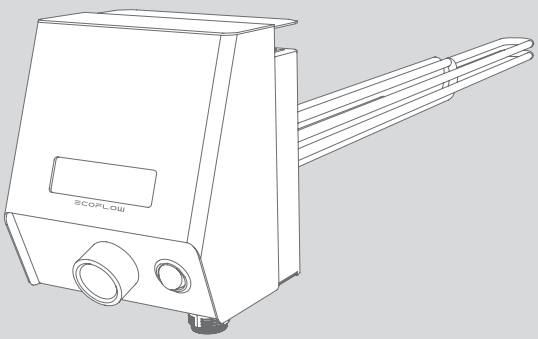
INSTALLATION GUIDE

V1.2

Issue Date: 2024-10-16

ECOFLOW POWERGLOW

Smart Immersion Heater



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

IMPORTANT

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

CONTENTS

Statement

Follow local laws and regulations when installing, operating, or maintaining the equipment. The safety instructions in this manual are only supplements to local laws and regulations. Ensure that the equipment is used in environments that meet its design specifications. Otherwise, the equipment may become faulty, and the resulting equipment malfunction, component damage, personal injuries, or property damage are not covered under the warranty.
EcoFlow will not be liable for any consequences of the following circumstances:

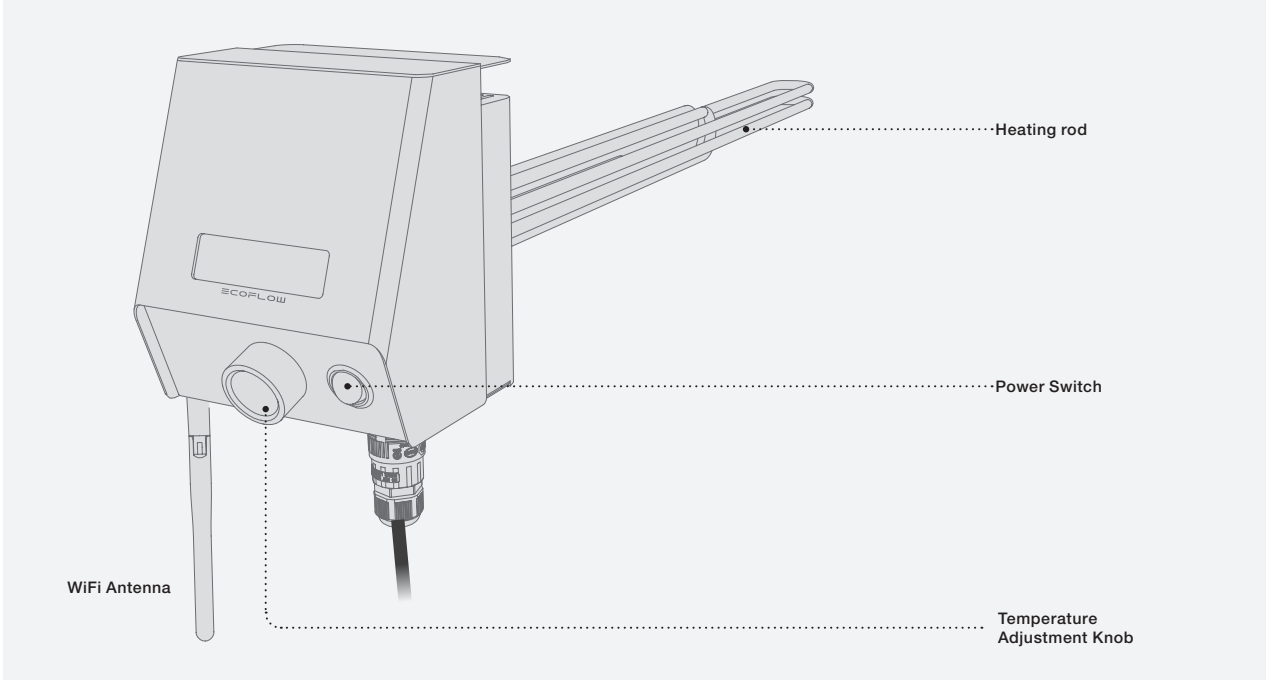
- Operation beyond the conditions specified in this document
- Unauthorized modifications to the product or software code or removal of the product
- Failure to follow the operation instructions and safety precautions on the product and in this document
- Equipment damage due to force majeure, such as earthquakes, fire, and storms
- Damage caused during transportation by the customer
- Storage conditions that do not meet the requirements specified in this document.
- Damage caused by calcium deposits on heating element.
- Damage caused by corrosion on heating element.

Safety Instructions

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.

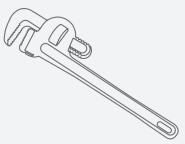
DANGER

- Before installing, operating, and maintaining the equipment, read and follow up Installation Guide and Safety Instructions.
- 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.
- Always disconnect the equipment from all power before any operation.
- Wear proper PPE (Personal protective equipment) before any operations.

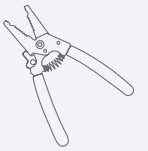


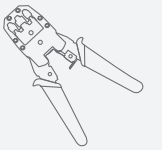
Preparing Tools and Instruments

• ESSENTIAL TOOLS


Pipe Wrench (18")


Cable cutter

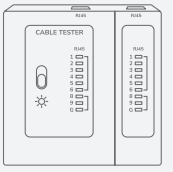

Wire strippers


RJ45 Crimping tool


Crimping tool
(for tubular terminal)


Screwdriver (SL3)


Screwdriver (PH3)



Network cable tester

• OPTIONAL TOOLS


Safety goggles


Safety shoes


Safety gloves

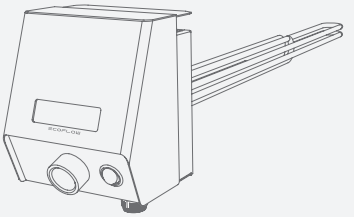

Dust mask

What's In The Box

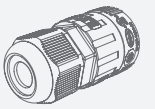
NOTICE

- Check if the deliverables are intact and complete. If any item is missing or damaged, contact the supplier.
- Retain the original packaging and documentation for further needs.

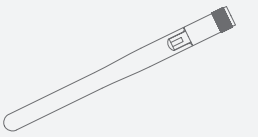
A ×1


EcoFlow PowerGlow Smart Immersion Heater

B ×1


AC IN connector

C ×1


Wi-Fi Antenna

D ×6

Tubular Terminal
(For wire gauge 0.5 mm²)

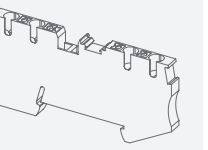
E ×5


Tubular Terminal
(For wire gauge 1.5 mm²)

F ×1


NTC with cable (2 m)

G × 1

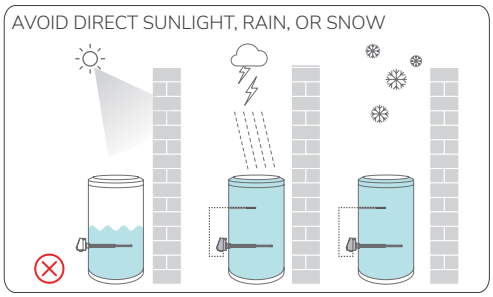

Feed-Through Terminal Block
(For EF RD-P1-3K5-S1 only)

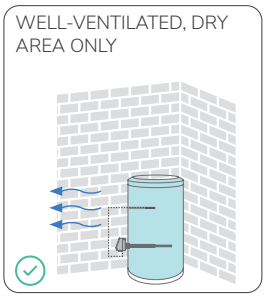
System Installation

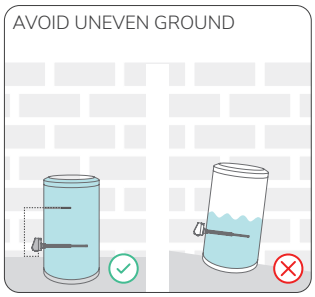
Installation Environment Requirements

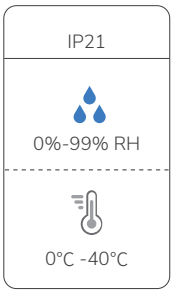
⚠ WARNING

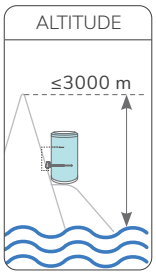
- The EcoFlow PowerGlow Smart Immersion Heater (hereinafter referred to as EcoFlow PowerGlow) is an electrical device for heating water in heat exchange closed water tanks, which is intended for indoor installation.
- The EcoFlow PowerGlow is designed to be installed horizontally, preferably in heat exchange closed water heating systems with a nominal pressure of up to 10 bar.
- The length of the threaded socket must always be less than the unheated zone, which can be found in the technical data (see Technical data in the safety instruction).
- The thermally induced media circulation in the tank must not be obstructed, e.g. by baffles. The standards and guidelines applicable at the installation site must be observed during installation.
- When used in water containing limescale, the EcoFlow PowerGlow must be descaled regularly.
- To prevent corrosion damage to enameled or coated tanks, the tubular heating elements of the screw-in heating element are electrically insulated from the tank and have a defined conductive connection via a resistor, which increases the service life of the protective anode and the screw-in heating element.
- A permanent earthing of the water tank that the EcoFlow PowerGlow mounted to is mandatory.
- The water tank that the EcoFlow PowerGlow mounted needs to be configured with a pressure-relief device, which is to be connected to a discharge pipe with a steady downward inclination in a frost-free environment. For installation details about a pressure-relief device, refer to the guide that comes together with it.
- The ventilation holes of the housing must not be blocked.
- Dismantling, manipulating or deactivating the safety devices is prohibited.
- Condensation may have formed if the temperature has changed by more than 15 °C between transportation and installation site. Wait with the installation until the condensation has evaporated again. Direct commissioning without acclimatization time can lead to damage.

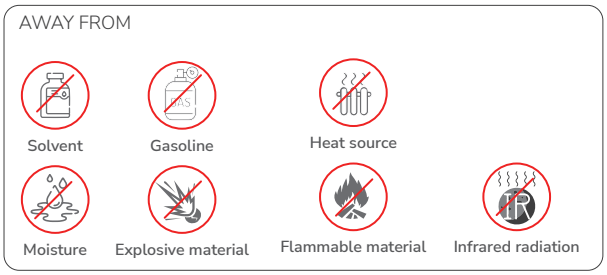


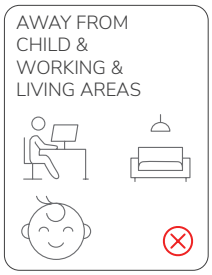


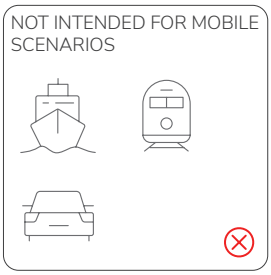








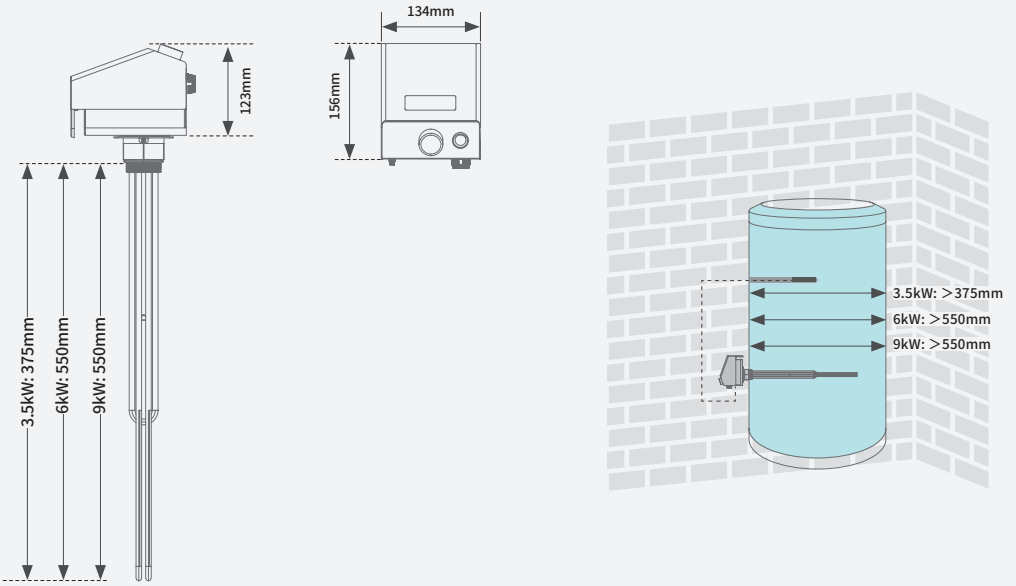




Installation Space Requirements

WARNING

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



Mounting EcoFlow PowerGlow to Water Tank

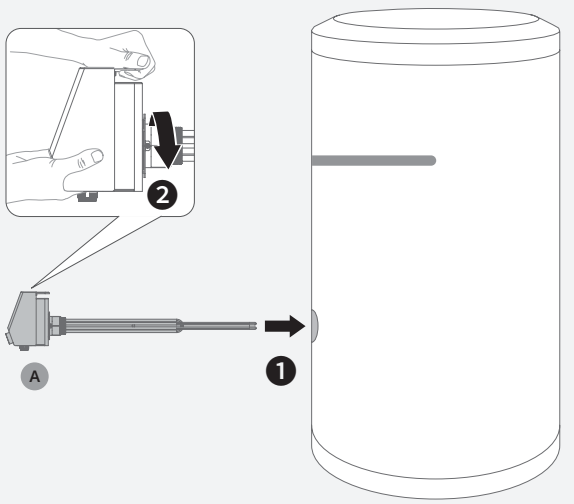
WARNING

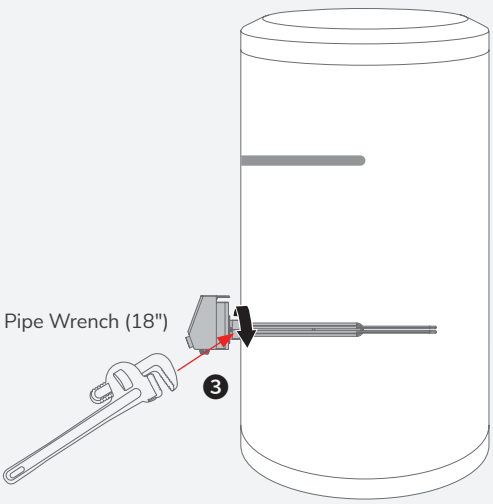
- The hot water storage tank must be drained before installing EcoFlow PowerGlow.
- The threaded socket must be shorter than the unheated zone of the heating rod.
- Screw the heating rod into socket with a pipe wrench (18"). Do not screw in by rotating the housing of the control panel.
- When refilling the water tank, ensure that the heating elements are completely surrounded by water, and must not be used in dry mode under any circumstances. Subsequently, the tank must be checked for leakage.

NOTICE

- Apply suitable sealant on the sealing ring if needed.
- Do not apply overforce when screwing in the heating rod until until the sealing ring is slightly squeezed and deformed.

(Optional) Apply suitable sealant on the sealing ring if needed.





Electrical Connection

CAUTION

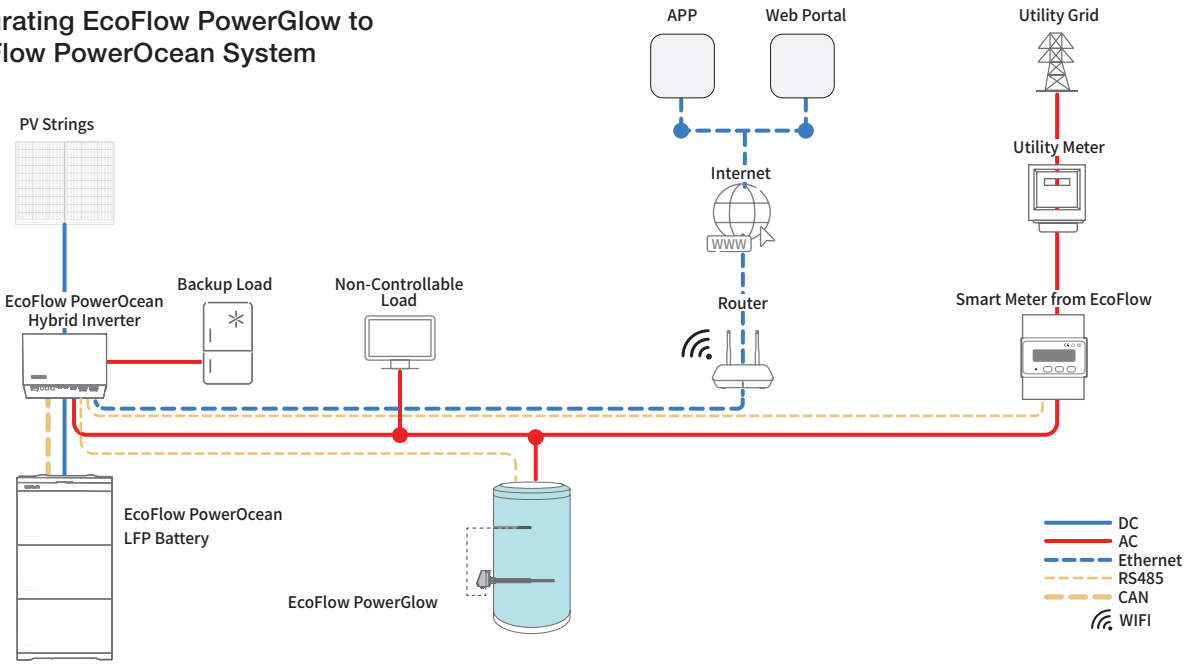
- All electrical connections must be carried out by a professionally trained and certified electrician.

NOTICE

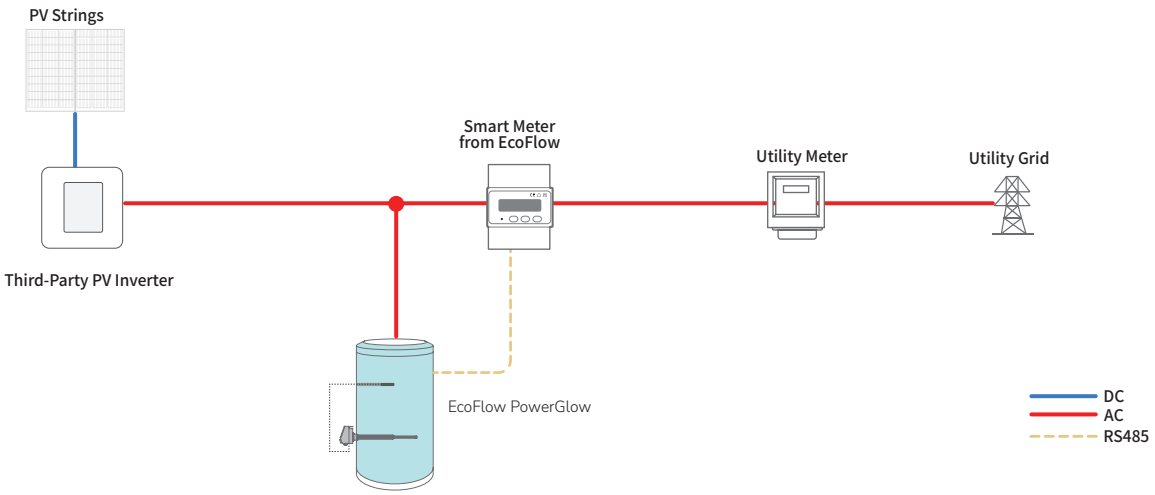
- Please purchase cables that meet local certification standards.
- Do not remove the protective cap of unused terminals. Otherwise, the IP rating of the equipment will be affected.
- The cable colors shown in the figures are for reference only. Select an appropriate cable according to the local standards.
- Do not connect loads between this equipment and the AC switch that directly connects to the equipment.
- The PE pole of the AC IN terminal must be connected.
- In any case, the temperature sensor must be attached to the storage tank above the heating rod in order to deliver a usable measurement result.

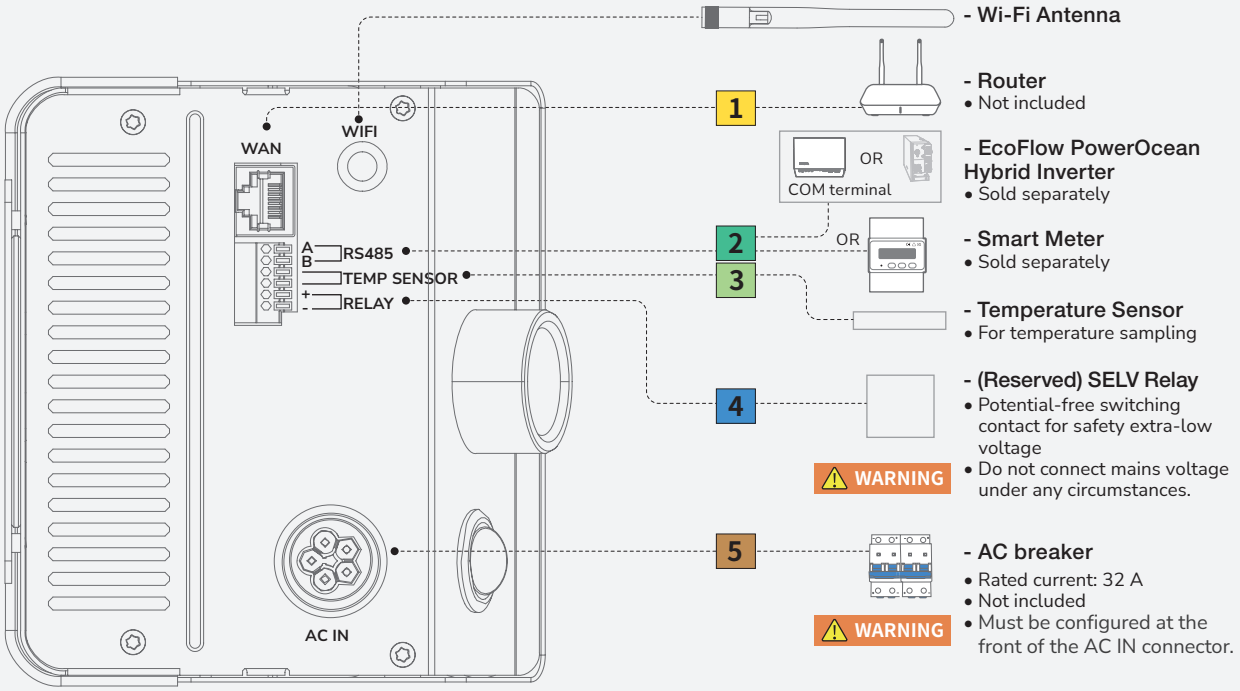
The EcoFlow PowerGlow can be operated in combination with either EcoFlow PowerOcean system or third-party PV system. Communication with the EcoFlow PowerOcean system takes place via RS485 or accessing the same wireless network (Wi-Fi). When connected with the PowerOcean system, the EcoFlow PowerGlow will be powered by PV excess and utility grid, implementing intelligent scheduling of energy use via EcoFlow App. Effortlessly manage, monitor, and control your devices through a sleek, user-friendly interface via app or web management. With the self-powered mode of the EcoFlow PowerOcean system, the self-consumption rate of the system, and the self-sufficiency rate of residential energy will be greatly improved, reducing electricity & gas costs.

Integrating EcoFlow PowerGlow to EcoFlow PowerOcean System



Integrating EcoFlow PowerGlow to Third-Party PV system





1 **Ethernet cable (optional)**
Cat 5e or higher shielded network cable

2 **Smart meter communication cable**
0.2mm² to 0.5 mm²

3 **Temperature Sensor cable (2m)**
0.2mm² to 0.5 mm²

4 **Relay cable (Optional)**
0.2mm² to 0.5 mm²

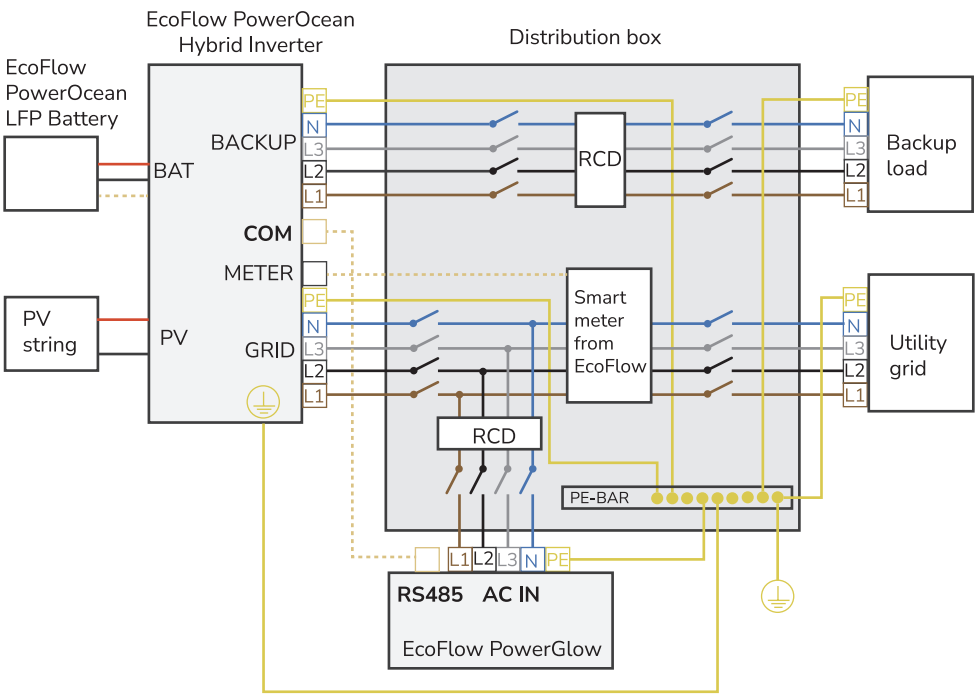
5 **Power cable**
1.5 mm²

Three-Phase Wiring Diagram

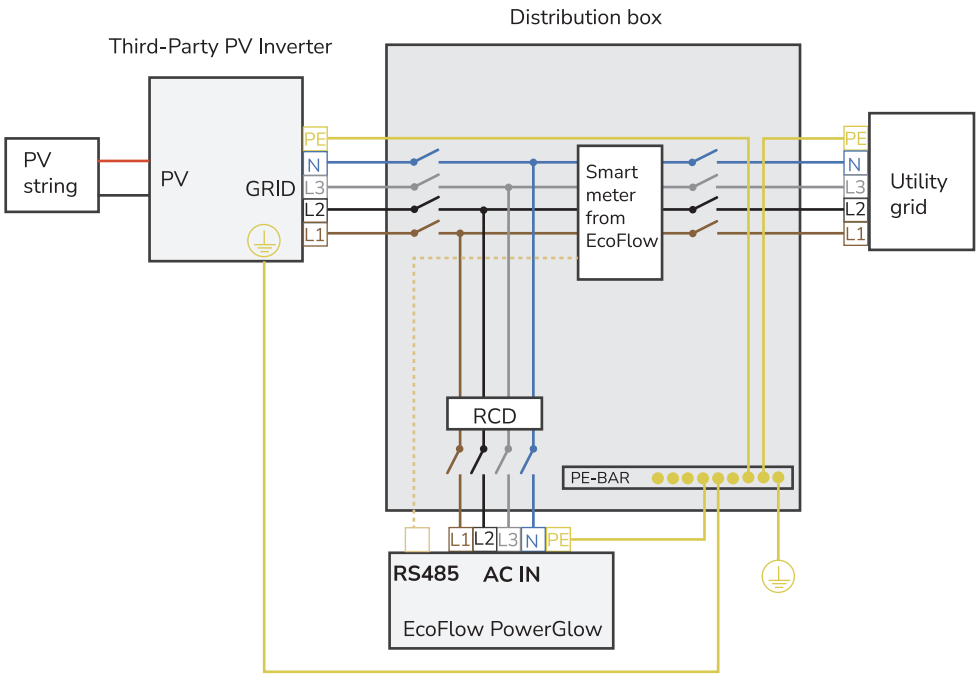
NOTICE

- Wiring may vary based on the regulation requirements of different regions. Refer to the specific requirements of local regulations.

Integrating EcoFlow PowerGlow to EcoFlow PowerOcean System



Integrating EcoFlow PowerGlow to Third-Party PV system



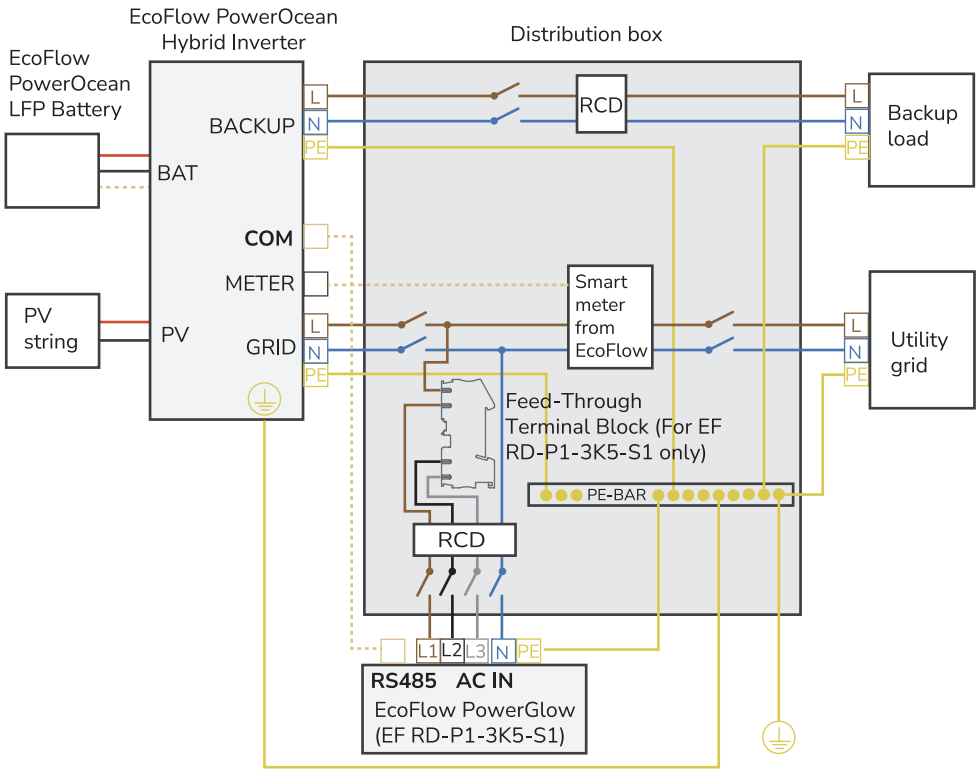
Single-Phase Wiring Diagram

NOTICE

- Wiring may vary based on the regulation requirements of different regions. Refer to the specific requirements of local regulations.

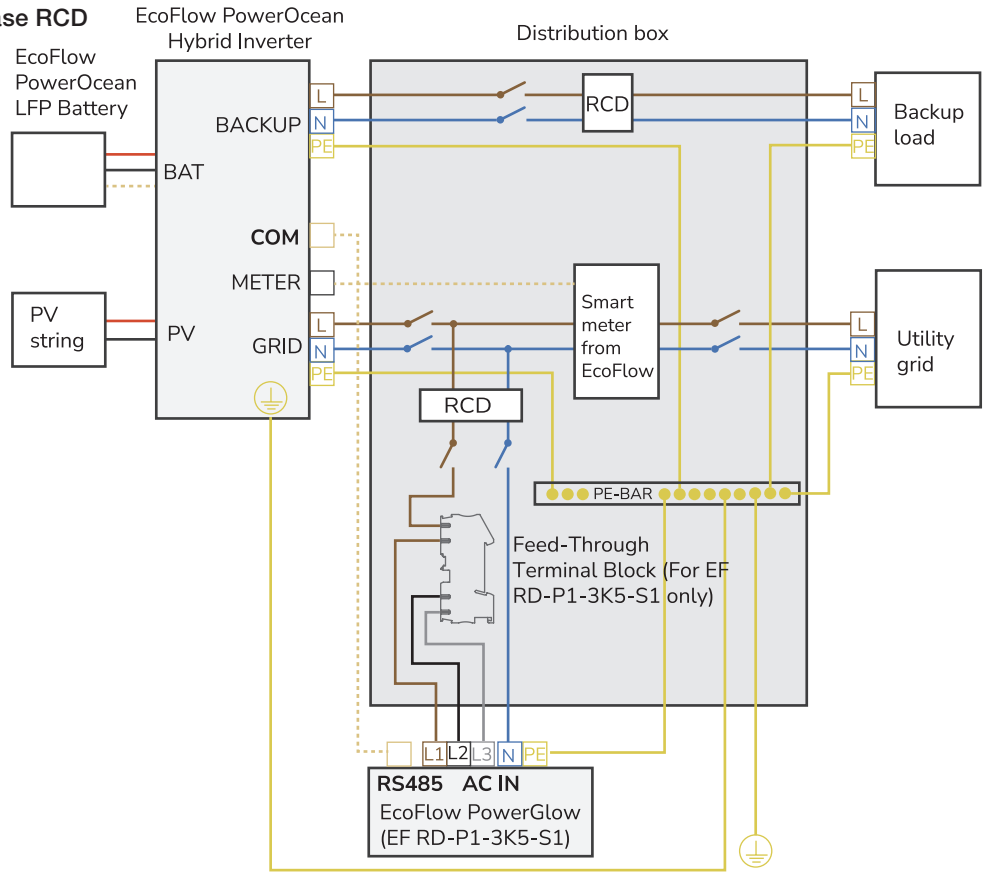
Integrating EcoFlow PowerGlow to EcoFlow PowerOcean System

Using Three-Phase RCD

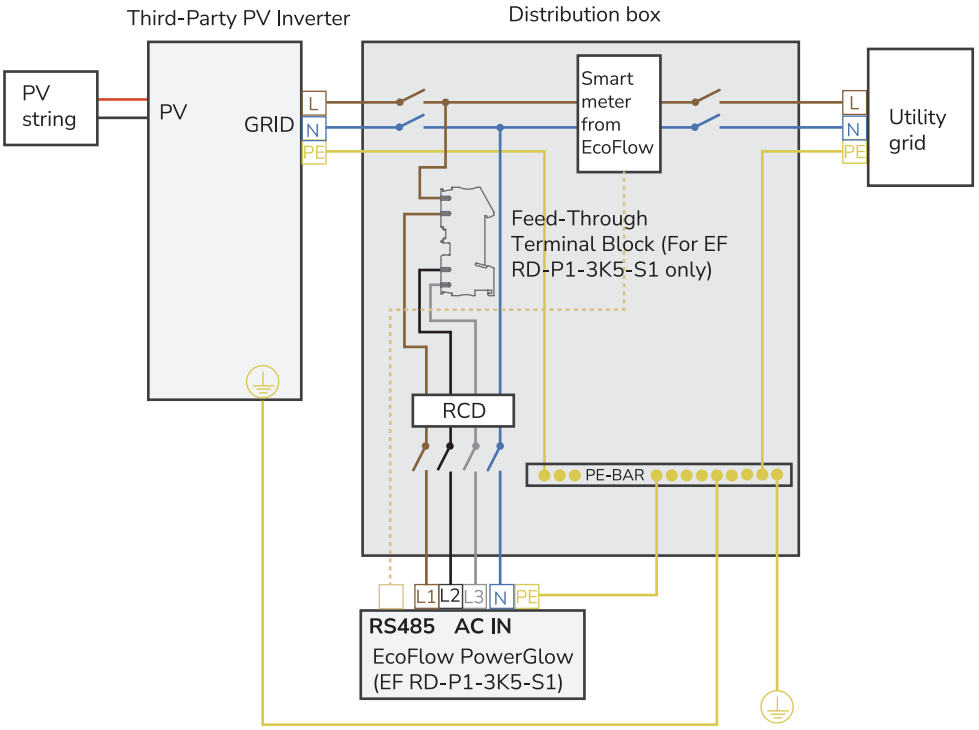


Integrating EcoFlow PowerGlow to Third-Party PV system

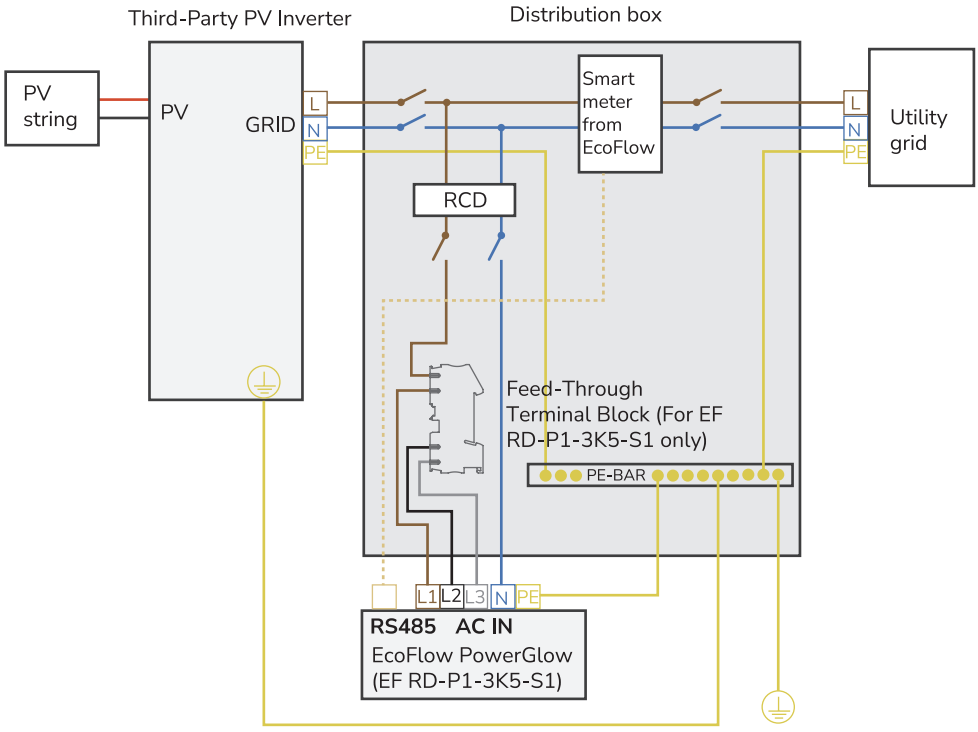
Using Single-Phase RCD



Using Three-Phase RCD



Using Single-Phase RCD

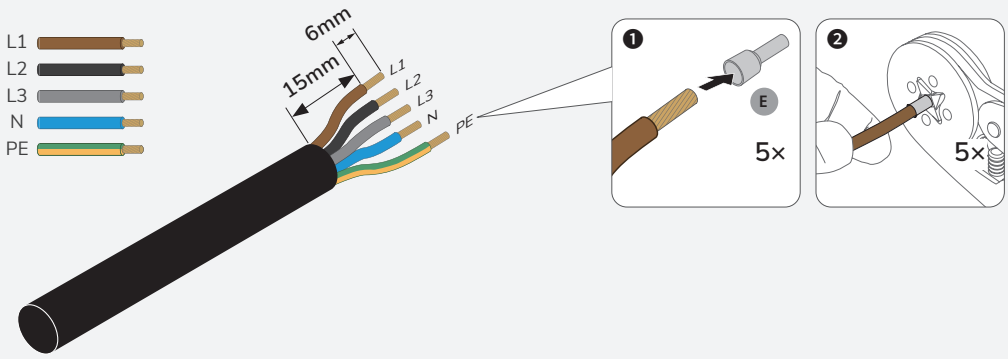


Connecting AC IN Cables

NOTICE

- Ensure that all cables are connected correctly and securely.

1



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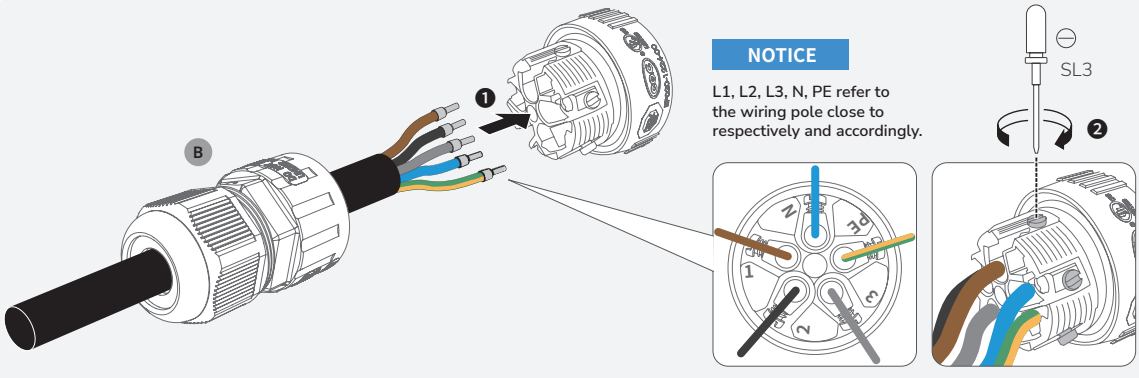

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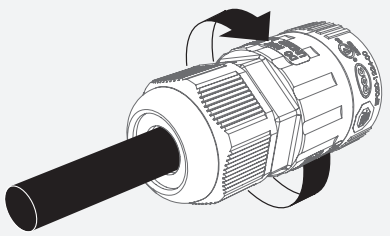
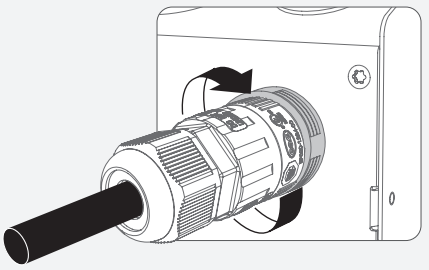


5



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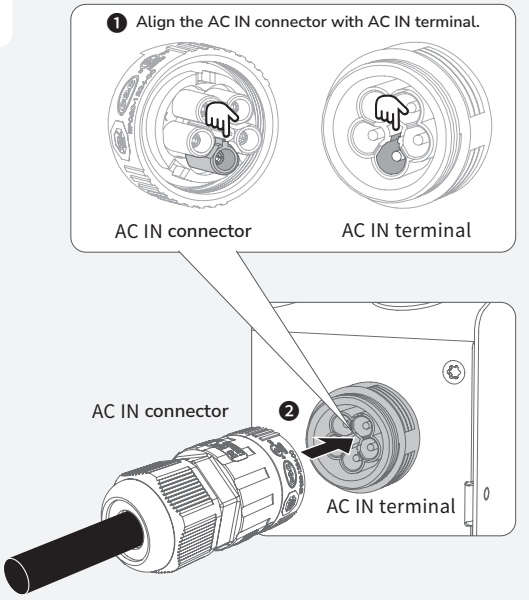
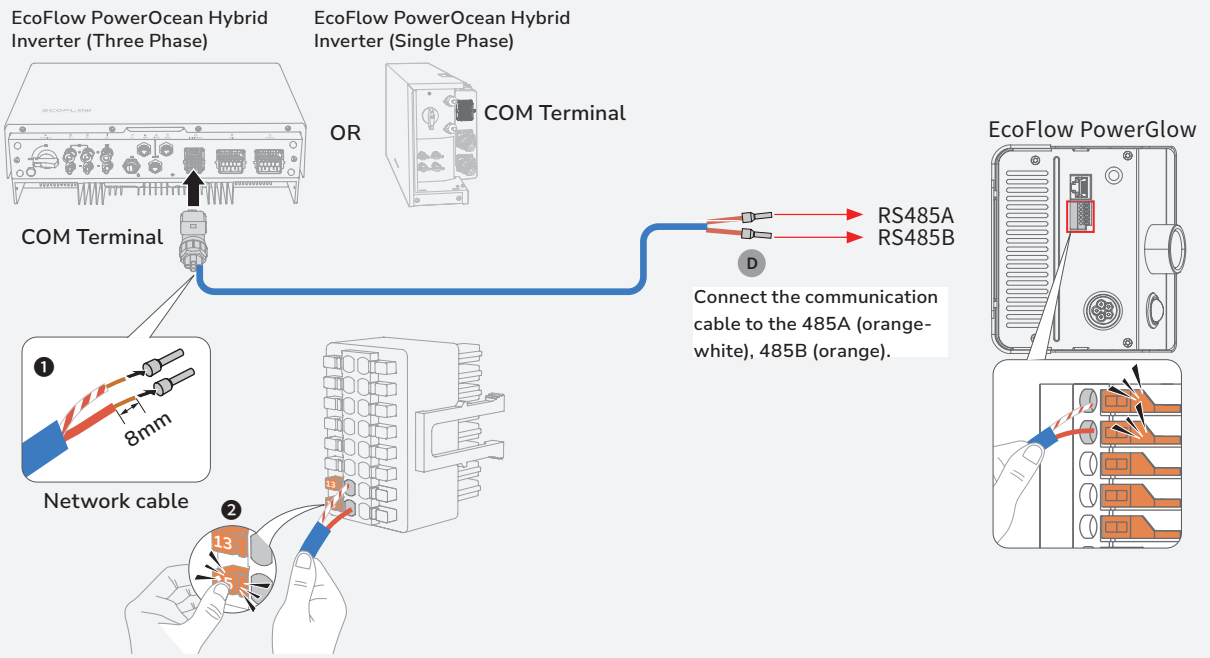


(Optional) Establish communication connection with EcoFlow PowerOcean

Method 1: Wired Connection (RS485)



Method 2: Wireless Connection (Wi-Fi)

To access the same wireless network, visit the EcoFlow App, then go to PowerOcean ⚙ **Device Settings** to add device on system component page. For details about adding device to PowerOcean system, refer to the installation guide that comes with the PowerOcean.

Connecting Smart Meter

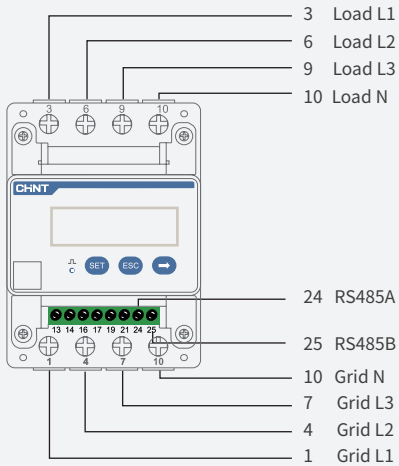
NOTICE

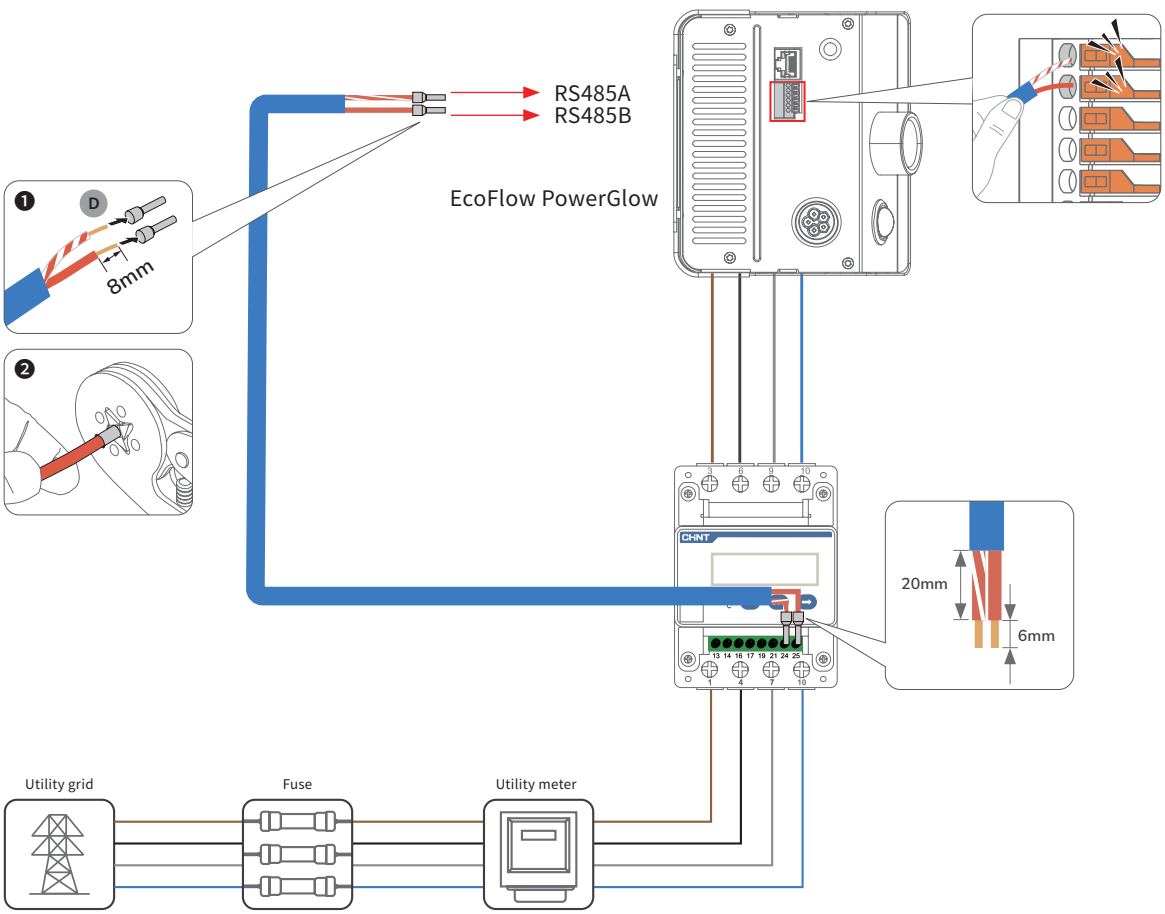
- It is recommend to use of CAT5 or higher rating network cable.
- Smart meter is sold separately, which has been preset parameters before delivered. Do not modify the relevant parameters.
- The compatibility of this product with smart meters may vary by regions and versions. For detailed instructions 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 INSTALLATION

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

2 **METER COMMUNICATION**
Find communication port 24,25 on the meter and connect them to the RS485 port of EcoFlow PowerGlow.

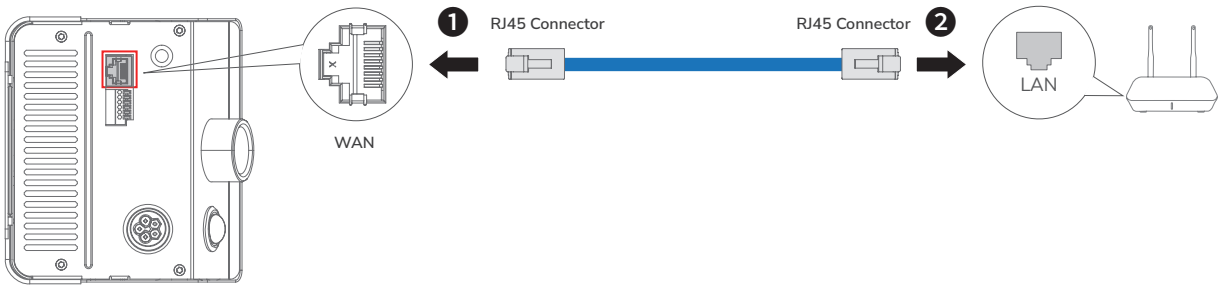




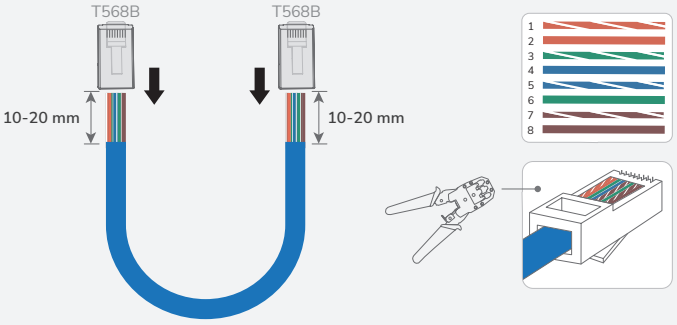
Connecting to Network

NOTICE • Use shielded CAT 5 or higher rating network cable for stable connection.

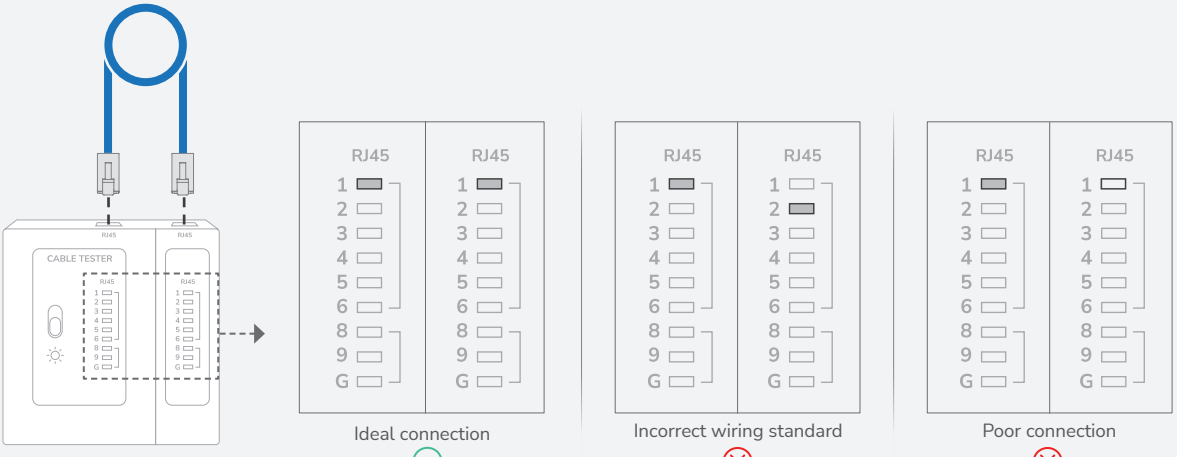
• METHOD 1: VIA A WIRED NETWORK



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



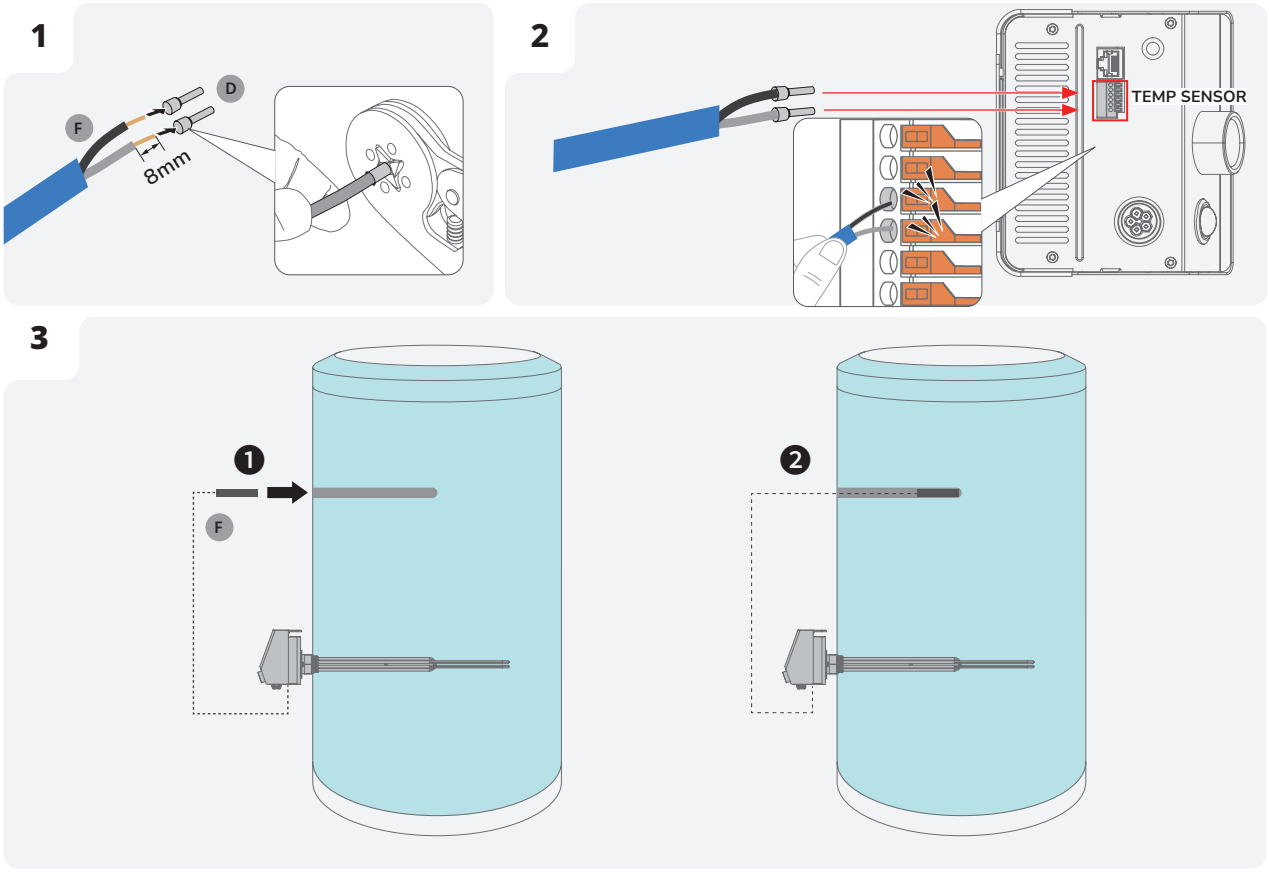
2 Test network cable connection. If the LEDs of the two RJ45 ports light up in sequence, it indicates that the network cable is correctly wired and should be fully operational.



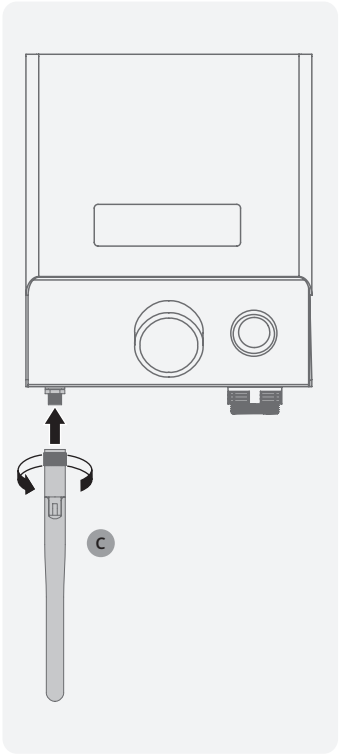
• METHOD 2: VIA A WIRELESS NETWORK

Refer to the System Commissioning section in this guide to connect to a wireless network.

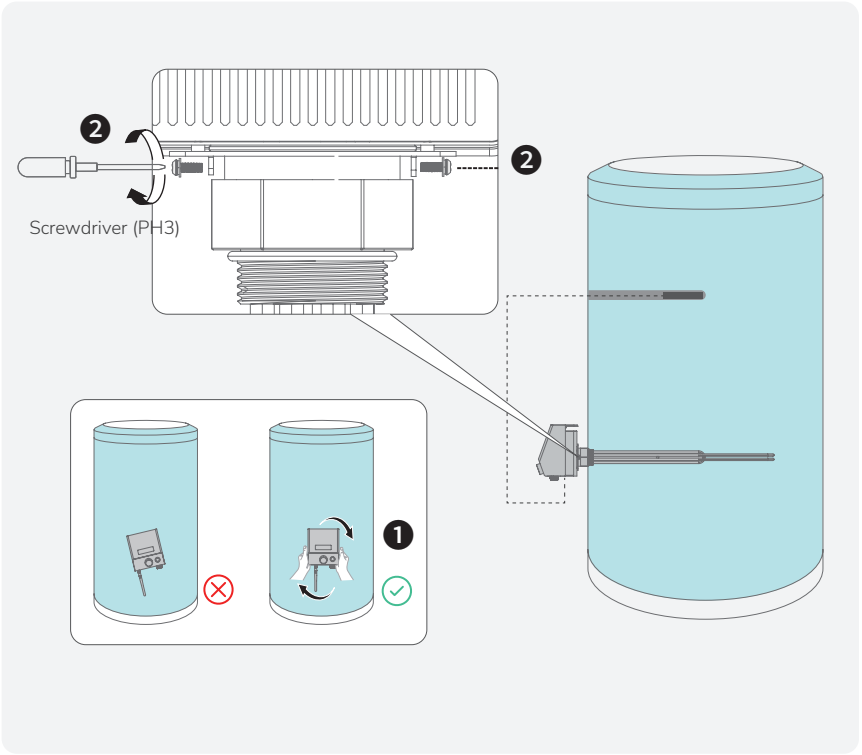
Connecting NTC



Installing Wi-Fi Antenna



Securing the Control Panel



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 cable is connected correctly, securely, and reliably.
Switch	All the switches connecting to the system are OFF.
Cable connection	The AC power cable, and communication cables 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 (INTEGRATED WITH POWEROCEAN)

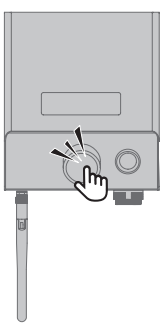
1. Power on the PowerOcean system. See the installation guide that comes with PowerOcean.
2. Power on the AC breaker/RCD that directly connects to the device.
3. Set the POWER SWITCH to **I** position.
4. Observe the LCD display to check the operating status, normally real-time water temperature is displayed.

PROCEDURE (INTEGRATED WITH THIRD-PARTY PV SYSTEM)

1. Power on the third-party PV system.
2. Power on the AC breaker/RCD that directly connects to the device.
3. Set the POWER SWITCH to **I** position.
4. Observe the LCD display to check the operating status, normally real-time water temperature is displayed.

NOTICE

- During the initial commissioning, you need to press the knob once or send a power-on command via EcoFlow app to activate the heating mode of the device.



System Power-Off

⚠ WARNING

- Before installing, operating, and maintaining the equipment, always disconnect it from all power.
- The POWER SWITCH enables/disables heating function only, to de-energize the device completely, power off the AC breaker/RCD that directly connects to the device.

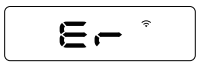
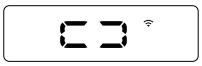
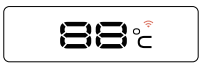
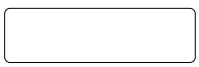
PROCEDURE (INTEGRATED WITH POWEROCEAN)

1. Set the POWER SWITCH to **O** position.
2. Power off the AC breaker/RCD that directly connects to the device.
3. Power off the PowerOcean system. See the installation guide that comes with PowerOcean.
4. Ensure the LCD display is off.

PROCEDURE (INTEGRATED WITH THIRD-PARTY PV SYSTEM)

1. Set the POWER SWITCH to **O** position.
2. Power off the AC breaker/RCD that directly connects to the device.
3. Power off the third-party PV system.
4. Ensure the LCD display is off.

LCD Display

Power On/Off Status	Description
	Startup, indicating real-time water temperature
	Indicating a desired water temperature when rotating the Temperature Adjustment Knob
	The digitals blink twice when pushing the knob once to setup the desired water temperature
	Indicating a faulty status
	Over-the-air update is in progress
	Not connected to network
	Network failure
	Power off

NOTICE

- If the LCD indicates a faulty status, visit the EcoFlow app to retrieve the error code for troubleshooting.

Setting Temperature

- **METHOD 1: VIA USING THE TEMPERATURE ADJUSTMENT KNOB**

  Rotate the Temperature Adjustment Knob until the LCD displays your desired temperature, and then press the knob once to complete setting process, with the digitals blinking twice.

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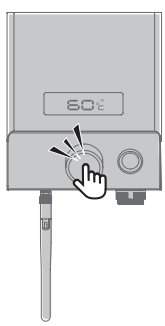
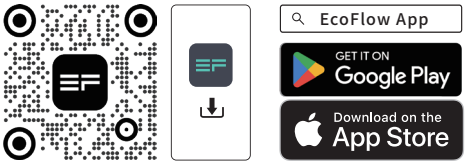


- **METHOD 2: VIA ECOFLOW APP**

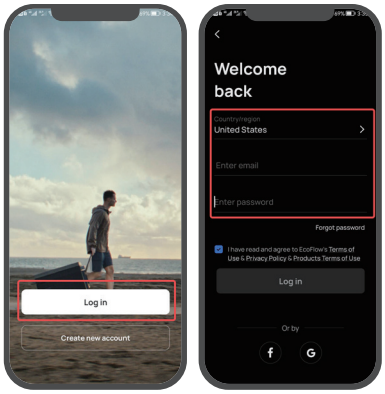
  Refer to the **App Control** section in this guide.

1. DOWN AND INSTALL ECOFLOW USER APP

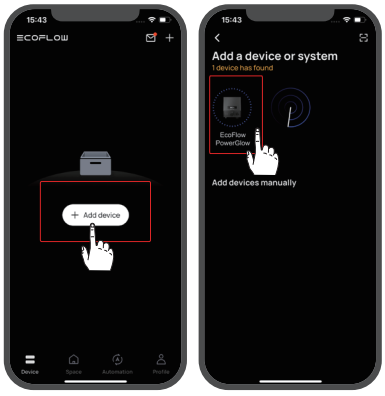
Scan the QR code or download at:
https://download.ecoflow.com/app



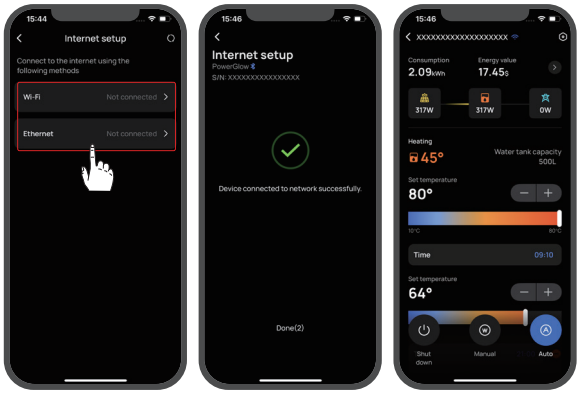
2. CREATE NEW ACCOUNT AND LOG IN.



3. ADD DEVICE.



4. CONNECT TO INTERNET VIA WIFI OR ETHERNET.



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