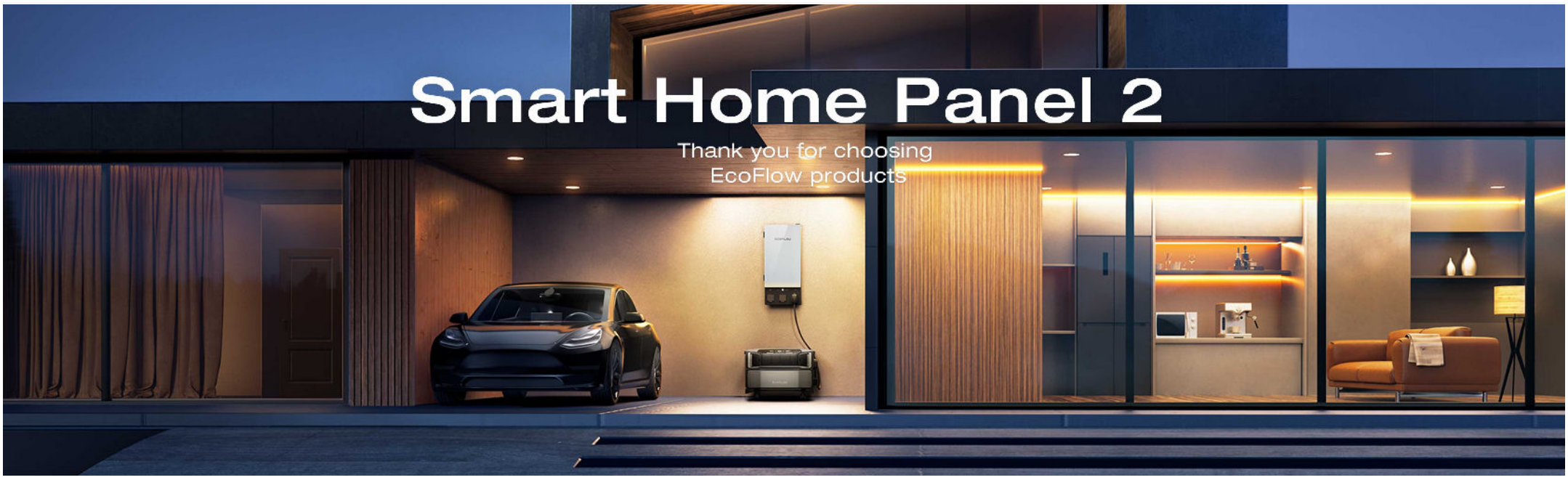



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# Overview

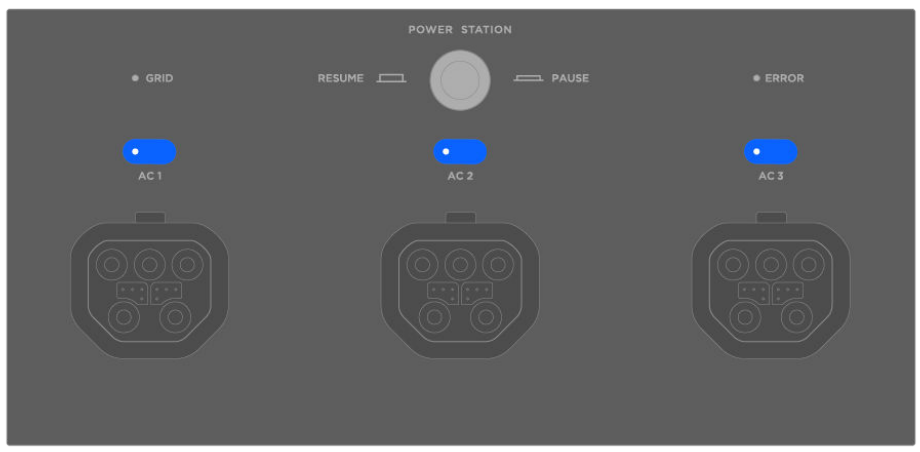
EcoFlow Smart Home Panel 2 (SHP2) is the center of any whole-home backup system. Compatible with EcoFlow DELTA Pro series and generators, EcoFlow Smart Home Panel 2 is complete with internal auto-switchover for instant backup.
It is divided into the distribution panel and the battery connection box. Internal switches inside the distribution panel, technically known as "relays", allow you to remotely control your backup system.




| | | | |
|---|---|---|---|
| 1 | Distribution panel | 7 | Grid main circuit breaker |
| 2 | Battery connection box (removable) | 8 | Branch circuit breaker |

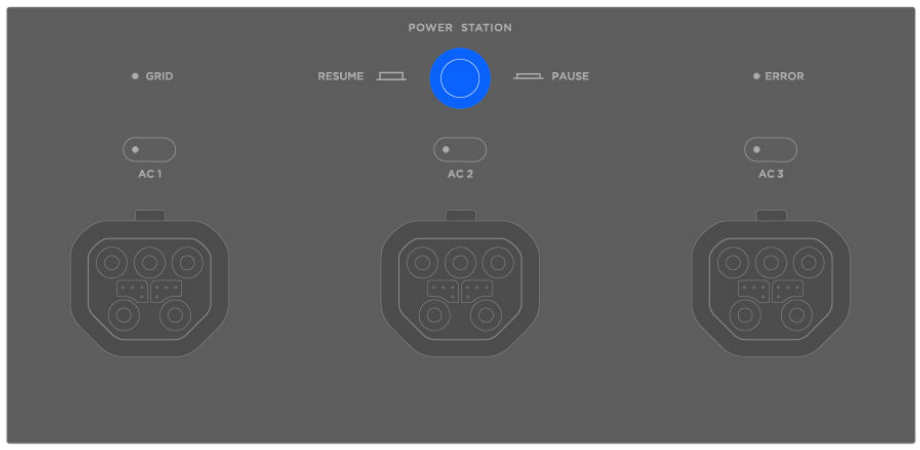
| | | | |
|---|---|---|---|
| 3 | Antenna | 9 | Dead front cover |
| 4 | Glass door | 10 | Emergency stop button |
| 5 | Interlock | 11 | Power input/output button |
| 6 | Generator main circuit breaker | 12 | Power input/output port (AC1/AC2/AC3 port) |

## Control Button




### AC1/AC2/AC3 (Power input/output button)

Short press to turn on/off the power input/output port (marked as AC1/AC2/AC3). Long press 2 to 3 seconds to switch to charge batteries.

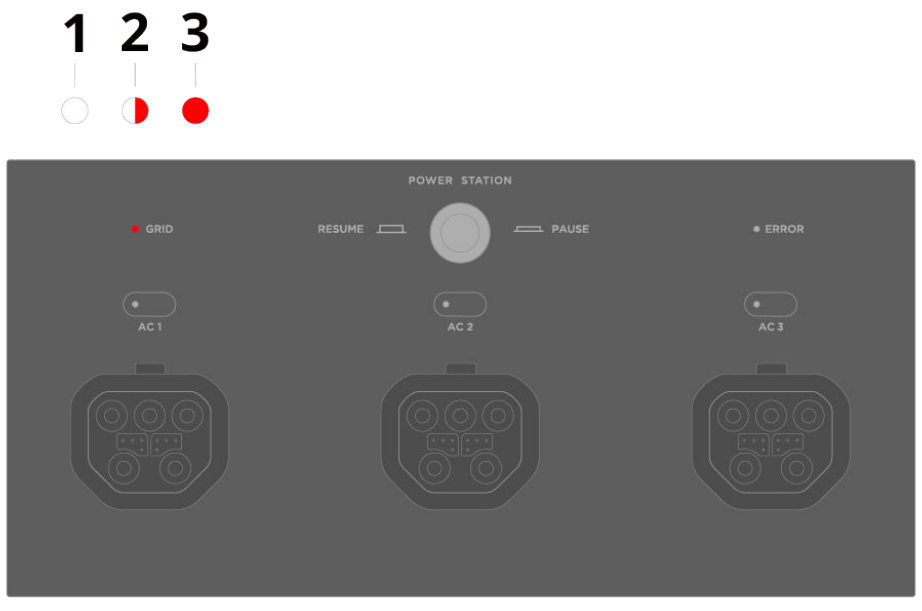



### Emergency stop button

In case of an emergency, press the button to cut off the power to stop the operation of Smart Home Panel 2. Press the button again to resume the operation.

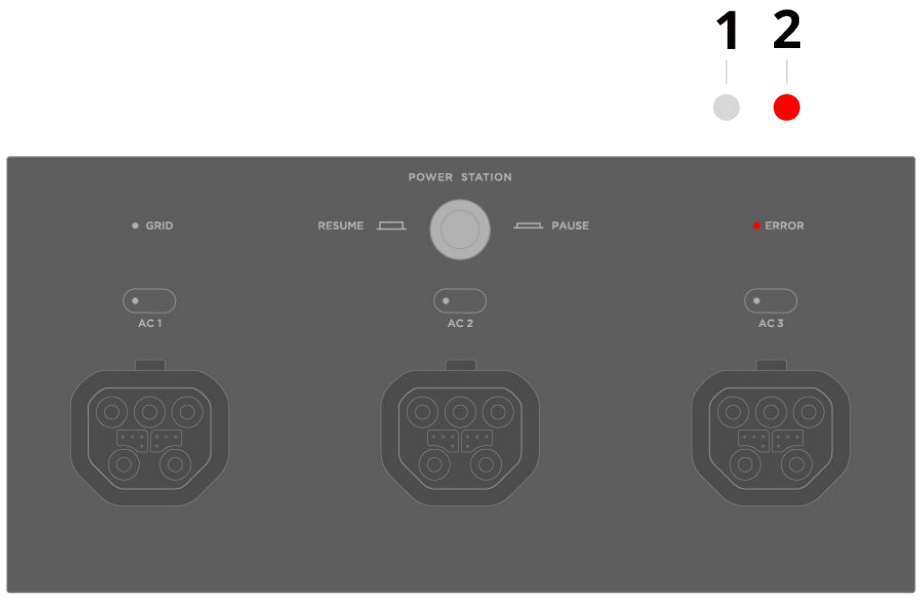
## LED Indicator

### Grid indicator



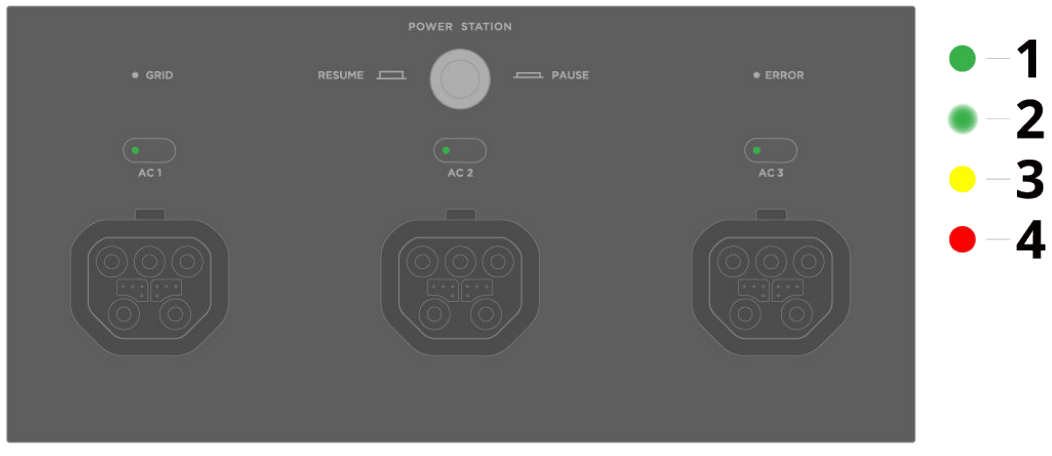

| | | |
|---|---|---|
| 1 | Solid white | Power grid is on |
| 2 | Alternate blinking between red and white | Grid overvoltage or overfrequency |
| 3 | Solid red | Grid voltage is not detected |

## Error indicator




| | | |
|---|---|---|
| 1 | Off | No system error |
| 2 | Solid red | System error |

## Storage indicator



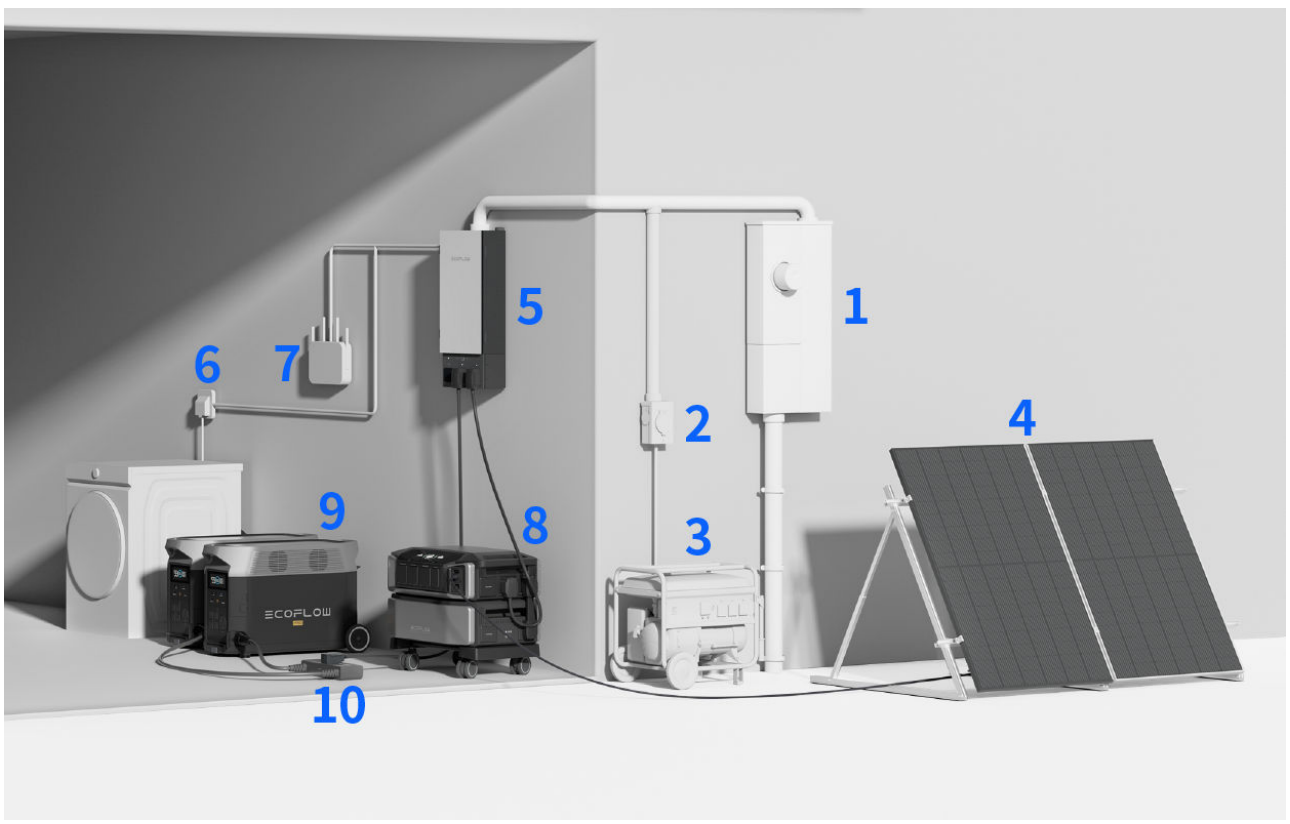

| | | |
|---|---|---|
| 1 | Solid green | Feeding electricity to loads |

| | | | |
|---|---|---|---|
| 2 | Breathing green | Standby | |
| 3 | Solid yellow | Charging | |
| 4 | Solid red | Error | |

If there is an error, please view the error description and troubleshoot it in the EcoFlow app.

# Backup System

Smart Home Panel 2 is used as a sub panel to connect with the main panel to access grid power. It can also be connected to a generator, with an inlet box that allows you to connect your generator to SHP2 easily, and to DELTA Pro Series for energy storage. At the same time, you can connect solar panels to the power station. SHP2 can intelligently manage all these power sources, grid, batteries, solar panels, and gas.




| | | | |
|---|---|---|---|
| 1 | Main electrical panel | 6 | Load (take one load as example) |
| 2* | Inlet box | 7 | Router |
| 3* | Generator | 8* | EcoFlow DELTA Pro Ultra |
| 4* | Solar panel | 9* | EcoFlow DELTA Pro |
| 5 | EcoFlow Smart Home Panel 2 | 10* | EcoFlow Double Voltage Hub - Power Input/Output Port (EcoFlow DELTA Pro) |

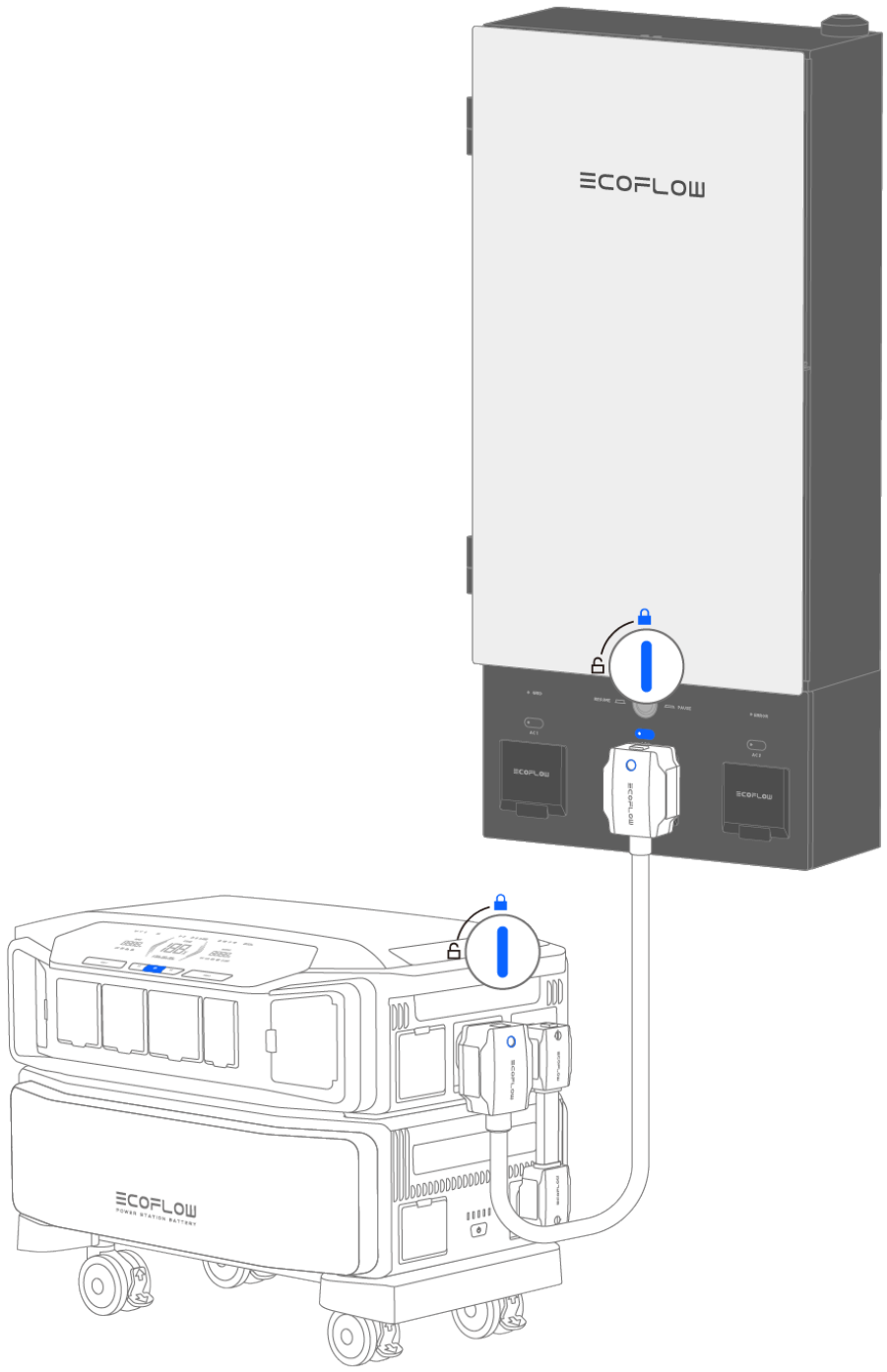
Items marked "*" are optional.

## Connect with EcoFlow DELTA Pro Ultra

Connect Smart Home Panel 2 with DELTA Pro Ultra and lock the cable. Then, power on DELTA Pro Ultra, and short press the power input/output button (marked as

AC1/AC2/AC3) in the battery connection box.

- Maximum 3 units.



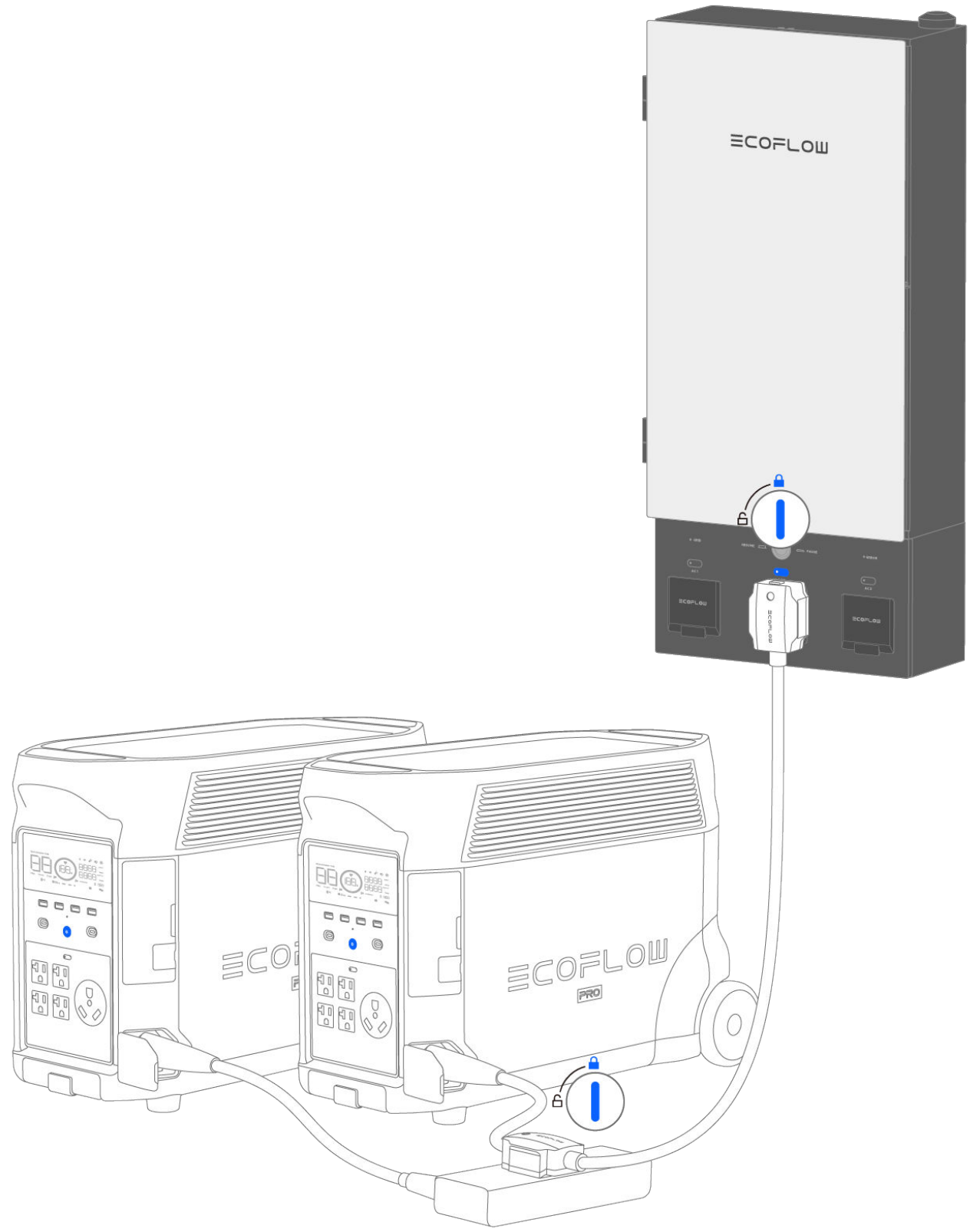

**CAUTION**

- Do not unplug with power on. Short press to turn off the "power input/output port" before unplugging the cable.
- AC outlet sockets of EcoFlow DELTA Pro Utra are not available when connecting with Smart Home Panel 2.

## Connect with 2 Sets of EcoFlow DELTA Pro

Use the EcoFlow Double Voltage Hub-Power Input/Output Port (EcoFlow DELTA Pro) to connect Smart Home Panel 2 and DELTA Pro, and lock the cable. Then, power on DELTA Pro and short press the power input/output button (marked as AC1/AC2/AC3) in the battery connection box.

- Maximum 2 sets of DELTA Pro (1 Double Voltage Hub)




See the battery charging and discharging in different connection scenarios in the following table.

| Number of Batteries Connected | Charging | Discharging |
| --- | --- | --- |
| 1 set of EcoFlow DELTA Pro | √ | x |
| 2 sets of EcoFlow DELTA Pro | √ | √ |
| EcoFlow DELTA Pro Ultra and (1 or 2 sets of) EcoFlow DELTA Pro | √ | √ |

Smart Home Panel 2, as a split-phase system, feeds electricity to home loads through L1 and L2. If you connect both DELTA Pro Ultra and 1 set of DELTA Pro to the panel, DELTA Pro Ultra will be charged and discharged through L1 and L2, while DELTA Pro will be charged and discharged only through L1 ***or*** L2. See the figure below for correspondence between the DP connection and the charging and discharging of L1 and L2.




*EcoFlow Double Voltage Hub-Power Input/Output Port (EcoFlow DELTA Pro)*

⚠ CAUTION

- Do not unplug with power on. Short press to turn off the "power input/output port" before unplugging the cable.
- AC outlet sockets of DELTA Pro are not available when connecting with Smart Home Panel 2.
- Please note that the hub is different from the EcoFlow Double Voltage Hub (EcoFlow DELTA Pro) used for plugging appliances or a gas generator. For the power outlet on this hub, you can only connect with Smart Home Panel 2.

## Connecting with a Generator

⚠ WARNING

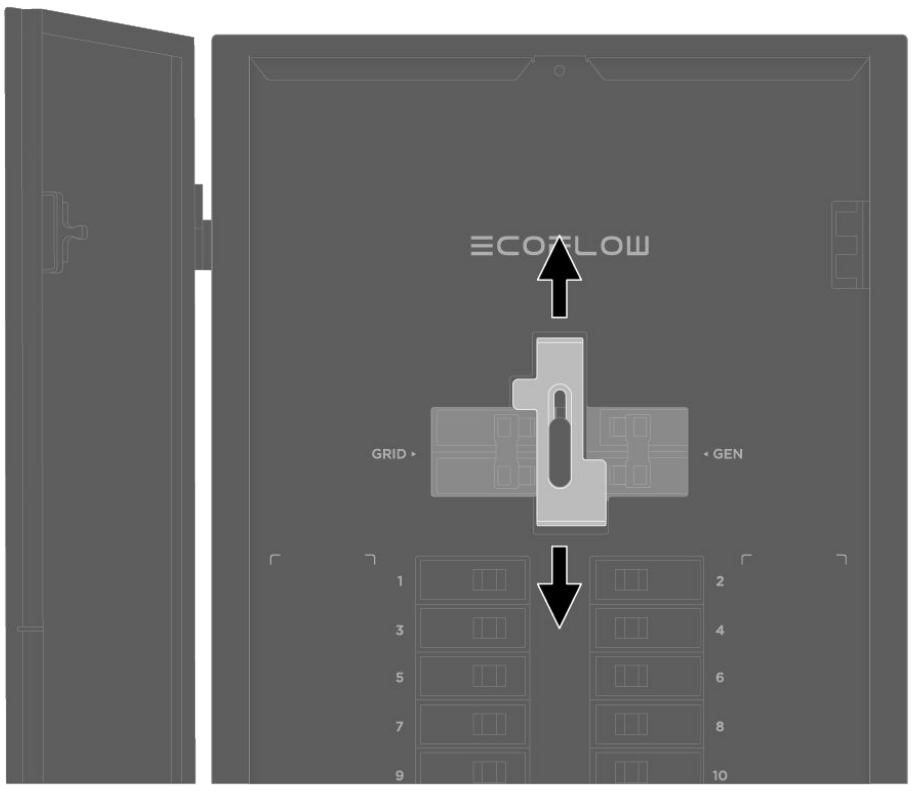
- Connecting a generator to Smart Home Panel 2 should be performed by qualified electrical personnel.
- If your generator has a bonded neutral, remove the ground-neutral bond from the generator before connecting. Otherwise, the GFCI/AFCI will malfunction. Please consult an electrician for this removal.
- After connecting the generator and turning on the power, it takes 25 seconds for the house to get electricity.

After the generator connection is completed, fill in the generator parameter in **System settings** > **Generator settings** in the app. See "Generator settings" in the section "Explore the App" for details.

### Switch supply between grid and generator

You can switch the interlock up for grid supply or down for generator supply, as the figure shown below.

- When on grid supply, you can only turn on/off the grid main circuit breaker.
- When on generator supply, you can only turn on/off the generator main circuit breaker.




**NOTICE**

- You can not switch supply between grid and generator in the EcoFlow app.
- When on generator supply, savings mode and EPS mode are not available.

# Installation Overview

Quick check the installation process of Smart Home Panel 2. Only qualified electrical personnel should install or service the product.

## 1. Site survey

Installers, typically 1 or 2, will assess your home's electrical system and installation environment for the best solution. You will receive a quote for installation and required additional materials. Key installation options are listed below:

- **Surface mounting or flush mounting**
- **Wireless or wired internet connection**
- **Integrated or separate installation**
  - Integrated: Install the entire Smart Home Panel 2 indoors
  - Separate: Install the panel and the battery connection box individually





### 2. Permit application

The installer applies for a permit as required by local regulations.

### 3. Installation

Installers may drill holes, connect conduits, and plan home loads for 1-12 circuits. Then, they will mount Smart Home Panel 2, install circuit breakers, wire the system, and finally energize the system.
Prepare for the electricity to be off for about 30 minutes in your house.
Lock the panel if necessary.

Click here to download the Installation Guide.

### 4. Commissioning

Complete system commissioning with the help of installers.

# Explore the App

## System Commissioning

Connect Smart Home Panel 2 to the EcoFlow App, and complete some the initial settings before use.
The information to fill in includes but is not limited to grid voltage and frequency, the maximum current of the main circuit breaker, the current of each load, and whether the circuits are split-phase.
If you connect with a generator, fill in the generator parameter in **System settings** > **Generator settings**.
Don't forget to connect your battery to the EcoFlow app.

## Backup Strategy

To prepare for an outage, you can turn on **Storm Guard** and **EPS mode**, and set **Circuit priorities**.

### Circuit priorities

During an outage, the system prioritizes the supply of battery power to home circuits. Categorize your home circuits into 3 levels: *must supply*, *conditional supply*, and *no power supply*. Circuits are prioritized from top to bottom in each category.

- **Must supply**: As long as there's power in batteries, it will be supplied to these circuits. At least 1 circuit in this category.
- **Conditional supply**: These circuits will be powered when the battery level is equal to or higher than the percentage you set (50% by default).
- **No power supply**: These circuits won't be powered when using battery power during an outage.

Go to **Settings** > **Outage strategy** and custom circuit priorities.

### Storm Guard

When Storm Guard is activated due to a severe weather event that will hit your area in 24 hours, batteries will be fully charged to 100%. If an outage occurs and the generator can not supply power, the system will use battery power for home loads.
Go to **Settings** to turn on/off **Storm Guard**, or deactivate it for a specified storm event on the home page.

> **NOTICE**
> When Storm Guard is on and a storm event occurs, the savings mode won't be executed until the storm event ends.

### EPS mode

The EPS (Emergency Power Supply) mode allows the system to switch the power source to battery storage in **20 ms**.
When the EPS mode is off, the switch takes about 5 seconds.

> **NOTICE**
> Turning on the EPS mode will deactivate the savings mode you're using.

## Select Savings Modes

If batteries are above the *backup reserve level*, the system will perform the savings mode you choose. Based on your rate plan and energy use routines, you can select a savings mode in **System Settings** > **Operating Mode**, including *self-powered*, *scheduled tasks*, and *TOU mode*.

> **NOTICE**
> You can also view the energy value such as total savings and solar value by clicking the **Savings** widget on the home page.

---

**Which mode should I choose?**

- **Self-powered** is ideal for households with installed solar panels and a relatively stable rate plan.
- **Scheduled tasks** is suitable for those with a fluctuating rate plan and regular energy consumption routines.
- **TOU (Time of Use) mode** is optimal for maximizing savings on a fluctuating rate plan through smart scheduling of solar energy and battery charging/discharging.

In the following diagrams, connecting Smart Home Panel 2 and DELTA Pro Ultra is used as an example.

---

### Backup Reserve Level

If batteries are below the backup reserve level, batteries will only be used during a grid outage. If batteries are above the backup reserve level, the system will execute the savings mode you choose. You can modify the backup reserve level in **System Settings** > **Operating Mode**.

This setting takes effect only when the savings mode is selected.

The default backup reserve level is set at 50%. If you need to make changes, adjust it within the system settings of SHP2. Setting on the DPU page will not take effect.

### Self-powered

Maximize the use of solar energy for your house.

- After batteries are above the *backup reserve level*, only solar will charge them.
- When batteries reach the *charge limit*, or exceed [*backup reserve level* by about 20%], the system will power home loads using **only** battery power until the batteries are below the *backup reserve level*.

For example, backup reserve level set as 50%, charge limit set as 90%:

> **NOTICE**
> If a grid outage hits, batteries discharge to 0%.

### Scheduled tasks

Schedule battery charging and discharging according to your needs.

Charging task: Set the period for charging. In this period, if batteries are below the *charge limit*, they will be charged.

Discharging task: Set the period for discharging. In this period, if batteries exceed [*backup reserve level* by about 20%], they will discharge.

> **NOTICE**
> If it conflicts with the **Automation settings** in EcoFlow DELTA Pro Ultra, the system will execute the scheduled tasks set in Smart Home Panel 2.

### TOU mode

The TOU (Time-of-Use) mode schedules battery charging and discharging based on rate fluctuations and your electricity usage habits.

- When the rate is low, batteries will be charged to the *charge limit* before the next peak period begins.
- When the rate is high, batteries will be discharged. To maximize your savings, they'll be discharged to the *backup reserve level* if necessary.

Set your time-of-use rate plan in **Settings** > **Electricity rate settings**. Then, the 24-hour schedule, and the timing of charging and discharging will be generated on the Operating mode page.

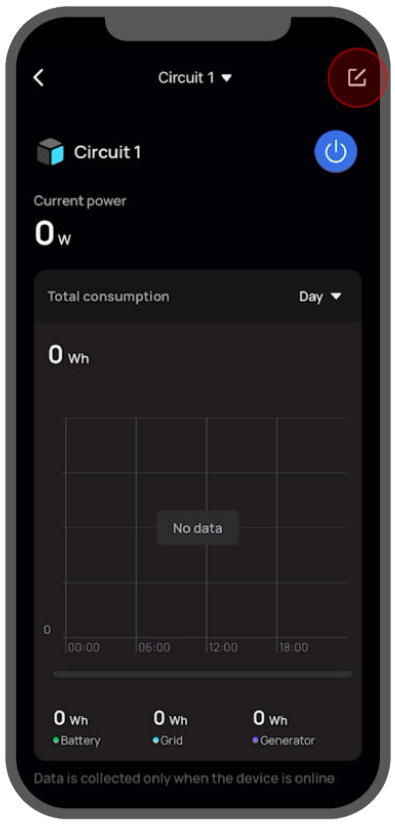
For example, $0.5 for 4:00-9:00 p.m., $0.4 for 3:00-4:00 and 9:00-12:00 p.m., and $0.3 for all other hours:

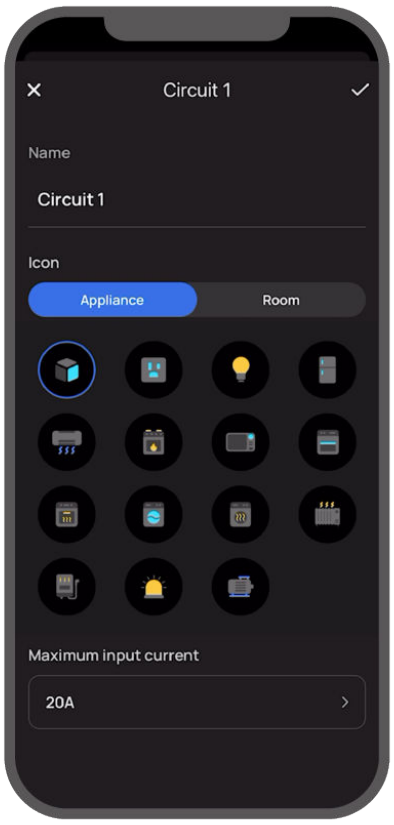
> **NOTICE**
> - TOU schedules are updated every hour if the internet is available.
> - At any time, if batteries are below backup reserve level, batteries will be charged.

## Remotely Control your System

### Control your home circuits

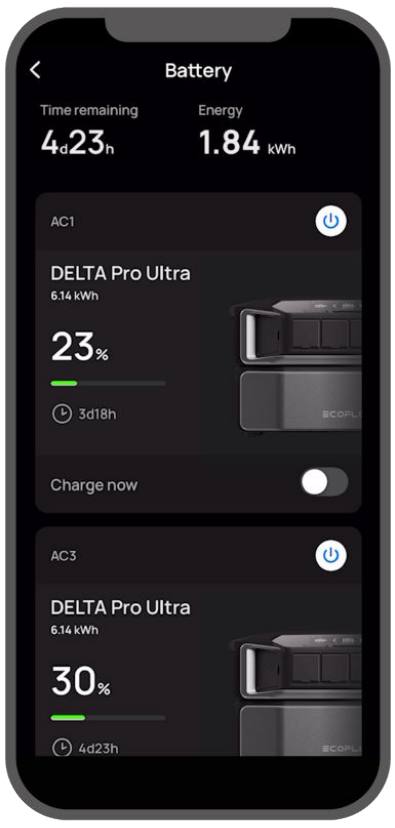
You can check, rename, or turn on/off the circuit on the home page > **Circuits** > the specified circuit.



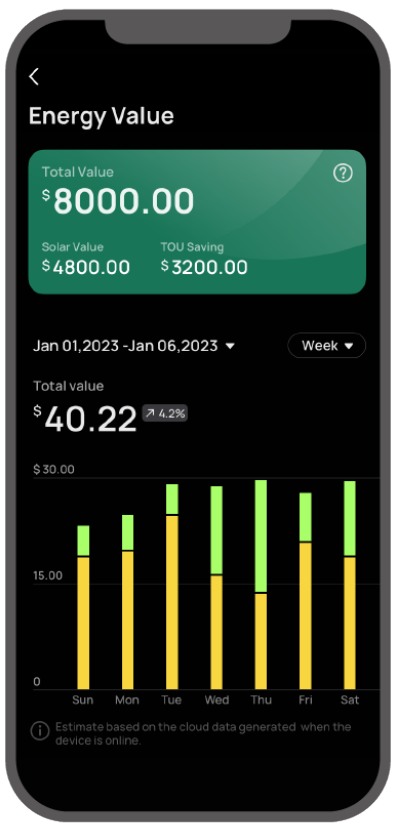
## Control your batteries

Except for the physical control button, you can also turn on or off the power input/output port (marked as AC1/AC2/AC3), or charge batteries on the home page > **Energy** > battery data.




## Check Dashboard

Go to the home page and tap widgets to view energy value, total charging and discharging, and historical consumption data by day, week, month, or year.




## Firmware Update

> ⚠️ **CAUTION**
> You can only update the firmware when Smart Home Panel 2 is in a state where the grid supplies power to the home circuits.

To update Smart Home Panel 2:

Go to **Settings** > **Firmware** in the EcoFlow app for updates.

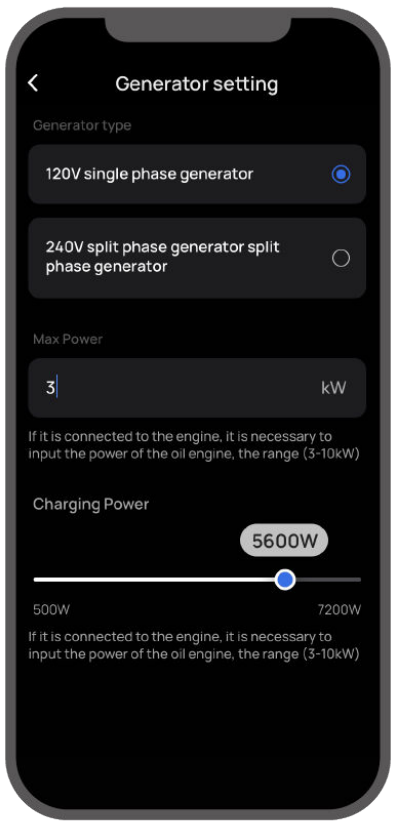
To update EcoFlow Double Voltage Hub:

The hub update package is included in the update package of Smart Home Panel 2. You can only update the hub when the Smart Home Panel 2 and EcoFlow DELTA Pro are connected, the EcoFlow DELTA Pro is powered on, and the power input/output port (marked as AC1/AC2/AC3) on the battery connection box is turned on.

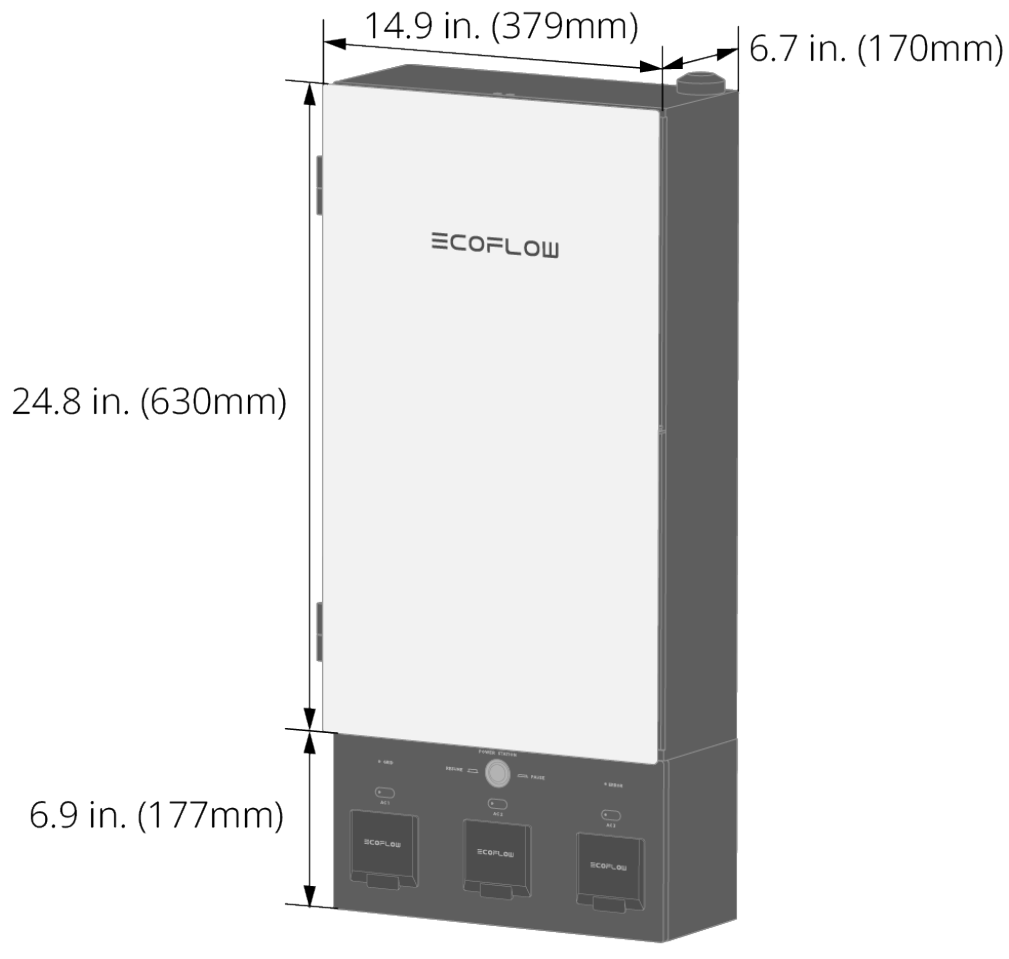
## Gas Generator Setting

In the case of connecting with a gas generator, you should select your *Generator type*, fill in *Max power*, and select the required *Charging power*.

- **Generator type**: 120V single phase or 240V split phase.
- **Maximum power**: Set the maximum output power of generator with the range of 3-12kW, based on your need.
- **Battery charging power**: Set the power of the generator for charging batteries, because the generator may feed electricity to home loads and charge batteries at the same time.




# Technical Specifications




| | |
|---|---|
| AC voltage (nominal) | 120V/240V |
| Feed-in type | Split phase |
| Maximum current rating | 100A panel / 90A storage |
| Busbar rating | 120A |
| Maximum input short-circuit current | 10kA |
| Operating temperature | –30 to 50°C (–22°F to 122°F) |
| Operating humidity | Up to 100% RH, condensing |
| Altitude | ≤ 2000 m (6562 ft) |
| Overvoltage category | IV |
| Enclosure type | NEMA TYPE 3R (distribution panel)<br>NEMA TYPE 1 (battery connection box) |
| Number of load branches | 12 |
| Communication | Ethernet, Wi-Fi, Bluetooth |
| Wi-Fi | Frequency range: 20M: 2412 - 2472 MHz / 40M: 2422- 2462 MHz<br>Maximum output power: ≤ 16.5 dBm |
| Bluetooth | Frequency range: 2402-2480MHz<br>Maximum output power: ≤ 8.76 dBm |
| Weight | 52.9 lb (24 kg) |
| Dimensions | 32.4 x 14.9 x 6.7 in. (823.7 x 379 x 170 mm) |
| Compatible generator | 120V single phase / 240V split phase (3-12kW) |

# FAQ

1. Is there any abnormality if there is a "click" sound when the system is running?
   It's normal. EcoFlow Smart Home Panel 2 uses internal switches (relays) to control branch circuits on/off and the power input/output port of the battery connection box. When the mode is switched or you press the emergency stop button, you may hear a series of "click" sounds because of internal switches.

2. Why does a circuit have no power when the app says it's on?
   The physical breaker in the panel has been tripped.

3. What should I do if I want to add or modify a new circuit breaker (a new circuit)?
   Please contact an electrician or customer service to install or replace the circuit breaker and turn it on in the app to support up to 12 circuits.

4. Can Smart Home Panel 2 be a main panel or service equipment?
   No.

Still not solve your problem? Please *click here* for more information.

# Accessory List

# Safety Instructions

DISCLAIMER

Read this document carefully before using the product to ensure that you completely understand the product and can correctly use it. After reading this document, keep it properly for future reference. Improper use of this product may cause serious injury to yourself or others, or cause product damage and property loss. Once you use this product, it is deemed that you understand, approve and accept all the terms and content in this document. EcoFlow is not liable for any loss caused by the user's failure to use this product in compliance with this document.

In compliance with laws and regulations, EcoFlow reserves the right to final interpretation of this document and all documents related to this product. This document is subject to changes (updates, revisions, or termination) without prior notice. Please visit EcoFlow's official website to obtain the latest product information.

WARNING

1. Only qualified electrical personnel should install or service the product.
2. Please read the Installation Guide carefully before installing, operating, or servicing this product. Installation of this product must conform to local standards, national electrical safety standards, and the manufacturer’s instructions.
3. Specifications of self-provided cables should meet the requirements of the Installation Guide and local regulations.
4. The AC cables are high voltage cables. Risk of death or serious injury due to electric shock.

5. There is a high possibility of electric shock or serious burns due to the high voltage in the product.
6. Use appropriate personal protective equipment (PPE) and follow safe electrical work practices.
7. Do not touch exposed wires with your hands.
8. Be cautious to prevent injury when moving heavy objects. Wear personal protective equipment such as protective gloves and shoes when manually moving the product.
9. Do not install or operate the equipment in extreme weather events such as lightning, snow, heavy rain, strong wind, etc.
10. Do not install or operate the product in an area where flammable or explosive materials are stored. Inspect the product and cables for damage before installing. Do not install the product or cables if damaged in any way.
11. Turn off all power supplying this product before installation. Disconnect each circuit individually before servicing.
12. Always use a properly rated voltage sensing device to confirm that the power is off.
13. During the drilling process, cover the interior product to prevent debris from falling into the product, and clear the debris after drilling to prevent interference with the equipment.
14. Do not damage, smear or cover any warning labels on the device. All labels must be visible after installation.
15. Before operating the product, check the electrical connections to ensure that the product is reliably and permanently grounded.
16. Do not place any kind of objects on top of the product during operation.
17. To completely de-energize the product, you MUST open the upstream breakers as well as physically unplug all DELTA Pro series. Failure to do so may present a shock hazard.
18. Do not place or install flammable or potentially explosive objects near the product or in explosive atmospheres.
19. Do not insert foreign objects into any part of the equipment.
20. Do not connect life-support systems, medical equipment, or any other equipment use where product failure could lead to injury to persons or loss of life to circuits which can be remotely switched.
21. Install the product in a location that prevents damage from flooding. Ensure that no water sources are above or near the product, including downspouts, sprinklers, or faucets.
22. If needed, replace all devices, doors, and covers before turning on the power.

CAUTION

1. In the case of cable damage, it must be replaced by the manufacturer, customer service or qualified personnel to prevent a safety hazard.
2. Do not use solvents to clean the product.
3. The product must be disposed of according to local codes and regulations.
4. This product is not intended to be used as a service disconnect.
5. Do not use parts or accessories other than those specified for use with the product.
6. When installing the product, the screws need to be tightened according to the specification torque using a special tool.
7. Keep out of reach of children or animals.
8. This product is designed for residential use only.