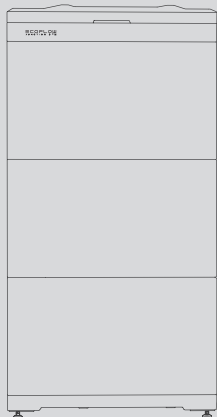
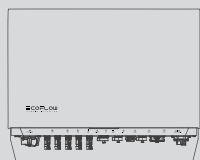


ECOFLOW POWEROCEAN PLUS Home Solar Battery Solution



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

IMPORTANT

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

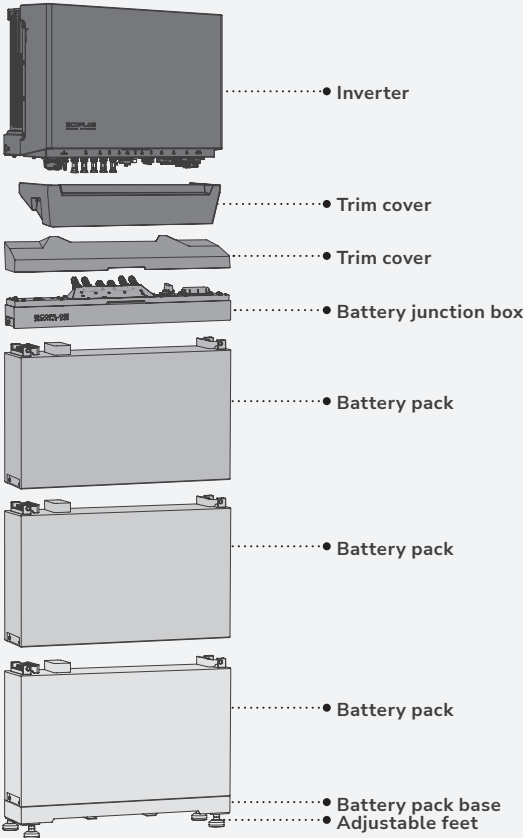
CONTENTS

1	Safety Instructions
2	Preparing Tools and Instruments
2	What's in the Box
4	System Installation
4	Installation Environment Requirements
5	Installation Clearance Requirements
6	Installing Battery
9	Installing Inverter
10	Application Scenarios
10	Single Inverter Setup
11	Multi Inverters Setup
13	Electrical Connection
14	Wiring Diagram
22	Connecting PE Cables
23	Connecting PV Input Cables
24	Removing the PV Terminal
24	Communication Between Cascaded Inverters
25	Connecting GRID/BACKUP Cables
27	Connecting Battery Power Cables
28	Connecting Battery Communication Cables
29	Cascading Batteries
30	Installing COM Connector With Shorting Wire
32	(Optional) Installing Emergency Stop (EPO)
32	Connecting Ecosystem Appliances
33	Connecting Smart Meter
35	(Optional) Energy Metering Installation for System with Third-Party PV Integration
37	Connecting to Internet
37	Installing trim cover on the battery junction box and inverter
38	System Commissioning
38	Checking before Power-On
38	System Power-On
38	System Power-Off
38	LED Indicators
39	System Commissioning
41	Help Home Owner for App Initial Setup
41	Appendix
41	Important Information about Inverter Cascading

Symbol	Description
 DANGER	Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
 CAUTION	Caution, 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 potentially hazardous situation 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.

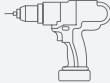
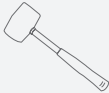
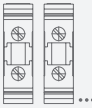
 DANGER

- Before installing, operating, and maintaining the equipment, read and follow up the product documents.
- Personnel who plan to install or maintain EcoFlow equipment must receive thorough training, understand all necessary safety precautions, and be able to correctly perform all operations.
- Personnel who will install, operate, and maintain the equipment, including operators, trained personnel, and professionals, should possess the local national required qualifications in special operations such as high-voltage operations, working at heights, and operations of special equipment.
- Before connecting cables, ensure that the equipment is intact. Otherwise, electric shocks or fire may occur.
- Before installing, operating, and maintaining the equipment, **always disconnect it from all power.**
- Wear proper PPE (Personal protective equipment) before any operations.



Preparing Tools and Instruments

• ESSENTIAL 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 mm ²)	 Wrench (14 mm)
 Marker	 Steel measuring tape	 Cable tie	 Feed-through terminal blocks 6-8 pcs	 Heat gun	 Heat-shrink tubing

• OPTIONAL TOOLS

 Level	 Vacuum cleaner	 Safety goggles	 Safety shoes	 Safety gloves	 Dust mask
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• CABLES

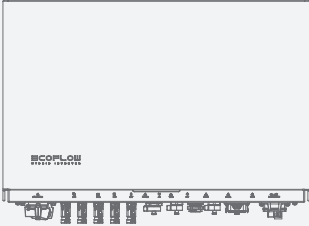
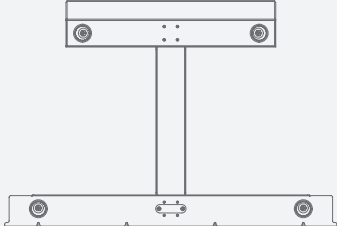
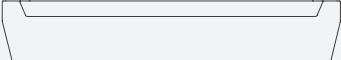
 10 mm ² grounding cable (copper conductor)	 4-6 mm ² PV input cable (black, red)	 10 or 16 mm ² UL10269 power cable (black, brown, blue, grey)	 Cat 5e or higher shielded network cable	 2*0.5 mm ² twist pair cable
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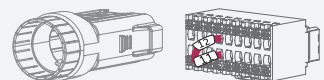
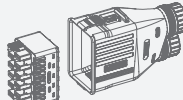
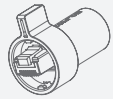
What's in the Box

NOTICE

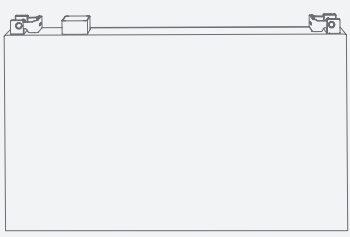
- Before unpacking, check the outer packing for damage, such as holes and cracks, and check the equipment model. If any damage is found, do not unpack the package and contact the supplier as soon as possible.
- After unpacking, check that the deliverables are intact and complete. If any item is missing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

• ECOFLOW POWEROCEAN HYBRID INVERTER BOX

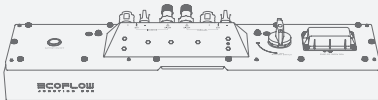
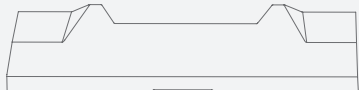
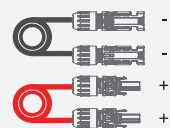
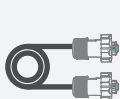
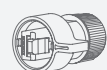
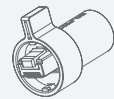
 EcoFlow PowerOcean Plus Hybrid Inverter	 Mounting bracket	 Trim cover
--	---	--

A4 ×1  WiFi module (EF HD-P3-WIFI-S1)	A5 ×4  PV terminal (+)	A5 ×4  PV terminal (-)	A6 ×1  Inverter cascading cable (3 m)	A7 ×1  COM connector with shorting wire
A8 ×1  Grid and backup connector	A9 ×1  Marking-off template for inverter	A10 ×4  Expansion bolt (M6*60)	A11 ×4  Screw (M5*10)	A12 ×2  Disassembly and assembly tool
A14 ×12  Tubular terminal (for wire gauge 16 mm², EF HD-P3-29K9-S1 and EF HD-P3-25K0-S1)	A15 ×12  Tubular terminal (for wire gauge 0.5mm²)	A16 ×12  Tubular terminal (for wire gauge 10 mm², EF HD-P3-20K0-S1 and EF HD-P3-15K0-S1)	A17 ×1  Termination resistor (for inverter cascading)	A18 ×1  Communication terminal

• ECOFLOW POWEROCEAN LFP BATTERY BOX

B1 ×1  EcoFlow PowerOcean LFP Battery	B2 ×2  Battery T-shaped/L-shaped mounting piece
A10 ×2  Expansion bolt (M6*60)	B3 ×8  Screw (M5*12)

• ECOFLOW POWEROCEAN PLUS BATTERY JUNCTION BOX

C1 ×1  EcoFlow PowerOcean Plus Battery Junction Box (EF BD-JC-S2)	C2 ×1  Battery base	C3 ×1  Trim cover
C4 ×1  Marking-off template for battery	C5 ×4  Adjustable feet	C6 ×1  Battery power cable (1.5 m)
C7 ×1  Battery communication cable (1.5 m)	C8 ×2  Battery terminal (+)	C8 ×2  Battery terminal (-)
A18 ×2  Communication terminal	A10 ×2  Expansion bolt (M6*60)	B3 ×4  Screw (M5*12)
A13 ×2  OT terminal	A17 ×1  Termination resistor (for battery cascading)	

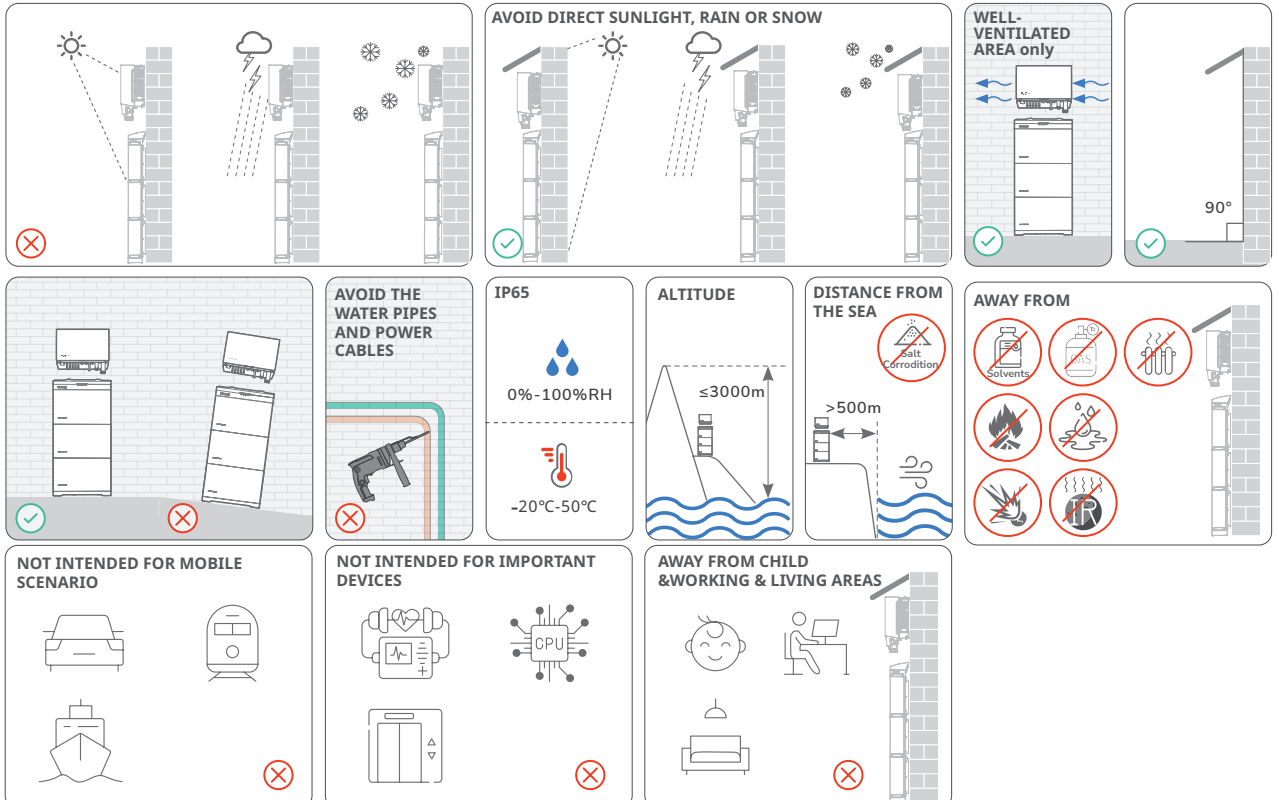
System Installation

I Installation Environment Requirements

WARNING

NOTICE

- The installation and operation environment must meet relevant international, national, and local standards for lithium batteries and the inverter.
- 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.
- Install the inverter to a wall that is sufficiently load-bearing (about 41 kg).
- 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.



I Installation Clearance Requirements



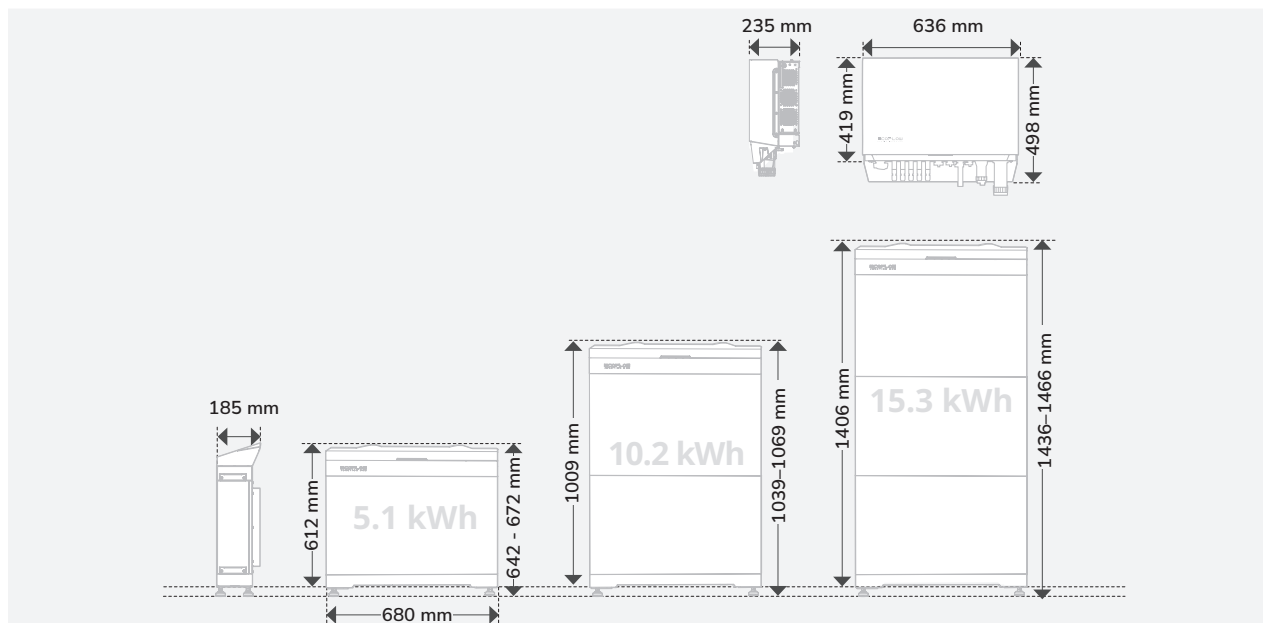
WARNING

- Reserve enough clearance around equipment to ensure sufficient space for installation and heat dissipation.

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.
- When installing multiple inverters, install them in horizontal mode if sufficient space is available and install them in triangle mode if no sufficient space is available. Stacked installation is not allowed.
- 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

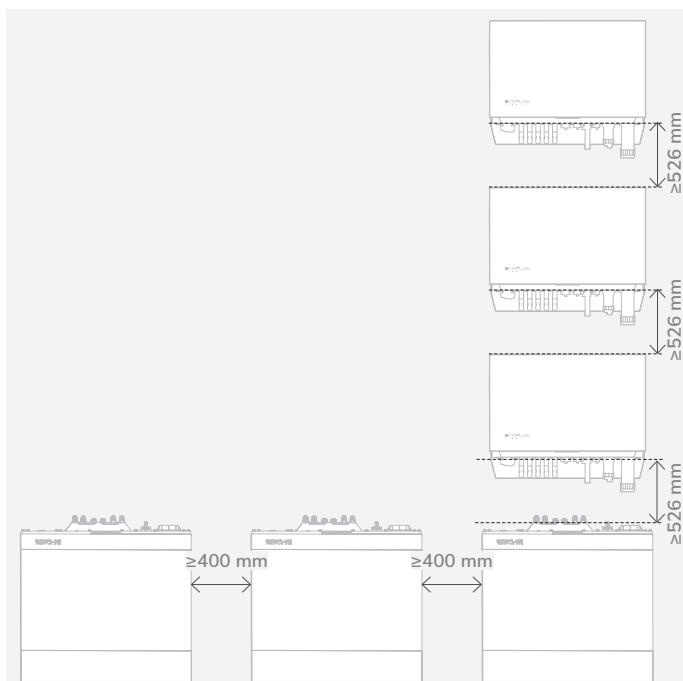
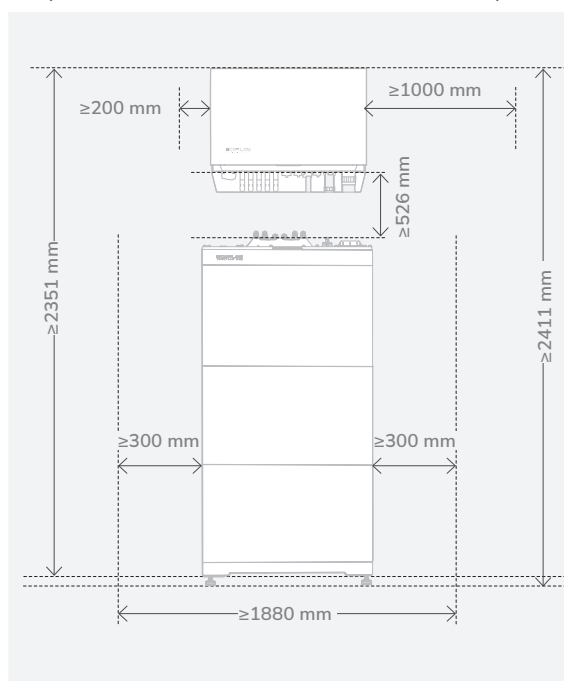
Clearance between the inverter and battery in the figure is for wiring, and can be reduced if the space height is limited (or place the inverter beside batteries).

NOTICE: Australian regulations require 900 mm above the system and 600 mm to the sides and front of the battery.

• CLEARANCE OF CASCADING INSTALLATION

Installing vertically is recommended for well ventilation. You can also install inverters secondly. Reduce the clearance between the inverter and battery if the space height is limited.

Installing horizontally is not recommended.



I 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

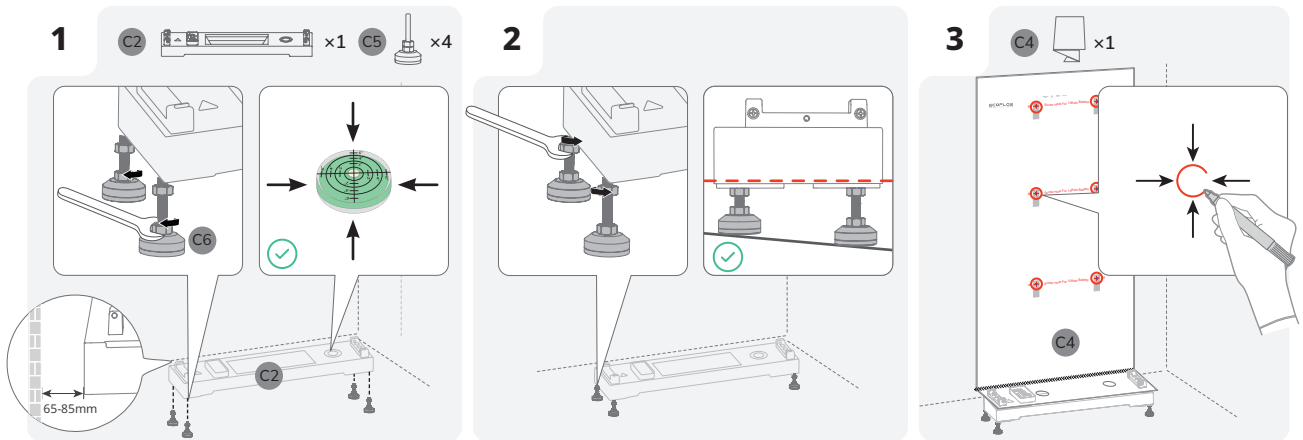
- Ensure the batteries are mounted on the wall to avoid falling over, tipping, or seismicity.
- Assign enough personnel (two or more) to move battery to avoid personal injury and battery damage.
- When moving battery, hold handles on top of the battery module.

NOTICE

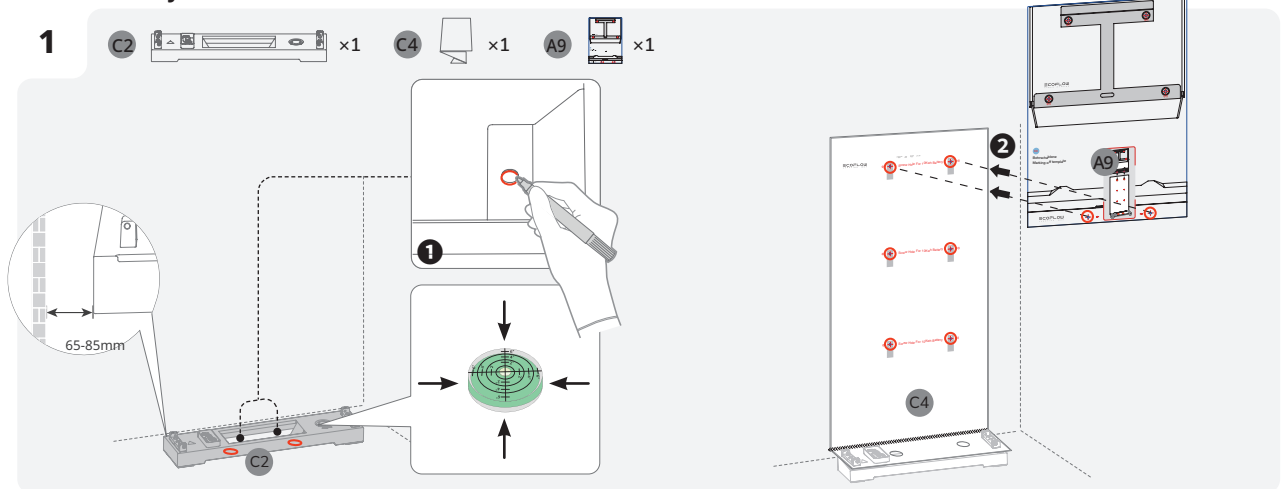
- Sealant is applied underneath the battery base to ensure its resistance against water.
- There will be a gap between the battery junction box and the battery pack before the screws are tightened. This gap is caused by the mechanical design to meet the IP rating, and will normalize after the screws are tightened.
- **(Optional) Install the provided adjustable feet to the base if needed.** Then you can adjust the feet and check the level on the base to ensure that the base is placed horizontally, screw the nuts of the four feet to the top to lock.

METHOD 1: FLOOR MOUNTED

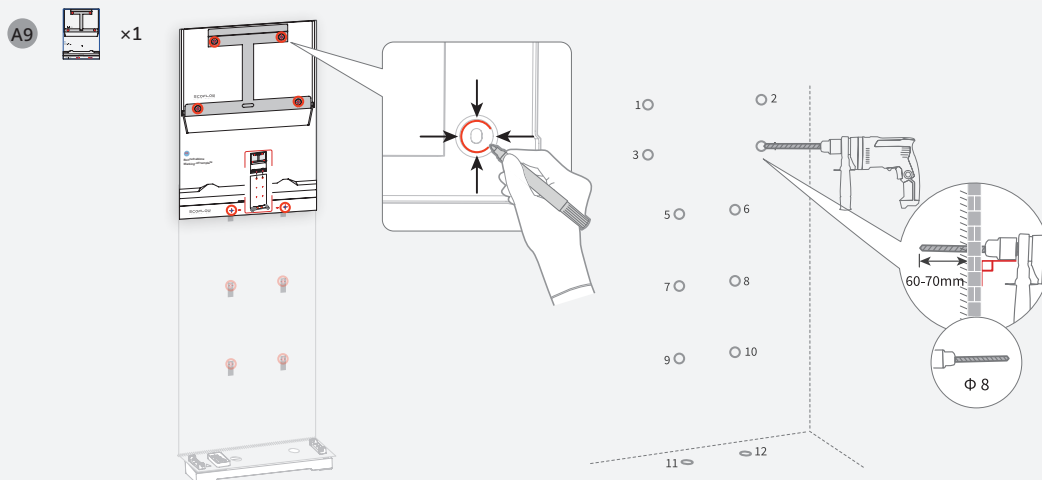
• WITH ADJUSTABLE FEET



• WITHOUT ADJUSTABLE FEET

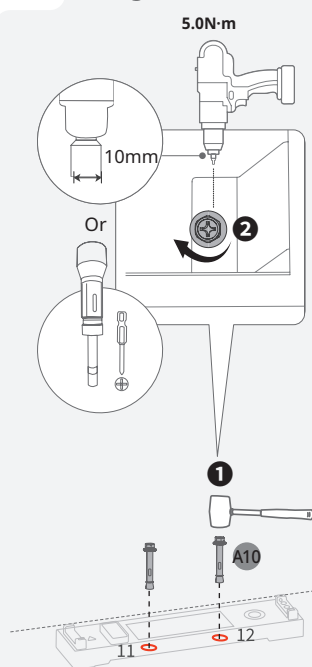


2



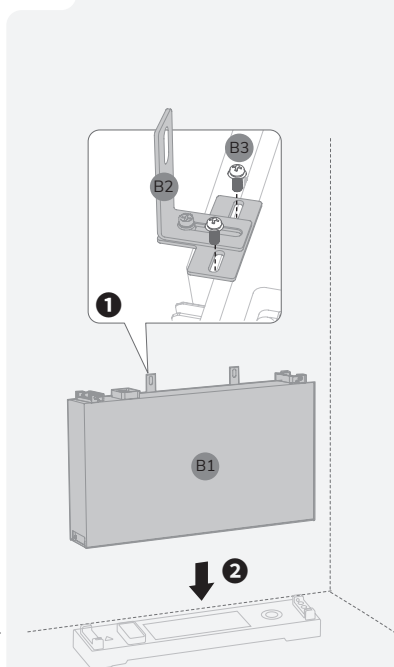
3

A10 x2



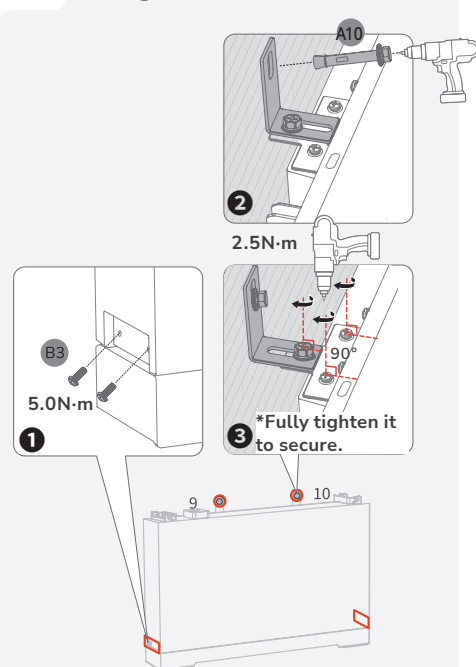
4

B1 x1 B2 x2 B3 x4



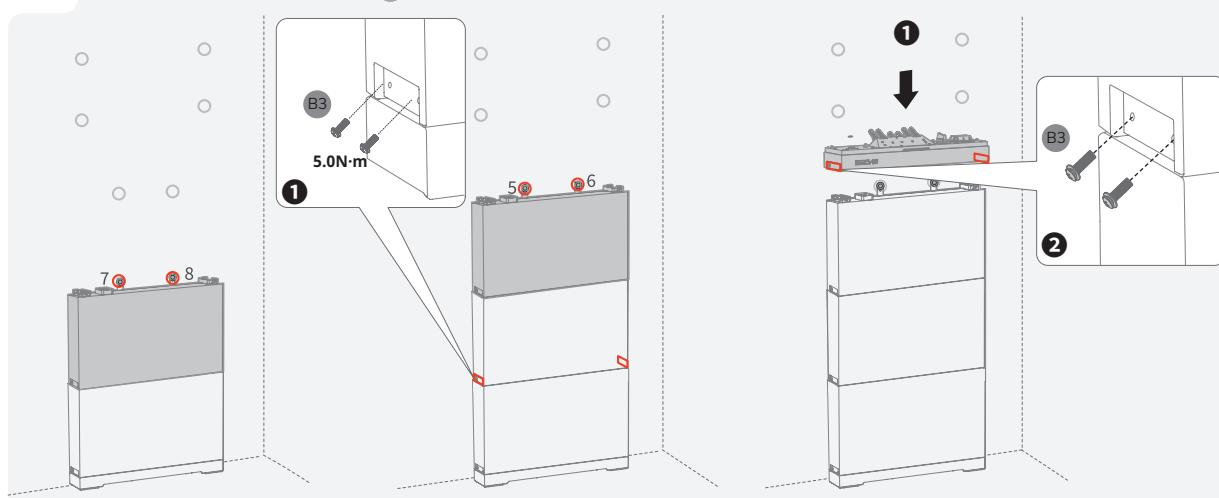
5

A10 x2 B3 x4



6

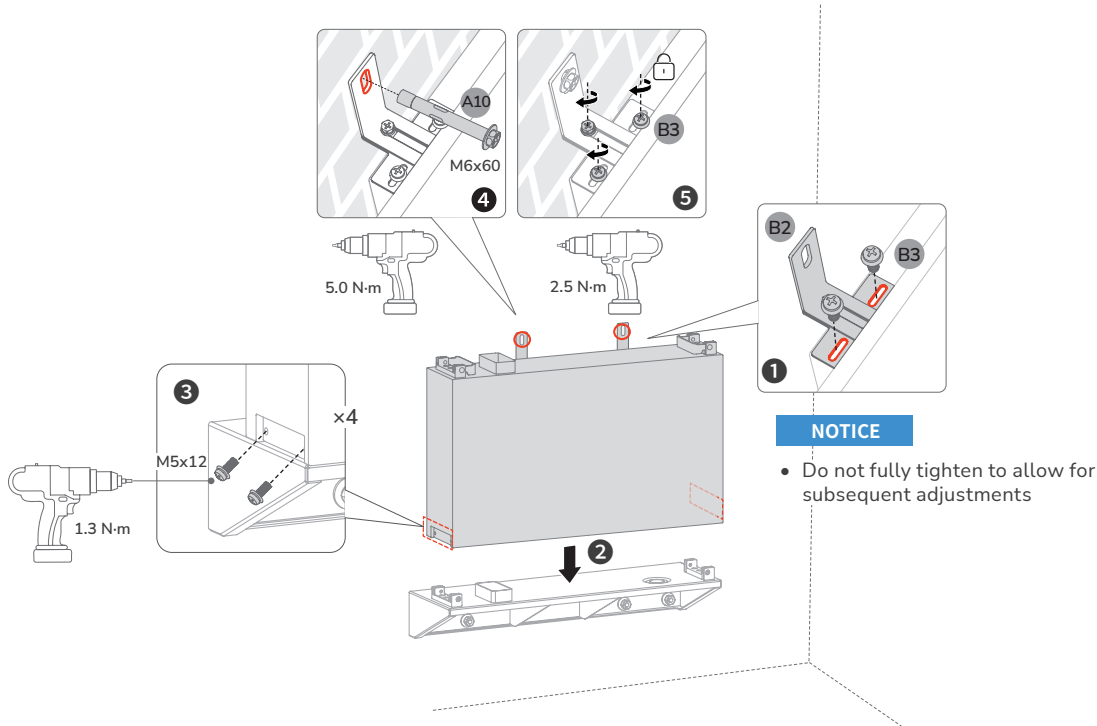
C1 x1 B3 x4



METHOD 2: (OPTIONAL) WALL MOUNTED

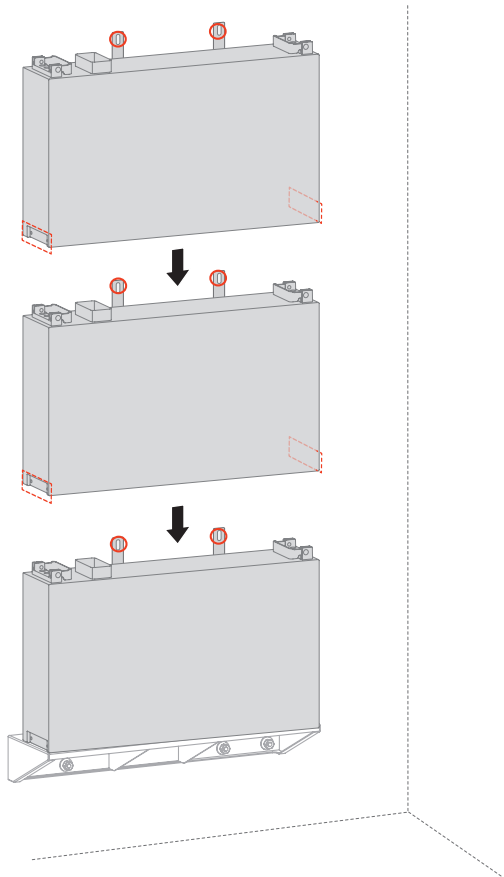
NOTICE

- For details about wall mounted installation, see the installation guide that comes together with the EcoFlow PowerOcean Wall-Mounted Battery Base.



NOTICE

- Install the remaining batteries and the inverter as shown in the method 1.

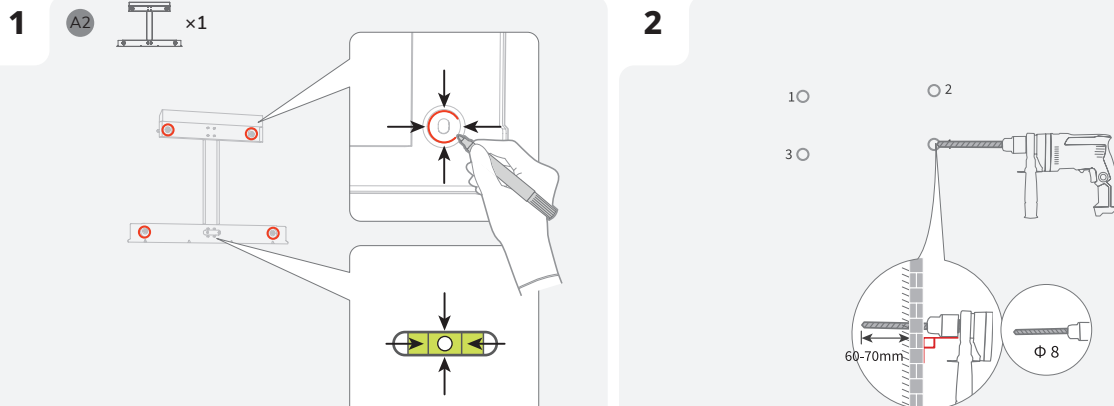


I Installing Inverter

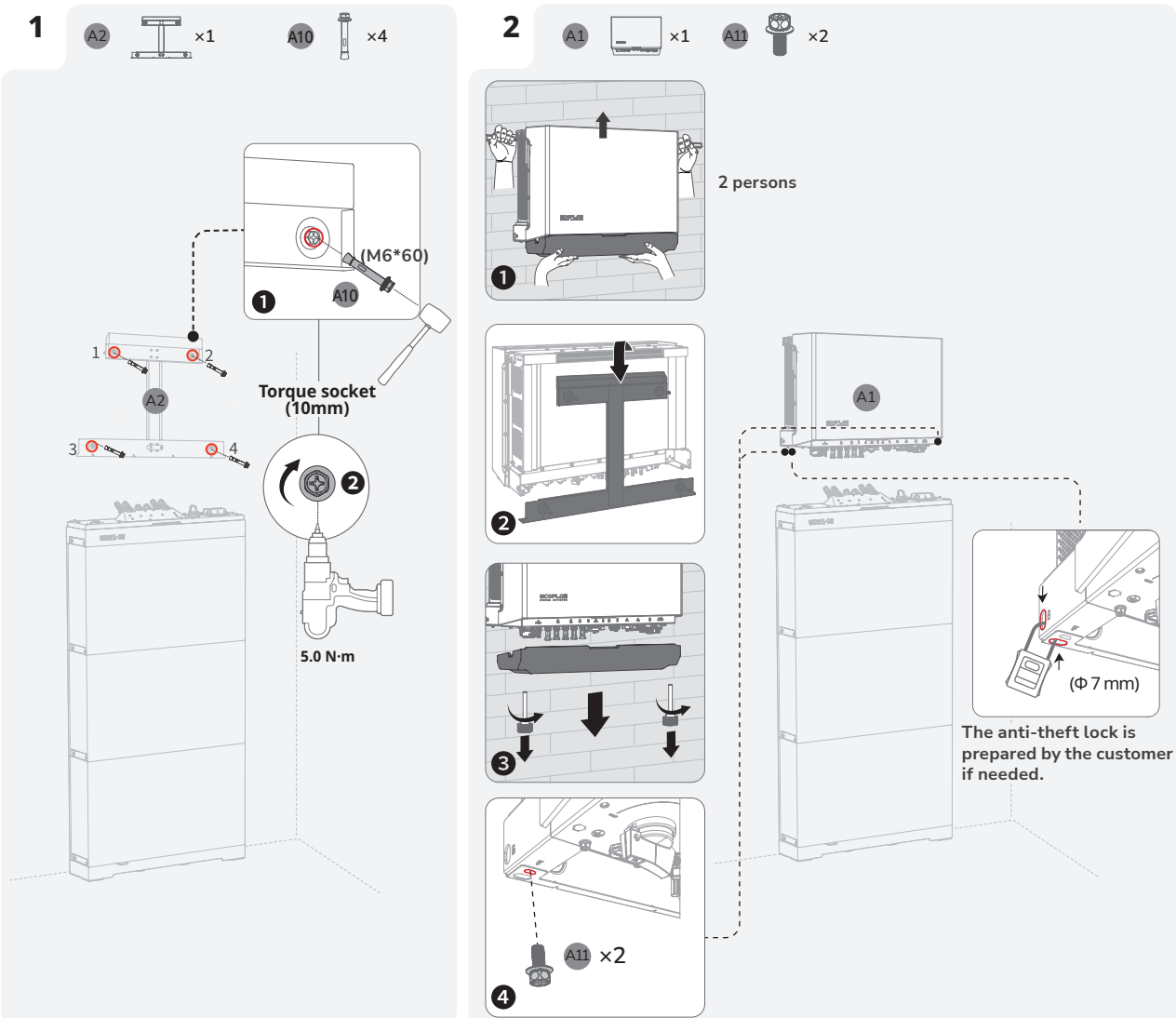
NOTICE

- Mount the inverter vertically or tilted back ($<30^\circ$) to facilitate the heat dissipation of the inverter.
- Do not remove the firm foam when taking out the inverter from the box.

• MOUNTING WITHOUT MARKING-OFF TEMPLATE FOR INVERTER IF INSTALLING THE INVERTER BEFORE BATTERIES



• CONTINUE THE BATTERY INSTALLATION STEP

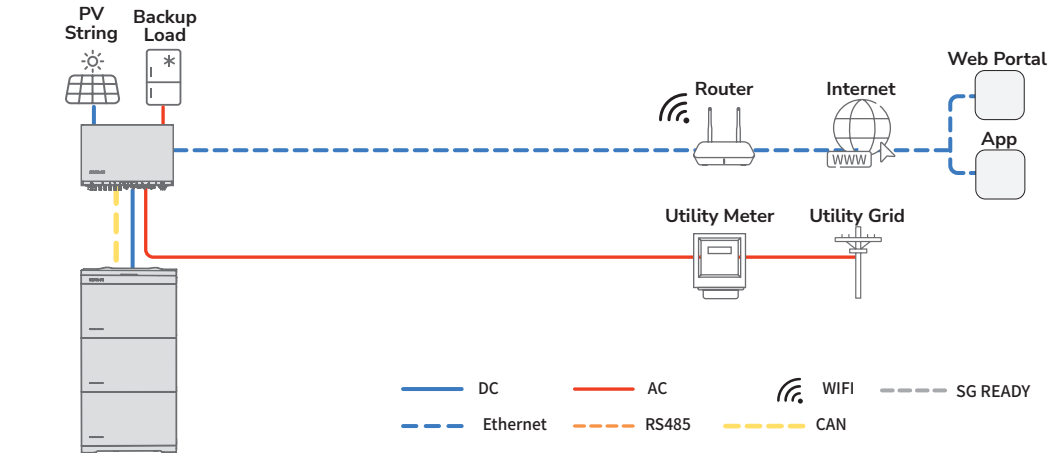


Application Scenarios

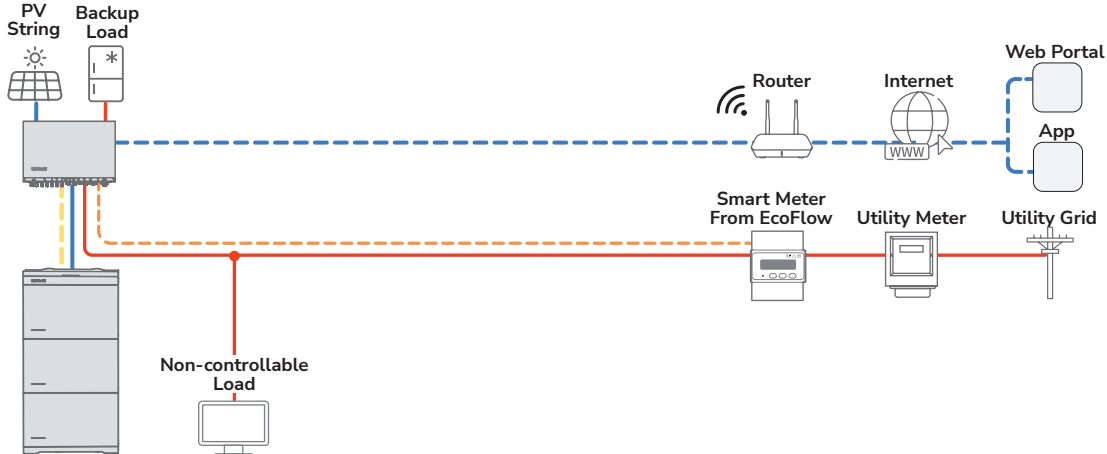
The wiring scheme described in this manual is based on the latest version of the APP software and firmware released in December 2025, which is subject to change with software updates. If you have any questions, please contact your local EcoFlow after-sales service.

I Single Inverter Setup

• WHOLE HOME BACKUP SYSTEM



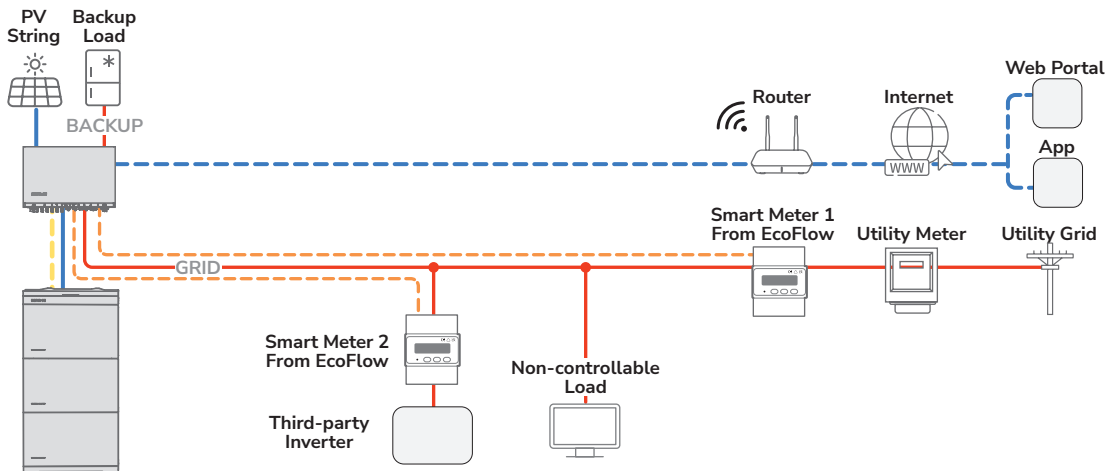
• PARTIAL HOME BACKUP SYSTEM



• USE WITH EXISTING PV SYSTEM

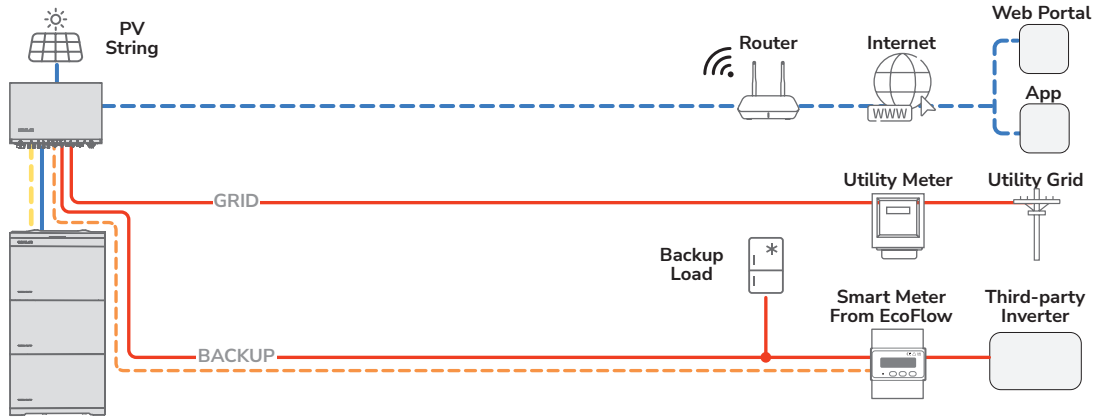
EcoFlow PowerOcean Plus system is compatible with any single/three-phase PV grid-tied system. For three-phase inverter connection, its rated power shall not exceed the rated power of the BACKUP/GRID port. For single-phase inverter connection, its rated power shall not exceed one-third of the BACKUP/GRID port's rated power. The power generation from the existing PV inverter will be firstly provided to the loads and then charge the battery.

OPTION 1: CONNECTION WITH GRID PORT



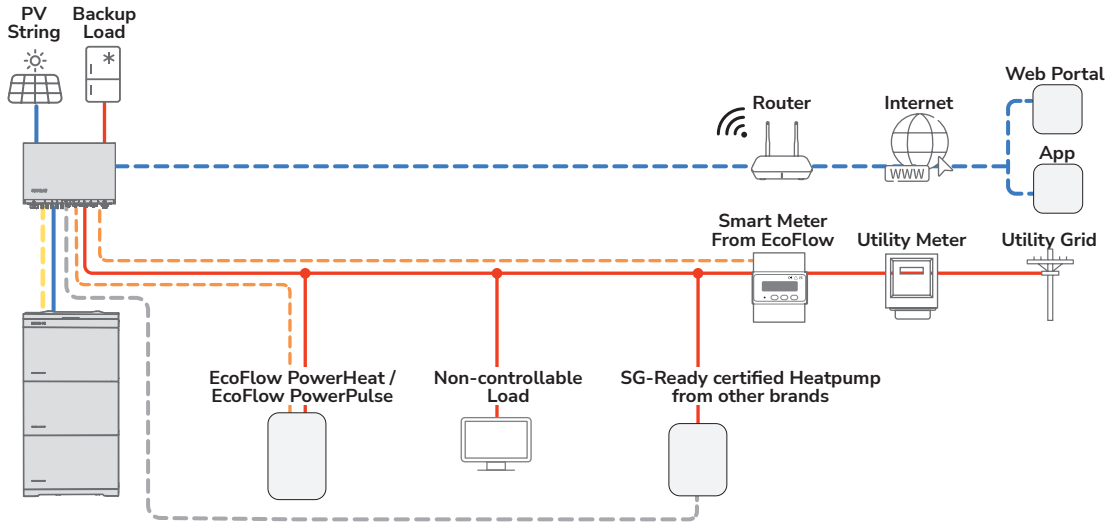


- A third-party inverter connected must also support local safety regulations for over-frequency protection and over-frequency load reduction functions.
- In this setup, off-grid parallel operation is not supported.
- If the battery-charging capability or grid-feed power is limited, a sudden disconnection of the backup load may cause an instantaneous overvoltage fault on the POWEROCEAN inverter.



• USE WITH SG-READY CERTIFIED HEATPUMP OR EV CHARGER

EcoFlow PowerOcean Plus system is compatible with EcoFlow EV Charger (PowerPulse), Heatpump (PowerHeat), any other SG-Ready certified Heatpump. When connected with the PowerOcean Plus 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 PowerOcean Plus system, the self-consumption rate of the new system, and the self-sufficiency rate of residential energy will be greatly improved, reducing electricity costs.



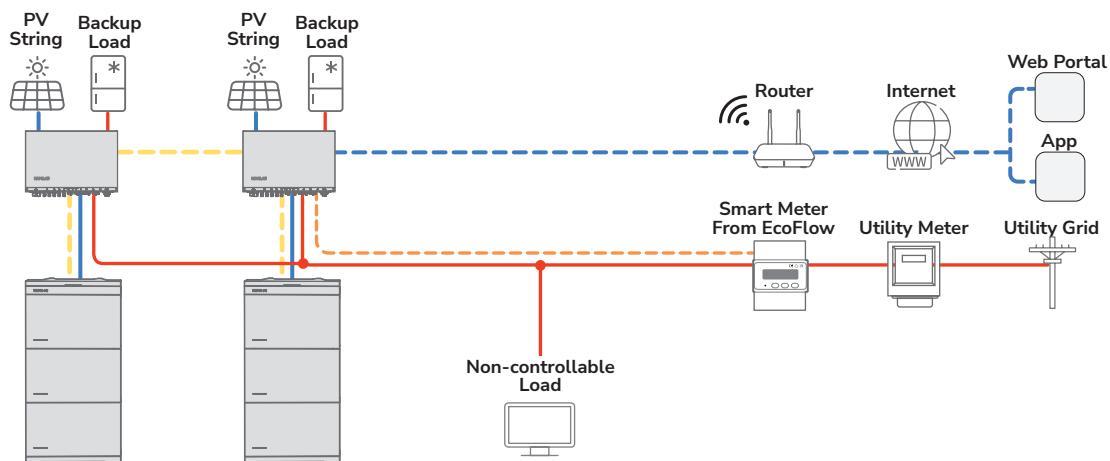
I Multi Inverters Setup

• 2 INVERTERS CASCADING (SEPARATE LOADS)



WARNING

- Only cascading of inverters of the same model is supported.
- Cascading different PowerOcean products is not supported.
- The BACKUP port remains inactive during off-grid operation of cascaded inverters without battery modules.

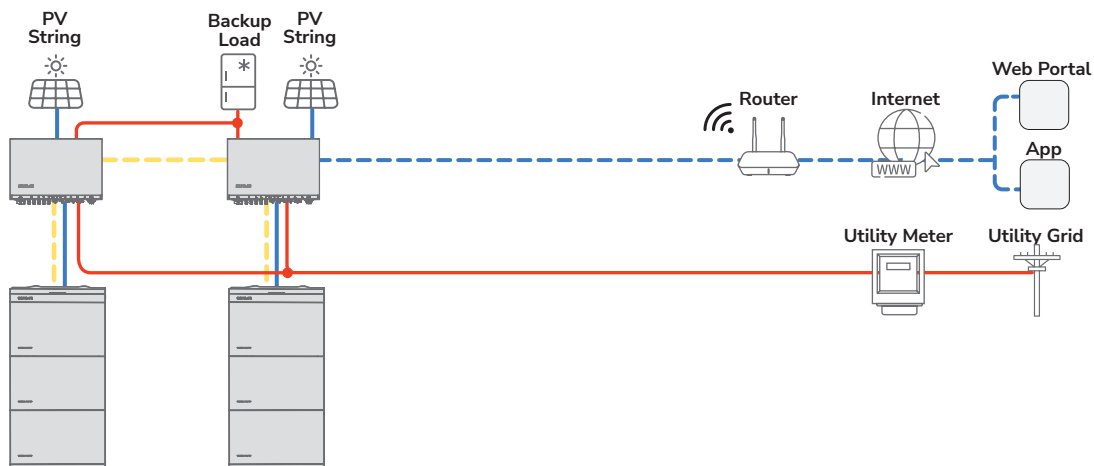


• 2 INVERTERS CASCADING (SHARING LOADS)



WARNING

- Only cascading of inverters of the same model is supported.
- Cascading different PowerOcean 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.

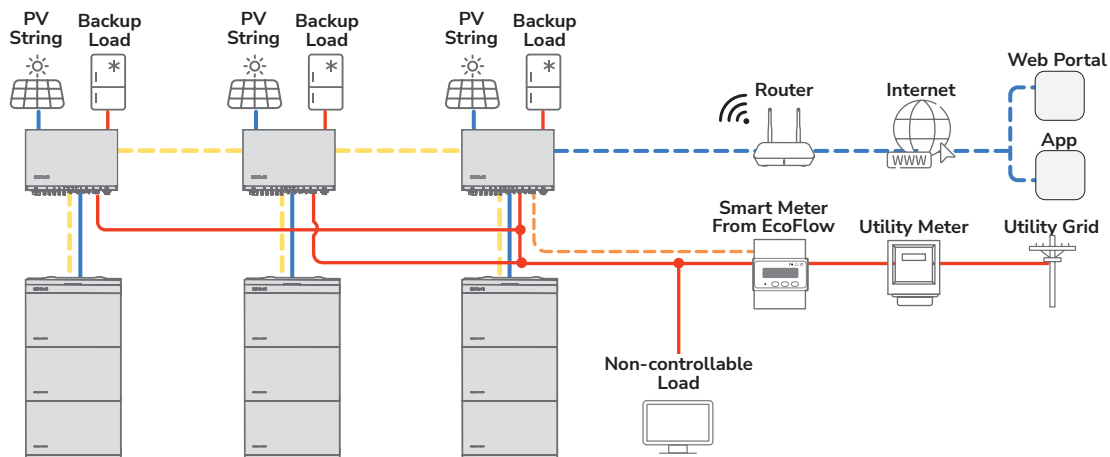


• 3 INVERTERS CASCADING (SEPARATE LOADS)



WARNING

- Only cascading of inverters of the same model is supported.
- Cascading different PowerOcean products is not supported.
- The BACKUP port remains inactive during off-grid operation of cascaded inverters without battery modules.



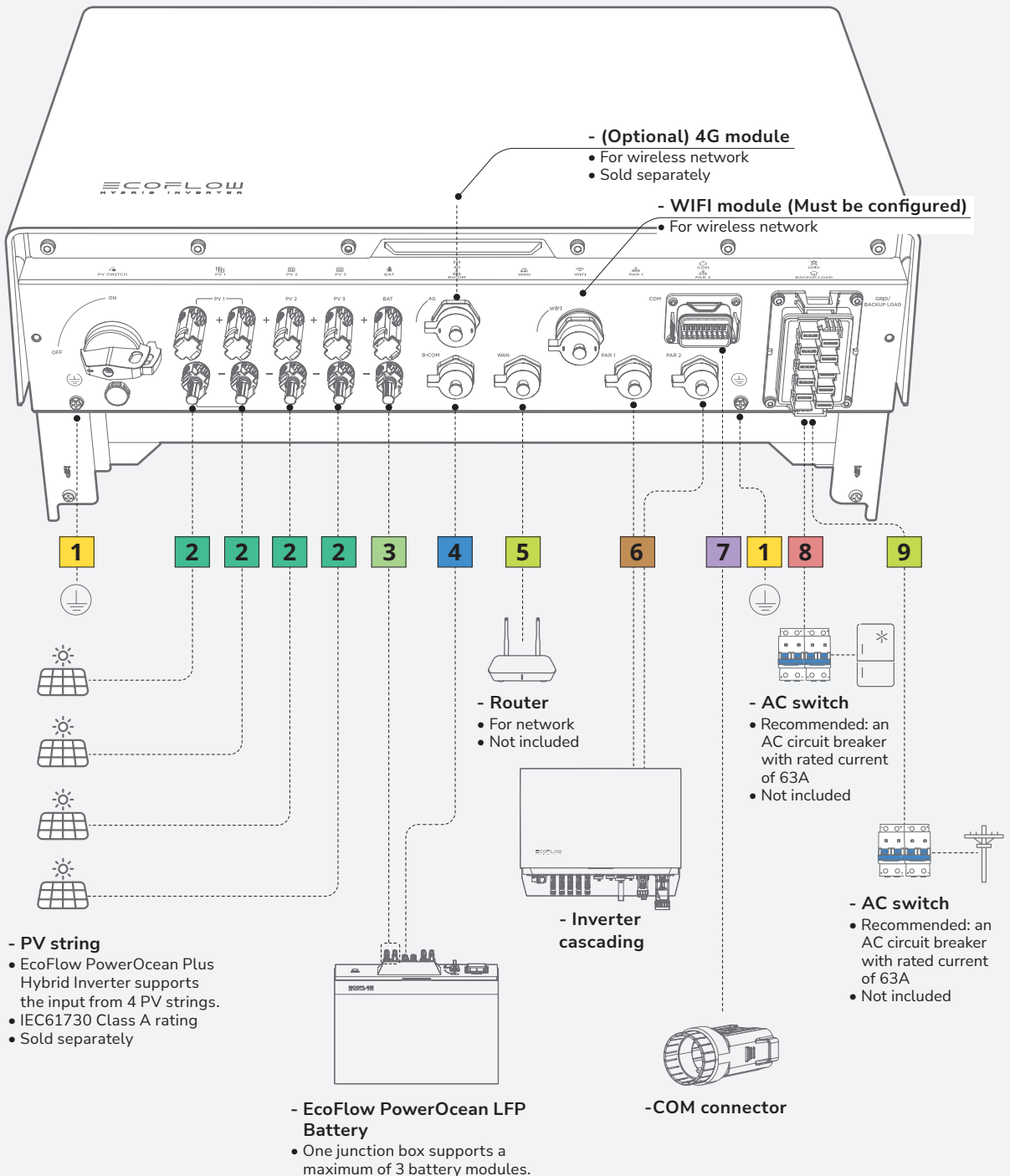
Electrical Connection

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

- | | |
|--|---|
| <p>1 Ground cable
10 mm²</p> <p>2 PV input cable
4-6 mm² with a rated voltage greater than or equal to 1000V DC</p> <p>3 Battery power cable
10 mm² with a rated voltage greater than or equal to 1000V DC</p> <p>4 Battery communication cable
8*0.2mm² Cat 5e or higher shielded network cable</p> <p>5 (Optional) Ethernet cable
Cat 5e or higher shielded network cable</p> | <p>6 Inverter cascading cable
Supplied in the box</p> <p>7 (Optional) COM terminal communication cable
Shielded twisted pair 2*0.5mm²</p> <p>8 Backup load power cable
10-16 mm² according to the specification of inverter, installed solar panels, number of batteries and loads.</p> <p>9 Grid power cable
10-16 mm² according to the specification of inverter, installed solar panels, number of batteries and loads.</p> |
|--|---|

I 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 highly 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.
- The N-PE connection should be longer than 10 m.
- RCDs (Type A) with a rated residual operating current are recommended to install, 300mA on the AC-GRID side, and 30mA 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.

• N AND PE CABLES ARE SEPARATELY WIRED IN THE MAIN PANEL.

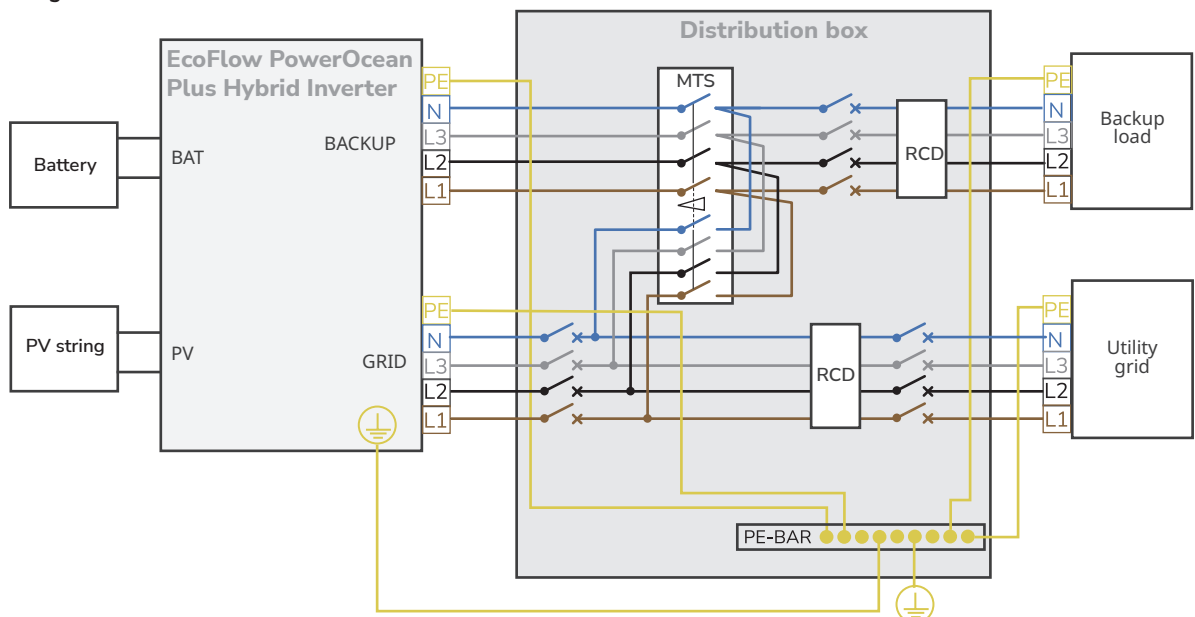
CAUTION

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

NOTICE

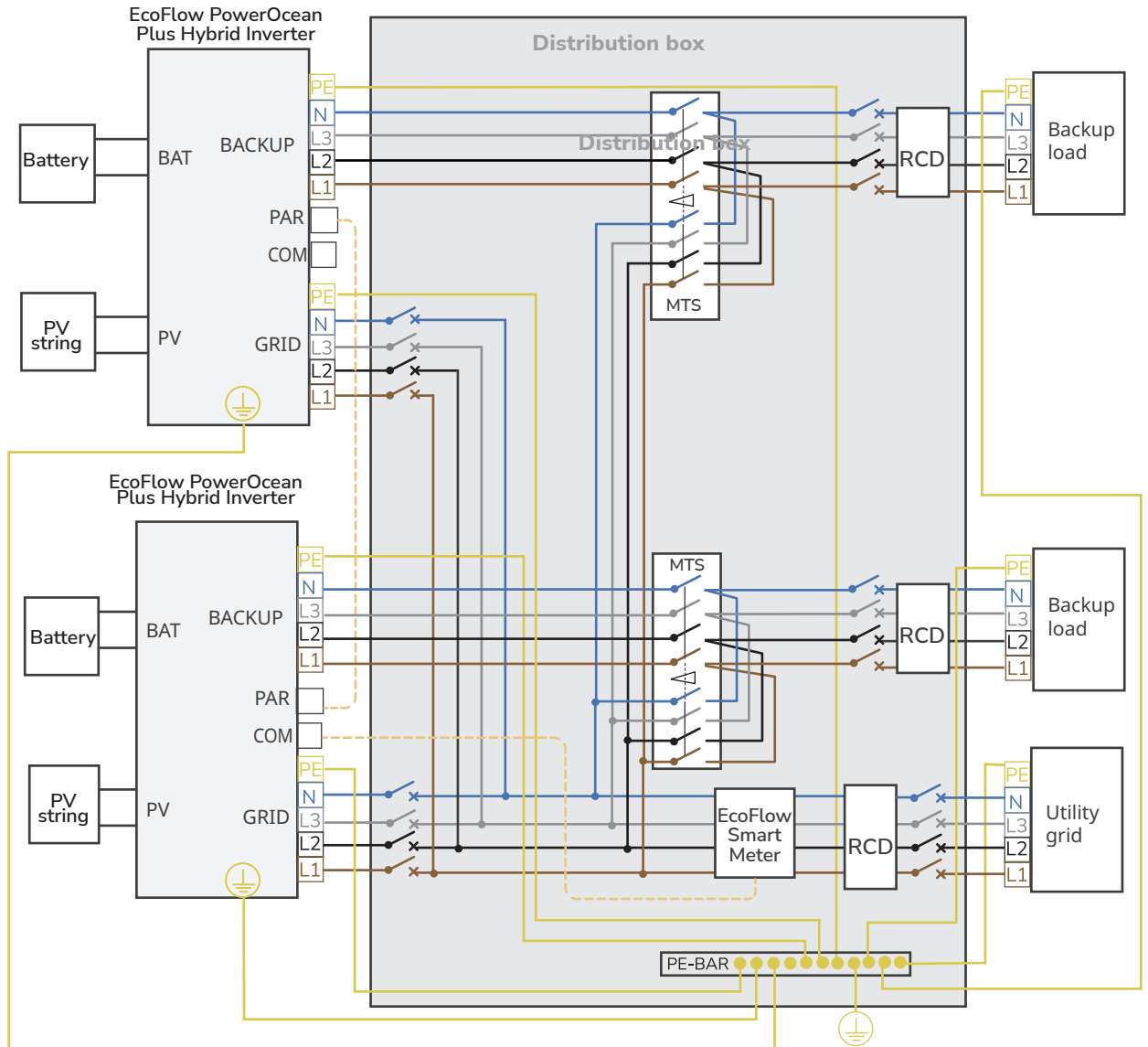
- Do not connect the N-wires of the AC-backup side and AC-grid side, otherwise the system may operate abnormally. If connected in some houses, try disconnecting the N busbar from the grid and connecting the AC-GRID N terminal of inverter directly to the N terminal of the grid.

- Single inverter

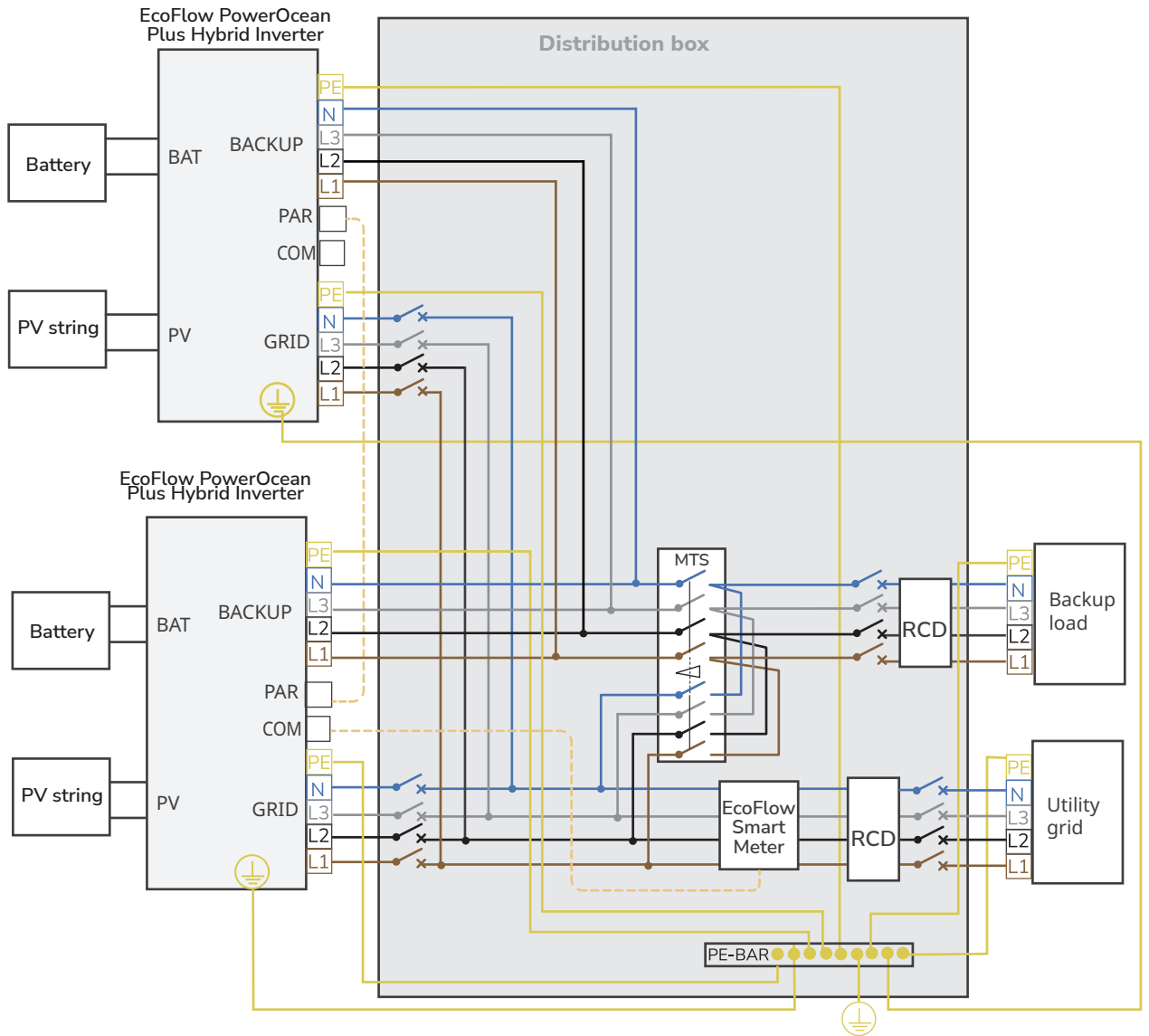


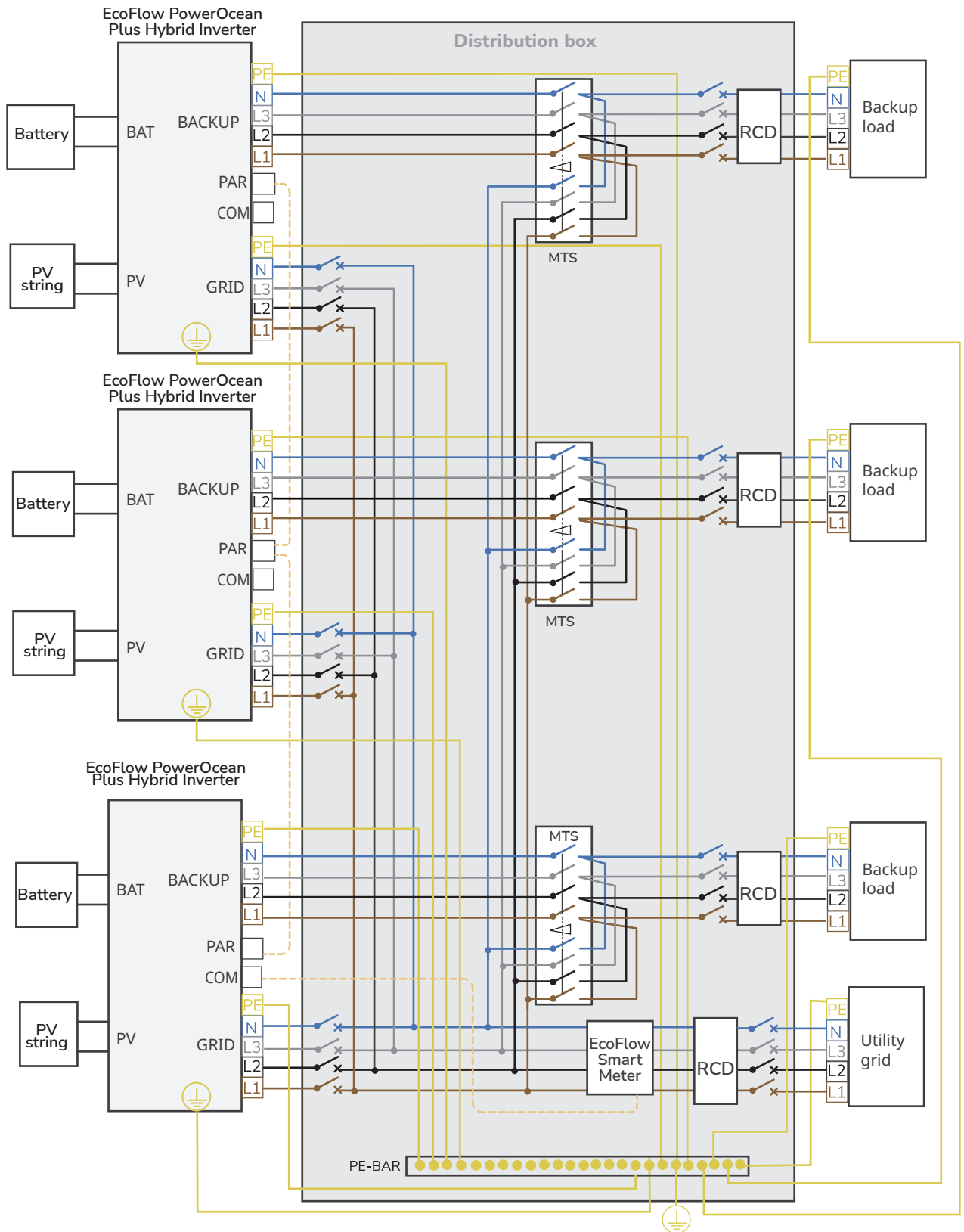
- 2 Inverters Cascading (separate loads)

en



- 2 Inverters Cascading (sharing loads)



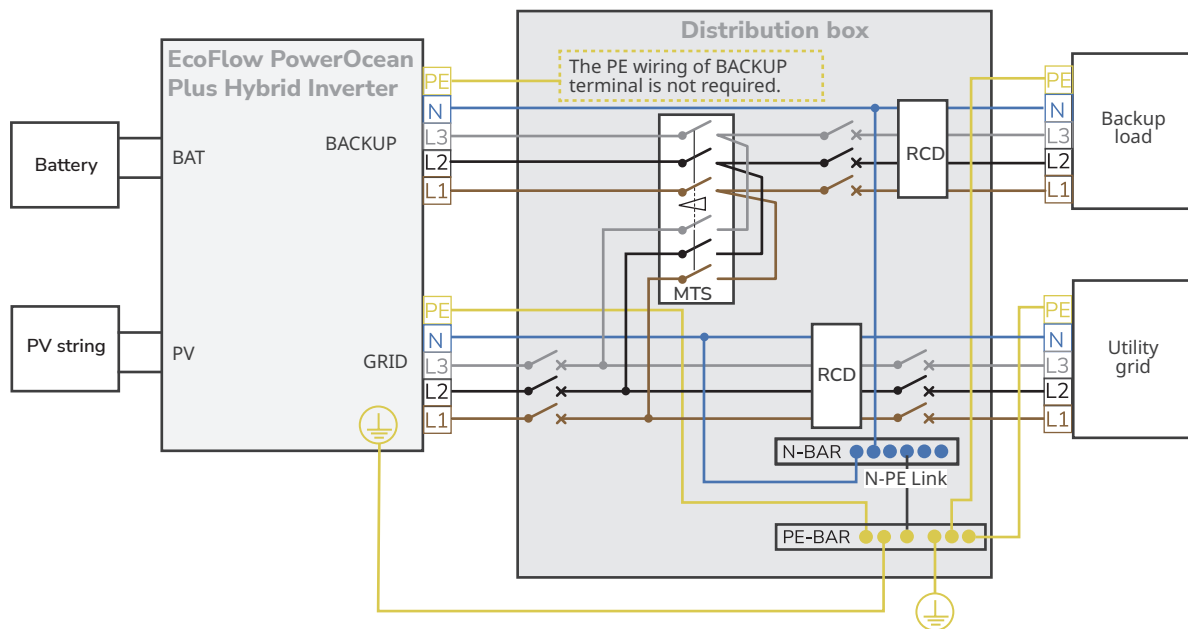


• N AND PE CABLES ARE CONNECTED TOGETHER IN THE MAIN PANEL FOR WIRING.

NOTICE

- For Australia and New Zealand, the N cable of GRID side and BACK-UP side must be connected together according to the wiring rules AS/NZS_3000. Otherwise BACK-UP function may be abnormal and risky.

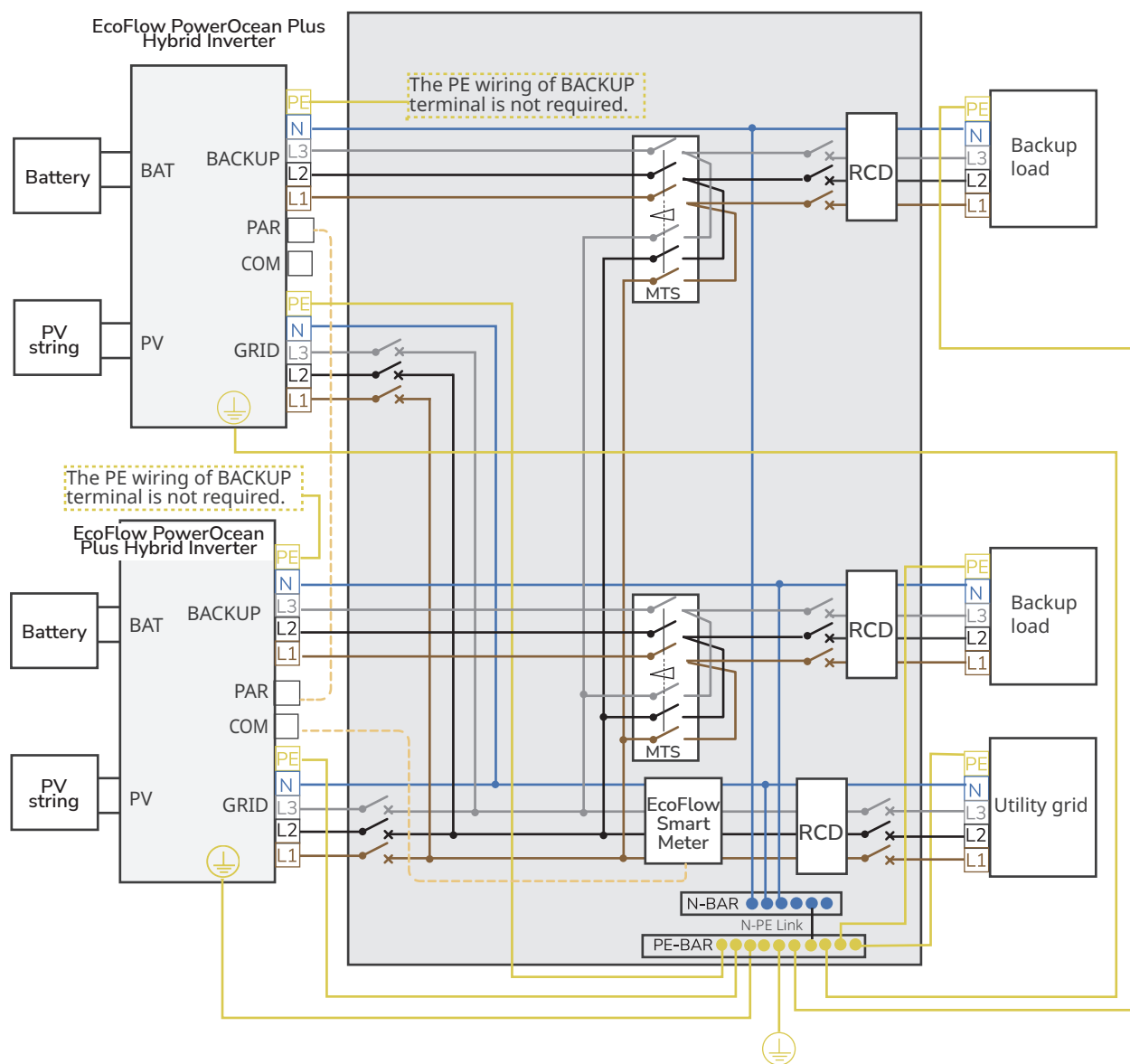
- Single inverter



- 2 Inverters Cascading (separate loads)

⚠ WARNING

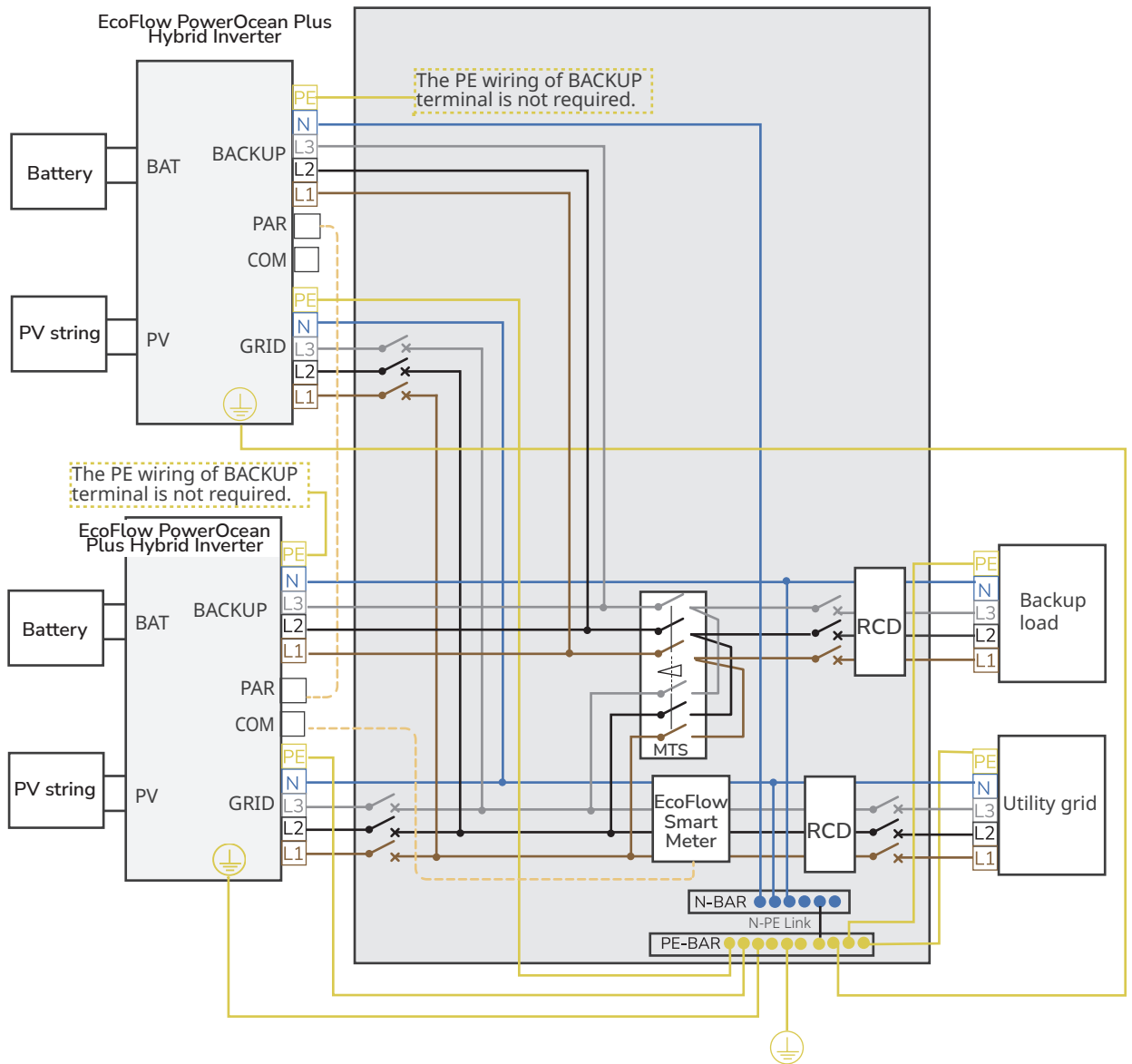
- Turn off the grid power and turn on EPO (if any) before cascading inverters.
- Flip the circuit breakers of loads to the OFF position, otherwise the wiring self-check might be faulty.
- Ensure the firmware version is up to date before performing cascading.



- 2 Inverters Cascading (sharing loads)

⚠ WARNING

- Turn off the grid power and turn on 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.

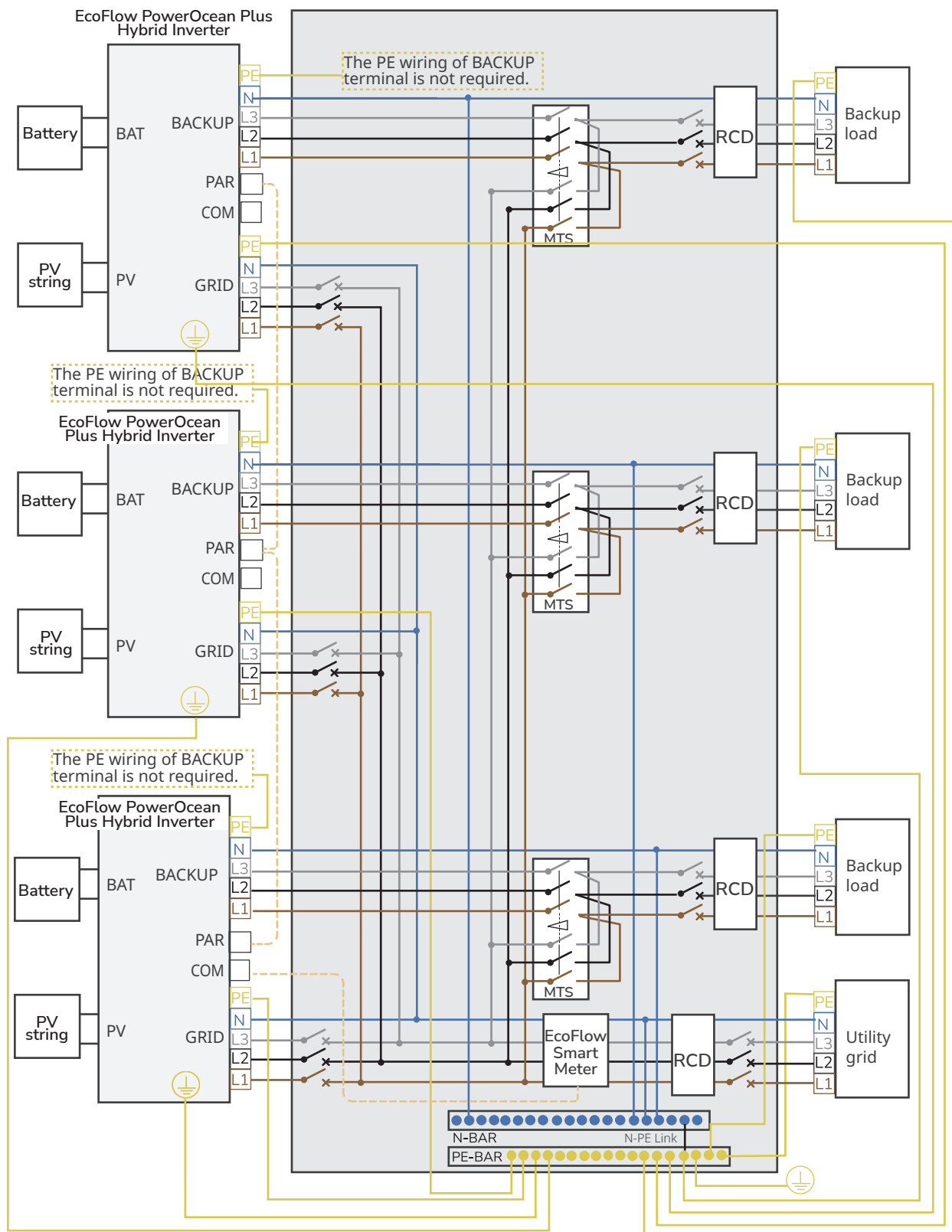


- 3 Inverters Cascading (separate loads)



WARNING

- Turn off the grid power and turn on 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.



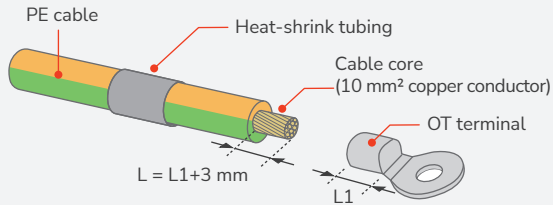
I Connecting PE Cables

NOTICE

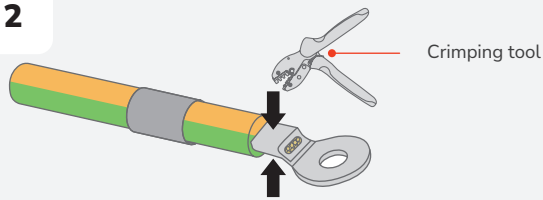
- Ensure that the PE cable is connected securely.
- Wrap the wire crimping area with heat shrink tubing or insulation tape. The heat shrink tubing is used as an example.
- When using a heat gun, protect the equipment from being scorched.
- It is recommended that silica gel or paint be used around the ground terminal after the PE cable is connected.

1

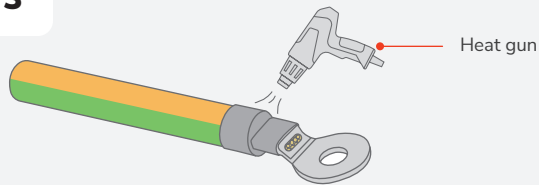
A13  x3



2

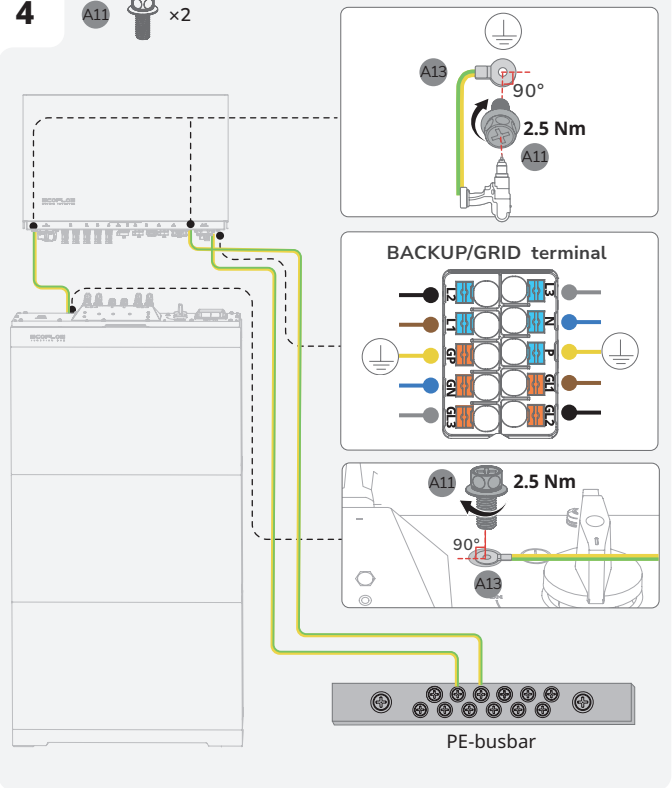


3



4

A11  x2



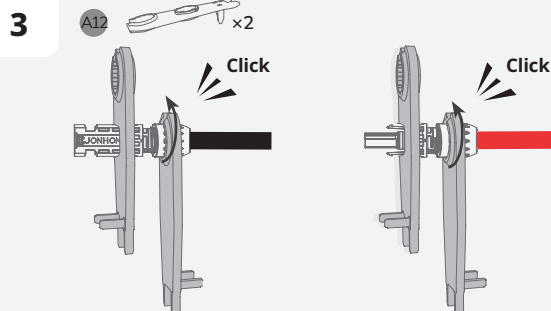
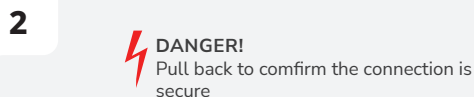
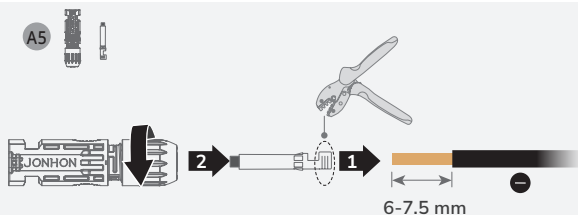
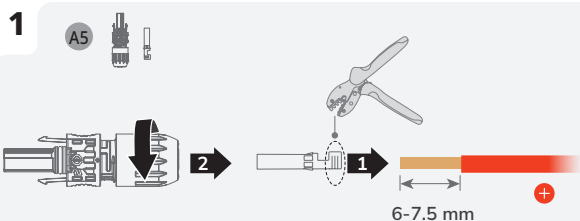
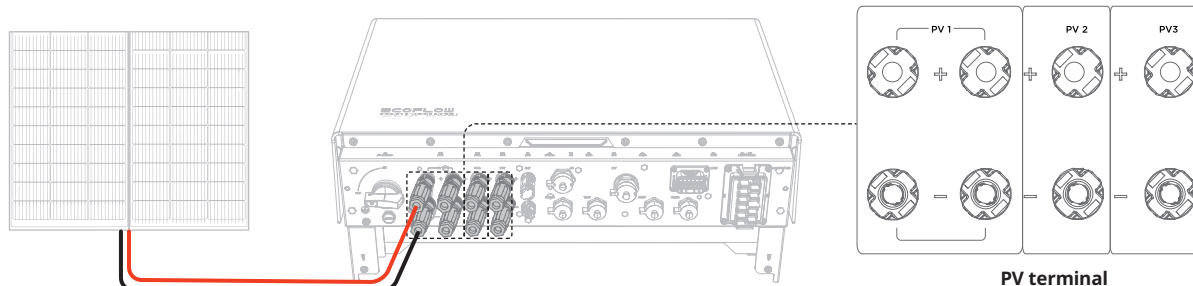
I Connecting PV Input Cables

DANGER

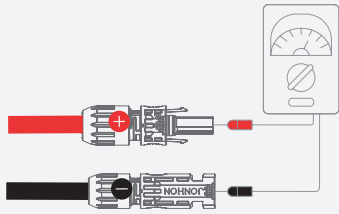
- Before connecting the PV input cables, ensure AC switch connected to the inverter and the PV SWITCH on the inverter are OFF. Failing to do so may result in electric shocks.
- The PV string will generate lethal high voltage when exposed to sunlight. Disconnect the PV cable of PV string before connecting 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

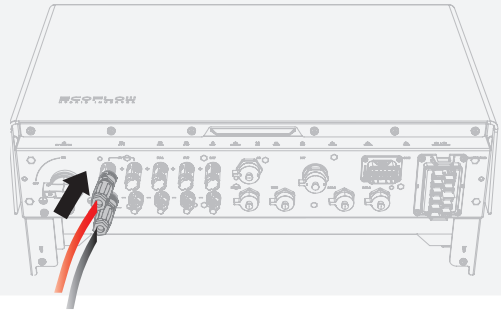
- In order to avoid malfunction, please do not connect any PV modules that have a risk of leakage current to the inverter.
- In order to avoid lightning damage to the inverter, it is recommended to add a surge protection switch at the PV junction box.
- After the positive and negative connectors snap 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.



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.

I Removing the PV Terminal



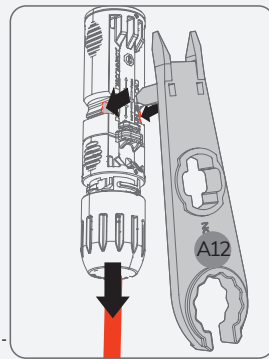
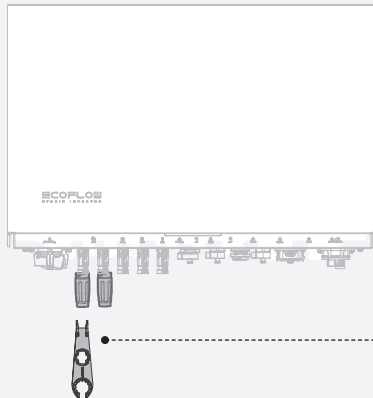
WARNING

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

A12



x1

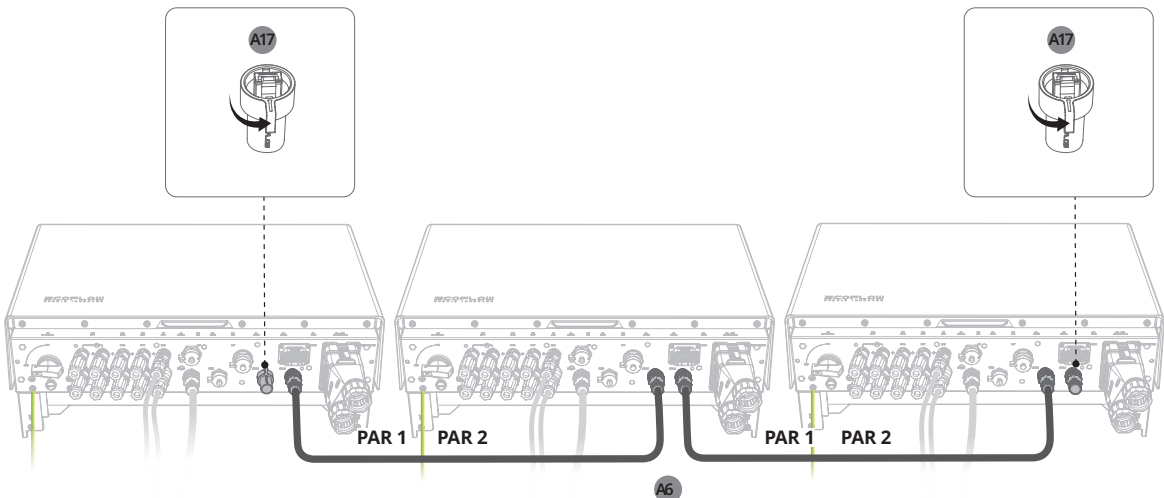


I Communication Between Cascaded Inverters



CAUTION

- Insert terminal resistors for proper communication.



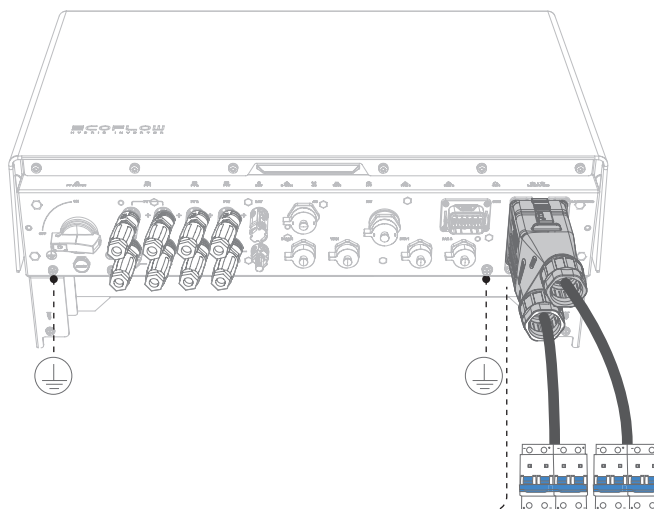
I Connecting GRID/BACKUP Cables

DANGER

- The strip length must be 20 mm. A shorter strip length may cause unsecure crimping and affect the current-carrying capacity.
- 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.

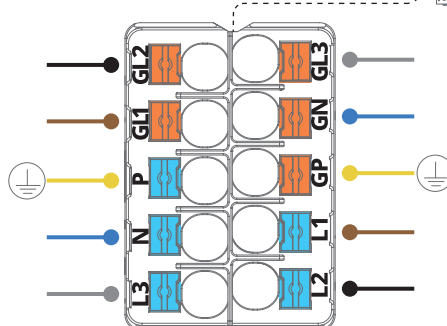
CAUTION

- 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.



BACKUP load terminal

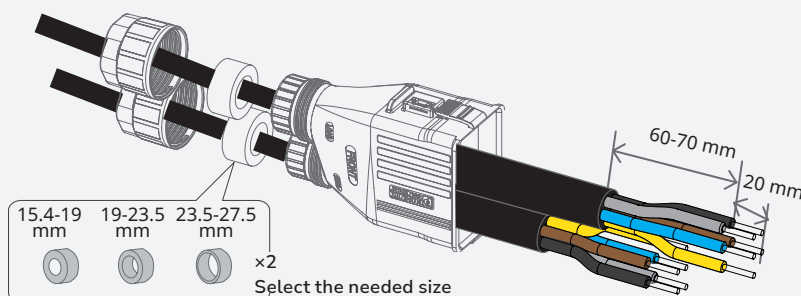
- L1 · LOAD-L1, a-phase line 1
- L2 · LOAD-L2, b-phase line 2
- L3 · LOAD-L3, c-phase line 3
- N · LOAD-N, neutral wire
- P · LOAD-PE, ground wire



GRID terminal

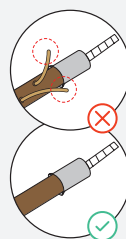
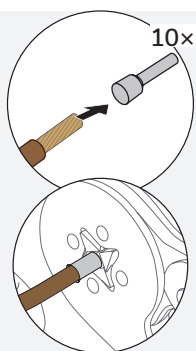
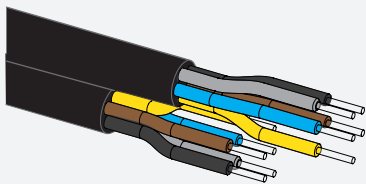
- GL1 · GRID-L1, a-phase line 1
- GL2 · GRID-L2, b-phase line 2
- GL3 · GRID-L3, c-phase line 3
- GN · GRID-N, neutral wire
- GP · GRID-PE, ground wire

1

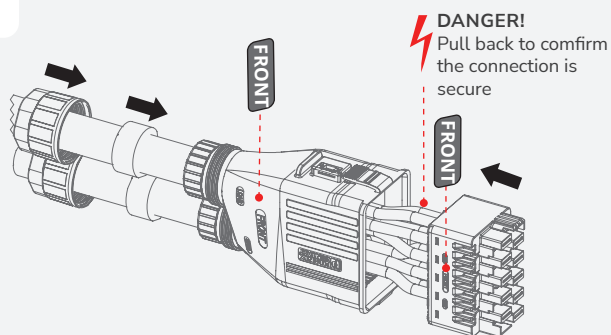


2

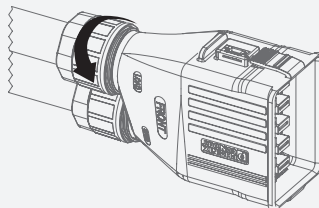
- A14 10-16 mm² according to the specification of inverter
- or
- A16 10-16 mm² according to the specification of inverter



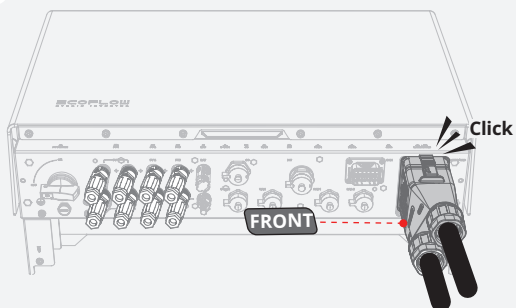
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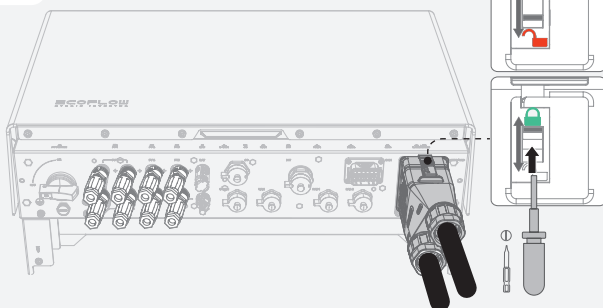
4



5



6



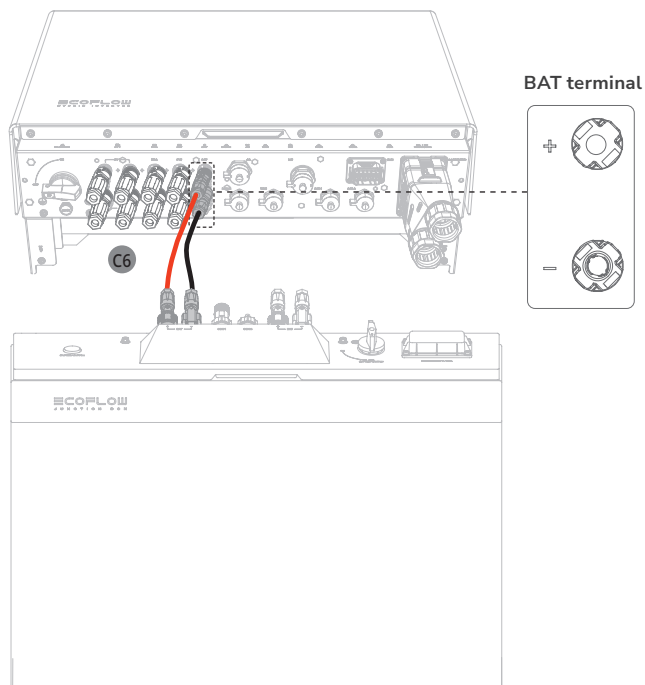
I Connecting Battery Power Cables

⚠ DANGER

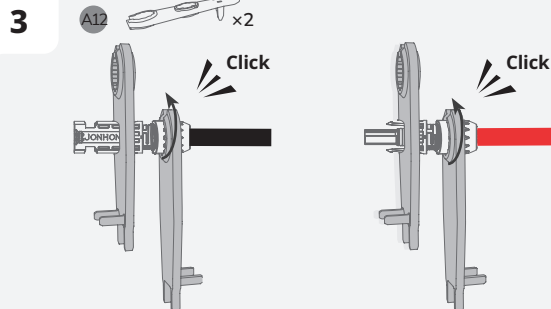
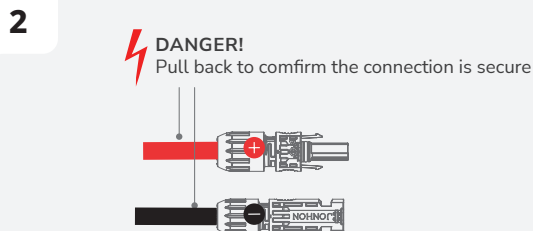
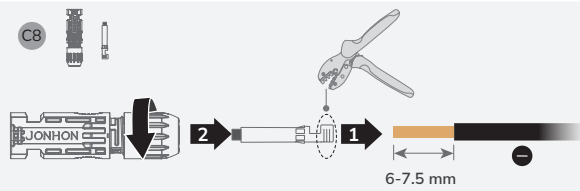
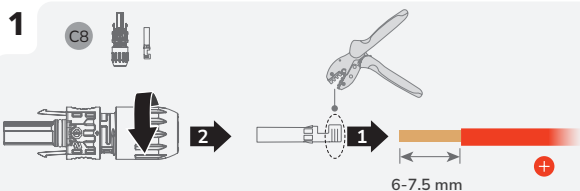
- Before disconnecting the battery terminals, you **MUST** set the BATTERY SWITCH on top of the Junction Box to OFF position, then press and hold the BATTERY ON/OFF button on the right side of the junction box for 10 seconds, until the indicator is off.

⚠ CAUTION

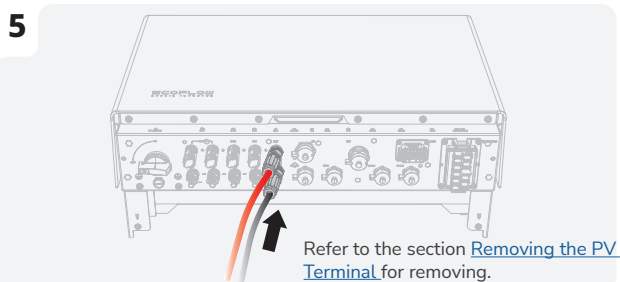
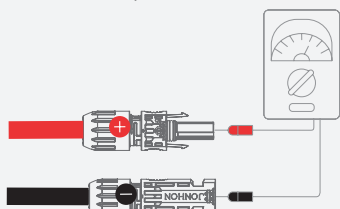
- Both ends of the positive cable are positive connectors. Both ends of the negative cable are negative connectors.



• TO CREATE A LONGER BATTERY POWER CABLE (UP TO 20 M)



4 Ensure that the cable polarities are correct.



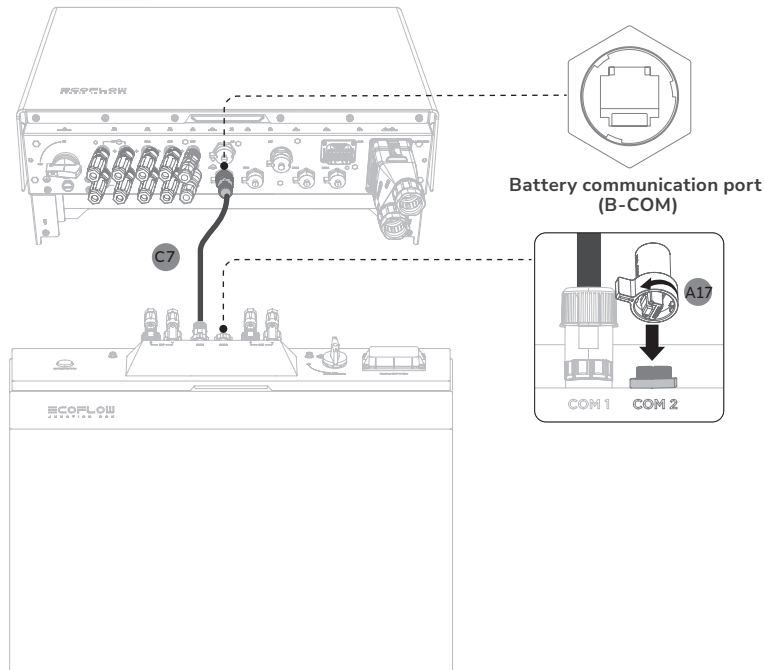
I Connecting Battery Communication Cables

NOTICE

- Connectors are required at both ends of the battery communication cable.
- It is recommended to use COM1 for communication between the inverter and battery, COM2 for battery parallel communication.

CAUTION

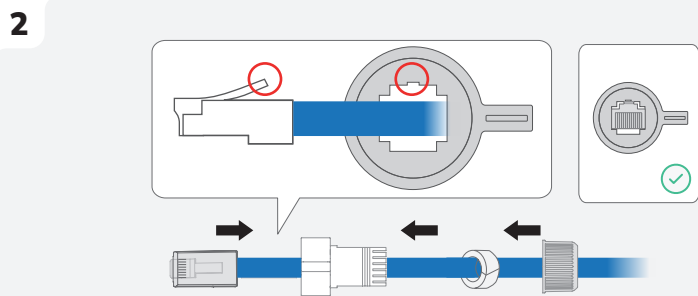
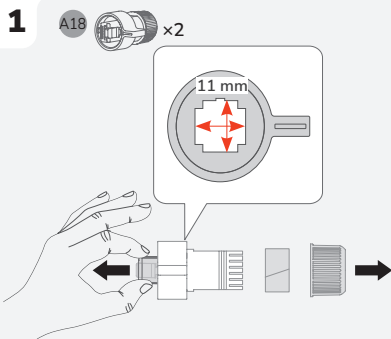
- It is a MUST to install a termination resistor to the unused B-COM terminal of the battery junction box, otherwise it would cause the system to malfunction.
- As for battery junction boxes already have termination resistors installed as delivered, remove the termination resistor to use the B-COM terminal.



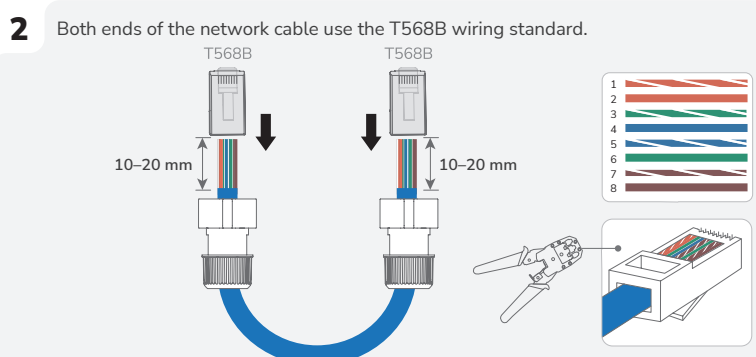
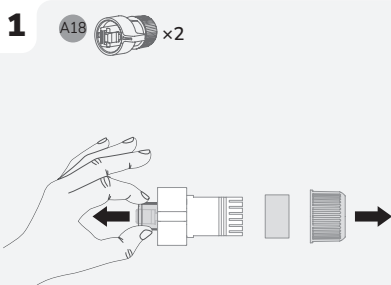
• TO CREATE A LONGER COMMUNICATION CABLE (UP TO 20 M)

- Method 1 (recommended): Use a self-prepared network cable (Cat 5e or higher shielded network cable)

The cable should meet the dimension requirement, as shown in the figure, otherwise you can peel off the outer skin of the cable head or use method 2.



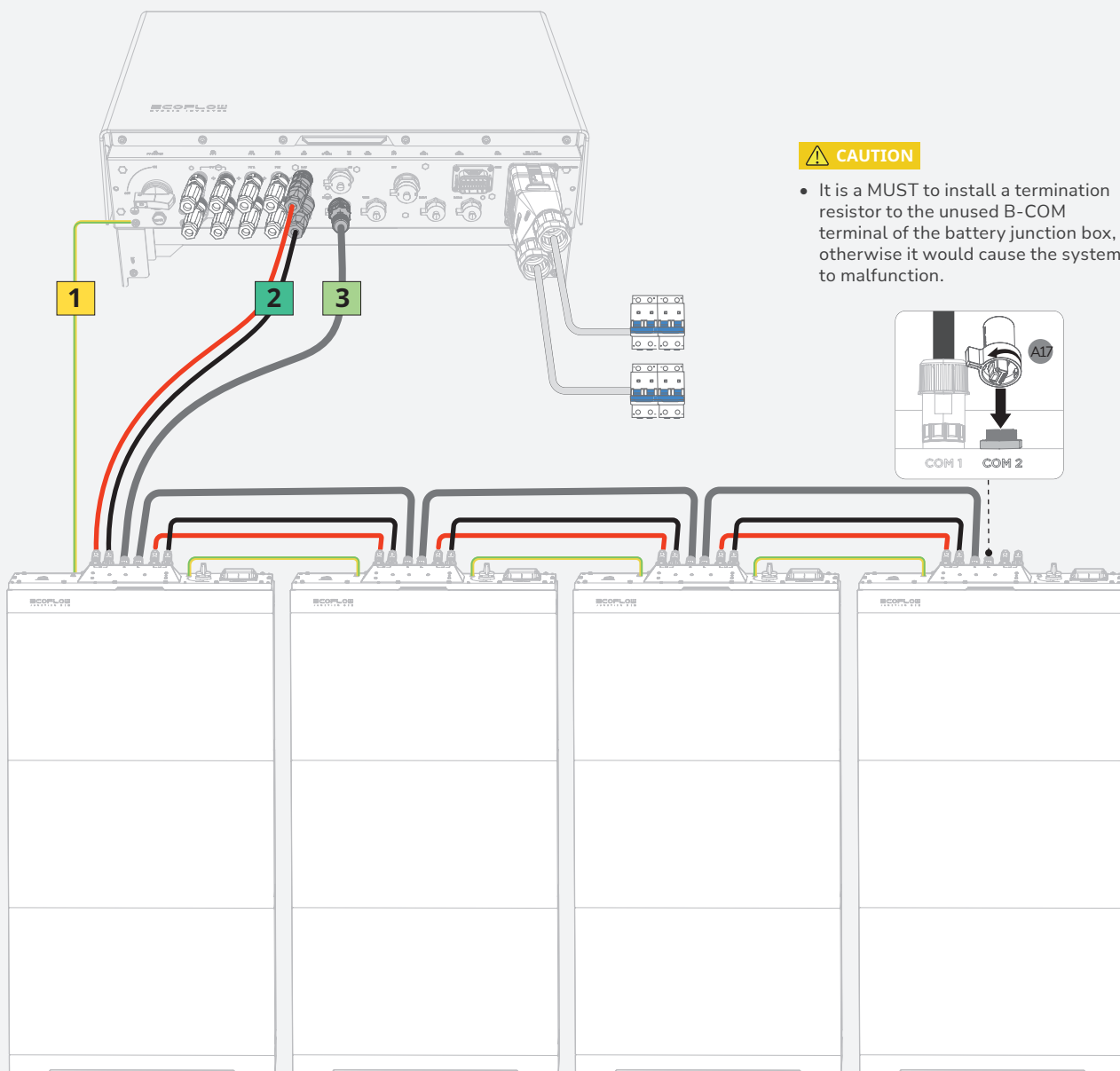
- Method 2: Create a new network cable



I Cascading Batteries

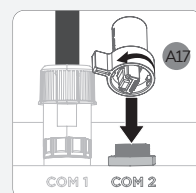
NOTICE

- One battery junction box supports a maximum of 3 battery packs.
- Up to 12 battery packs (maximum 61.2 kWh) 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.



CAUTION

- It is a **MUST** to install a termination resistor to the unused B-COM terminal of the battery junction box, otherwise it would cause the system to malfunction.



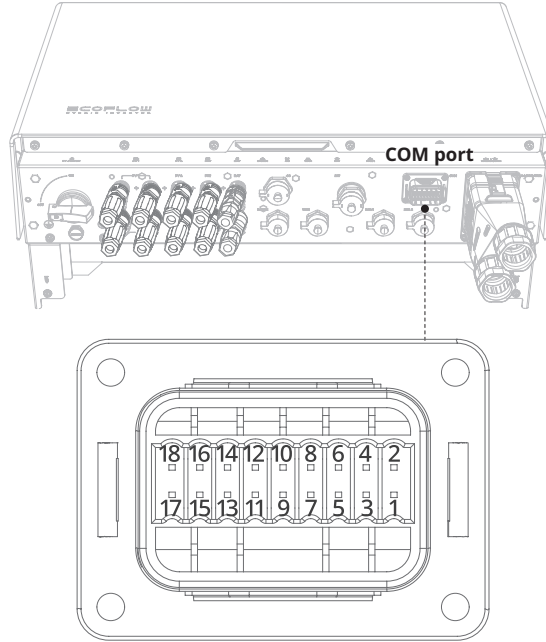
LEGEND

- 1** For details about connecting grounding terminals between the battery junction boxes, see the section **Connecting PE Cables** in this guide.
- 2** For details about connecting DC input terminals (BAT+/-) between the battery junction boxes, see the section **Connecting Battery Power Cables** in this guide.
- 3** For details about connecting battery communication terminals (B-COM) between the battery junction boxes, see the section **Connecting Battery Communication Cables** in this guide.

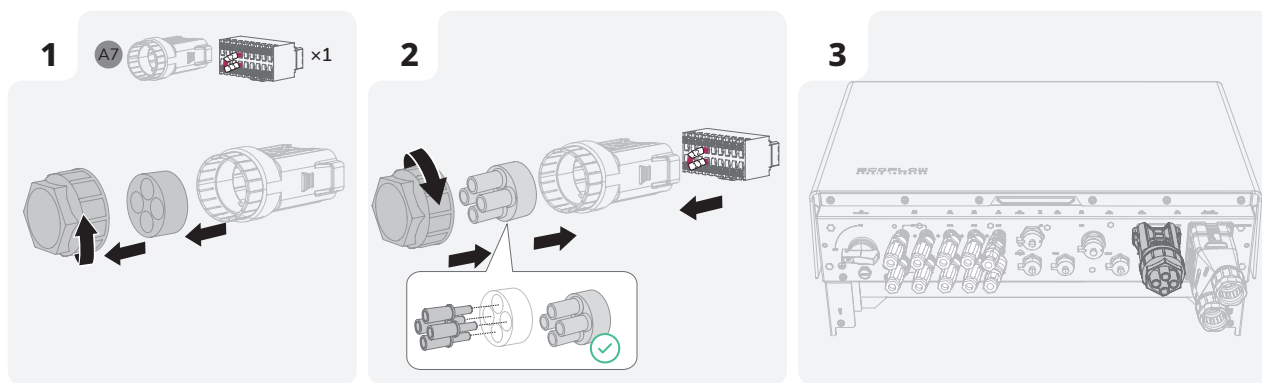
I Installing COM Connector With Shorting Wire

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 closed, the inverter can operate normally. When the switch is opened, 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 $\leq 24\text{V}/2\text{A}$ for safe operation.



DRM or RCR Status Detection		Emergency Stop Input	
1	DRM0/COM LOAD or REF_1 (AU) REF_1 (EU)	11	EPO_GND
2	DRM1/5 or DI_1 (AU) DI_1 (EU)	12	EPO
3	DRM2/6 or DI_2 (AU) DI_2 (EU)	AC Meter	
4	DRM3/7 or DI_3 (AU) DI_3 (EU)	13	485_A_1
5	DRM4/8 or DI_4 (AU) DI_4 (EU)	14	485_B_1
6	REF GEN/0 or REF_2 (AU) REF_2 (EU)		
SG_Ready		AC Coupled Meter	
7	SG_Ready11	15	485_A_2
8	SG_Ready12	16	485_B_2
9	SG_Ready21	Ecosystem Appliances	
10	SG_Ready22	17	485_A_3
		18	485_B_3



• 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%

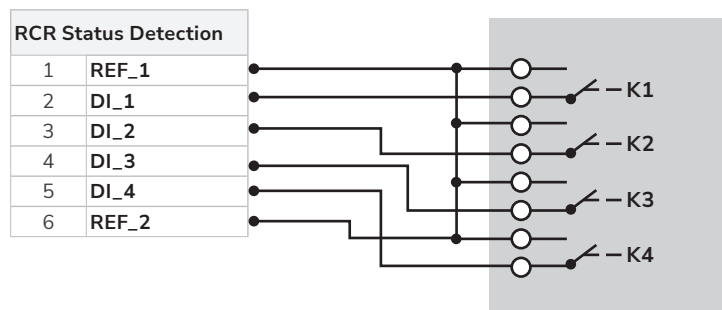
Please enable the RCR by shorting COM1 and COM6, in this case, the feed-in power limitation will be disabled. The inverter is connected to the ripple control receiver as follows:

DRM1/DI_1(COM2): 100%

DRM2/DI_2(COM3): 60%

DRM3/DI_3(COM4): 30%

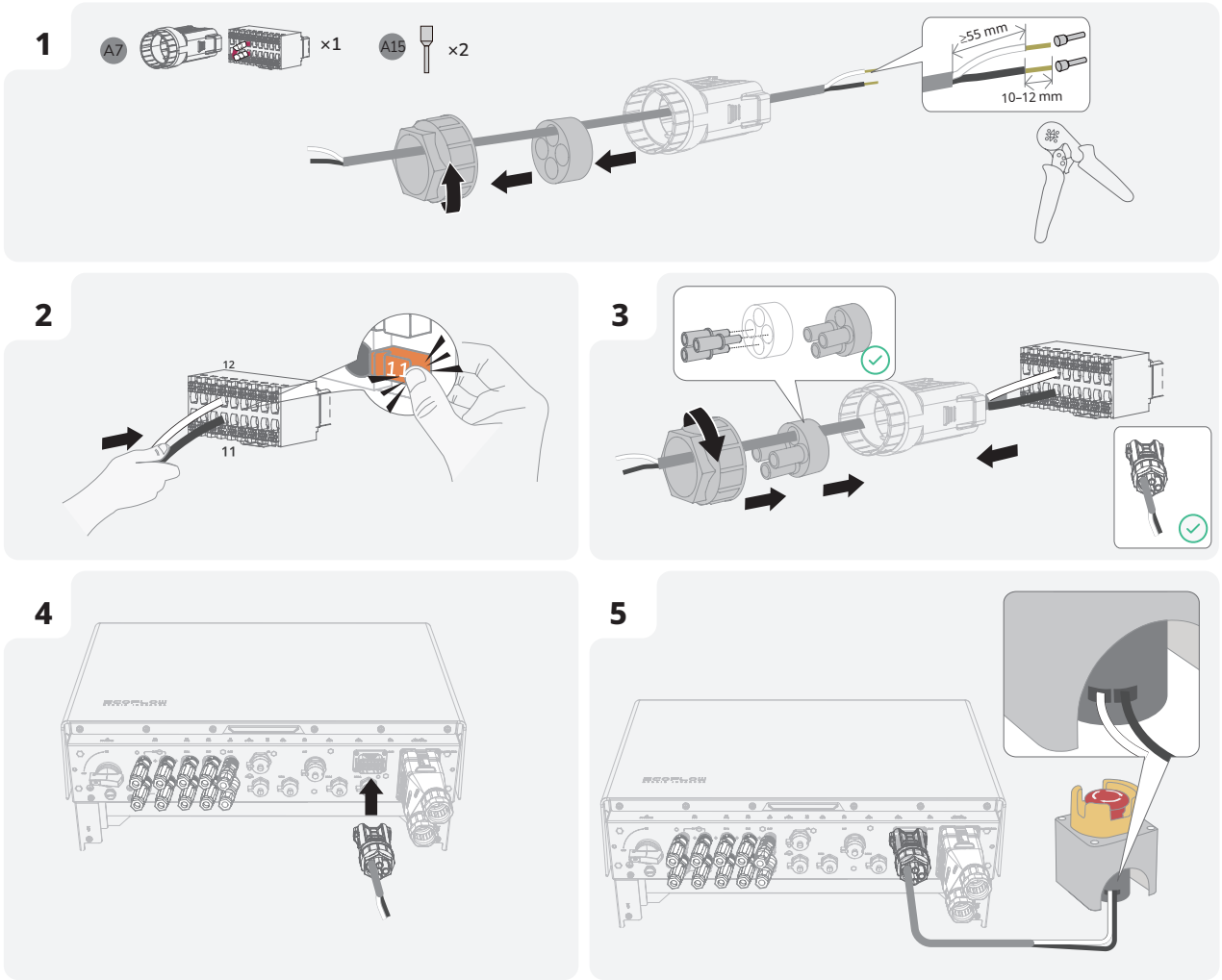
DRM4/DI_4(COM5): 0%



I (Optional) Installing Emergency Stop (EPO)

NOTICE

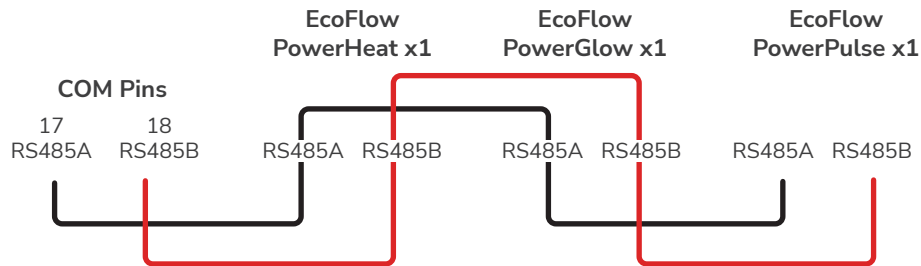
- Before installing EPO, remove the shorting wire between PIN11 and PIN12.



I Connecting Ecosystem Appliances

EcoFlow PowerOcean Plus supports connecting with EcoFlow PowerHeat, EcoFlow PowerGlow, EcoFlow PowerPulse 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 instruction of the corresponding products.



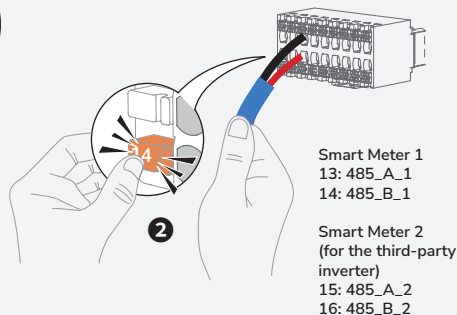
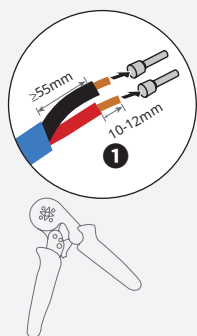
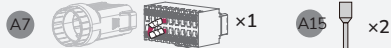
I Connecting Smart Meter

NOTICE

- Cable requirement: shielded twisted pair 2*0.5 mm², up to 100 m.
- 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 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.

• WITH CT

1



2

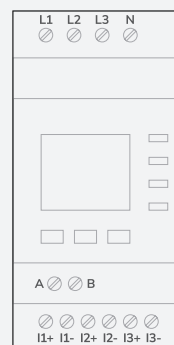
METER SAMPLING

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

3

METER COMMUNICATION

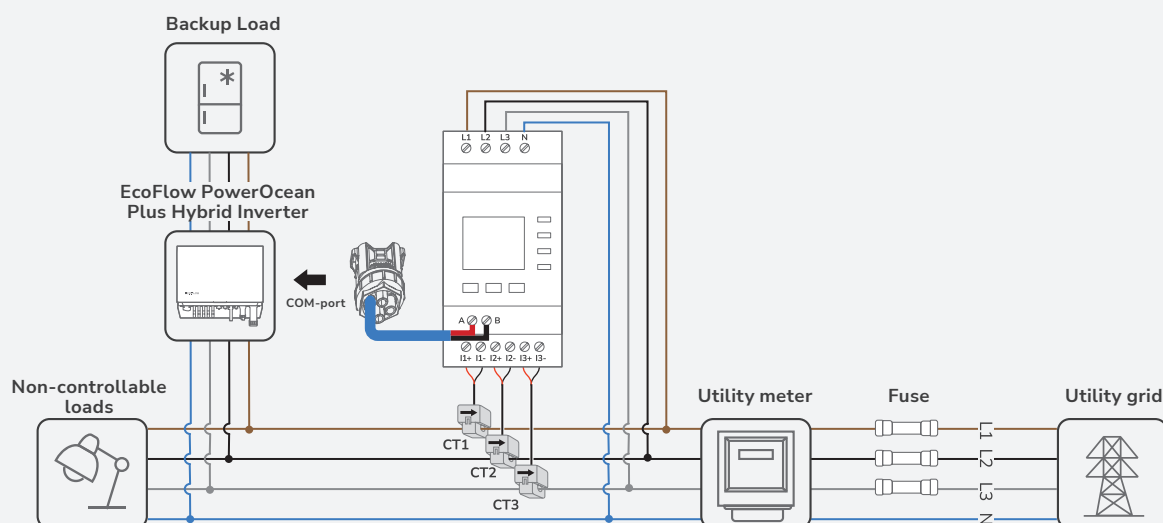
Find communication port A,B on the meter and connect with the inverter.



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

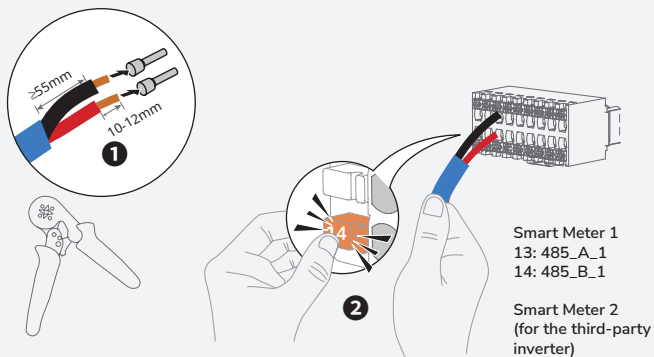
4

COMMUNICATION WIRING DIAGRAM



• WITHOUT CT

1 A7  x1 A15  x2



Smart Meter 1
13: 485_A_1
14: 485_B_1

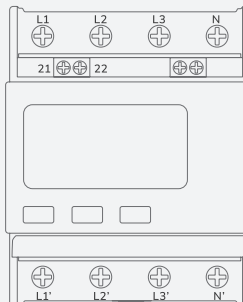
Smart Meter 2
(for the third-party inverter)
15: 485_A_2
16: 485_B_2

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.

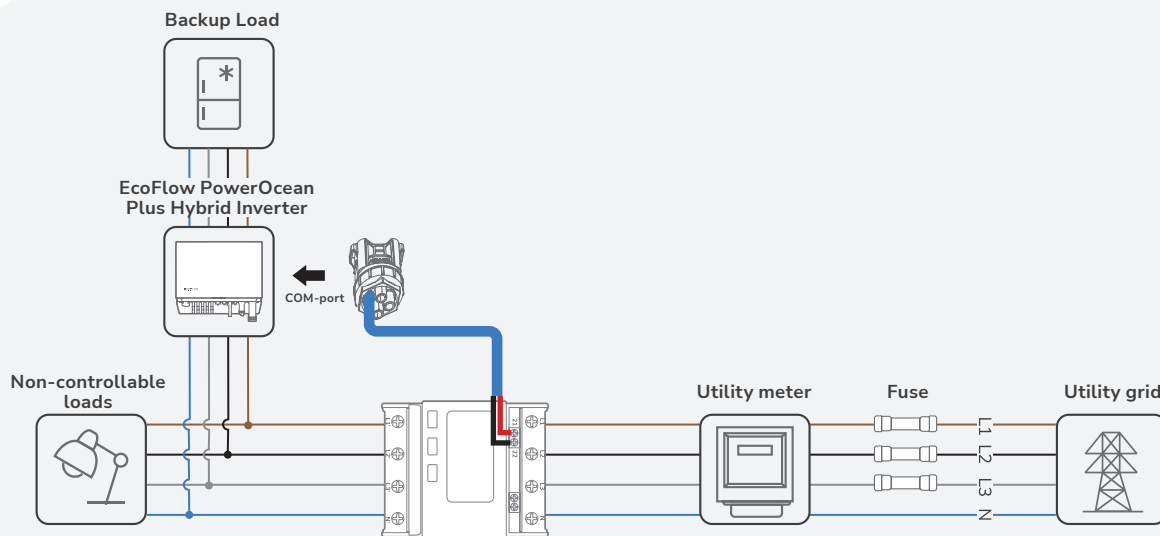


L1	Grid L1
L2	Grid L2
L3	Grid L3
N	Grid N

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

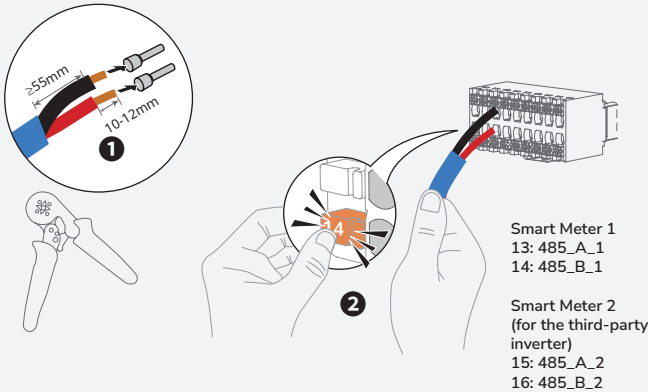
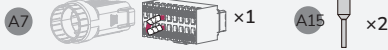
en

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 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.

METER WITH CT

1



2

METER SAMPLING

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

3

METER COMMUNICATION

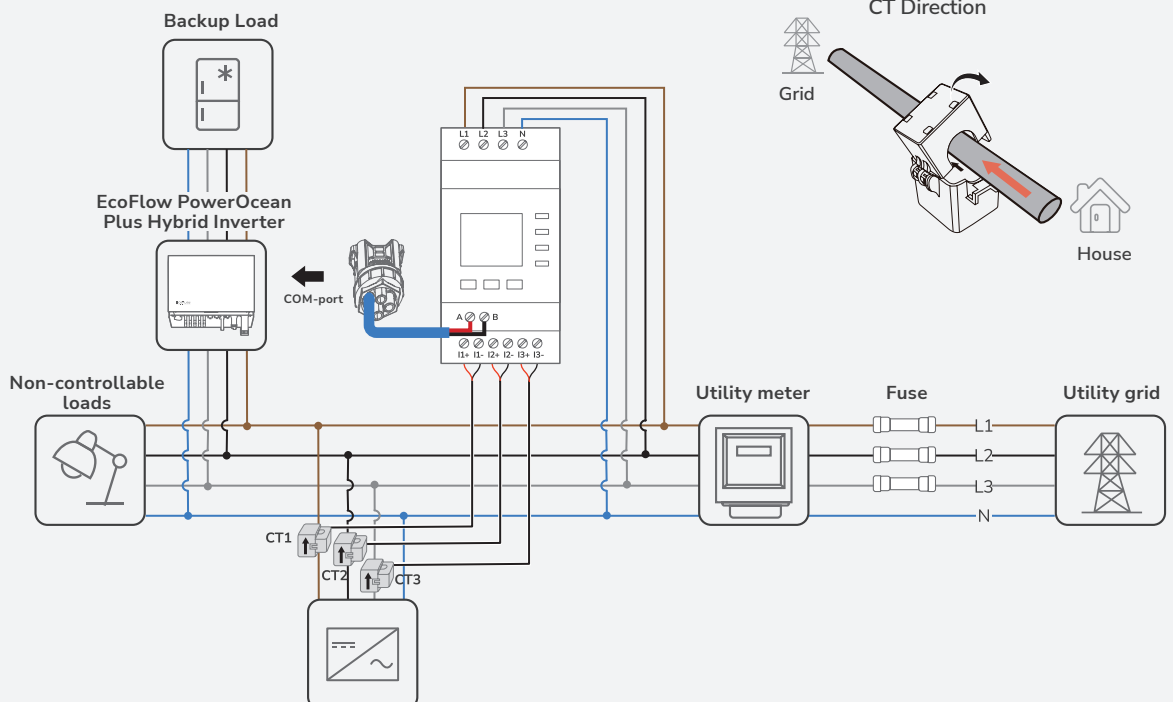
Find communication port A,B on the meter and connect with the inverter.



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

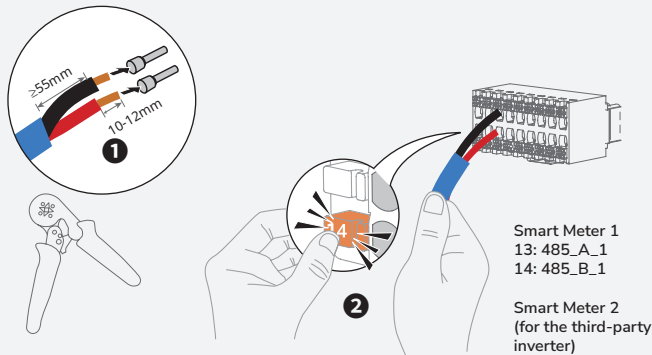
4

COMMUNICATION WIRING DIAGRAM



• METER WITHOUT CT

1



Smart Meter 1
13: 485_A_1
14: 485_B_1

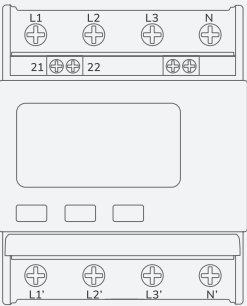
Smart Meter 2
(for the third-party inverter)
15: 485_A_2
16: 485_B_2

2

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

3

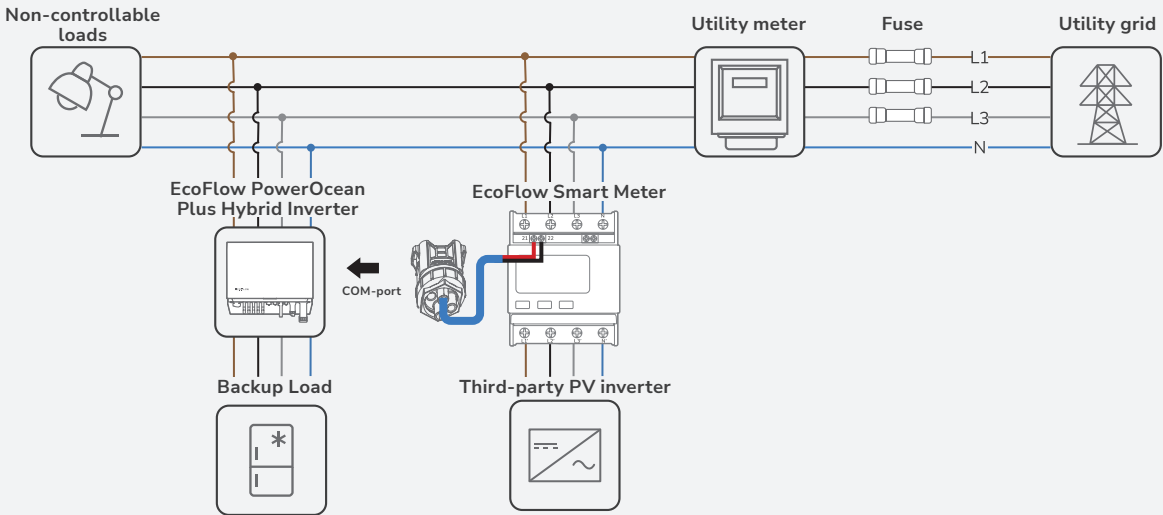
METER COMMUNICATION
Find communication port A,B on the meter and connect with the inverter.



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

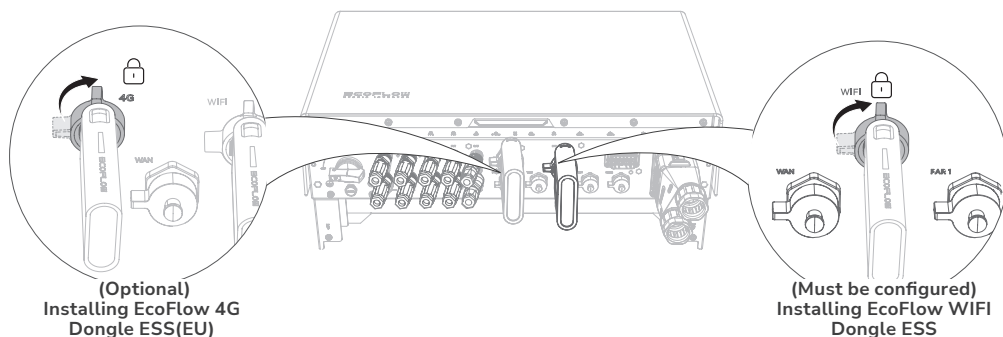


I Connecting to Internet

NOTICE

- Use shielded CAT 5 or higher rating network cable for stable connection.
- For more details about EcoFlow WIFI Dongle ESS or EcoFlow 4G Dongle ESS (EU), please visit following website to access user manual: <https://homebattery.ecoflow.com/eu/documentation>
- The WIFI dongle is used for wired and wireless WLAN or Bluetooth communication between inverters and EcoFlow app.

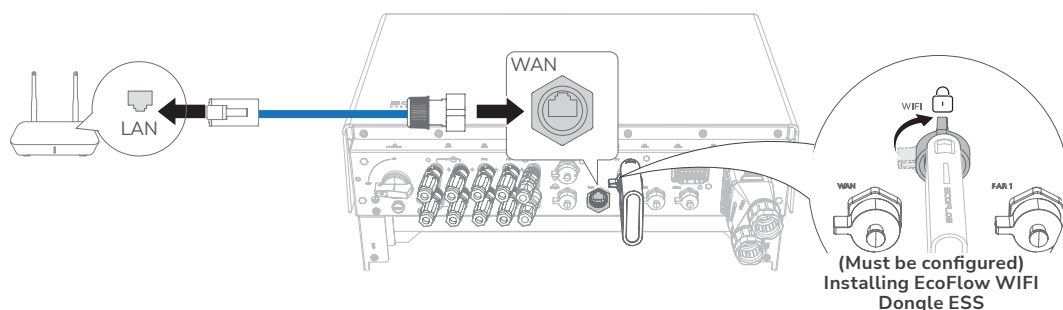
• METHOD 1: VIA A WIRELESS NETWORK



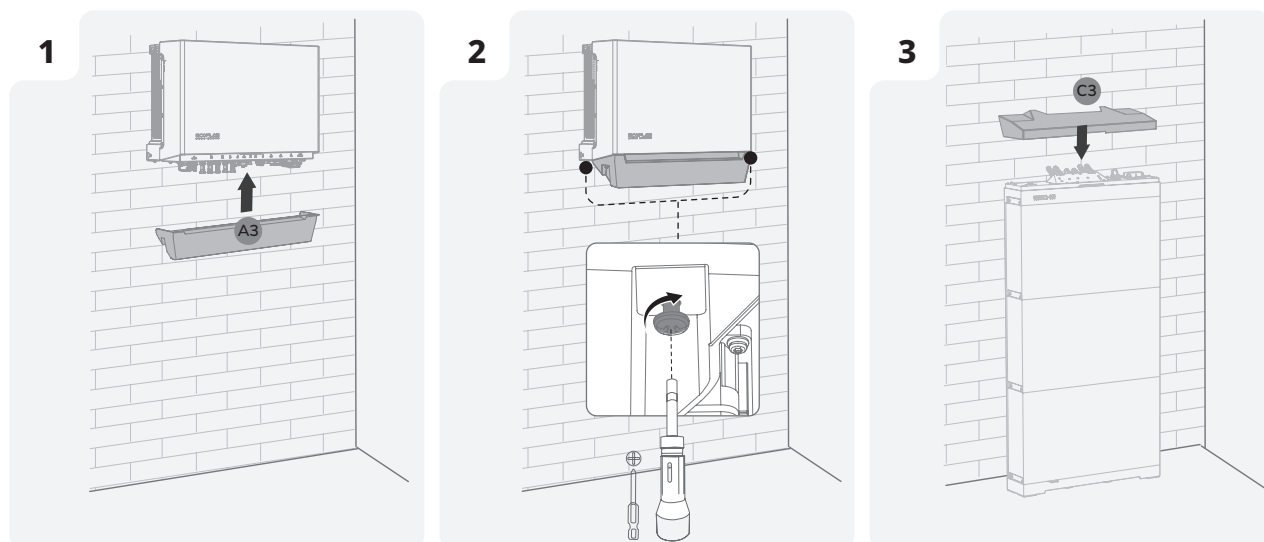
• METHOD 2: VIA A WIRED NETWORK

Refer to the section "Connecting Battery Communication Cables" for creating a waterproof WAN communication terminal.

If two inverters are cascaded, plug EcoFlow WIFI Dongle ESS to both inverters.



I Installing trim cover on the battery junction box and inverter



System Commissioning

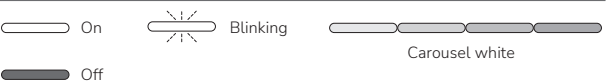
I Checking before Power-On

Check Item	Acceptance criteria
Equipment	Equipment is 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.

accidental startup. The lock is prepared by the customer.

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

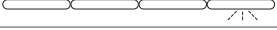
I LED Indicators



• ECOFLOW POWEROCEAN HYBRID INVERTER

Status	Description
	Standby / Startup / Self-check / Over-the-air updates / Alarm, system is still operating
	Operating in grid-tied/backup mode
	EPO shutdown / Fault, system cannot work

• ECOFLOW POWEROCEAN BATTERY JUNCTION BOX

Charge Status	Description
	0-25%
	25-50%
	50-75%
	75-99%
	100%

Discharge Status	Description
	<5%
	5-25%
	25-50%
	50-75%
	75-100%

Over-the-air Updates Status	Description
	Over-the-air update is in progress

Faulty Status	Description
	Electrical connection is faulty
	Communication is faulty
	Battery is faulty
	Battery junction box is faulty

I System Power-On

• PROCEDURE (PV MODULE CONFIGURED)

- Set the BATTERY SWITCH on top of the Junction Box to ON position.
- Set the PV SWITCH at the bottom of the inverter to ON position.
- Turn on the AC switch between the inverter and the power grid.
- Observe the LED to check the inverter operating status.

• PROCEDURE (NO PV MODULE CONFIGURED)

- Set the BATTERY SWITCH on top of the Junction Box to ON position.
- Set the PV SWITCH at the bottom of the inverter to ON position.
- Turn on the AC switch between the inverter and the power grid.
- After commissioning, press and hold for three seconds the BATTERY ON/OFF button on top of the battery junction box.
- Observe the LED to check the inverter operating status.

I System Power-Off

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



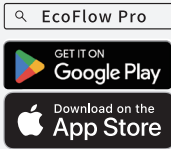
WARNING

- 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.
- Send a shutdown command on the app.
 - Turn off the AC switch between the inverter and the power grid.
 - Set the PV SWITCH at the bottom of the inverter to OFF position.
 - (Optional) Secure the PV SWITCH with a lock to prevent

I System Commissioning

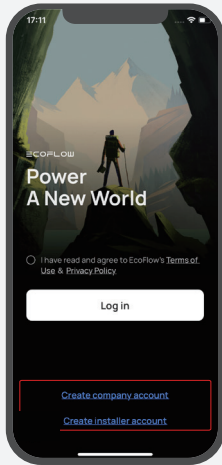
1 DOWNLOAD AND INSTALL ECOFLOW PRO APP (FOR INSTALLER ONLY)

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



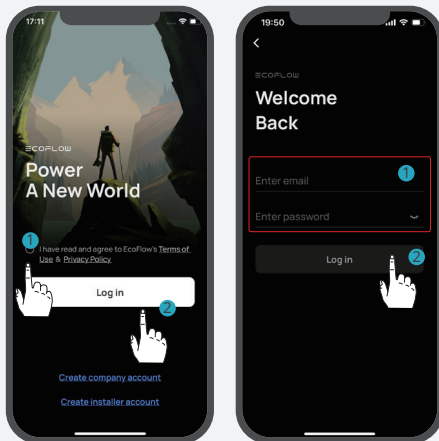
2 CREATE ACCOUNT

Create your company or installer account



3 LOG IN

Enter the installer account and password.



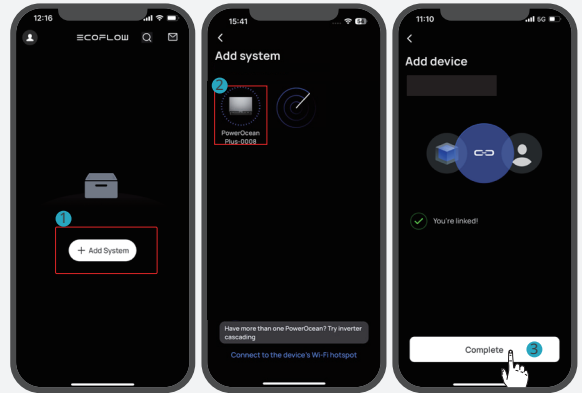
4

ADD SYSTEM

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

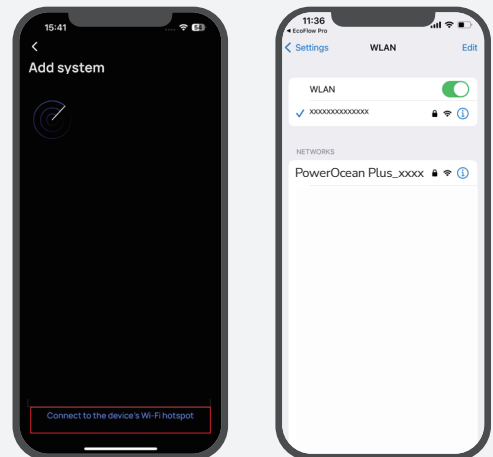
•Via Bluetooth

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



•Via Wi-Fi

1. Tap **Add System**, and tap **Connect to the device's Wi-Fi hotspot** to access to your phone's Wi-Fi settings.
2. Tap "PowerOcean Plus_xxxx" 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.



5 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.

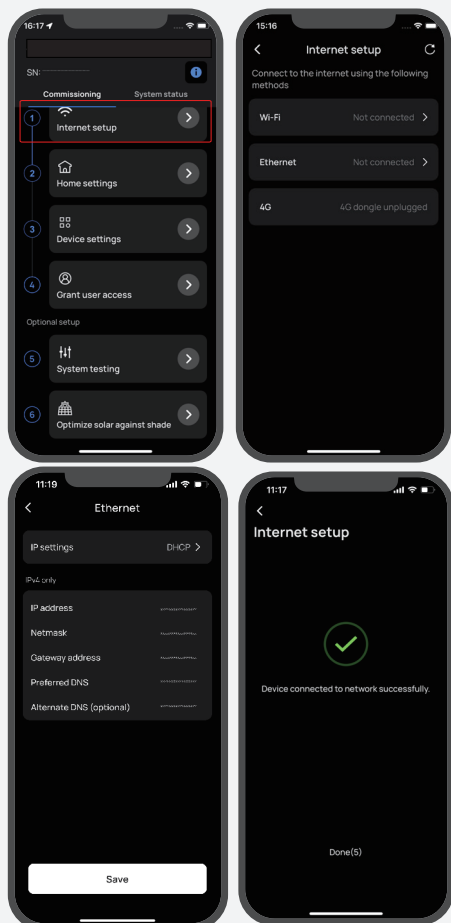
- In the default DHCP mode, the device obtains IP address automatically (recommended).
- In the Static mode, network administrator (homeowner) should set a valid IP address to the device. To avoid IP address conflict, check the IP addresses of other devices on the network by accessing router's settings.

• 4G

1. Install a nano SIM card to the EcoFlow 4G Dongle ESS(EU).
2. Install the dongle onto the USB port (4G) of the inverter.
3. Activate your SIM card through App.

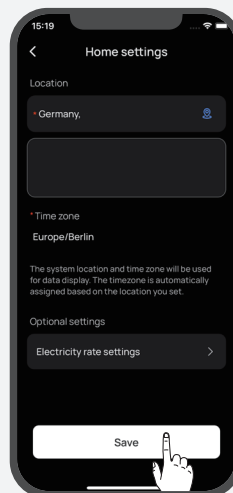


For more details about EcoFlow 4G Dongle ESS(EU), refer to the user manual of the 4G Dongle.



Step 2: Home Setting

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



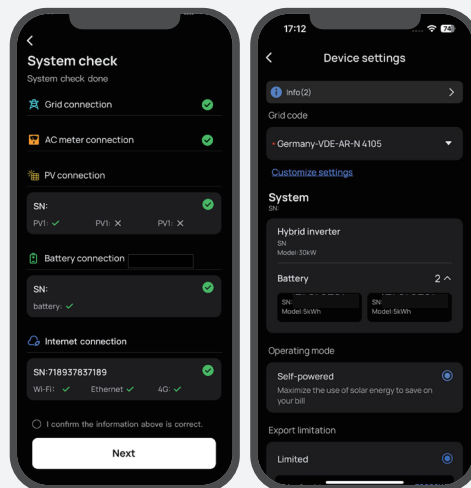
Step 3: Device Setting

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

- Perform system check to confirm 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**.

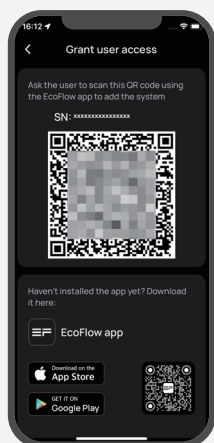


Follow local regulations if you need to change any of these parameters, and contact your local power organization first.



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.

Appendix

Important Information about Inverter Cascading

⚠ WARNING

- Turn off the grid power and turn on 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

- Cascading different models is not recommended.
- Cascading different PowerOcean products is not supported.

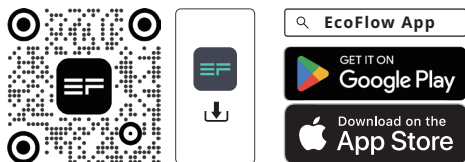
Check whether the cascading installation (up to 2 units) is completed according to the following items.

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 when using inverter cascading. Refer to "Connecting Smart Meter".
Connecting to Internet	Plug EcoFlow WIFI Dongle ESS to both inverters.
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, turn off EPO, tap Refresh in the app, and turn on the load-side circuit breaker of backup loads. The inverter indicator will turn white.

I 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.

