

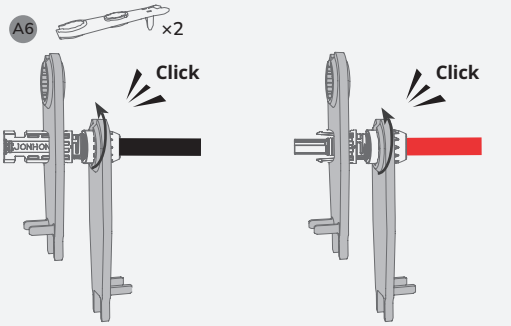


2

DANGER!
Pull back to comfirm the connection is secure

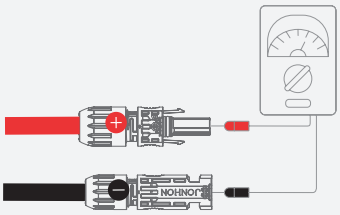


3

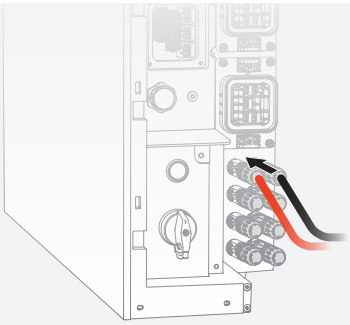


4

Ensure that the cable polarities are correct.



5

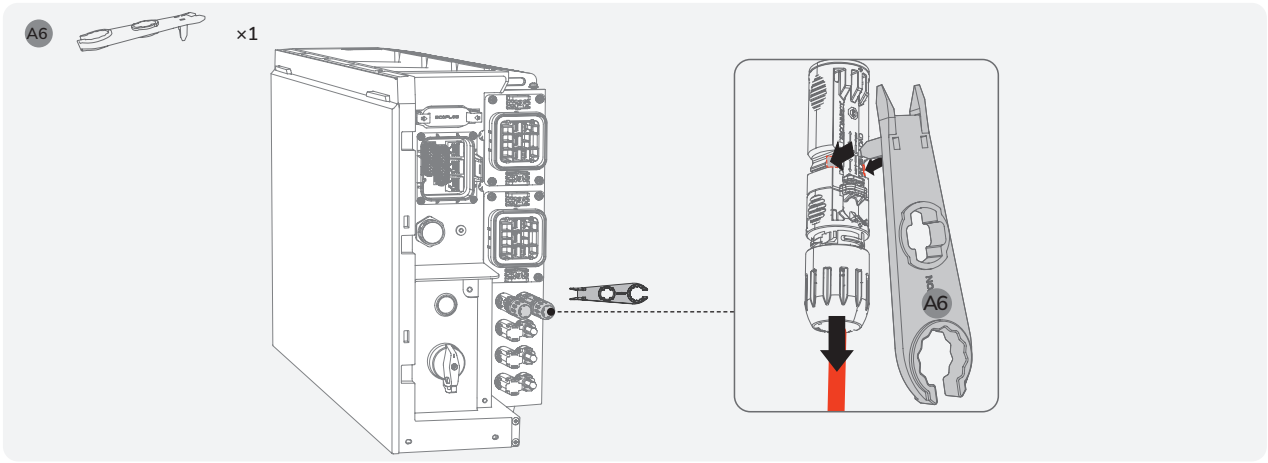


- Set the multimeter to DC gear to measure the voltage at the DC position. If the voltage is a negative value, the PV input polarity is incorrect and needs correction. If the voltage is greater than 1000 V, too many PV modules are configured to the same string. Remove some PV modules.
- If the PV input cable is reversely connected and the PV SWITCH is set to ON, first set the PV SWITCH to the OFF position, then remove the positive and negative connectors, and correct the polarities of the PV input cables.

- **REMOVING THE PV TERMINAL**

⚠ WARNING

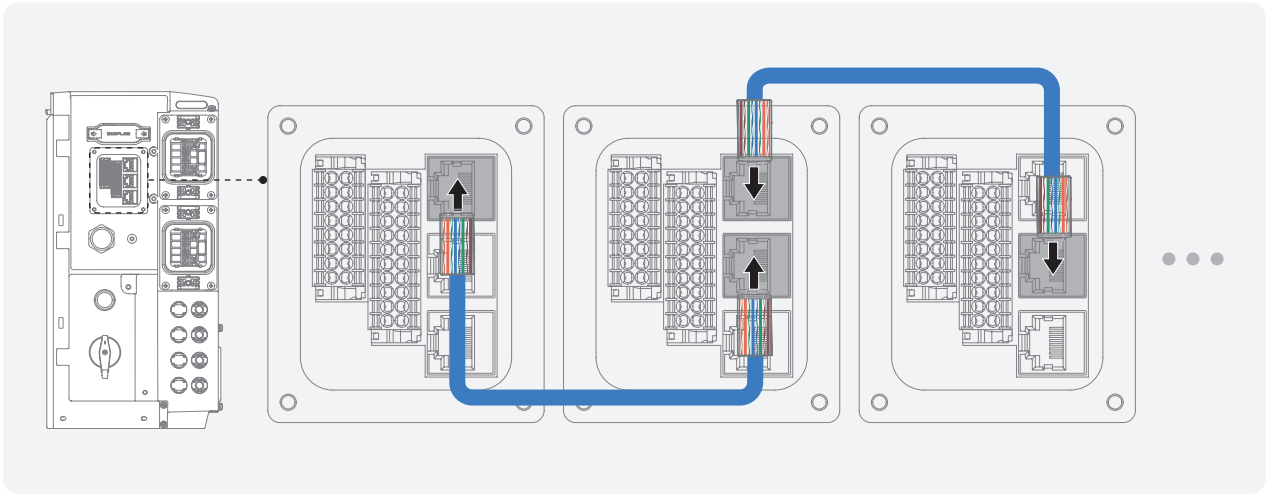
- Before removing the positive and negative connectors, ensure that the PV SWITCH is OFF.

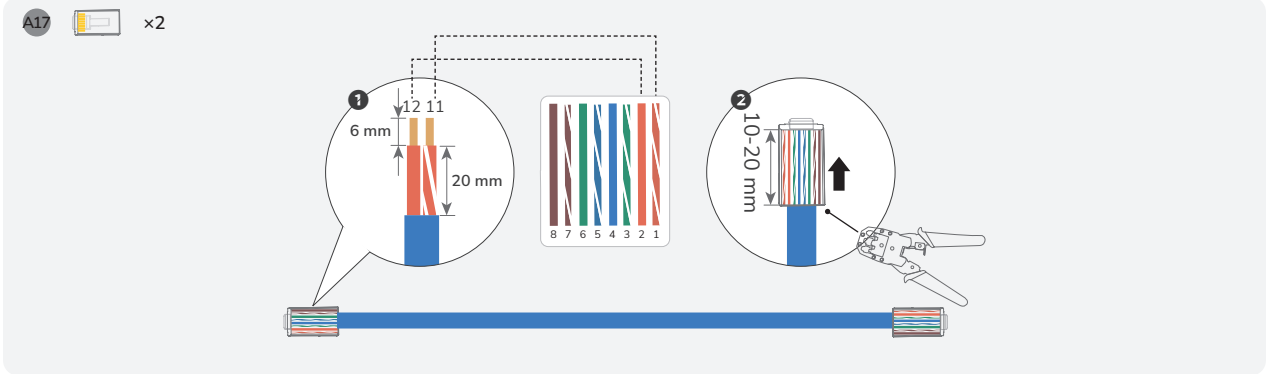


Communication Between Cascaded Inverters

NOTICE

- Up to 5 inverters can be cascaded.
- On-grid parallel communication cable length: ≤100m; Off-grid parallel communication cable length: ≤10m
- Grid-tied: up to 5 inverters; off-grid: up to 2 inverters.





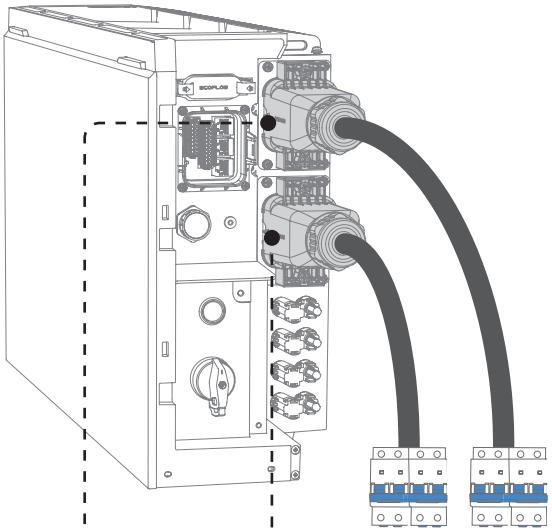
Connecting GRID/BACKUP Cables

DANGER

- Straighten the conductors. If any conductor is left outside the wire jacket, a short circuit may occur.
- Make sure to pull back the cable to confirm connection before holding terminal block in place.

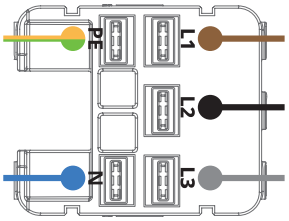
⚠ CAUTION

- Before installing, operating, and maintaining the equipment, always disconnect it from all power.
- Do not connect loads between the inverter and the AC switch that directly connects to the inverter.
- Ground the PE pole of GRID connector and the equipment enclosure.
- Do not connect the GRID conductors to the BACKUP load terminal of the inverter, and do not connect the BACKUP load conductors to the GRID terminal.
- Please ensure the wiring is correct; otherwise, it may cause device malfunction or even damage.



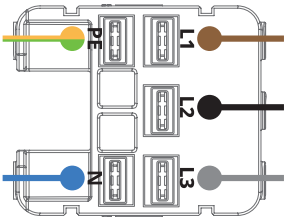
GRID terminal

GL1 · GRID-L1, a-phase line 1
GL2 · GRID-L2, b-phase line 2
GL3 · GRID-L3, c-phase line 3
GN · GRID-N, neutral wire
GP · GRID-PE, ground wire

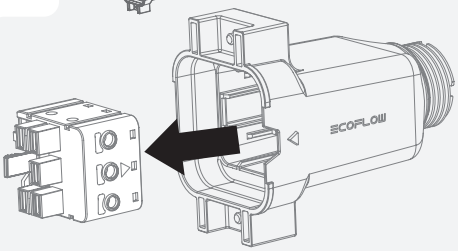


BACKUP load terminal

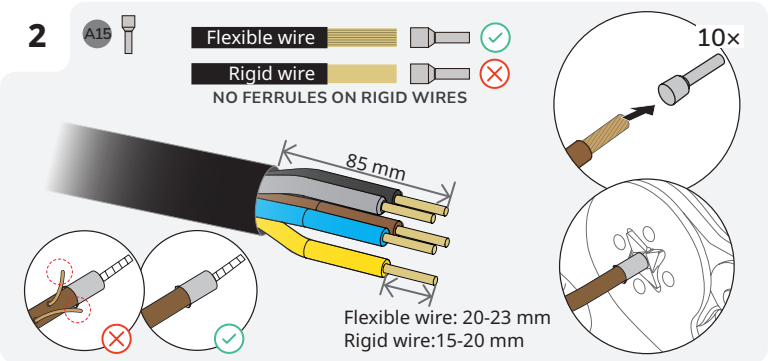
L1 · LOAD-L1, a-phase line 1
L2 · LOAD-L2, b-phase line 2
L3 · LOAD-L3, c-phase line 3
N · LOAD-N, neutral wire
P · LOAD-PE, ground wire



1 A9 ×1

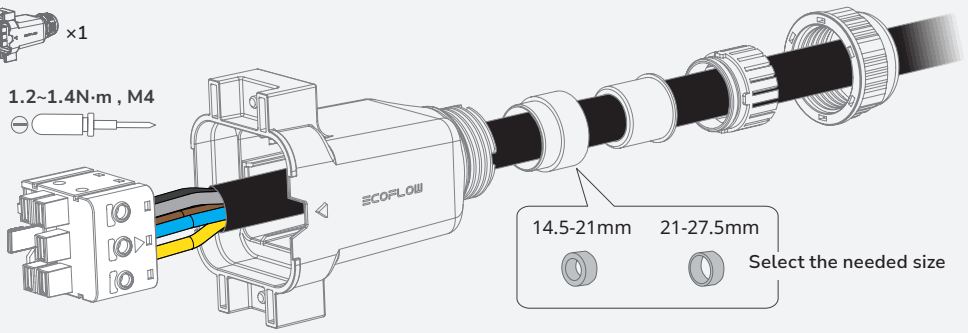


2 A15

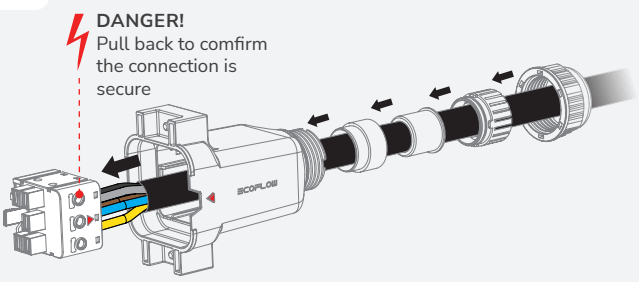


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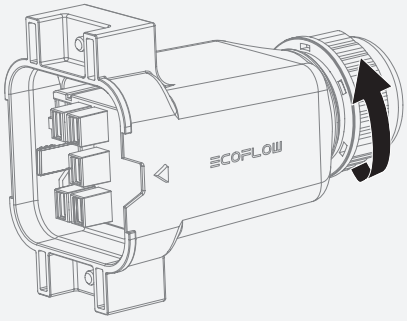
A9 ×1



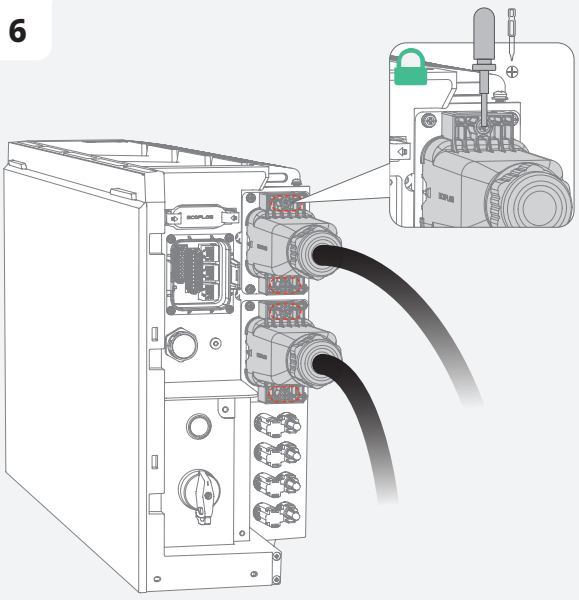
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5



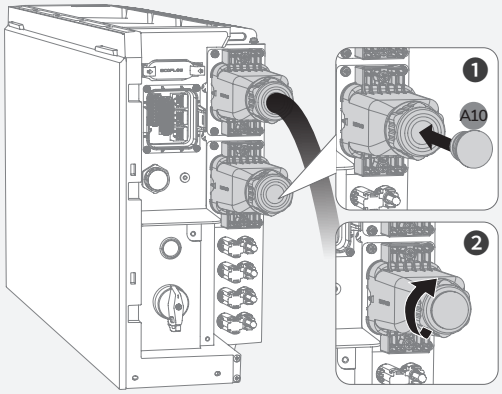
6



A10 ×1

CAUTION

- Even when not in use, the BACKUP terminal must be fitted with the BACKUP connector and an electrical safety plug (included) to completely isolate live parts, preventing personnel from electric shock or damage caused by incorrect external device connection.



I Cascading Batteries

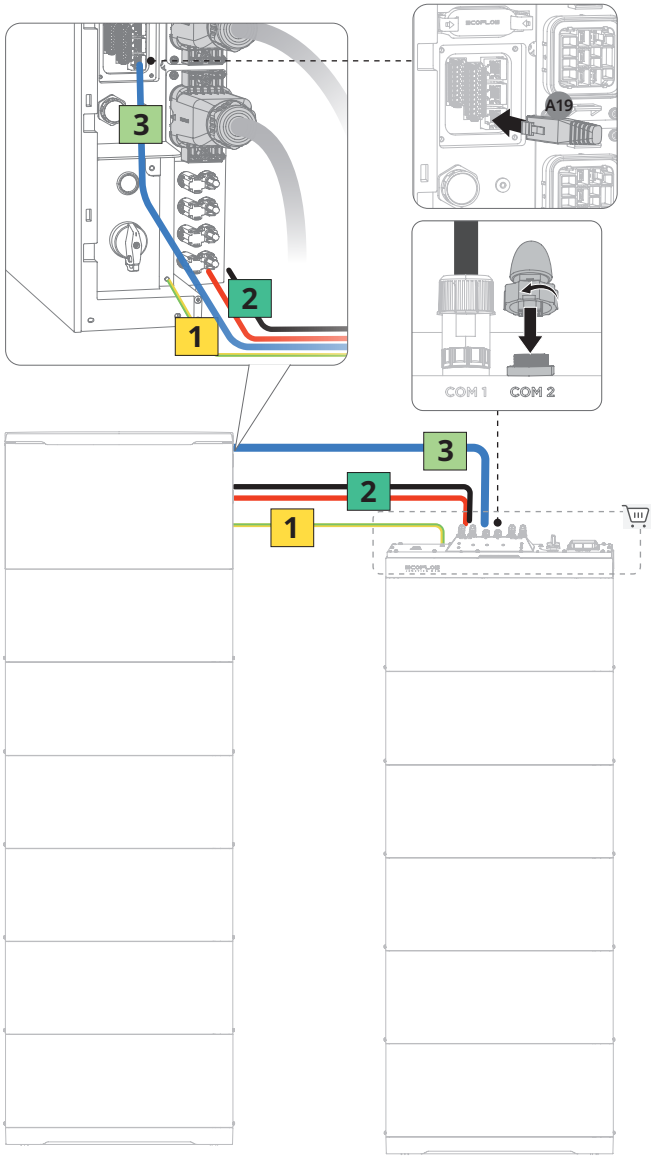
NOTICE

- For cascade battery configurations, the EcoFlow PowerOcean Plus Battery Junction Box (EF BD-JC-S2) is required to ensure proper connection of multiple battery stacks. One battery junction box supports a maximum of 6 battery packs.
- Up to 12 battery packs can be cascaded.
- Do not remove the protective cap of unused DC input terminals. Otherwise, the IP rating of the inverter will be affected.
- For the battery clearance, see the section Installation Space Requirements in this guide.

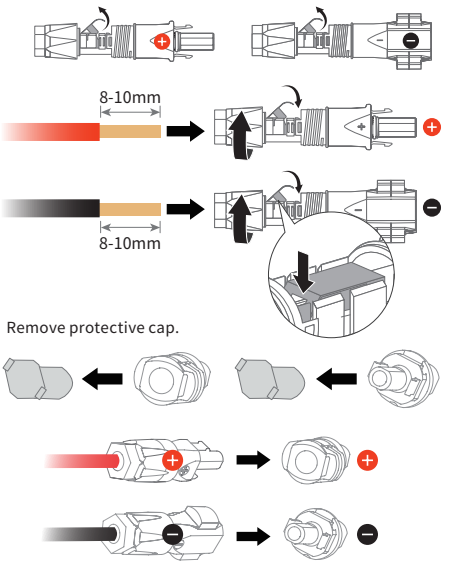
1 For details about connecting grounding terminals between the battery junction boxes, see the section **Connecting PE Cables** in this guide.

NOTICE

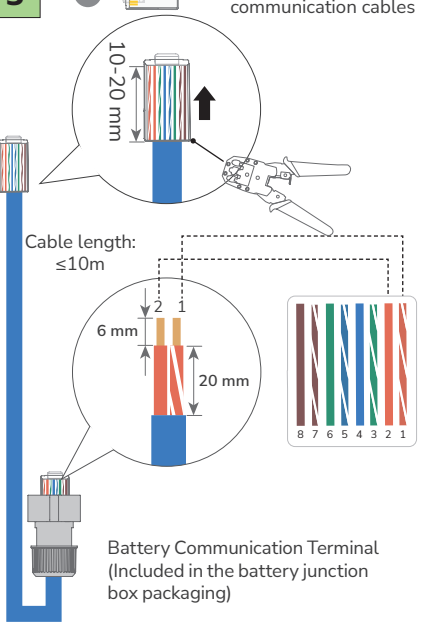
- B-COM port: Please install a terminating resistor to the unused B-COM terminal for proper communication.



2 Battery Power Cables (Included in the battery junction box packaging)



3 A17 ×1 Preparing battery communication cables

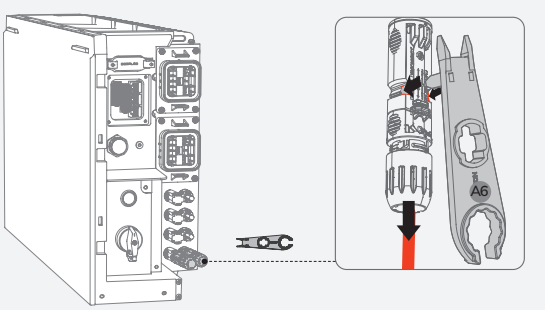


- **REMOVING THE PV TERMINAL**

⚠ WARNING

- Before removing the positive and negative connectors, ensure that the BATTERY SWITCH is OFF.

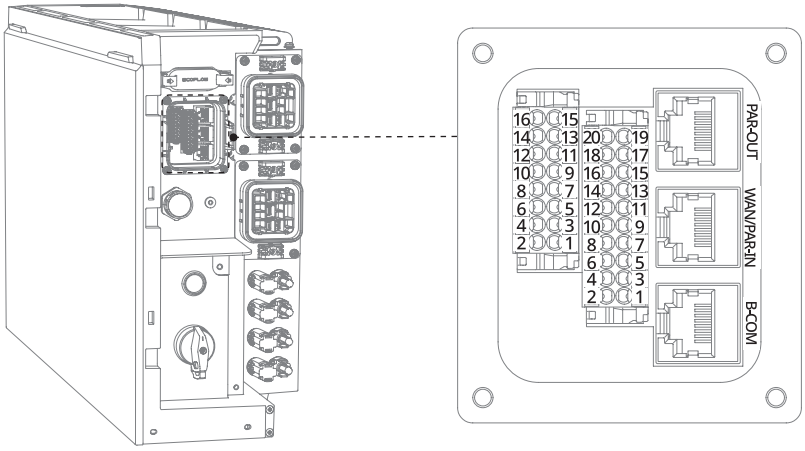
A6 ×1



Installing COM Terminal With Shorting Wire

NOTICE

- COM terminal supports logic interface connection. Logic interface is required by some local regulations that can be operated by a simple switch or contactor.
- When the switch is switched on, the inverter can operate normally. When the switch is switched off, the inverter will reduce its active power to zero.
- DRM only be supported in Australia and New Zealand.
- Relay Contact rating of SG_Ready pins: 30V/2A. The recommended load should be rated ≤24V/2A for safe operation.



• 16-PIN COM TERMINAL DEFINITION

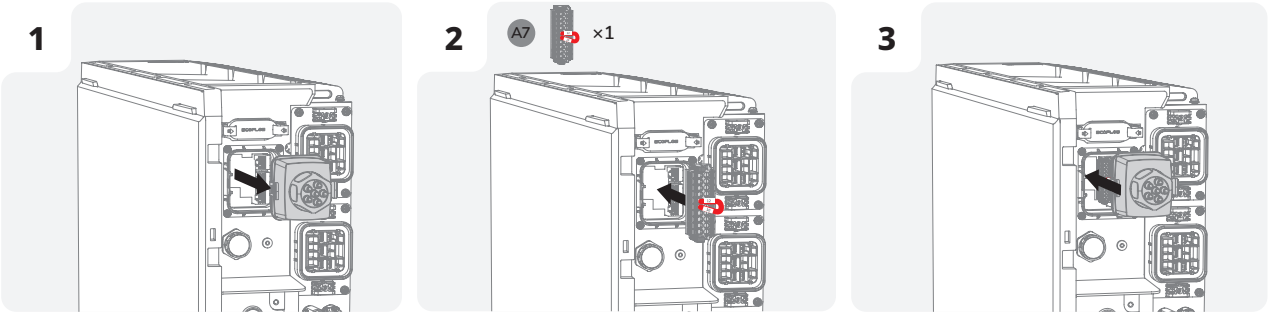
Off-Grid Parallel Communication / Gateway Communication		RS485 Communication for Ecosystem Appliances	
1	CAN0_H	2	ECO_485_B1
3	CAN0_L	4	ECO_485_A1
5	SYN	6	ECO_485_B2
7	SYN_GND1	8	ECO_485_A2
SG_Ready / Earth Fault Alarm (EFA)		Smart Meter	
9	DO 2_1 (for SG_Ready 2)	10	METER_485_B3
11	DO 2_2 (for SG_Ready 2)	12	METER_485_A3
13	DO 1_1 (for SG_Ready 1 / EFA)	DC Output	
15	DO 1_2 (for SG_Ready 1 / EFA)	14	12V_OUT
		16	12V_GND1

• 20-PIN COM TERMINAL DEFINITION

Signal Shield Grounding		DRM / RCR Communication	
1	PE	2	GND2 (for DRM/RCR)
3	Reserved	4	DRM0
RCR DI Communication			
5	RCR_DI3	6	RCR_DI1
7	RCR_DI4	8	RCR_DI2
CAN Communication for Ecosystem Appliances		Emergency Stop Input	
9	ECO_CAN3_H	10	EPO
11	ECO_CAN3_L	12	EPO_GND2
CAN Communication		DI Communication for Gateway / Generator	
13	CAN4_H	14	DI 2
15	CAN4_L	16	DI 2_GND1
DI Communication for EEBUS §14a *		DO Communication for Generator	
17	DI 1	18	DO 3_1
19	DI 1_GND2	20	DO 3_2

*** For details about EEBUS §14a, see the EEBUS §14a Function Description at:**

https://energy.ecoflow.com/eu/documentation/download?productId=228014&documentationId=2078032032431943681



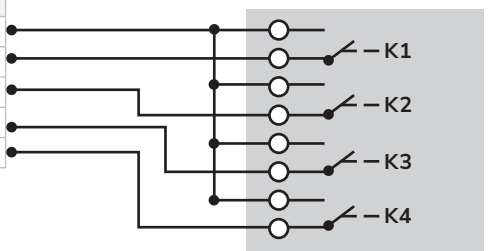
- **RIPPLE CONTROL RECEIVER (RCR)**

Ripple control receiver (RCR) is an interface between a PV system and power grid company that enables the grid operator to reduce the feed-in power if necessary. Generally, if the grid is overloaded, the utility company will specify whether the PV system should reduce their feed-in power to 0%, 30%, 60% of their rated power. If the grid is not overloaded, the PV system will be allowed to input 100% of the power. These control commands will be directly sent to the installer and then realized by the RCR.
The RCR has four relays (K1-K4). The relays are potential-free make contacts. The relays are interlocked with each other. Furthermore, each of these relays represents one of the following control stages:

No.	K1	K2	K3	K4	System Setpoint
1	0	0	0	0	100%
2	0	0	0	ON	0%
3	0	0	ON	0	30%
4	0	0	ON	ON	0%
5	0	ON	0	0	60%
6	0	ON	0	ON	0%
7	0	ON	ON	0	30%
8	0	ON	ON	ON	0%
9	ON	0	0	0	100%
10	ON	0	0	ON	100%
11	ON	0	ON	0	100%
12	ON	0	ON	ON	100%
13	ON	ON	0	0	100%
14	ON	ON	0	ON	100%
15	ON	ON	ON	0	100%
16	ON	ON	ON	ON	100%

Please enable the RCR via EcoFlow App, in this case, the feed-in power limitation will be enabled. The inverter is connected to the ripple control receiver as follows:
RCR_DI1 (PIN6): 100%
RCR_DI2 (PIN8): 60%
RCR_DI3 (PIN5): 30%
RCR_DI4 (PIN7): 0%

RCR Status Detection	
PIN2	GND2
PIN6	RCR_DI1
PIN8	RCR_DI2
PIN5	RCR_DI3
PIN7	RCR_DI4



(Optional) To disconnect cables from PAR-OUT / WAN/PAR-IN / B-COM ports, first remove the 16-pin/20-pin communication terminals.

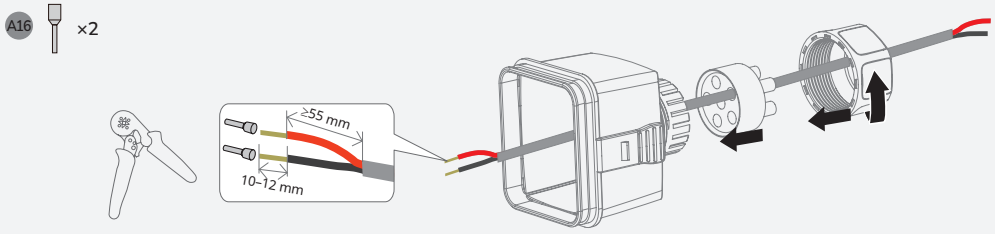


(Optional) Installing Emergency Stop (EPO)

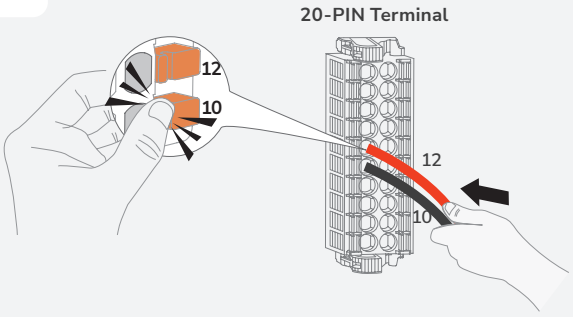
NOTICE

- Before installing EPO, remove the shorting wire between PIN10 and PIN12.

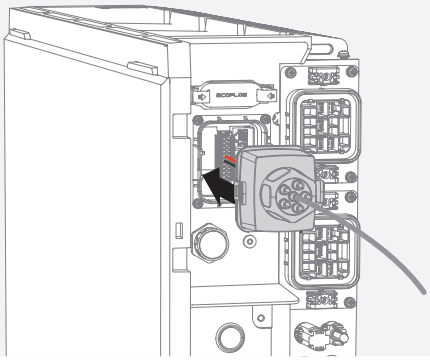
1



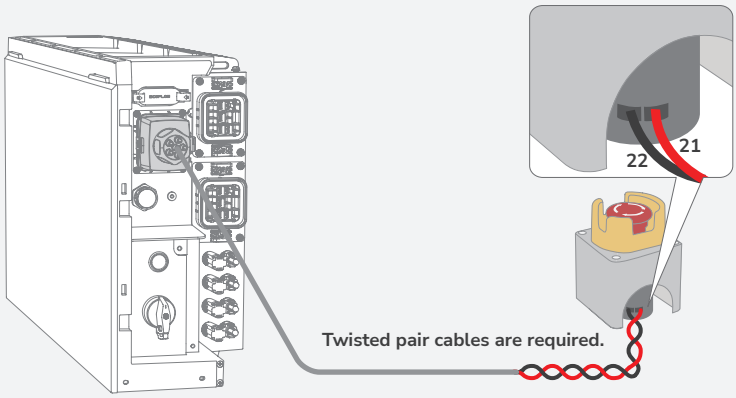
2



3



4

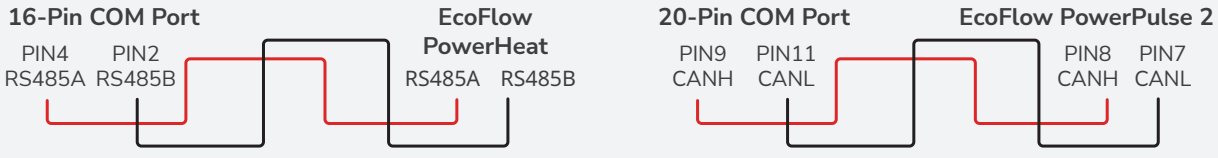


Connecting Ecosystem Appliances

The EcoFlow Ocean 2 system supports connecting with ecosystem appliances (EcoFlow PowerHeat, EcoFlow PowerPulse 2, etc.) via the COM interface.

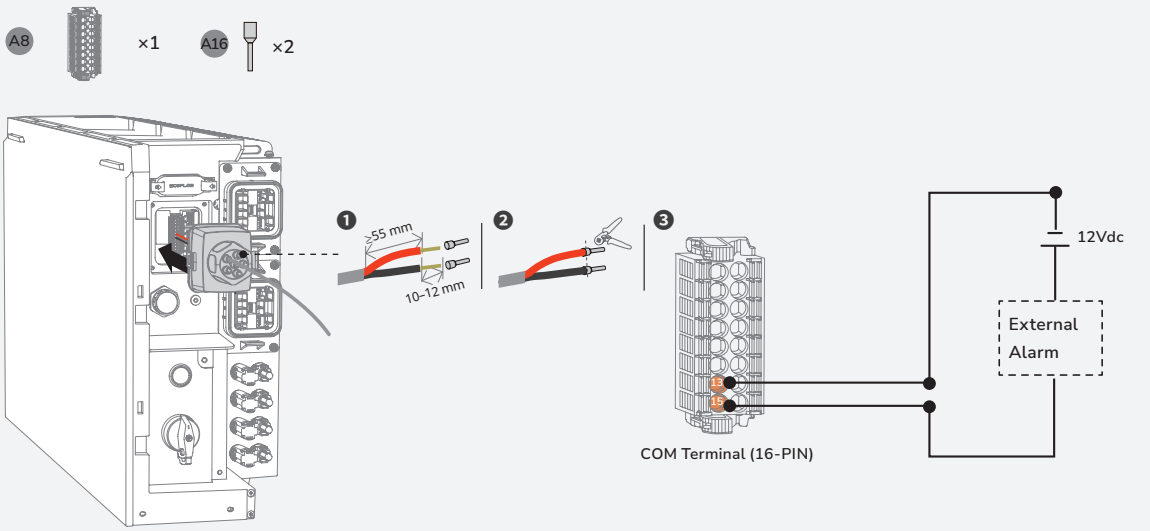
Refer to the procedure in the section "(Optional) Installing Emergency Stop (EPO)" and connect the wires in accordance with the PIN definition of the COM interface. Check the installation guide of the corresponding products.

RS485 / CAN communication cable length: ≤50m



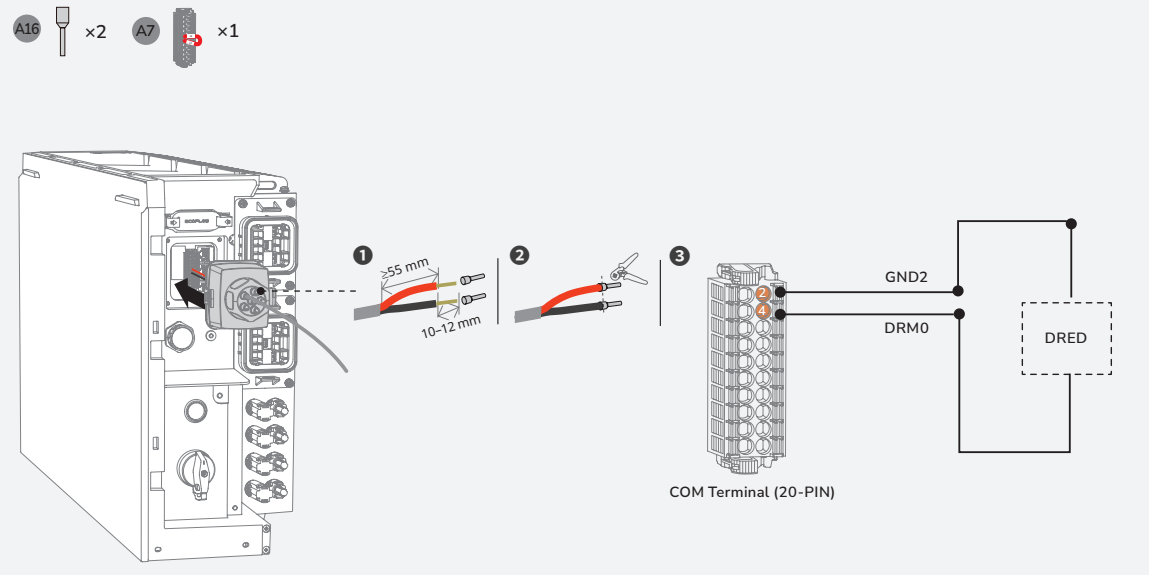
Installing Earth Fault Alarm (Required for Australian Version)

The inverter provides terminals for connecting to an external alarm for earth fault. The additional equipment required is a light indicator and/or a buzzer. The external alarm needs to be powered by an external power supply less than 24V.
If an earth fault occurs,
- the light indicator will blink, or the buzzer will beep;
- the corresponding fault codes will pop up on the EcoFlow App. Visit the EcoFlow App to retrieve the error code for troubleshooting.



Installing Demand Response Enabling Device

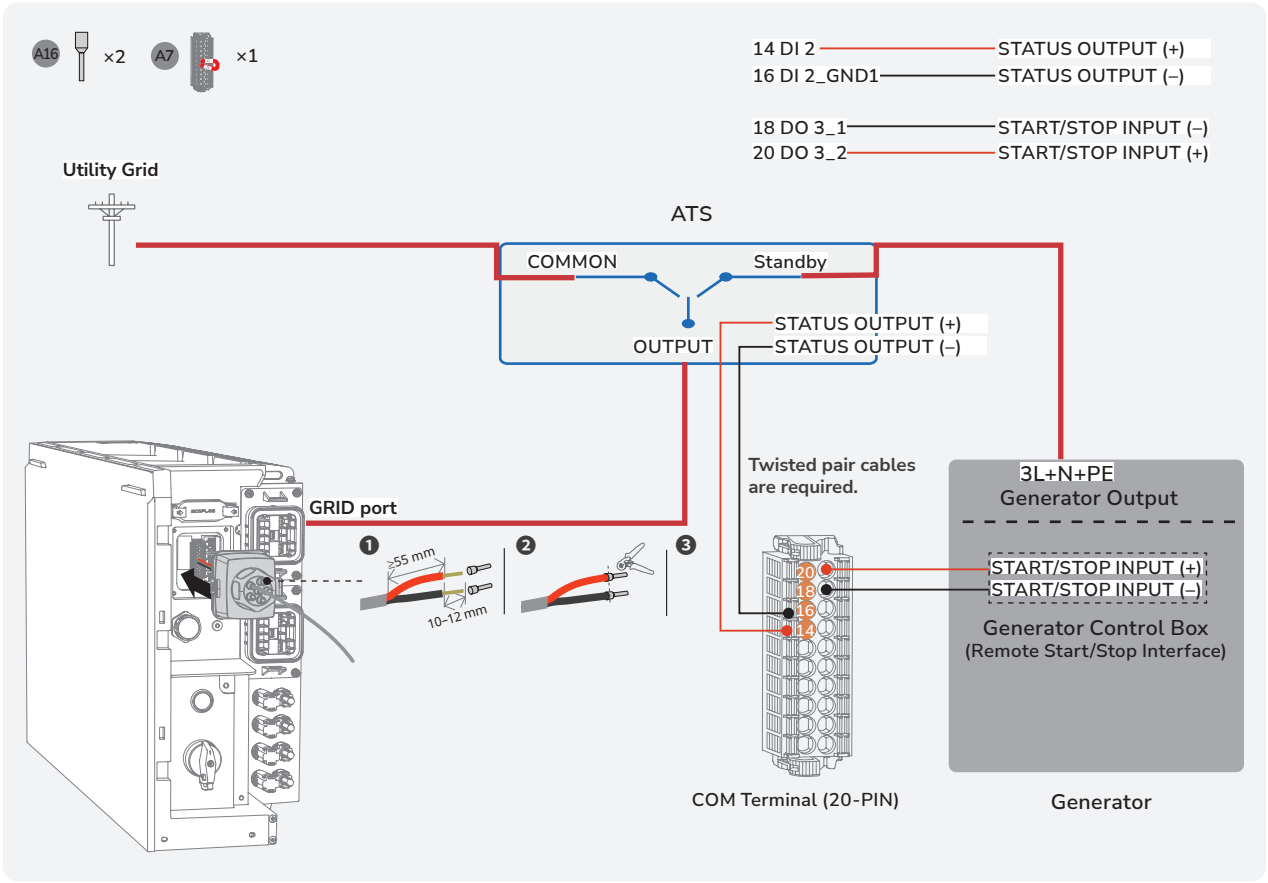
The inverter provides terminals for connecting to a Demand Response Enabling Device (DRED). After the connection, the DRED can trigger demand response mode (DRM0) on the inverter, which instructs the inverter to reduce its output to zero.



(Optional) Installing Third-Party Generator

NOTICE

- The DO terminals provide potential-free (dry) contacts with a maximum rating of 30 VDC / 2 A. Do not connect mains voltage or any other high-voltage circuits to these terminals.
- Use shielded twisted-pair (STP) cable (e.g., a twisted pair from CAT5 or higher-grade network cable). Maximum recommended routing distance is 50 m.
- After completing the physical wiring, enable Generator Mode in the EcoFlow App. The system will not detect or dispatch the generator until this mode is activated.
- Remote start terminal assignments vary by generator manufacturer. Always consult the generator manual to confirm the Remote Start / Status pin definitions before wiring.
- The generator and the utility grid must be electrically interlocked via an ATS/MTS (Automatic / Manual Transfer Switch). Parallel operation with the grid is strictly prohibited to prevent backfeeding.
- Three-phase generator connection only.



(Optional) Energy Metering Installation for Partial Backup System

NOTICE

- Smart meter is sold separately, which has been preset parameters before delivered. Do not modify the relevant parameters.
- The compatibility of this product with smart meters may vary by regions and versions. For the appropriate smart meter for your EcoFlow OCEAN 2 system, see the Smart Meter Selection Guide at:
  https://enterprise-service-eu-cdn.ecoflow.com/enterprise/documentation/1755571330907/Smart%20Meter%20Selection%20Guide_EN_View.pdf.
- For detailed instructions on the installation and wiring scheme of the smart meter for this product, please refer to the guide that comes together with the meter.
- The cable colors shown in the figures are for reference only. Select an appropriate cable according to the local standards.
- RS485 communication cable length: ≤50m
- External meter is not required for whole-home backup applications.
- Install CT with a minimum 50cm clearance from all other power cables, except for the conductor being measured which may pass through the CT; this prevents electromagnetic interference that could compromise measurement accuracy.

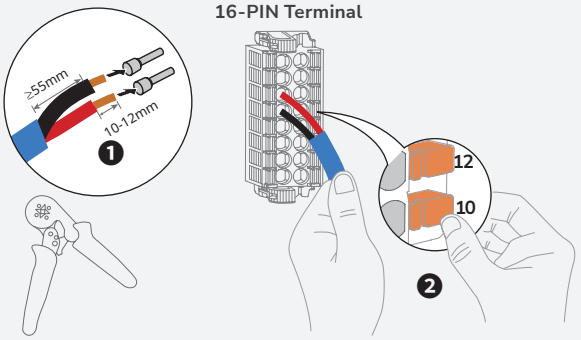
- **WITH CT**

1

A8 ×1 A16 ×2

12 METER_485_A3 — RS485A
10 METER_485_B3 — RS485B

16-PIN Terminal

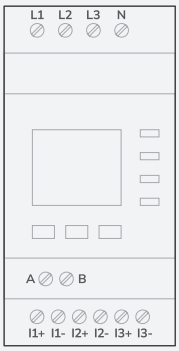


2

METER SAMPLING
Find the home mains and connect the smart meter as shown in the diagram.

3

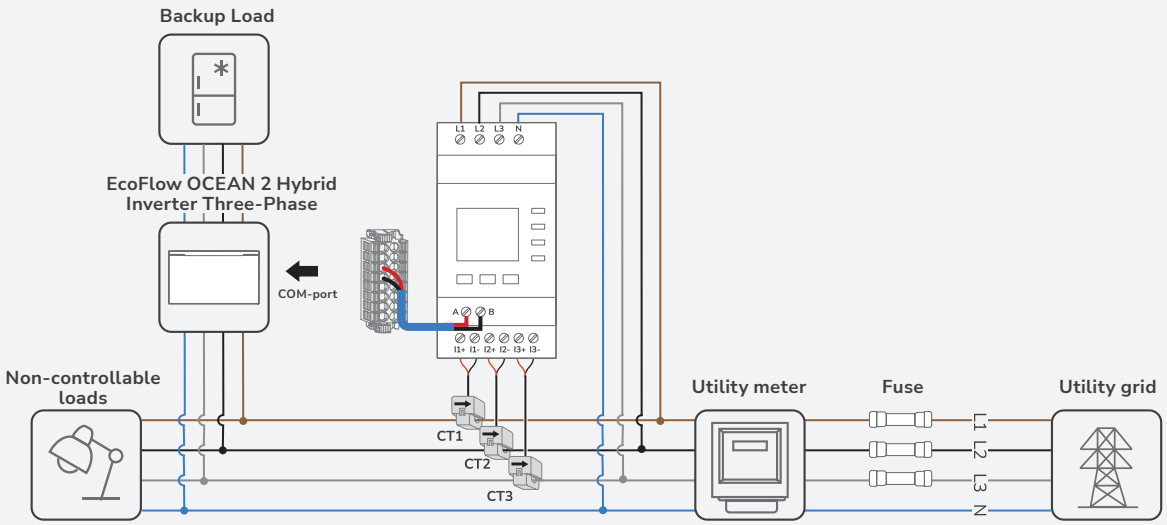
METER COMMUNICATION
Find communication port A,B on the meter and connect with the inverter.



L1	Grid L1
L2	Grid L2
L3	Grid L3
N	Grid N
A	RS485A
B	RS485B
I1+ / I1-	Grid L1 CT
I2+ / I2-	Grid L2 CT
I3+ / I3-	Grid L3 CT

4

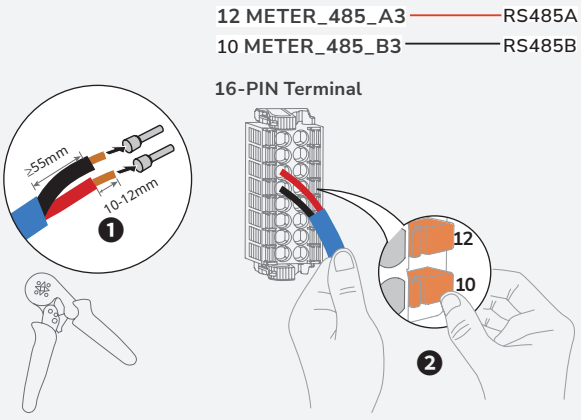
COMMUNICATION WIRING DIAGRAM



- **WITHOUT CT**

1

A8 ×1 A16 ×2

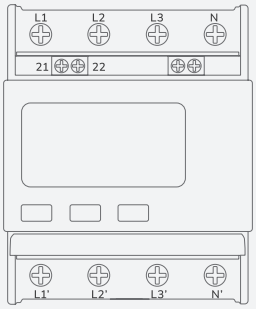


2 METER SAMPLING

Find the home mains and connect the smart meter as shown in the diagram.

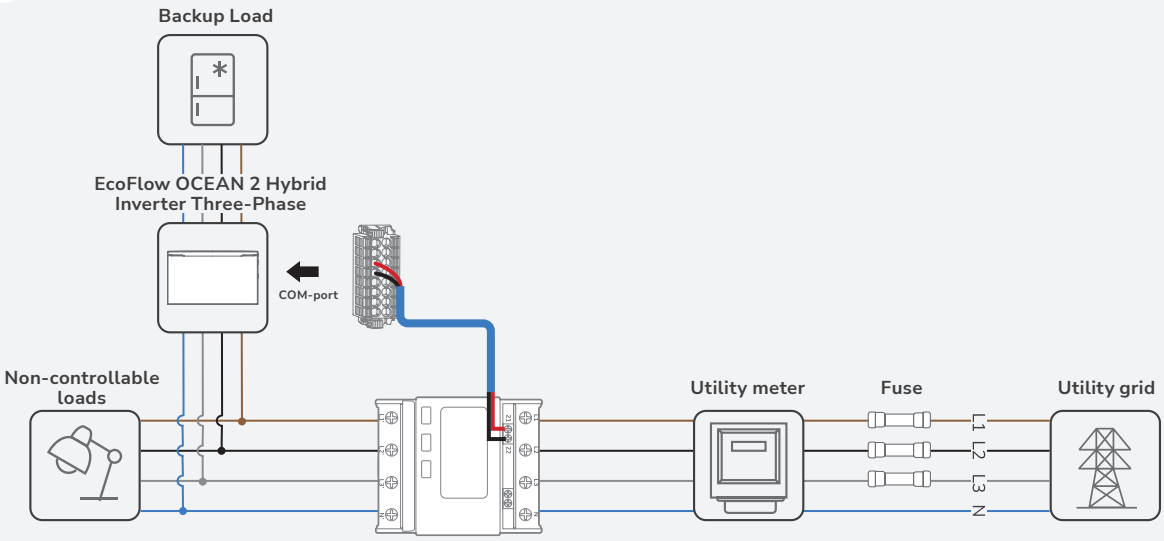
3 METER COMMUNICATION

Find communication port A,B on the meter and connect with the inverter.



L1	Grid L1
L2	Grid L2
L3	Grid L3
N	Grid N
21	RS485A
22	RS485B
L1'	Load L1
L2'	Load L2
L3'	Load L3
N'	Load N

4 COMMUNICATION WIRING DIAGRAM



I (Optional) Energy Metering Installation for System with Third-Party PV Integration

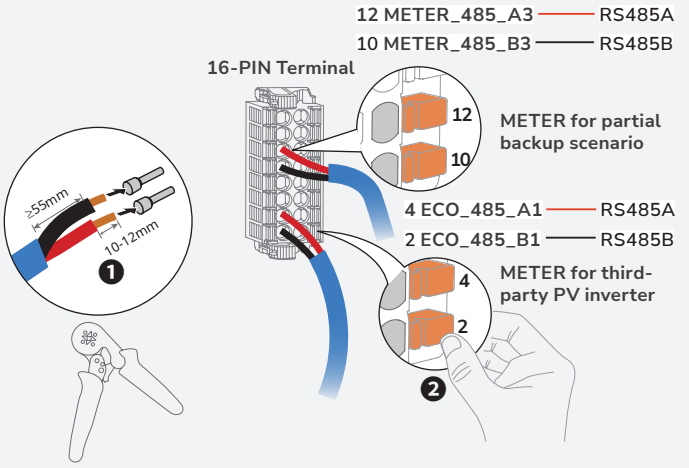
NOTICE

- It is recommend to use of CAT5 or higher rating network cable.
- Smart meter is sold separately, which has been preset parameters before delivered. Do not modify the relevant parameters.
- The compatibility of this product with smart meters may vary by regions and versions. For the appropriate smart meter for your EcoFlow OCEAN 2 system, see the Smart Meter Selection Guide at: https://enterprise-service-eu-cdn.ecoflow.com/enterprise/documentation/1755571330907/Smart%20Meter%20Selection%20Guide_EN_View.pdf.
- If the existing third-party PV system already has its own grid-tied meter, its meter configuration and wiring remain unchanged when the EcoFlow OCEAN 2 three-phase system is added.
- Install CT with a minimum 50cm clearance from all other power cables, except for the conductor being measured which may pass through the CT; this prevents electromagnetic interference that could compromise measurement accuracy.

- **METER WITH CT**

1

A8  ×1 A16  ×2



2

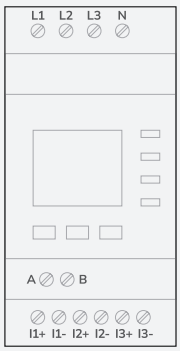
METER SAMPLING

Find the home mains and connect the smart meter as shown in the diagram.

3

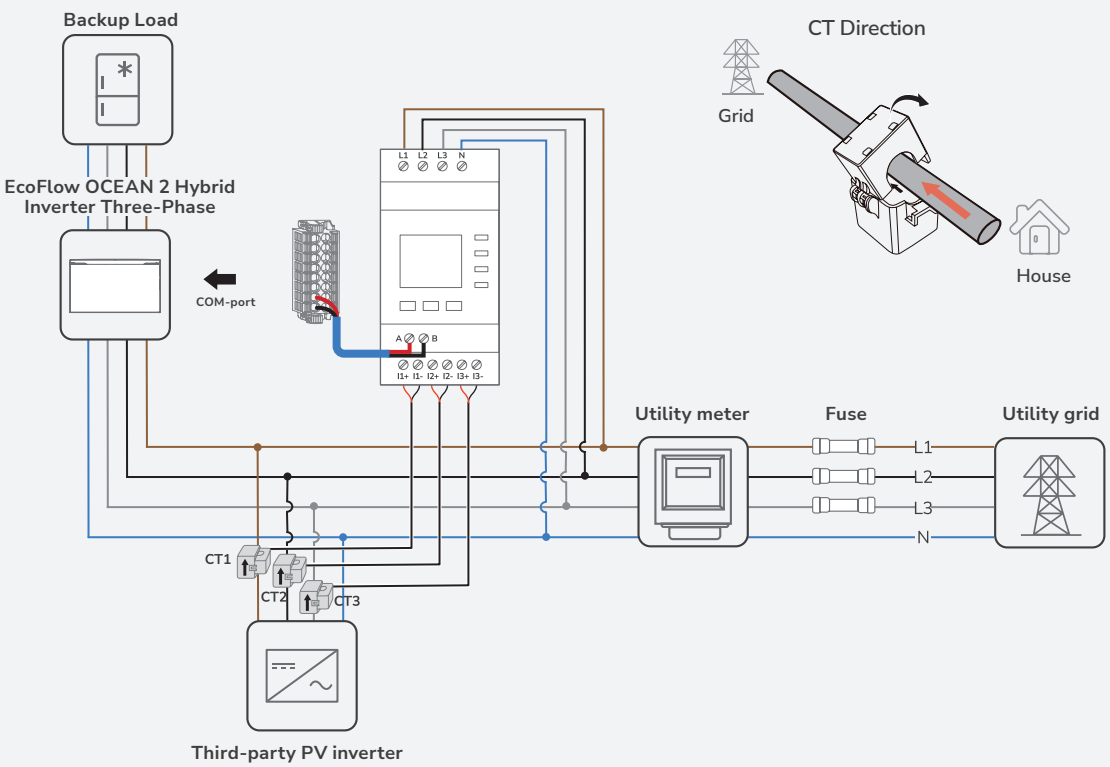
METER COMMUNICATION

Find communication port A,B on the meter and connect with the inverter.

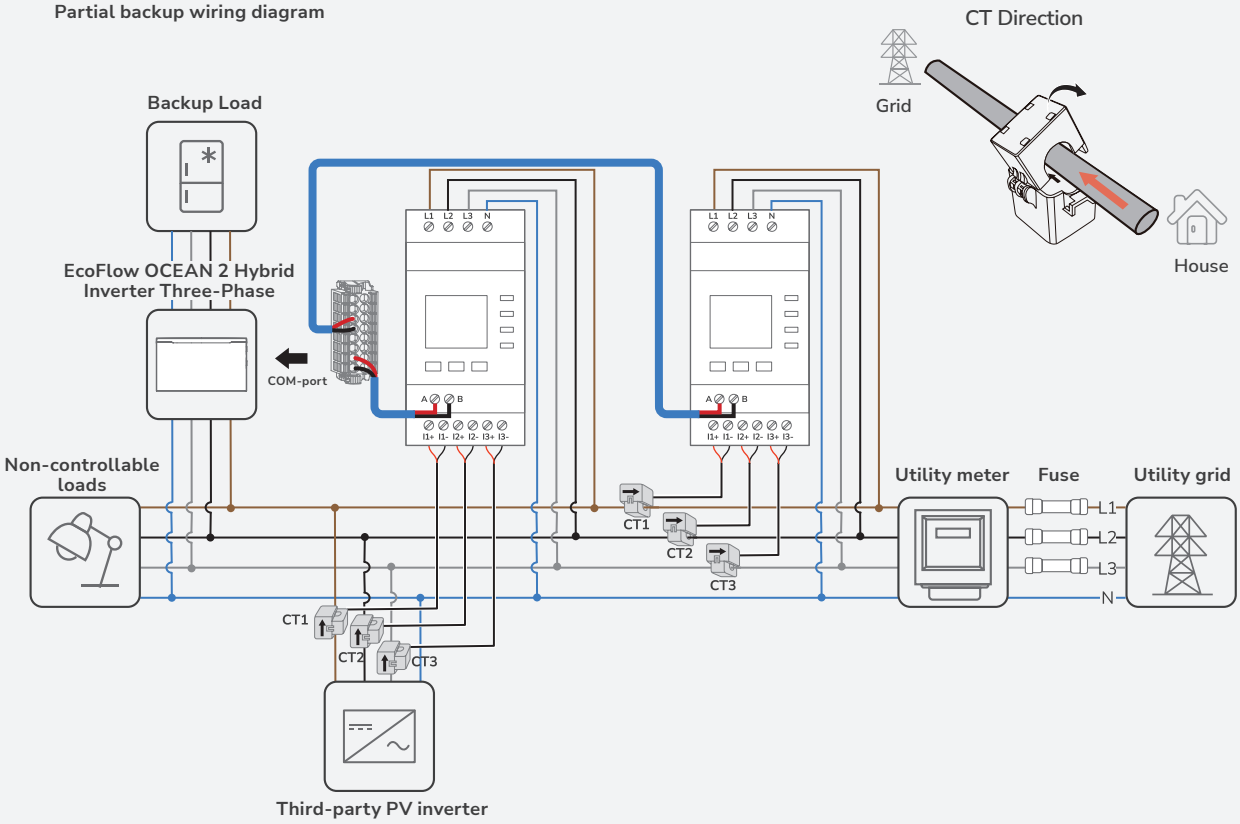


L1	Grid L1
L2	Grid L2
L3	Grid L3
N	Grid N
A	RS485A
B	RS485B
I1+ / I1-	Grid L1 CT
I2+ / I2-	Grid L2 CT
I3+ / I3-	Grid L3 CT

4 Whole-home backup wiring diagram



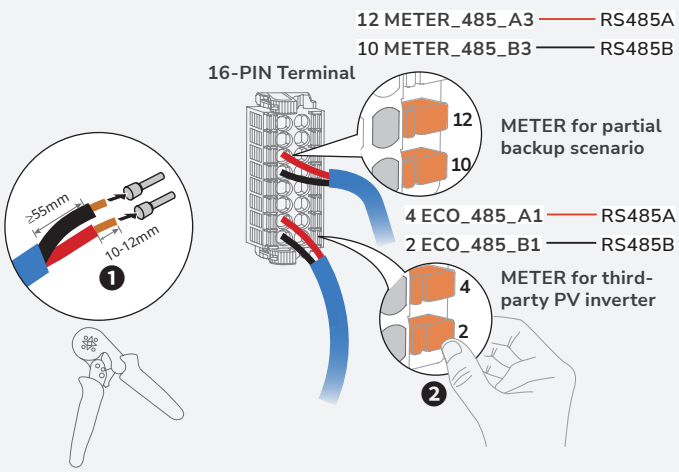
Partial backup wiring diagram



- **WITHOUT CT**

1

A8 ×1 A16 ×2



2

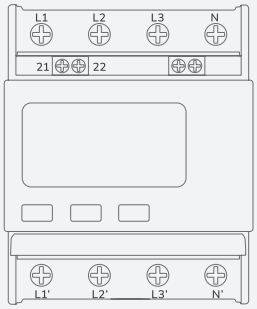
METER SAMPLING

Find the home mains and connect the smart meter as shown in the diagram.

3

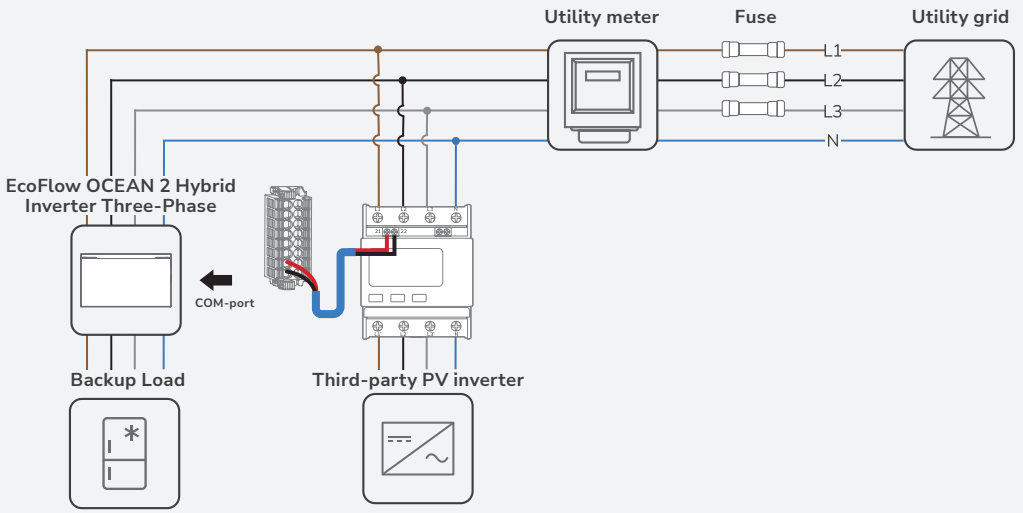
METER COMMUNICATION

Find communication port A,B on the meter and connect with the inverter.

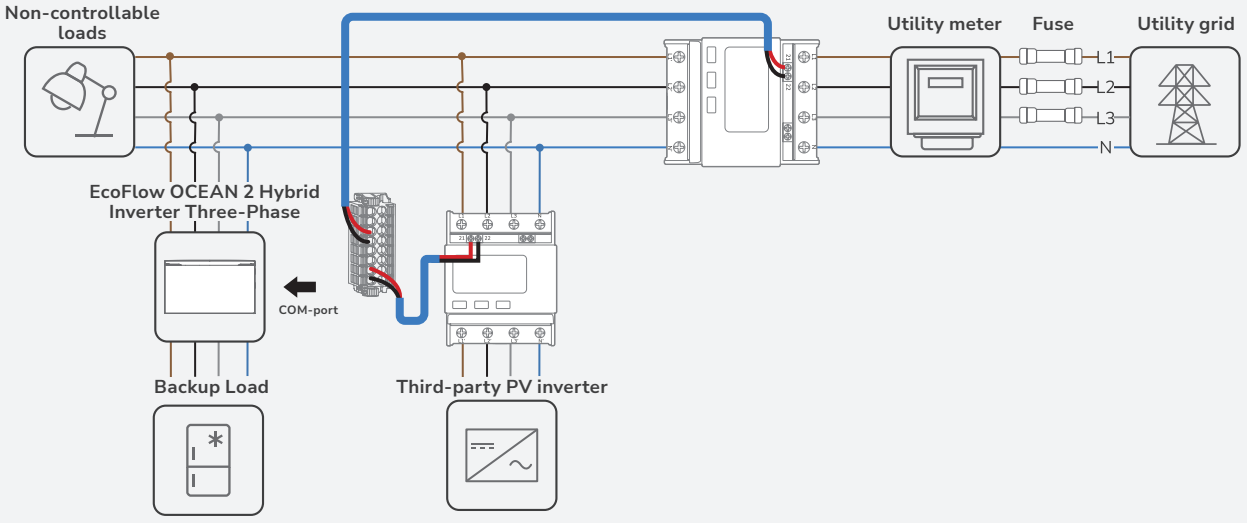


L1	Grid L1
L2	Grid L2
L3	Grid L3
N	Grid N
21	RS485A
22	RS485B
L1'	Load L1
L2'	Load L2
L3'	Load L3
N'	Load N

4 Whole-home backup wiring diagram



Partial backup wiring diagram

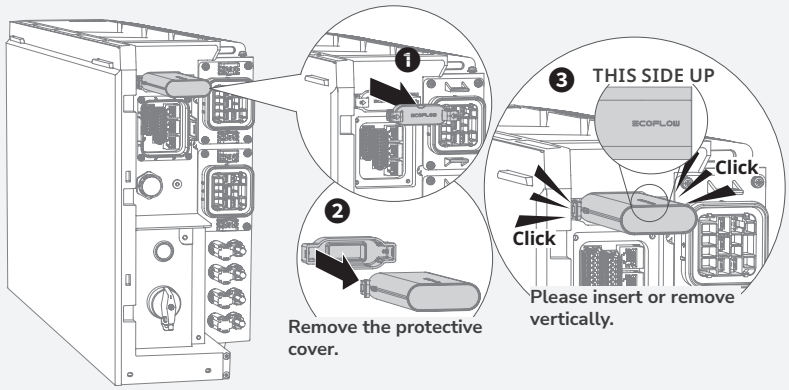


Connecting to the Internet

NOTICE

- Use shielded CAT 5 or higher rating network cable for stable connection.
- For more details about EcoFlow OCEAN 2 Dongle, please please visit following website to access user manual: https://energy.ecoflow.com/eu/documentation
- The WIFI dongle is used for wired and wireless WLAN or Bluetooth communication between inverters and EcoFlow app, which is required for a single inverter or each of cascaded inverters.
- For maximum reliability, use a wired connection. If wireless is necessary, select the 2.4GHz frequency band (avoid 5GHz) and maintain a clear line of sight between the router and OCEAN 2 Dongle.

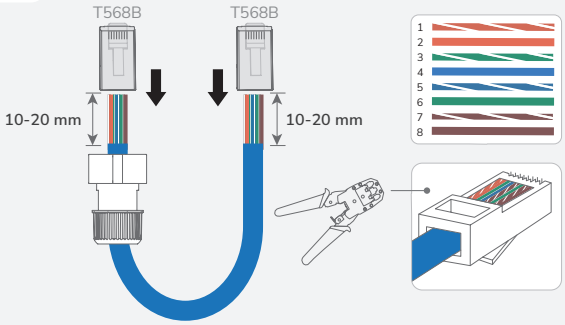
- **METHOD 1: VIA A WIRELESS NETWORK**



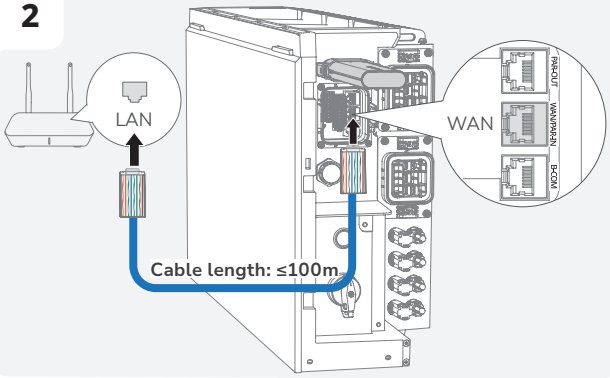
- **METHOD 2: VIA A WIRED NETWORK**

1

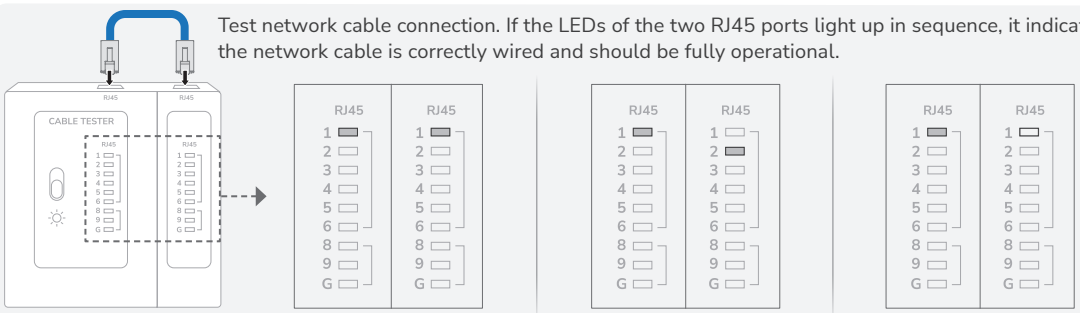
Both ends of the network cable use the T568B wiring standard.



2

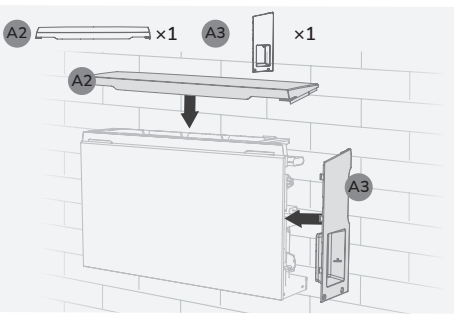


Test network cable connection. If the LEDs of the two RJ45 ports light up in sequence, it indicates that the network cable is correctly wired and should be fully operational.

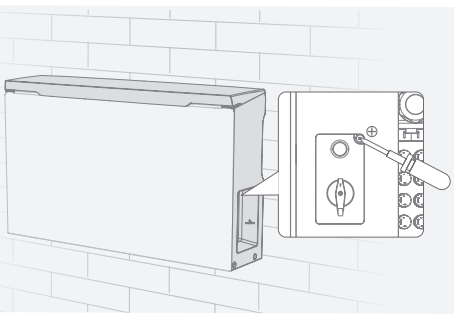


Installing trim covers

1



2



System Commissioning

Checking before Power-On

Check Item	Acceptance criteria
Equipments	Equipments are installed correctly and securely.
Cables routing	Cables are routed properly as required by the customer.
Cable tie	Cable ties are evenly distributed and no burr exists.
Grounding	The PE cables are connected correctly, securely, and reliably.
Switch	All the switches connecting to the system are OFF.
Cable connection	The AC/DC power cable, battery cable, and communication cable are connected correctly, securely, and reliably.
Unused terminal and port	Unused terminals and ports are locked by watertight covers.
Installation environment	The installation space is proper, and the installation environment is clean and tidy.

System Power-On

- **PROCEDURE (PV PRESENT / GRID PRESENT)**

1. (Optional) Set the BATTERY SWITCH to ON position.
2. Set the PV SWITCH to ON position.
3. Turn on the AC switch between the inverter and the power grid.
4. Observe the LED to check the operating status.

- **PROCEDURE (PV ABSENT AND GRID ABSENT)**

1. (Optional) Set the BATTERY SWITCH to ON position.
2. Set the PV SWITCH to ON position.
3. Turn on the AC switch between the inverter and the power grid.
4. After commissioning, press and hold for three seconds the BATTERY ON/OFF button.
5. Observe the LED to check the operating status.

System Power-Off

Before installing, operating, and maintaining the equipment, always disconnect it from all power.

⚠ WARNING

- After the system powers off, the remaining electricity and heat may still cause electric shocks and body burns. Therefore, put on protective gloves and begin operating the equipment five minutes after the power-off.

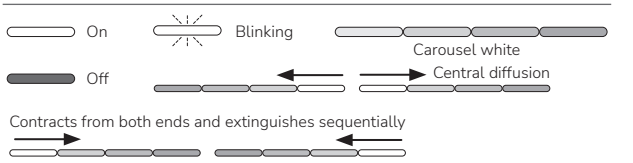
1. Shut down the system via the EcoFlow App or the EPO (if equipped).
2. Turn off the AC switch between the inverter and the power grid.
3. Set the PV SWITCH to OFF position.
4. Secure the PV SWITCH with a lock to prevent accidental startup. The lock is prepared by the customer.



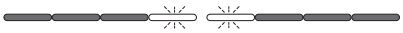
Locking Operation:
1. Reveal lock hole: Press the button on the switch to expose the lock hole.
2. Apply lock: Use customer-provided lock to secure the switch through the exposed lock hole.

5. (Optional) Set the BATTERY SWITCH to OFF position.
6. (Optional) Secure the BATTERY SWITCH with a lock to prevent accidental startup. The lock is prepared by the customer.
7. Press and hold the BATTERY ON/OFF button on the inverter for 10 seconds.
8. (Optional) Press and hold the BATTERY ON/OFF button on the junction box for 10 seconds until the indicator turns off.
9. Sequentially disconnect GRID cables, PV input cables, battery cables, communication cables and all modules connecting to the system.

LED Indicators



- **DAILY USE**

Power On	Description
	Startup
Charge Status	**Description**
	0-25%
	25-50%
	50-75%
	75-100%
	100%
Discharge Status	**Description**
	1-10% (Low battery)
	11-24%
	25-49%
	50-74%
	75-100%

- **INSTALLATION/COMMISSIONING**

Over-the-air Updates / Self-Check Status	Description
	Over-the-air update or self-check ongoing.
Wi-Fi Setup Status	**Description**
First breathing white then blinking	Wi-Fi pairing ongoing

- **ABNORMAL/FAULT**

Faulty Status	Description
	Electrical connection fault detected
	Communication fault detected
	Battery fault detected
	Converter fault detected

- **ENERGY SAVING MODE**

Energy Saving Mode	Description
	When enabled, the system enters energy-saving mode under low load and resumes normal operation when the load increases.

Monitoring VIA EcoFlow APP

The EcoFlow App can establish communication connection to the inverter via the WLAN, providing remote monitoring, data logging and near-end maintenance on the inverter. Users can also view inverter information and set parameters through the App.

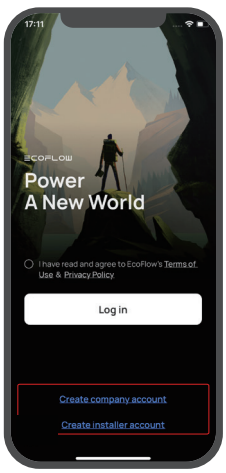
DOWNLOAD AND INSTALL ECOFLOW PRO APP (FOR INSTALLER ONLY)

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



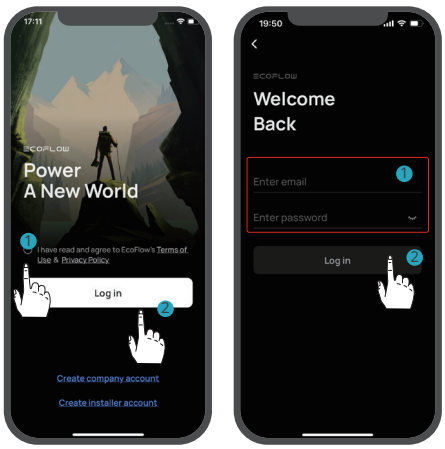
CREATE ACCOUNT

Create your company or installer account



LOG IN

Enter the installer account and password.

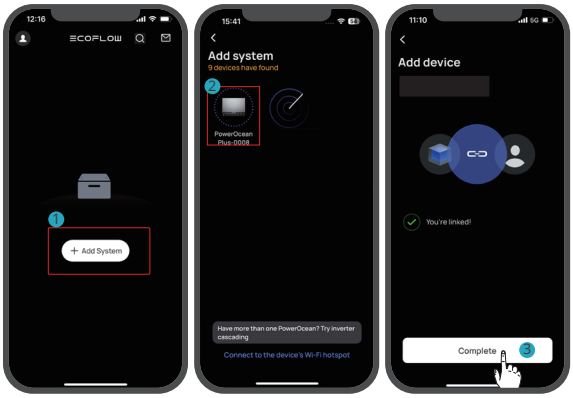


ADD SYSTEM

You can connect to the system via Bluetooth or Wi-Fi.

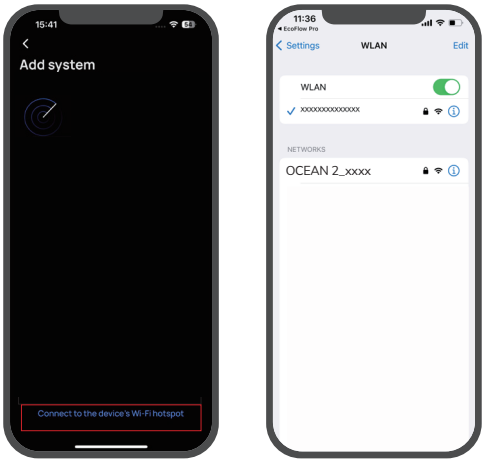
·Via Bluetooth

Tap **Add System** to automatically search for bluetooth devices nearby, tap **EcoFlow Ocean 2** to connect, and then tap **Complete** to proceed.



·Via Wi-Fi

1. Tap **Add System**, and tap **Connect to the device's Wi-Fi hotpot** to access to your phone's Wi-Fi settings.
2. Tap "**EcoFlow Ocean 2**" and enter the password for the Wi-Fi. The password is the last 8 digits of the serial number of the inverter, found in the product nameplate.



COMMISSIONING

After bound device successfully, the device enters the four-step commissioning process.

Step 1: Internet Setup

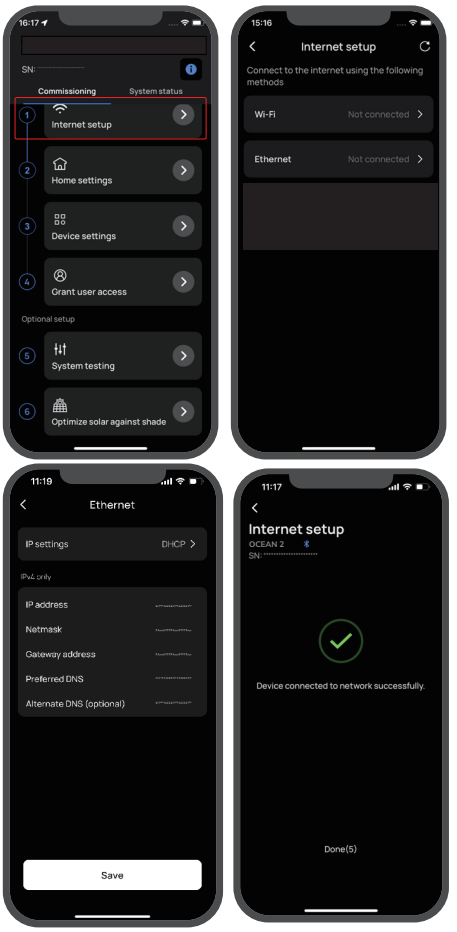
Tap **Internet Setup** to start the network configuration.

• Wi-Fi

Select **WiFi** select the appropriate **network** and enter the password.

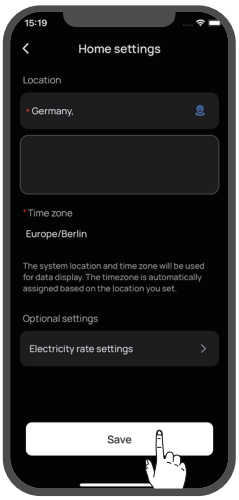
• Ethernet

Connect the system to a router using a network cable in the DHCP or Static mode.
- In the default DHCP mode, the device obtains IP address automatically (recommended).
- In the Static mode, network administrator (homeowner) should set a valid IP address to the device. To avoid IP address conflict, check the IP addresses of other devices on the network by accessing router's settings.



Step 2: Home Setting

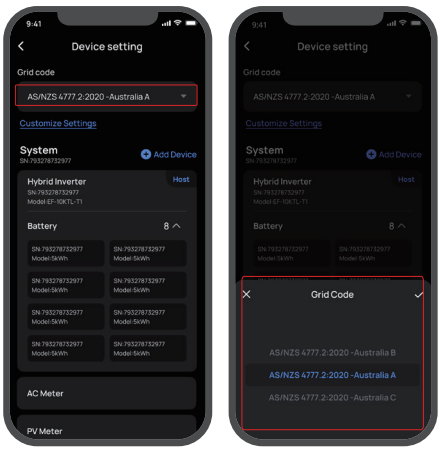
Tap **Home Setting** to enter the corresponding house address and set the electricity rate if needed.



Step 3: Device Setting

Tap **Device Setting** to verify that the devices in the device list match the connected devices.

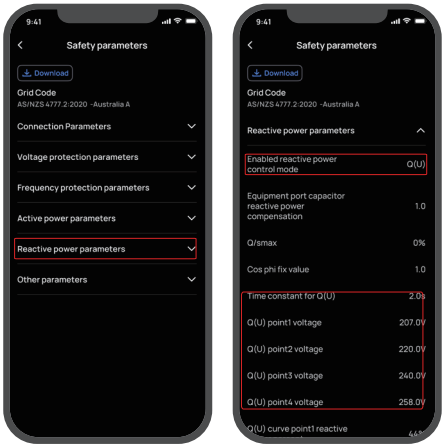
- Perform system check to comfirm connection (during the initial commissioning)
- Update firmware (recommended)
- Set the grid code, system work mode, feed-in power limitation, etc.



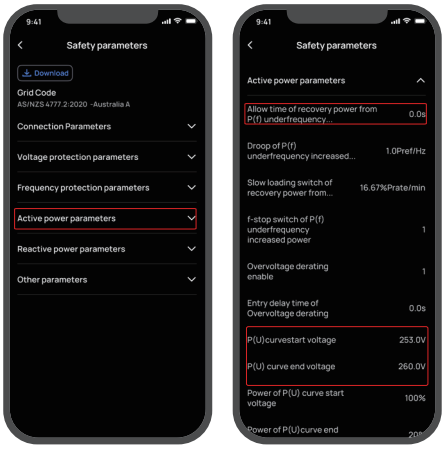
- Set connection parameters, voltage protection parameters, etc. in **Customize Settings**.

Follow local regulations if you need to change any of these parameters, and contact your local power organization first.

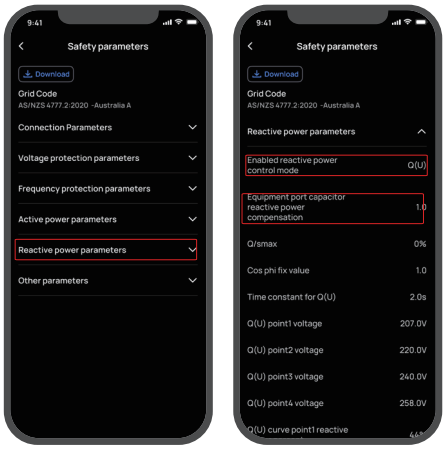
- Set power quality response modes: Volt-var.



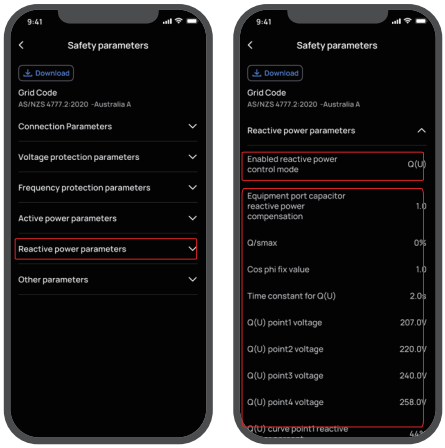
- Set power quality response modes: Volt-watt



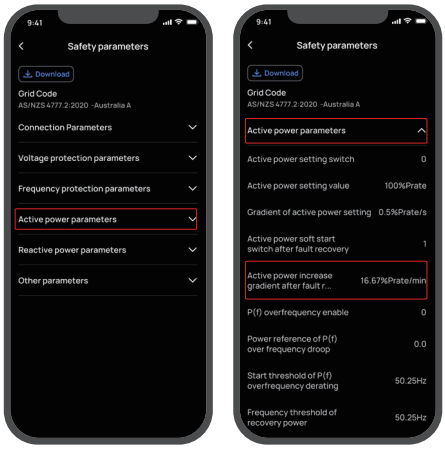
- Set fixed power factor.



- Set reactive power mode.



- Set power rate limit.



Step 4: Grant User Access

Tap **Grant User Access** to generate an access QR code for the home owner to bind the system after the home owner adds the device in the EcoFlow app.



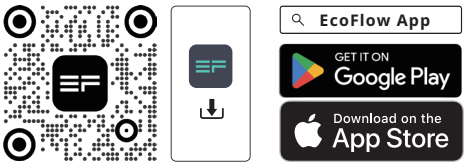
Step 5: Optional Setup

- System testing for on-grid or off-grid feature and DI active scheduling.
- Optimize solar against shade.

Help Home Owner for App Initial Setup

1. Download and install EcoFlow App

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



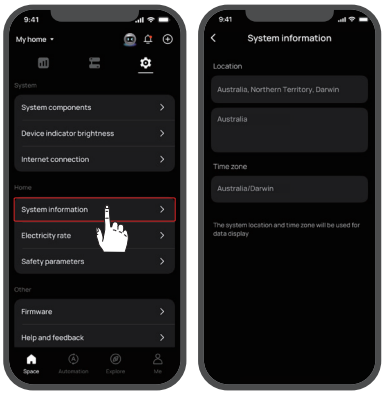
2. Create new account and log in.

3. Add device manually or use Bluetooth.

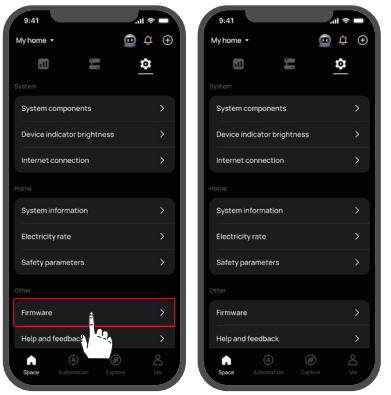
4. Scan user grant QR code

Home owner scans the system QR code displayed on the installer's phone to bind the device.

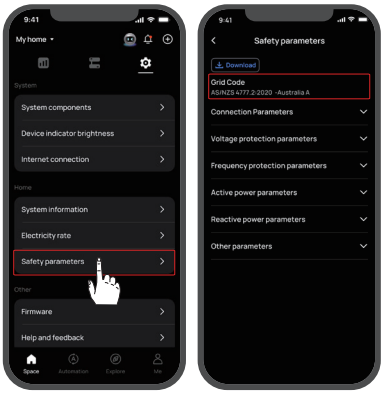
- How to view region settings?



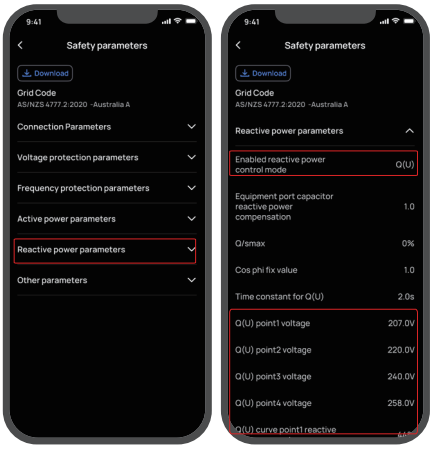
- How to view firmware version?



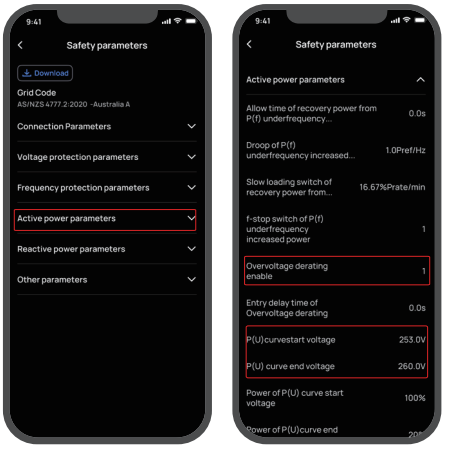
- How to view grid code?



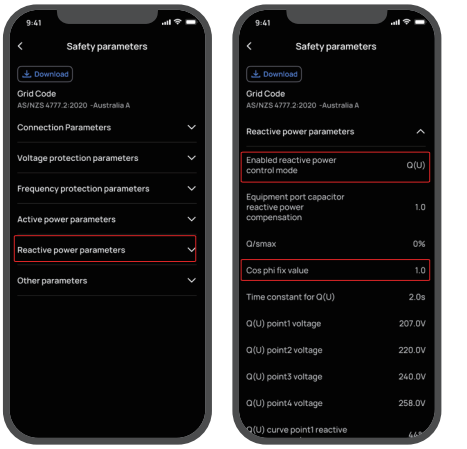
- How to view power quality response modes: Volt-var?



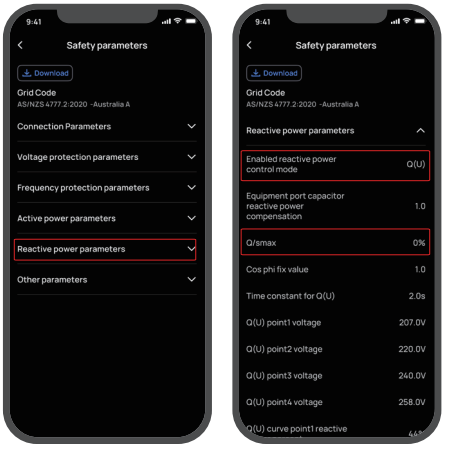
- How to view power quality response modes: Volt-watt?



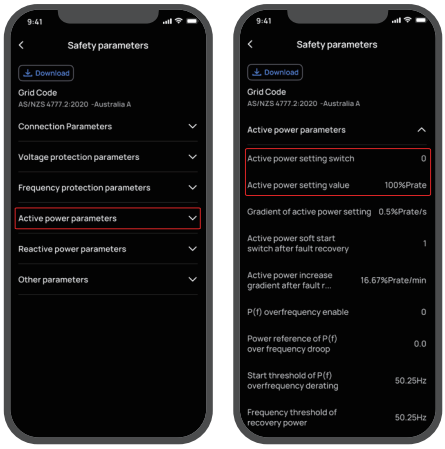
- How to view fixed power factor?



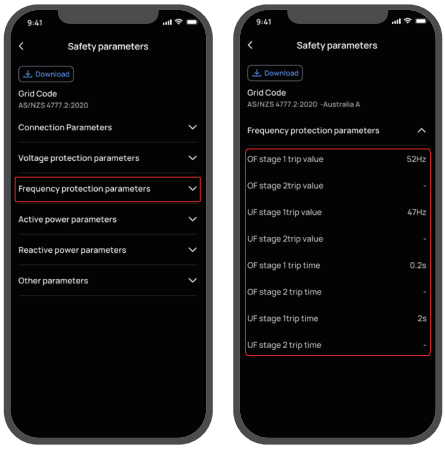
- How to view reactive power mode?



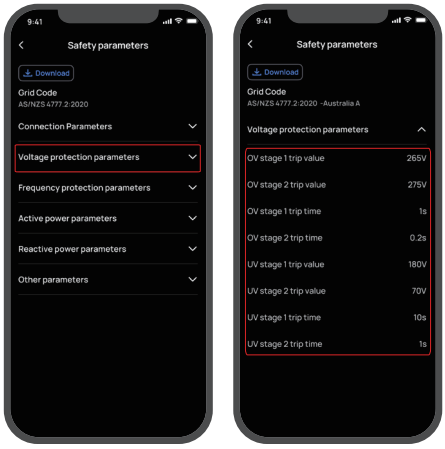
- How to view power rate limit?



- How to view frequency protection parameters?



- How to view voltage protection parameters?



System Maintenance & Replacement

⚠ WARNING

- Before any maintenance or replacement, turn off all switches of the inverter and the battery junction box and disconnect all power sources.
- Wear proper PPE before any operations.
- Place temporary warning signs or set up barriers to prevent unauthorized access to the maintenance area.

Routine Maintenance

To ensure the long-term operating of the equipment, you are acdvised to perform routine maintenance according to this section.

Check Item	Check Method	Power off or not	Maintenance Cycle
System cleanliness	• Periodically check that the heat sinks are free of dust and obstructions, and ensure proper ventilation and heat dissipation for the equipment. • Clean the equipment surface with a dry, soft cloth if there is dust or dirt. Do not use liquids, abrasive materials, or hard objects for cleaning.	Yes	Once every 6 months
System running status	• Check that the equipment is not damaged or deformed. • Check that the equipment operates with no abnormal sound. • Check that all equipment parameters are correctly set during operation. • Check for abnormal noise from the fan during operation and ensure that there are no objects obstructing the fan. If foreign objects are found, remove them.	No	
Electrical connection	Check that all cables are properly secured and undamaged.	Yes	Check once every 6 months after creating new systems and once every 6 to 12 months thereafter
Grounding reliability	Check that ground cables are securely connected.	Yes	
Seal ability	Check that all unused terminals and ports are properly sealed with waterproof covers as supplied.	Yes	

Troubleshooting

⚠ WARNING

The equipment should only be powered on after all issues have been resolved. Otherwise, the faults may worsen or the equipment could be damaged.

For installers, to troubleshoot the system:

1. Open the EcoFlow Pro app and log in.
2. Check the error code and follow the instructions provided in the app.
3. Fully power off the system. See the System Power-Off section for guidance.
4. Follow the app instructions to resolve the issue. If the problem persists, contact your dealer.

For home owners, to troubleshoot the system:

1. Open the EcoFlow app and log in.
2. Check the most common FAQs or contact customer support via Settings > Help & Feedback.
3. If the issue persists, contact EcoFlow technical support for further assistance.

Inverter Storage

- Do not unpack the equipment if you do not intend to use the equipment immediately.
- Keep the storage temperature at –30°C to 60°C and the humidity at 0%–100% RH.
- Store the product in a clean, dry place, and protect it from dust and moisture-related corrosion.
- Do not stack the inverters to avoid personal injury or equipment damage.
- Do not place this product near water, fire or other heat sources, such as heaters, direct sunlight, gas ovens, etc..
- During the storage period, check the equipment periodically.
- If the equipment has been stored for over 6 months, it must be inspected and tested by professionals before use.

For details about battery maintenance, see EcoFlow Power-Ocean LFP Battery User Manual.

Battery Storage and Recharge

- **BATTERY STORAGE**
  - During storage, place batteries according to the orientation markings on the packing case. Do not place batteries upside down or on their sides.
  - Stack battery packing cases in accordance with the stacking requirements indicated on the outer packaging.
  - Handle batteries with caution to avoid damage.
  - The storage environment requirements are as follows:
    - Ambient temperature: -20°C-55°C; recommended storage temperature: 0°C-35°C
    - Relative humidity: 5% to 80%
    - Place batteries in a dry and clean place with good ventilation.
    - Place batteries in a place that is away from corrosive organic solvents and gases.
    - Keep batteries away from direct sunlight.
    - Keep batteries at least 3 meters away from heat sources and vibration source.
  - Disconnect the batteries from all external devices during storage. Ensure that all indicators on the battery junction box are off.
  - If a battery is dropped and shows obvious deformation, leakage, or damage without abnormal odor, smoke, or fire, contact qualified professionals to transfer the battery to an open and safe area, or contact a certified recycling company for proper disposal.
  - If the battery is not used for a long period of time, store it intact in a semi-charged state (60% SOC). The battery is recommended to be discharged to 30% and then recharged to 60% every three months.
- **BATTERY RECHARGE**

⚠ WARNING

Battery recharge operations should be carried out by EcoFlow only. Please contact the EcoFlow technical support team for battery recharge service.

- If the power level of the battery is lower than 1% after use, recharge it to 30%-60% before storage. If the battery has been idle for a long time when the power is seriously insufficient, it will cause irreversible damage to the cells and shorten the service life of the battery.
- If the battery has been idle for a long time and the power level is severely low, it will enter a deep sleep protection mode. In such a case, recharge the battery before using it again.

Replacement

⚠ WARNING

- Only professionals with appropriate qualifications are allowed to perform the replacement activities.
- Wear proper PPE before any operations.

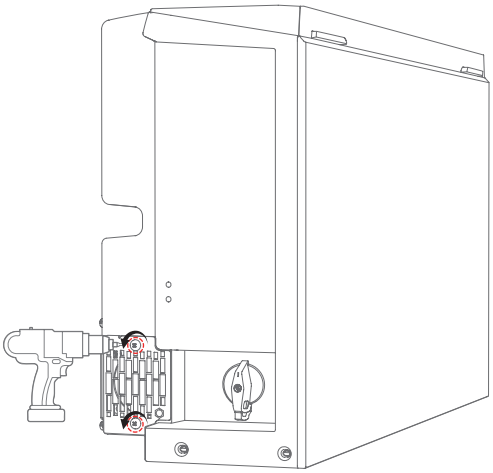
- **REPLACING THE INVERTER FAN**

NOTICE

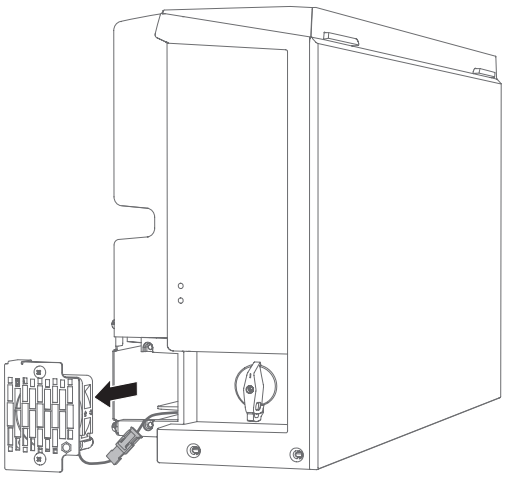
You can only replace the whole fan module instead of the individual fan.

To remove the inverter fan:

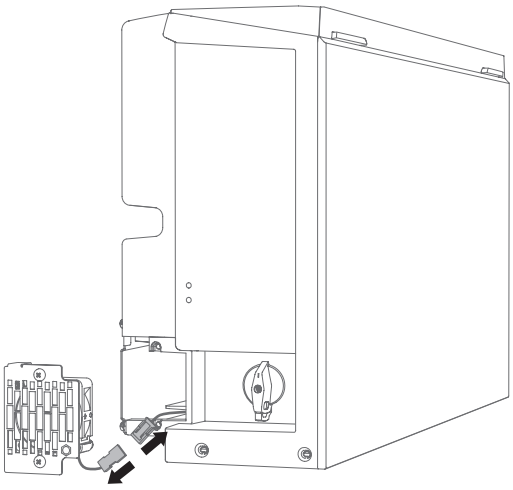
1. Loosen the screws using a Phillips screwdriver.



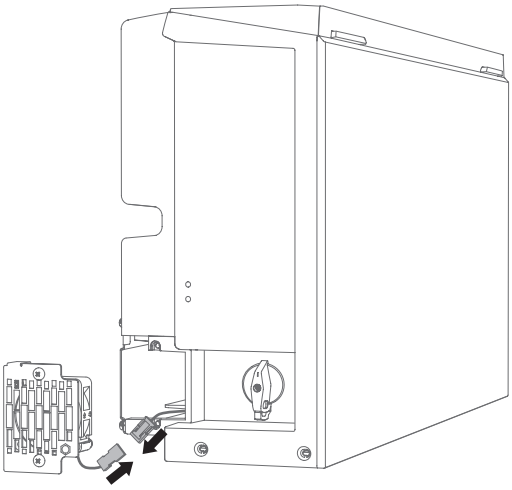
2. Remove the fan-equipped exhaust shutter.



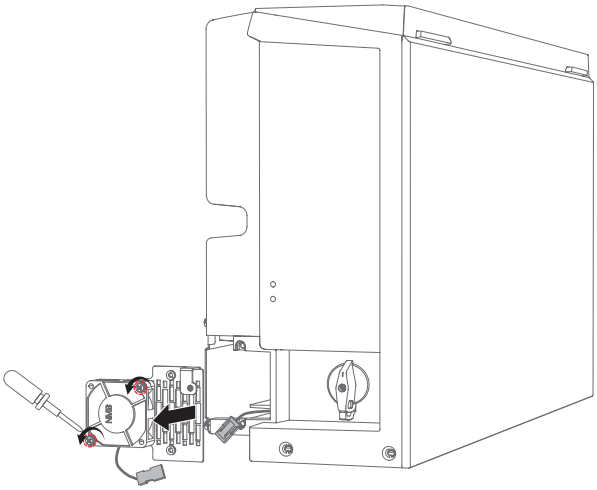
3. Disconnect the cable.



4. Unscrew to remove the fan module.

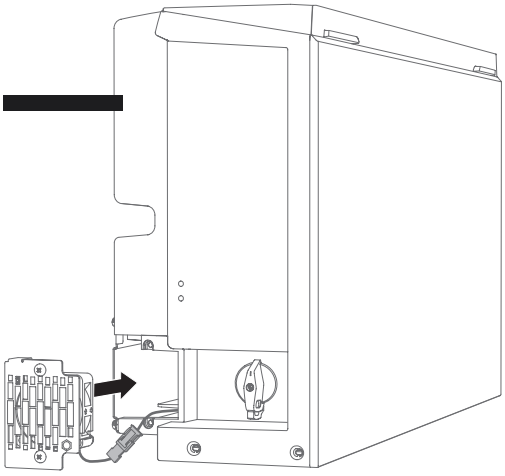


3. Align the locating pins and place the fan module into the fan position.

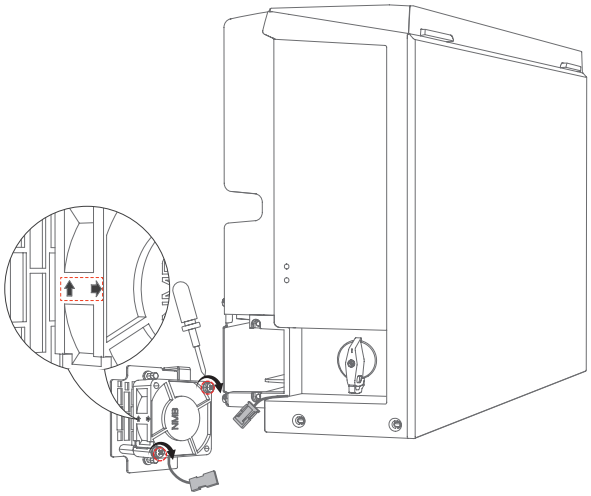


Prepare a new fan and install it on the inverter. To install a new fan:

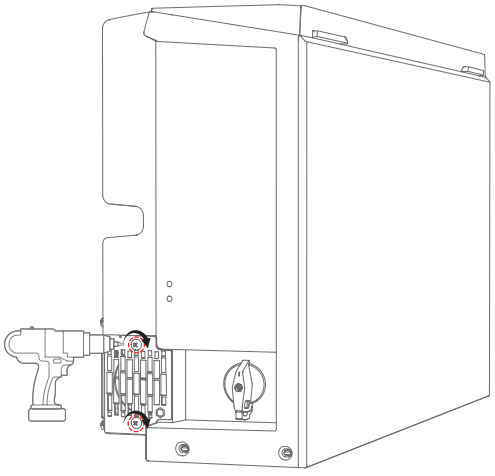
1. Secure the new fan to the exhaust shutter.



4. Secure the exhaust shutter.

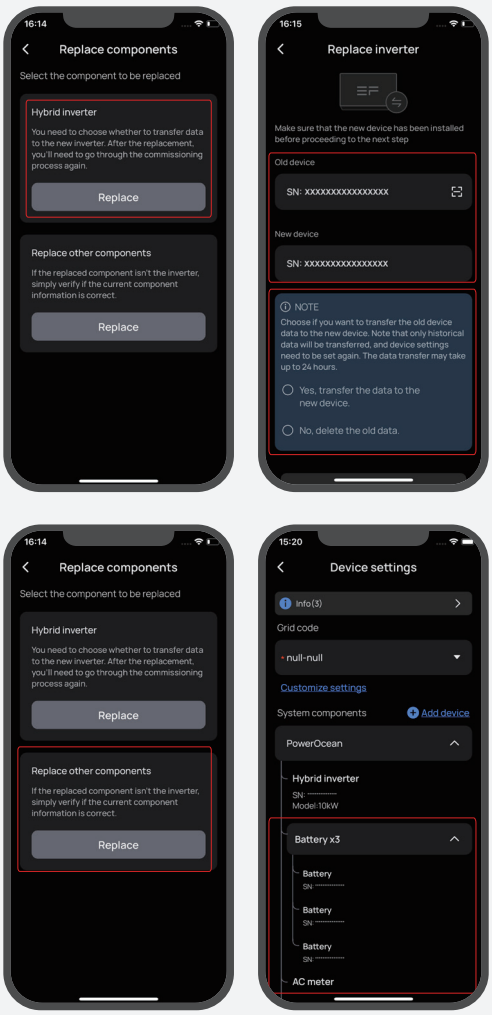


2. Connect the cable.



- **REPLACE THE INVERTER:**
  1. Power off the entire system. Refer to the System Power-Off section.

2. Sequentially disconnect GRID cables, PV input cables, battery cables, communication cables and all modules connecting to the inverter.
3. Remove the inverter or other components from the mounting bracket.
4. Install a new inverter and new components. For example, if you upgrade the inverter of different model, the battery junction box and WIFI module might be differnet. Refer to the new inverter's Installation Guide.
5. Power on the system and perform system commissioning. Refer to the Installation Guide delivered with the new inverter.
6. Transfer the device data to the new inverter or delete the previous data **Settings** > **Replace components** in the EcoFlow Pro app.



Decommissioning

⚠ CAUTION

Before removing a inverter, ensure that it is powered off. Refer to the System Power-Off section.

1. Sequentially disconnect GRID cables, PV input cables, battery cables, communication cables and all other modules connected to the inverter.
2. Remove the inverter or other components from the mounting bracket.
3. Remove the mounting bracket.
4. Pack and store the inverter properly.

The battery module complies with the requirements of the German Battery Act (BattG). Dispose of used or defective batteries in accordance with applicable local regulations.

Appendix

Important Information about Inverter Cascading

⚠ WARNING

- Turn off the grid power and press EPO (if any) before cascading inverters.
- Flip the circuit breakers of loads to the OFF position, otherwise the wiring self-check might be faulty.
- Ensure the firmware version is up to date before performing cascading.

NOTICE

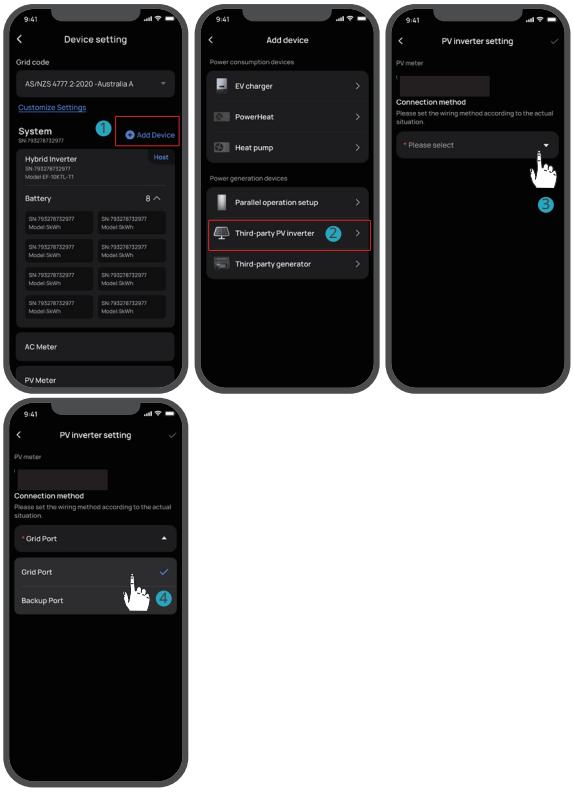
- Only cascading of inverters of the same model is supported.
- Cascading different Ocean 2 products is not supported.

Check whether the cascading installation is completed according to the following items.

Check Item	Note
Power cable connection	Refer to "Wiring Diagram". Connect NS protection before wiring to the utility grid according to local regulation.
Communication	Use the inverter cascading cable to connect 2 PAR ports of inverters, and plug the remaining 2 PAR ports with termination resistors. Refer to "Communication Between Cascaded Inverters".
Metering	Connect an EcoFlow smart meter for partial backup scenario. Refer to **(Optional) Energy Metering Installation for Partial Backup System**.
Connecting to Internet	An EcoFlow OCEAN 2 dongle is required for a single inverter or each of cascaded inverters. Refer to **Connecting to the Internet**.
System commissioning	Perform system commissioning and wiring check in the EcoFlow Pro app in the following step. Otherwise, the system may be damaged. Before commissioning, make sure all loads are disconnected. 1. Go to **Home settings** > **Device settings** to perform system check (for each inverter). 2. Turn on the load-side circuit breaker of the secondary inverter. 3. Tap **Add device** > **Inverter cascading setup**, and tap Next for wiring check (for inverter cascading). 4. Go to **Home settings** > **Device settings** to perform system check AGAIN (for each inverter). 5. After setup, reset EPO, tap Refresh in the app, and turn on the load-side circuit breaker of backup loads. The inverter indicator will turn white.

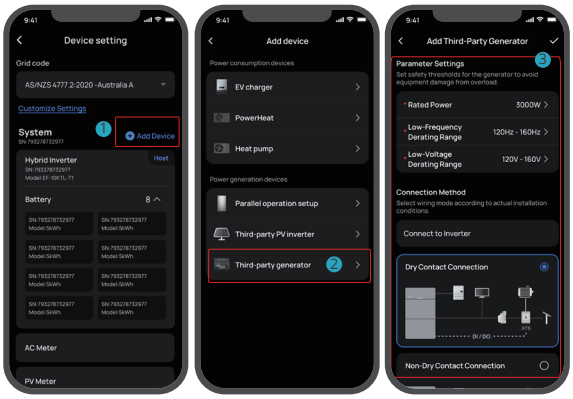
Third-Party PV Inverter Setup

Once the third-party PV inverter and the smart meter have been correctly wired, visit the EcoFlow Pro App, then go to the **Device Setting** interface to add the PV inverter to the system and set the wiring method.



Third-Party Generator Setup

Once the third-party generator has been correctly wired, visit the EcoFlow Pro App, then go to the **Device Setting** interface to add the generator to the system.
Set the safety thresholds and the wiring method.





Raccolta carta

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