

Anker SOLIX F3800 Plus Solution Technical Brief and Design Guide



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1. Overview

Anker SOLIX F3800 Plus is a portable power station that can be used with Anker SOLIX Home Power Panel for home energy cycling or with the transfer switch for emergency backup power.

Abbreviations:

Anker SOLIX F3800 Plus Portable Power Station: PPS or F3800 Plus

Anker SOLIX BP3800 Expansion Battery: Battery

Anker SOLIX Home Power Panel: HPP or Home Power Panel

Third-Party Generator: Generator

Generator Input Adapter: Adapter

Anker SOLIX Double Power Hub: Hub or Double Power Hub

Rigid/Portable Solar Panel: (Solar) Panel

Scenarios	Portable Power Station	Smart Home Power Kit	Home Backup Kit
Main Equipment	 F3800 Plus	 - F3800 Plus - Home Power Panel - Subpanel	 - F3800 Plus - Transfer Switch
Function	- Portable Power Station - Multiple Output Ports - Powering Devices During Outages or Outdoors	- Smartly integrate F3800 Plus, the utility grid, and your rooftop solar system for maximum power efficiency and seamless backup. - Deliver backup power to essential home appliances during outages. - Easily control and monitor energy usage with the Anker app. - Avoid peak rate charges and optimize energy consumption.	During an outage, a third-party 240V generator provides emergency power to home loads via Anker SOLIX Transfer Switch and supplies excess power to F3800 Plus for charging.

2. F3800 Plus Portable Power Station

2.1 Product Overview

2.1.1 Overview

Portable power supply with multiple ports for powering devices during power outages or outdoors.

- No more limitations when you're powering your dryer. The 120V/240V AC output runs appliances at home with different voltages.
- The 6,000W AC output runs everything at home. For more power, add another F3800 Plus for 12,000W max AC output.
- Pair with Anker SOLIX Home Power Kit to easily set up a home backup power system. Use not only for emergencies, but also every day to lower energy bills.
- With a fuel generator charging cable, let your fuel generator charge F3800 Plus. You can even charge and discharge at the same time.
- Recharge from 0 to 100% in just 1.5 hours with 3,200W solar input.
- With 3.84kWh, power your family's needs all day. Add up to 6 batteries for 26.9kWh or add another F3800 Plus and 12 batteries for 2 weeks of power.
- Directly charge you EV and RV with built-in NEMA TT-30R and L14-30R outlets.

2.1.2 Environmental Requirements

- Environmental requirement

Do not expose the equipment to flammable or explosive gases or smoke. Do not operate the equipment in such environments.

Do not store flammable or explosive materials near the equipment.

Install the equipment in a well-ventilated area away from liquids.

Take precautions when installing in areas prone to natural disasters (e.g., floods, mudslides, earthquakes, hurricanes).

Avoid exposing the product to rain or using it in humid environments.

- Storage and Operating Temperature Range:

Equipment operating temperature: -20°C to 40°C (-4°F to 104°F).

Battery charging temperature: 0°C to 40°C (32°F to 104°F).

Battery discharging temperature: -20°C to 40°C (-4°F to 104°F).

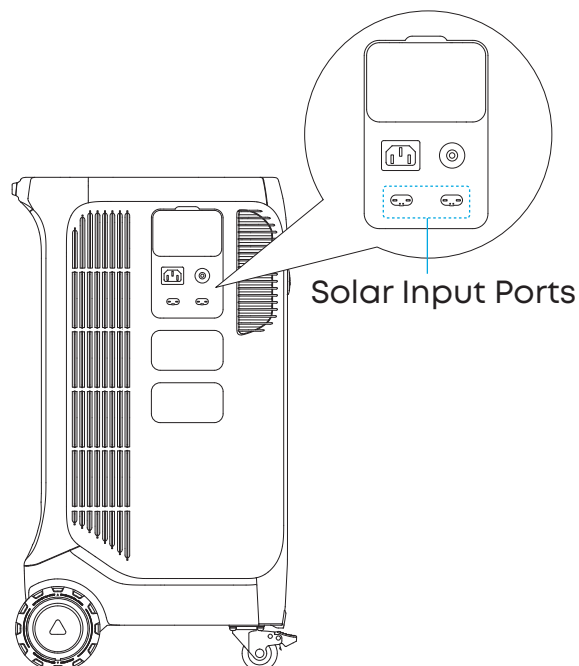
To prolong battery life, we recommend to use or store the product at temperatures between 20°C and 30°C (68°F and 86°F).

2.1.3 Component List

Anker SOLIX F3800 Plus Portable Power Station		• A 3,840Wh, 6,000W portable power station with multiple ports for powering devices during outages or outdoors. • F3800 Plus needs to be charged before its first use to activate it.
Anker SOLIX BP3800 Expansion Battery		• Expansion Battery 3,840Wh • One F3800 Plus can connect up to 6 expansion batteries, expandable to 26.9kWh. • Two F3800 Plus units can expand to 53.8kWh.
Anker SOLIX Double Power Hub		Connecting two Anker SOLIX F3800 Plus units increases the maximum output from 6,000W~25A to 12,000W~50A.
Anker SOLIX Generator Input Adapter		Connect the generator with F3800 Plus or Home Power Panel.

2.2 Charging Your Power Station

2.2.1 Solar Panel Charging



2.2.1.1 Precautions

- Each solar input port supports a voltage range of 11-165V, a maximum current of 17A, and a maximum input of 1,600W. With two ports, the system can handle up to 3,200W in total. Ensure that the total voltage of connected solar panels does not exceed the voltage range of each solar port, as this may cause damage to the product or to the solar panels themselves.
- To ensure the accurate connection of solar panels, we recommend consulting professionals or technicians for detailed guidance.
- The solar charging time depends on the total output power of the solar panels and sunlight intensity.
- To connect two or more solar panels to the product, please ensure that you use the same type of solar panel.
- Each PV port has its own MPPT and can only connect to one solar array. Connecting the same array to both ports will cause MPPT interference, leading to unstable power tracking. Please connect each port to a separate array.

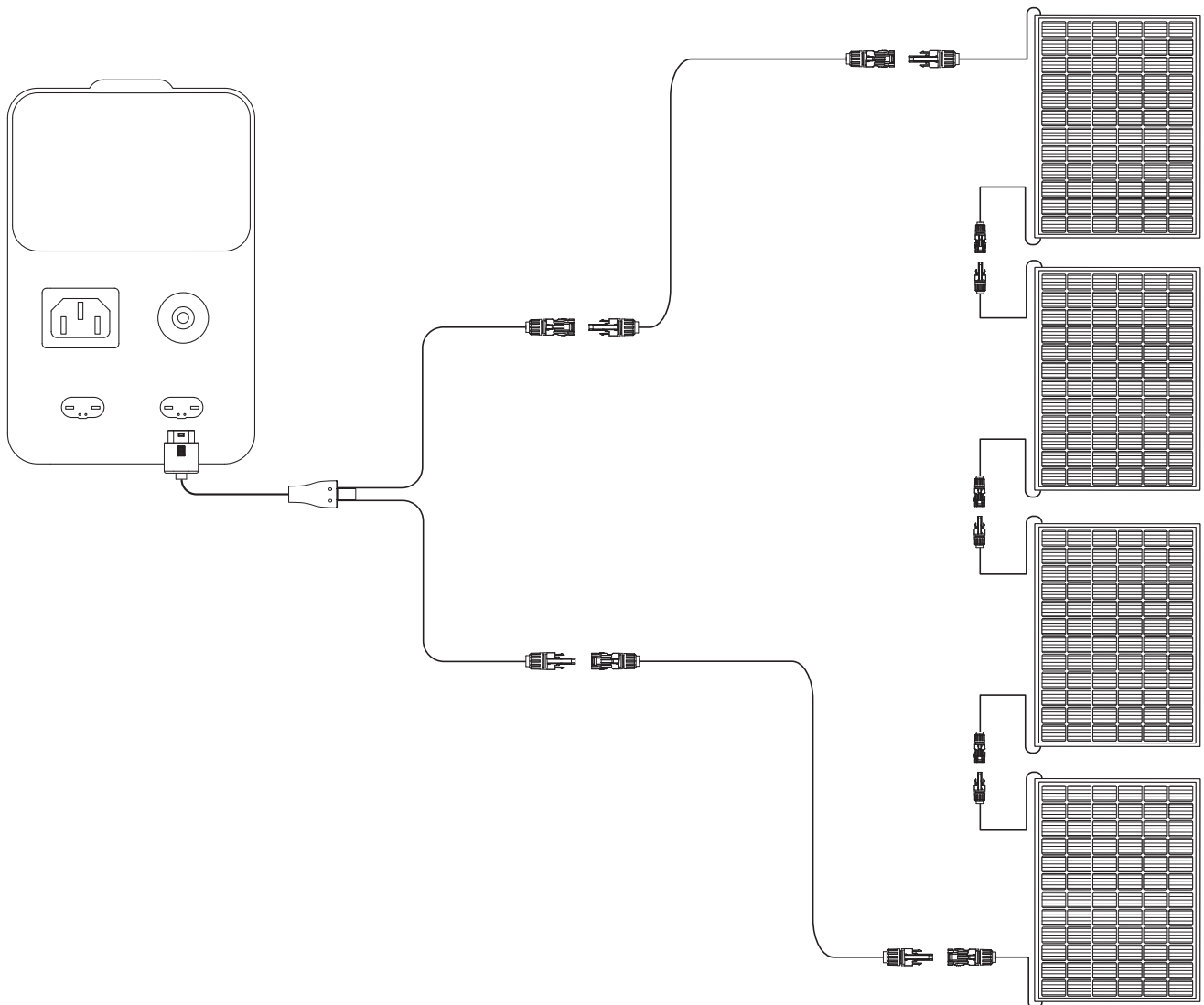
2.2.1.2 Connectivity

- For series connection, you can connect up to 4 solar panels to each solar input port. As an example, a compatible solar panel is Anker SOLIX 405W Rigid Solar Panel (31.18V/12.99A).

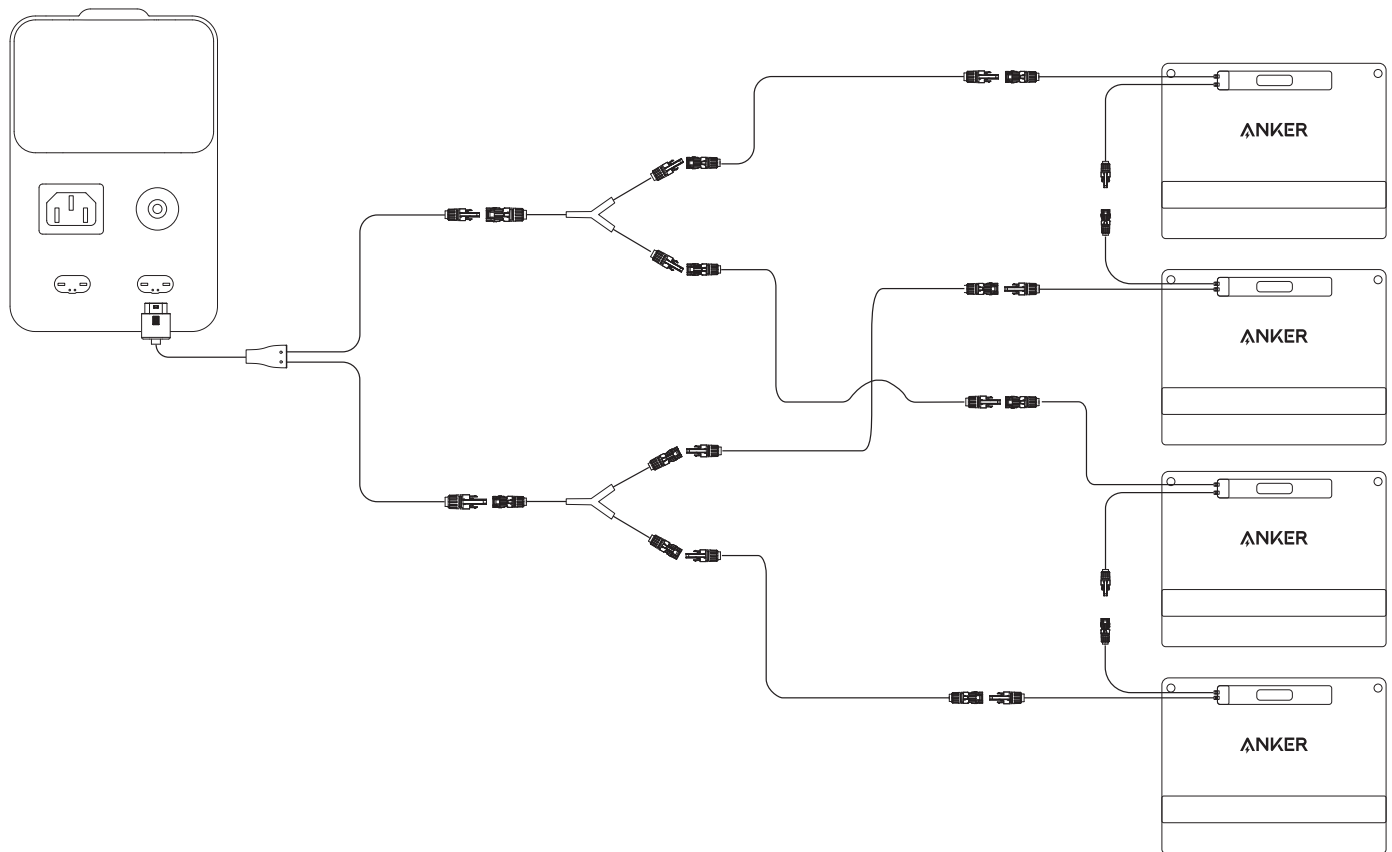
Notes:

- Series Connection: Each solar input port supports a maximum of 165V. Given that one solar panel operates at 31.18V, this equates to a theoretical limit of 5.29 panels ($165V \div 31.18V$). However, connecting 5 panels in series would exceed the 1,600W power limit, so a maximum of 4 panels is recommended.

- **Parallel Connection:** When connecting solar panels in parallel, the total current of two panels exceeds 17A per port, preventing efficient use of solar input power. Therefore, parallel connection is not recommended.



- Supports a 2S2P (2 in series, 2 in parallel) configuration. For example, review this image showing Anker SOLIX 400W Portable Solar Panels (48V/8.3A).

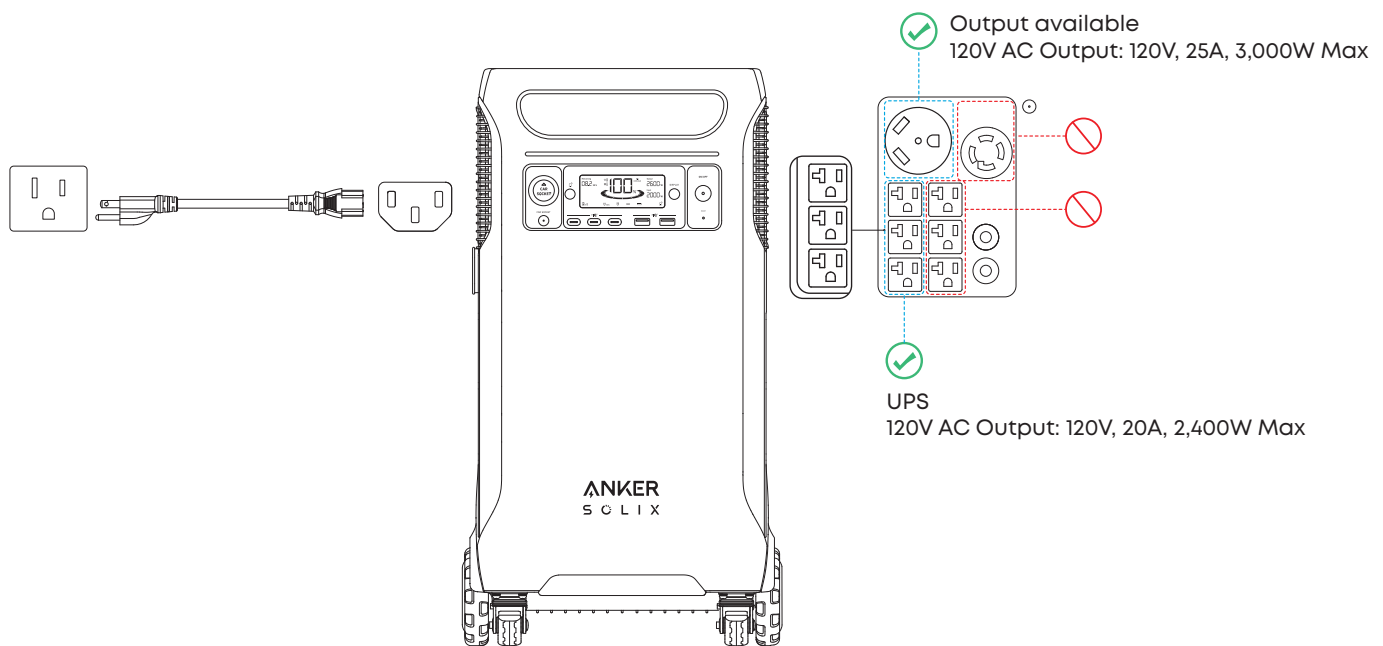


2.2.2 Connecting to a Wall Outlet (UPS Function)

- F3800 Plus has three 120V UPS sockets. When connected to a wall outlet, the grid charges the battery and provides bypass power to the three 120V sockets.
- **AC Recharging:** 120V, 15A, 1,800W Max
- **AC Bypass Output:** 120V, 12A, 1,440W Max
- During a power outage, it switches to battery power in 20 ms.

Note:

- During grid bypass, the L14-30 socket and the other three 120V sockets have no output.



2.2.3 Generator Charging

Through the Generator Input Adapter, a third-party generator can be connected to F3800 Plus to supply power. When F3800 Plus is connected to a third-party generator, it can be used with expansion battery packs or used on its own.

- **Charging Power**
 - After connecting to a 120V generator, F3800 Plus recharges at a maximum power of 3,000W. The number of connected expansion batteries does not affect recharging power.
 - After connecting to a 240V generator:
 - Charging power is 3,300W max when no battery is connected.
 - Charging power is 4,300W max when one battery is connected.
 - Recharging power is 6,000W max when two batteries are connected.
- **Switching Time**

Before the generator is connected, F3800 Plus supplies power to the loads. Once the generator is connected, F3800 Plus switches to bypass mode, allowing the generator to directly power the loads with a switching time of approximately 30 ms. If the generator is turned off or stops operating, the system will automatically switch back

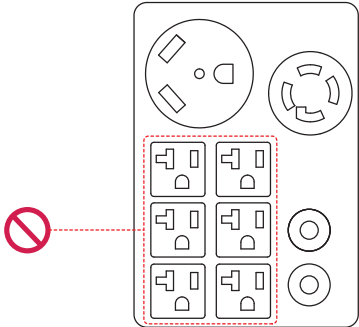
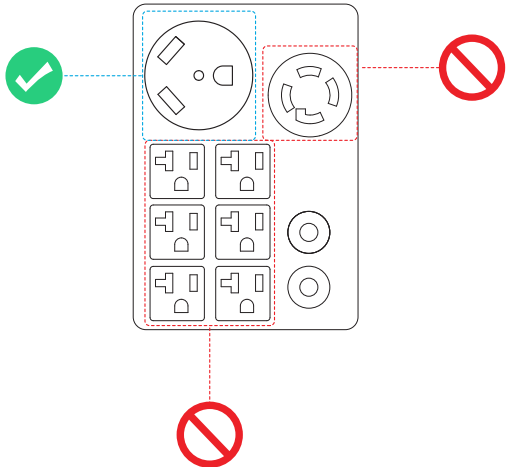
to F3800 Plus for power supply, with a switching time of approximately 50 ms. (Before shutting down the generator, ensure that you turn off the generator's AC output breaker first to achieve the fastest switching time. For detailed shutdown procedures, please refer to the generator's operation manual.)

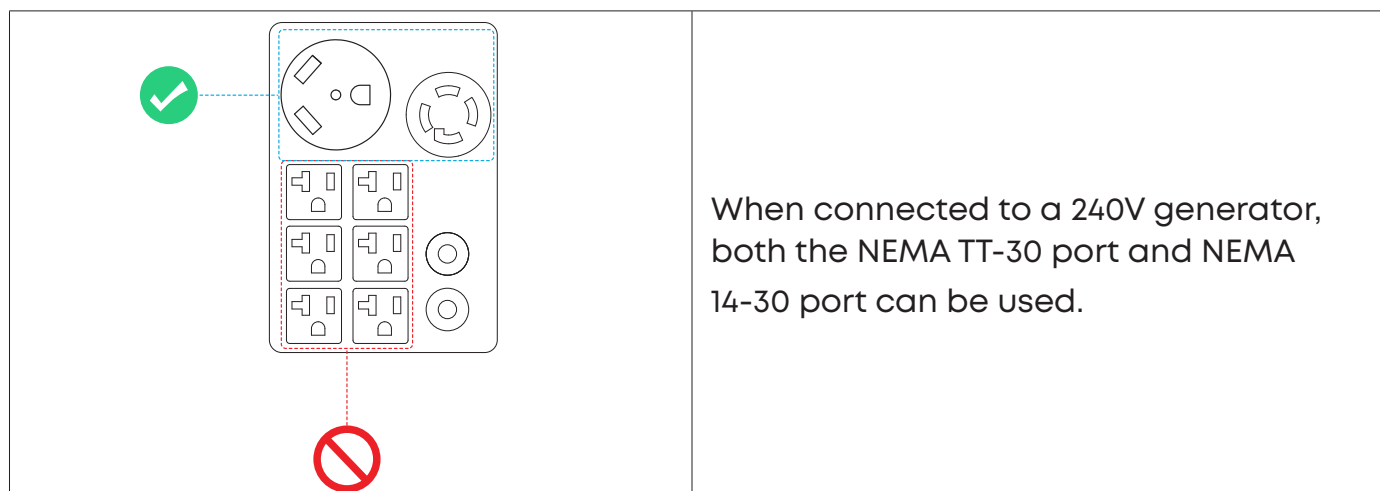
• AC Output Status

Status	Generator Input AC	AC Input	TT-30	L14-30	5-20 Output (Left Side)	5-20 Output (Right Side)
Status 1	No	No	Output Available	Output Available	Output Available	Output Available
Status 2	Yes (120V)	No	Switch to L1: Output Available PPS to Generator: 30 ms Generator to PPS: 50 ms 3,000W Bypass Switch to L2: No Output	No Output	No Output	No Output
Status 3	Yes (240V)	No	Output Available 3,000W Bypass	Output Available 6,000W Bypass	No Output	No Output
Status 4	No	Yes	Output Available 1,440W Bypass	No Output	Output Available 20 ms UPS 1,440W Bypass	No Output
Status 5	Yes (120V)	Yes	Switch to L1: Output Available PPS to Generator: 30 ms Generator to PPS: 50 ms 3,000W Bypass Switch to L2: No Output	No Output	No Output	No Output

Status 6	Yes (240V)	Yes	Output Available 3,000W Bypass The system switches to Status 4 when the generator stops outputting.	Output Available 6,000W Bypass The system switches to Status 4 when the generator stops outputting.	No Output	No Output
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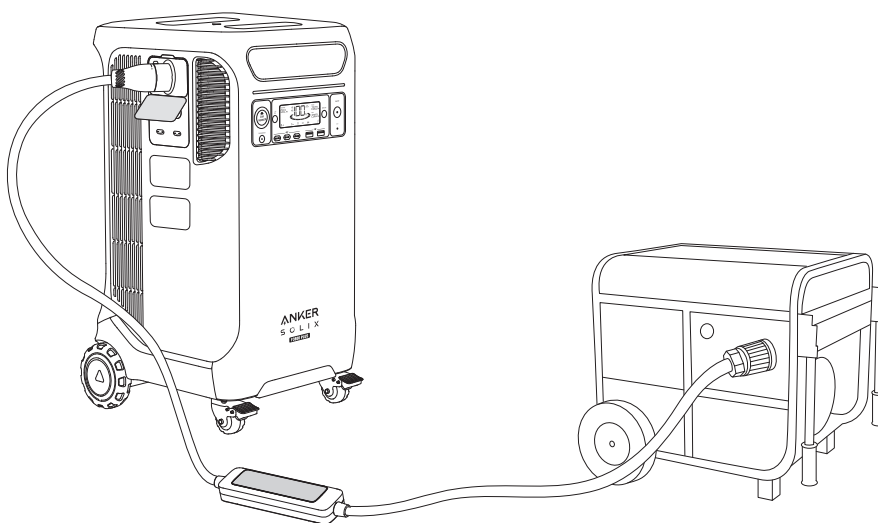
• Notes

	When F3800 Plus is connected to a third-party generator, the six AC output ports (NEMA 5-20 ports, 120V) in the lower-left corner cannot be used.
	When connected to a 120V generator, only the NEMA TT-30 port can be used.



• Connecting Instructions

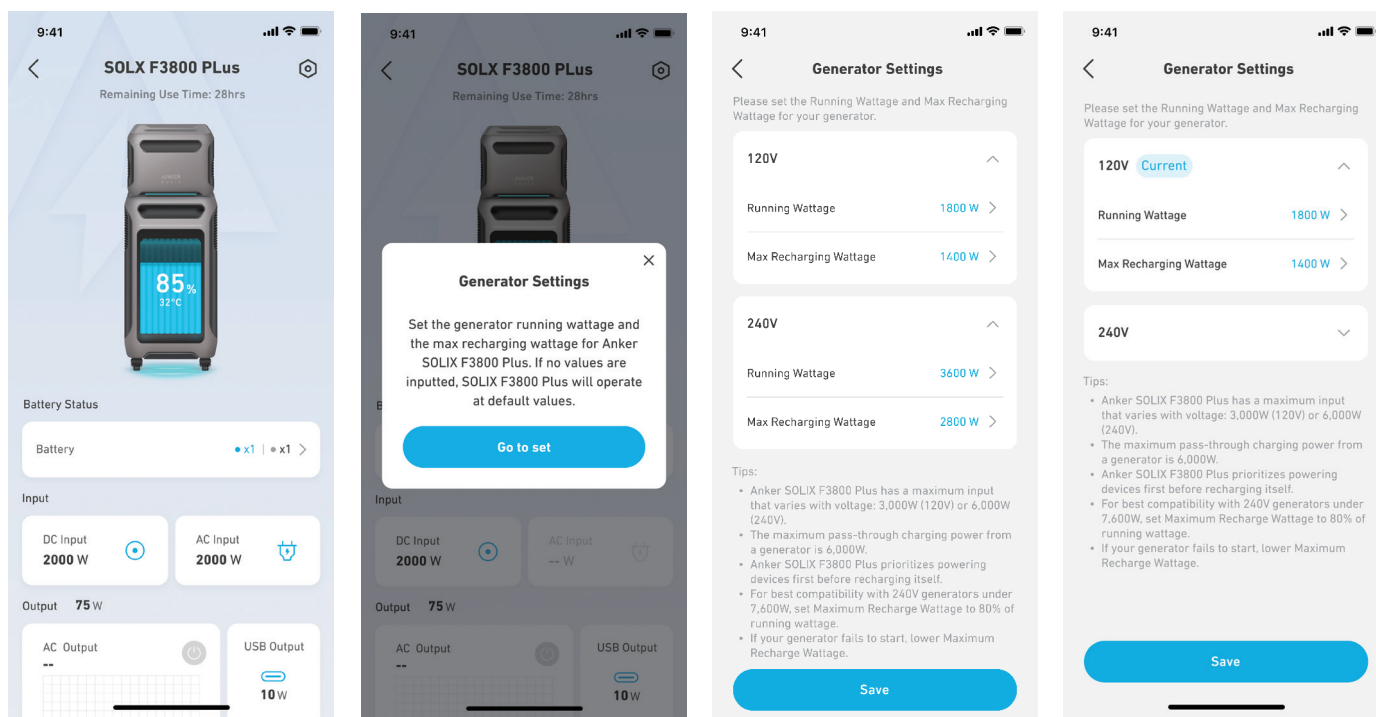
- Before connecting F3800 Plus and the generator, ensure that both devices are powered off.
- Connect Anker SOLIX Generator Input Adapter to the HPP port of F3800 Plus.
- Connect Generator Input Adapter to the generator's NEMA L14-30P port. If connected to a 120V generator, a TT-30 to L14-30R adapter is required before connecting to Generator Input Adapter. When connected to the L1 phase, the TT-30 port provides output. When connected to the L2 phase, the TT-30 port has no output and the generator can only charge F3800 Plus.
- Manually turn on the generator and F3800 Plus to enable proper operation.

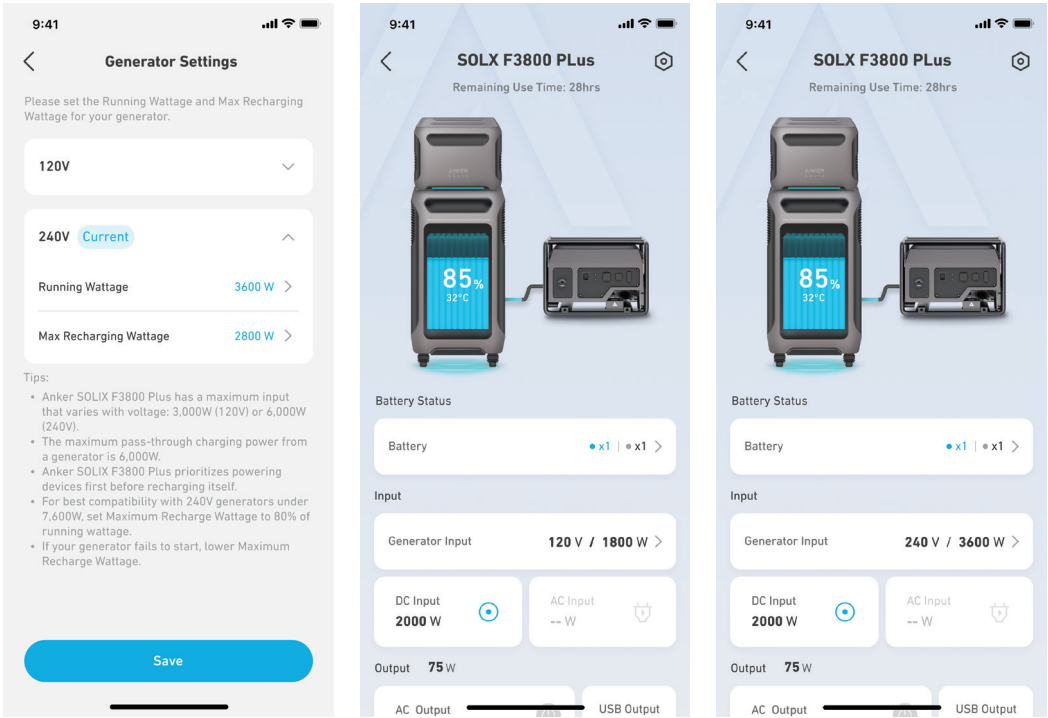


• Setup Instructions

- Add F3800 Plus as a device in the Anker app.
- Before using Generator Input Adapter, ensure that the adapter firmware has been updated to the latest version (Generator Input Adapter firmware can only be updated when connected to F3800 Plus).
- You can go to the Firmware Upgrade page in the settings page in the upper right corner of the device. There will be a red dot indicating that there is a new firmware version available. Tap it to start the firmware update process and follow the app prompts. Before updating, please note the following:
- F3800 Plus and Home Power Panel must be connected to 2.4GHz Wi-Fi, and the network environment must be strong and stable.

- The F3800 Plus battery level must be maintained at 5% or above.
- When connecting a third-party generator for the first time, you need to set the generator's running wattage and maximum recharging wattage in the app (We recommend setting the maximum recharging wattage to 80% of the running wattage). Otherwise, the generator will charge the device at the default values.
- While the generator is powering the loads, it can also charge F3800 Plus. The maximum input power for F3800 Plus is 3,000W (120V) or 6,000W (240V).

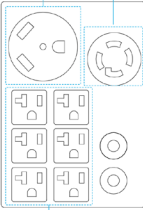




2.3 Charging Your Appliances

2.3.1 AC Output

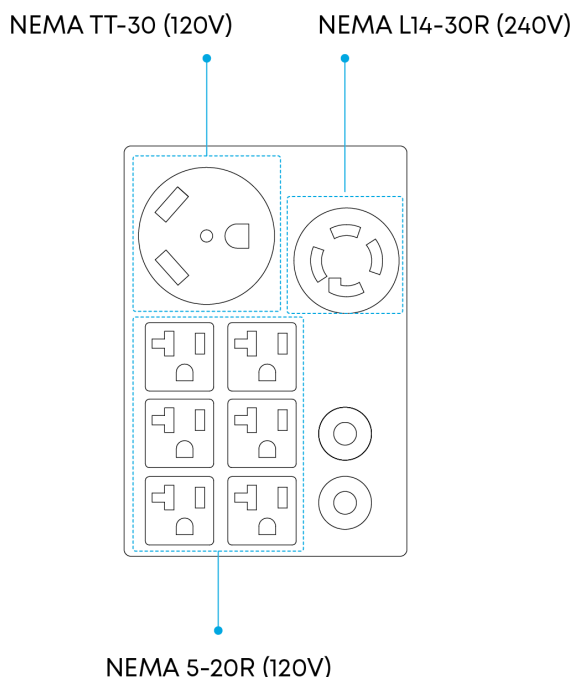
• AC Output Overload Capacity

F3800 Plus AC Output Power	F3800 Plus Overload Capacity
NEMA TT-30 AC Output Port 120V, 25A Max, 60Hz, 3,000W Max NEMA 14-30 AC Output Port 120V/240V, 25A Max, 60Hz, 6,000W Max  NEMA 5-20R AC Output Ports (Left 3 ports have UPS function) 120V, 20A Max, 60Hz, 2,400W Max	• Output Load Rate < 105% - Long-Term Operation • 105% ≤ Output Load Rate < 120% - 1 Min Operation • 120% ≤ Output Load Rate < 150% - 10 s Operation • 150% ≤ Output Load Rate < 170% - 5 s Operation • 170% ≤ Output Load Rate - 1 s Operation (Current Peak < 80A)

• 120V/240V AC Output Auto-Shutdown

The eight AC output sockets are controlled together and can be turned on or off by pressing the AC outlet button. If no device is detected and the power is less than 20W, the AC output will automatically turn off after 15 minutes.

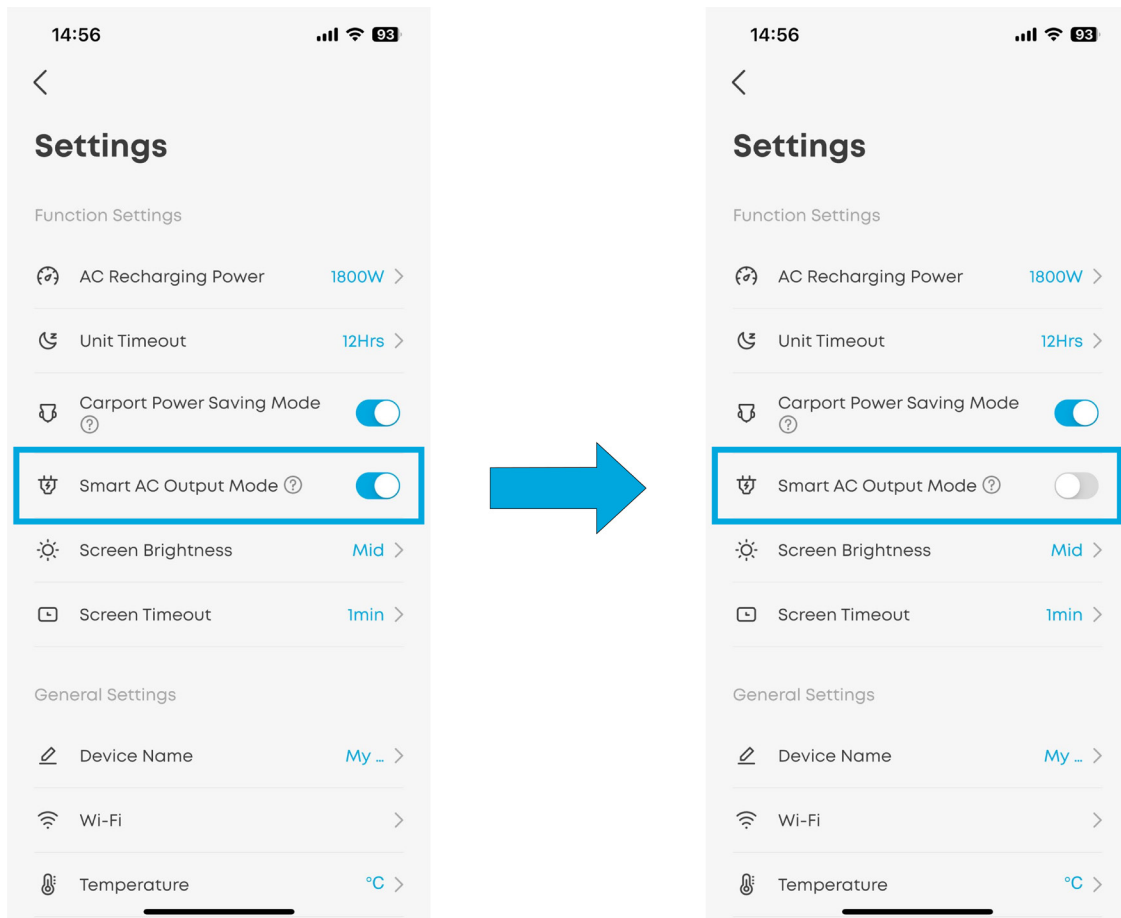
- The six 120V sockets (5-20R) at the bottom are smart sockets that detect connected devices and stay on as long as a device is connected.
- The two sockets (L14-30R 240V and TT-30R 120V) at the top are not smart sockets and cannot detect connected devices.



If the six 120V sockets at the bottom have no devices connected and the two 240V sockets at the top draw less than 20W, the AC output will automatically turn off after 15 minutes. This can happen with intermittently working devices like refrigerators or pumps.

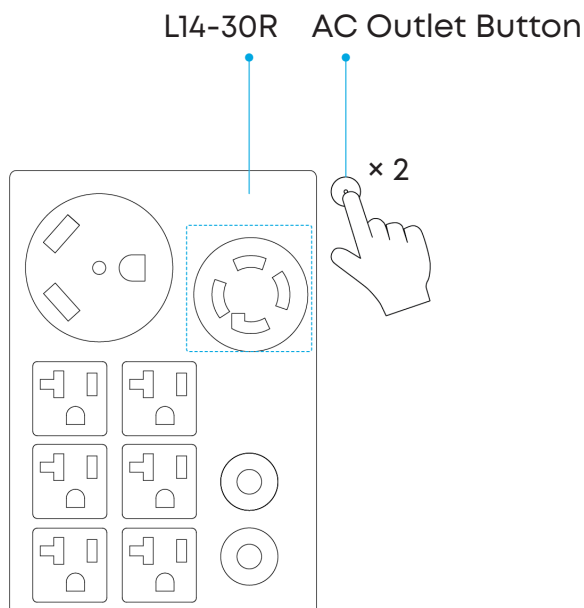
Solution

- Plug a socket into one of the 120V smart sockets to prevent shutdown.
- In the Anker app, go to the F3800 Plus settings page and turn off Smart AC Output Mode. This keeps the AC output on.



2.3.2 EV Mode Charging

- **Usage:** F3800 Plus is for emergency EV charging only, not for regular use.
- **Supported Ports:** L14-30R, 6,000W max output (240V/25A).



Note:

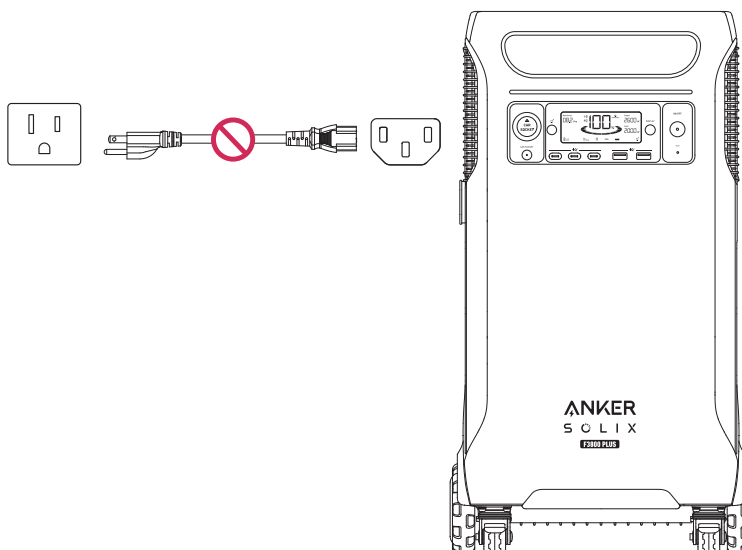
- Before charging an EV, set the charging current on the EV or charger to 25A or lower. F3800 Plus does not support currents above 25A.
- In EV mode, F3800 Plus's 240V AC port is grounded. Ensure the neutral and ground wires in your main panel or transfer switch are properly connected for a safe power supply.

Steps:

- Double-tap the AC outlet button.
- Wait for the car icon to appear on the display.
- Connect the device to the F3800 Plus's L14-30R port.

Note:

When the power station is in EV mode, it cannot be charged via AC simultaneously. Otherwise, the 240V socket will be inactive, and only the three 120V UPS sockets will have power.

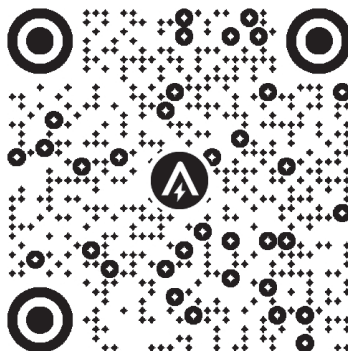


2.4 Connect to the Anker App

2.4.1 Download the Anker App

You can remotely control your power station using the Anker app.

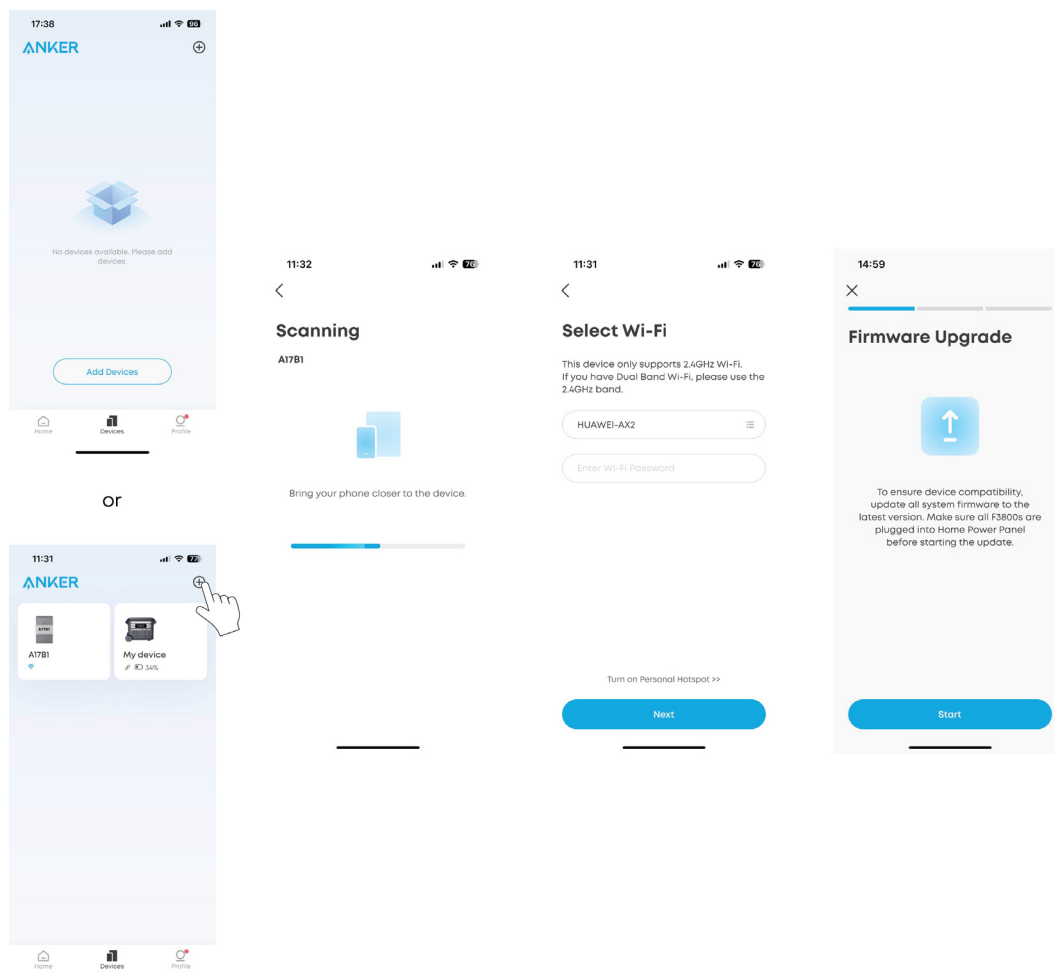
Search and download the "Anker" app from the App Store (iOS devices) or Google Play (Android devices), or by scanning the QR code:



2.4.2 Bind the Device

Register in the app and bind your device to remotely control.

- Log in to the Anker app.
- Select "Add the device" or tap the "+" symbol in the upper right corner, then the app will automatically search the available devices.
- Tap the device you plan to add and you'll be prompted to choose your Wi-Fi.
- Tap "start" to begin the firmware upgrade progress.



2.5 Other Basic Functions

Product	Type	Reference links
Anker SOLIX F3800 Plus Portable Power Station	User Guide	Anker SOLIX F3800 Plus Portable Power Station User Guide
	Installation Video	How to Charge Anker SOLIX F3800 Plus Portable Power Station
Anker SOLIX BP3800 Expansion Battery	User Guide	Anker SOLIX BP3800 Expansion Battery User Guide
Anker SOLIX Double Power Hub	User Guide	Anker SOLIX Double Power Hub User Guide
Anker SOLIX Generator Input Adapter	User Guide	Anker SOLIX Generator Input Adapter User Guide (A17D0)

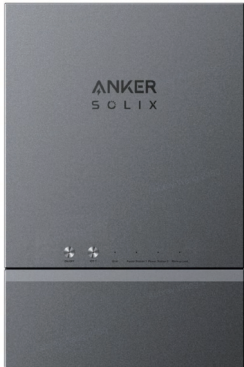
3. F3800 Plus Automatic Home Backup System (Smart Home Power Kit)

3.1 System Overview

Smartly integrate Anker SOLIX F3800 Plus, the utility grid, and your rooftop solar system for maximum power efficiency and seamless backup.

- When connected to the grid:
 - F3800 Plus can be charged using a rooftop solar system.
 - F3800 Plus can also be charged from the grid during super off-peak hours and supply power to the home during peak hours.
- When not connected to the grid:
 - Home Power Panel is connected to F3800 Plus and a 240V third-party generator. During a power outage, the generator powers up the backup loads and recharges F3800 Plus with excess power.

3.2 Component list

Product Name	Check Item	Details
Anker SOLIX F3800 Plus Portable Power Station		A 3,840Wh, 6,000W portable power station with multiple ports for powering devices during outages or outdoors. Note: When F3800 Plus is connected to the Home Power Panel, Home Power Panel controls the AC input and output. The AC input and output ports on F3800 Plus itself are disabled.
Anker SOLIX BP3800 Expansion Battery		A 3,840Wh expansion battery. • One F3800 Plus can connect up to 6 expansion batteries, expandable to 26.9kWh. • Two F3800 Plus units can expand to 53.8kWh.
Anker SOLIX Home Power Panel		When on grid, it supports Self-Consumption, TOU, Manual Backup and Storm Guard modes. During a power outage, it controls F3800 Plus to power the backup loads with a switching time of ≤ 20 ms.
Anker SOLIX Subpanel (24 Circuits, 12 Spaces Backup Load Center)		Backup Load Center: During a power outage, F3800 Plus can power up to 12 loads connected to Anker SOLIX Subpanel.

Anker SOLIX Generator Input Adapter		Connect the generator with F3800 Plus or Home Power Panel.
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3.3 Function and Limitation

3.3.1 Backup function

Smart Home Power Kit has a backup function. During a power outage, the third-party generator supplies power to the subpanel of Home Power Panel and provides excess power to F3800 Plus.

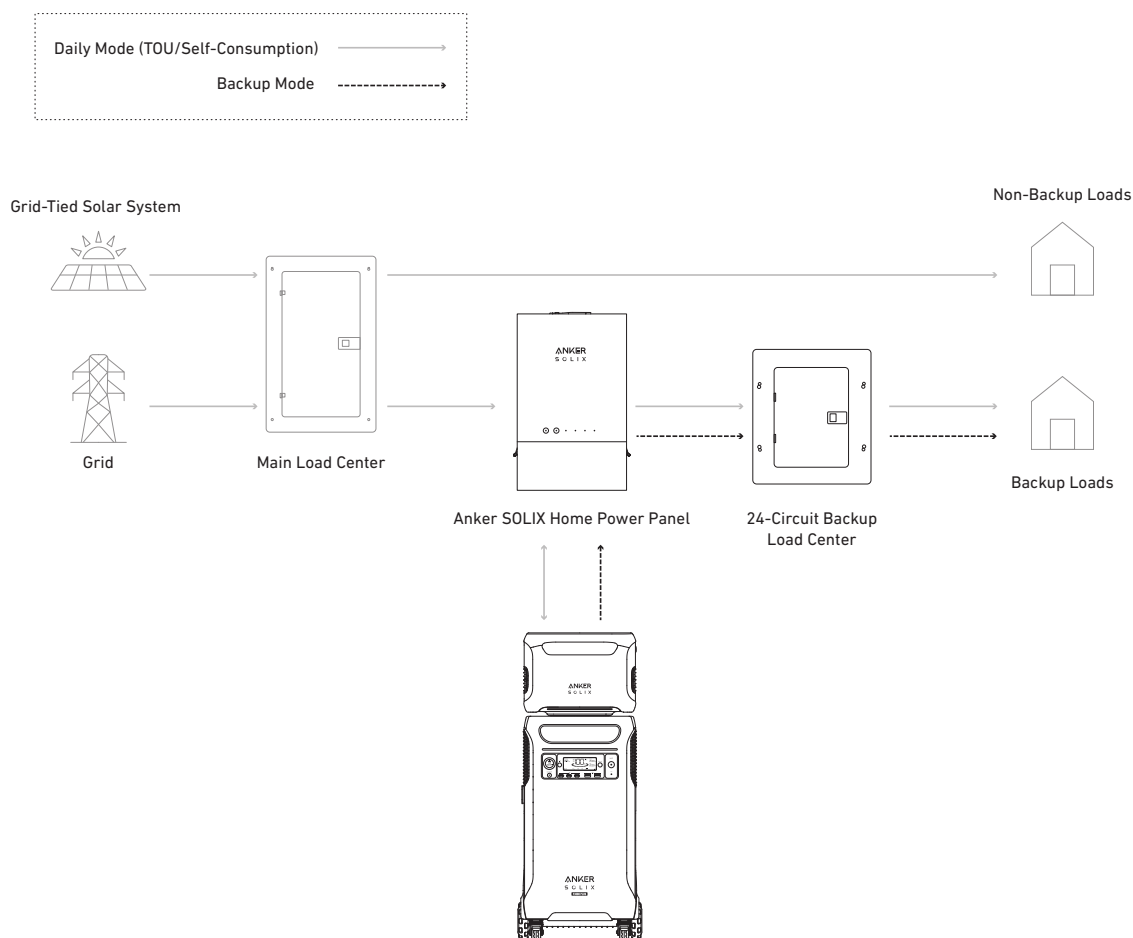
Backup Output Power	F3800 Plus Overload Capacity
• One F3800 Plus provides up to 6kW (240V, 25A or 120V, 25A) through Home Power Panel. • Two F3800 Plus units can provide up to 12kW (240V, 50A or 120V, 50A) through Home Power Panel.	• Output Load Rate < 105% - Long-Term Operation • 105% ≤ Output Load Rate < 120% - 1 Min Operation • 120% ≤ Output Load Rate < 150% - 10 s Operation • 150% ≤ Output Load Rate < 170% - 5 s Operation • 170% ≤ Output Load Rate - 1 s Operation
LRA	Operating Voltage Range
One F3800 Plus LRA: 80A Two F3800 Plus LRA: 160A	176V~264V

Note:

- Avoid connecting high-power devices to the subpanel to avoid quickly depleting F3800 Plus. The load should not exceed 25A (one F3800 Plus) or 50A (two F3800 Plus units).
- During a power outage, grid-tied solar inverters must stop supplying power to the grid due to anti-islanding requirements. In these instances, the solar system will not charge F3800 Plus through Home Power Panel.

3.3.2 On-Grid Operation Functions

When on-grid, Home Power Panel integrates power from F3800 Plus, the utility grid, and the rooftop solar system to supply the home based on the selected mode.



Operating Modes	• Self-Consumption • Time of Use • Manual Backup Power • Storm Guard
Power Sources	Solar, F3800 Plus, Grid
F3800 Plus Output Limits	To extend battery life, Home Power Panel limits F3800 Plus's charge and discharge power when on-grid, ensuring long-term durability and efficiency. This limitation does not apply during power outages. When on-grid: • One F3800 Plus provides about 1.92kW. • Two F3800 Plus provide 3.8kW. • With more than three expansion batteries, the maximum output is 6kW. During a power outage: • One F3800 Plus provides up to 6kW. • Two F3800 Plus units provide up to 12kW.

Home Power Panel Protection Shutdown	• Input current under 55A, Home Power Panel will operate as normal. • Input current between 55A and 75A, Home Power Panel will shut down after 2 minutes. • Input current between 75A and 100A, Home Power Panel will shut down after 1 minute. • Input current over 100A, Home Power Panel will shut down after 10 seconds. When Home Power Panel's shutdown protection activates, F3800 Plus does not output. To reset, remove loads from F3800 Plus and flip Home Power Panel's on/off switch to the on position.
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Output power increases with additional expansion batteries. Please review this chart:

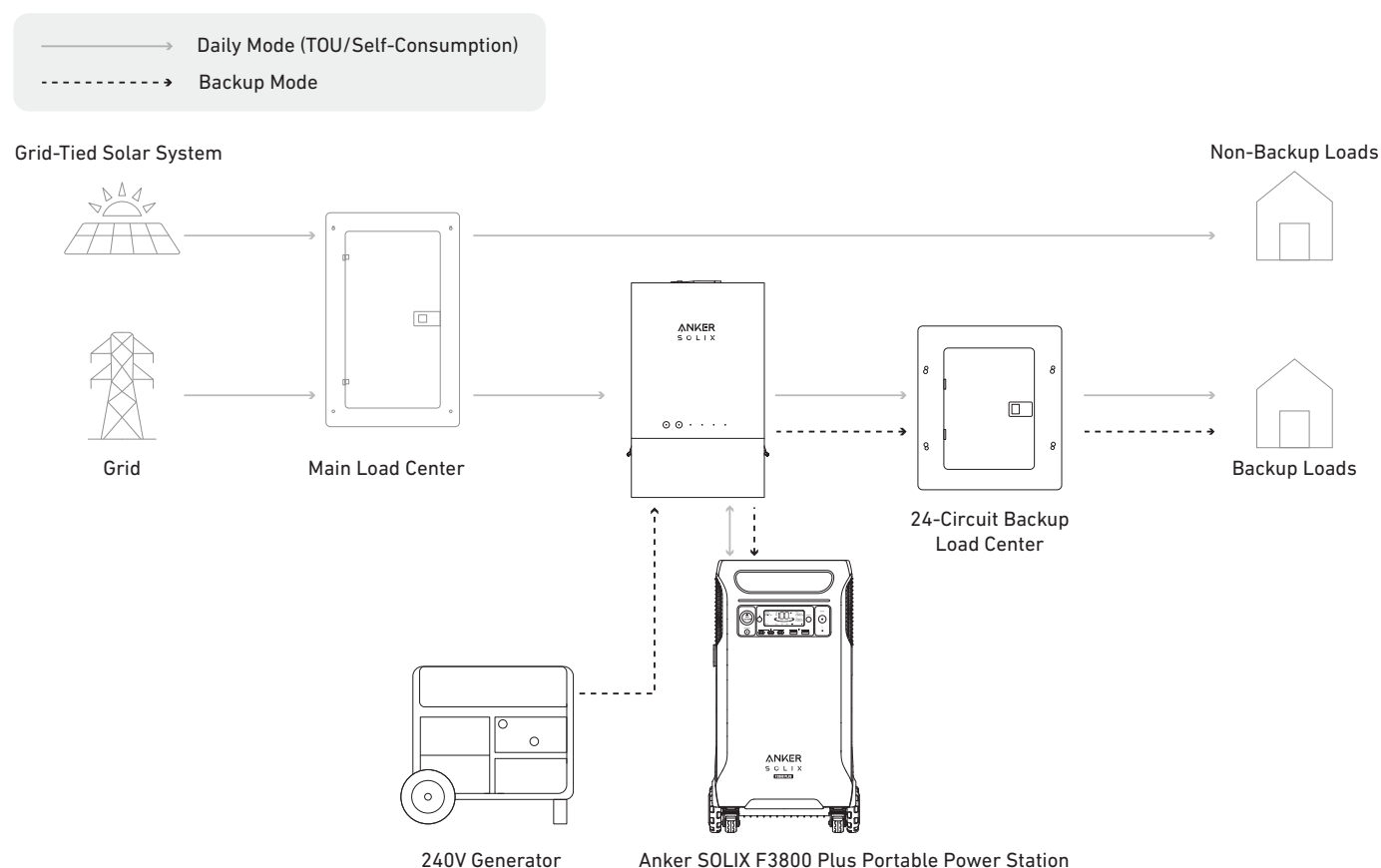
Configuration (Number of Units)		Self-Consumption or Time of Use Modes Activated		Manual Backup Power Mode Activated	During Power Outages
Number of F3800 Plus Units	Number of BP3800 Units	Max Charging Power	Max Discharging Power	Max Charging Power	Max Discharging Power
1	0	1,900W	1,900W	3,800W	6,000W
1	1	2,660W	3,800W	6,000W	6,000W
1	2	3,800W	5,700W	6,000W	6,000W
1	3 or More	3,800W	6,000W	6,000W	6,000W
2	0	2× 1,990W	3,800W	6,000W	12,000W
2	2	5,320W	6,000W	6,000W	12,000W
2	3 or More	6,000W	6,000W	6,000W	12,000W

3.3.3 Off-Grid Operation Functions

Home Power Panel can be connected to a 240V third-party generator. In an off-grid state, when the generator is connected, the power supply to the subpanel switches from F3800 Plus to the generator with a switching time of 30 ms. When the generator runs out of fuel and shuts down, the power supply switches back from the generator to F3800 Plus with a switching time of 50 ms. Once the grid power is restored, the power supply transitions from the generator back to the grid with a switching time of approximately 50 ms.

• System Combination

HPP + Generator	HPP + F3800 + Generator	HPP + F3800 Plus + Generator	HPP + F3800 + F3800 Plus	HPP + F3800 Plus + F3800 Plus
				

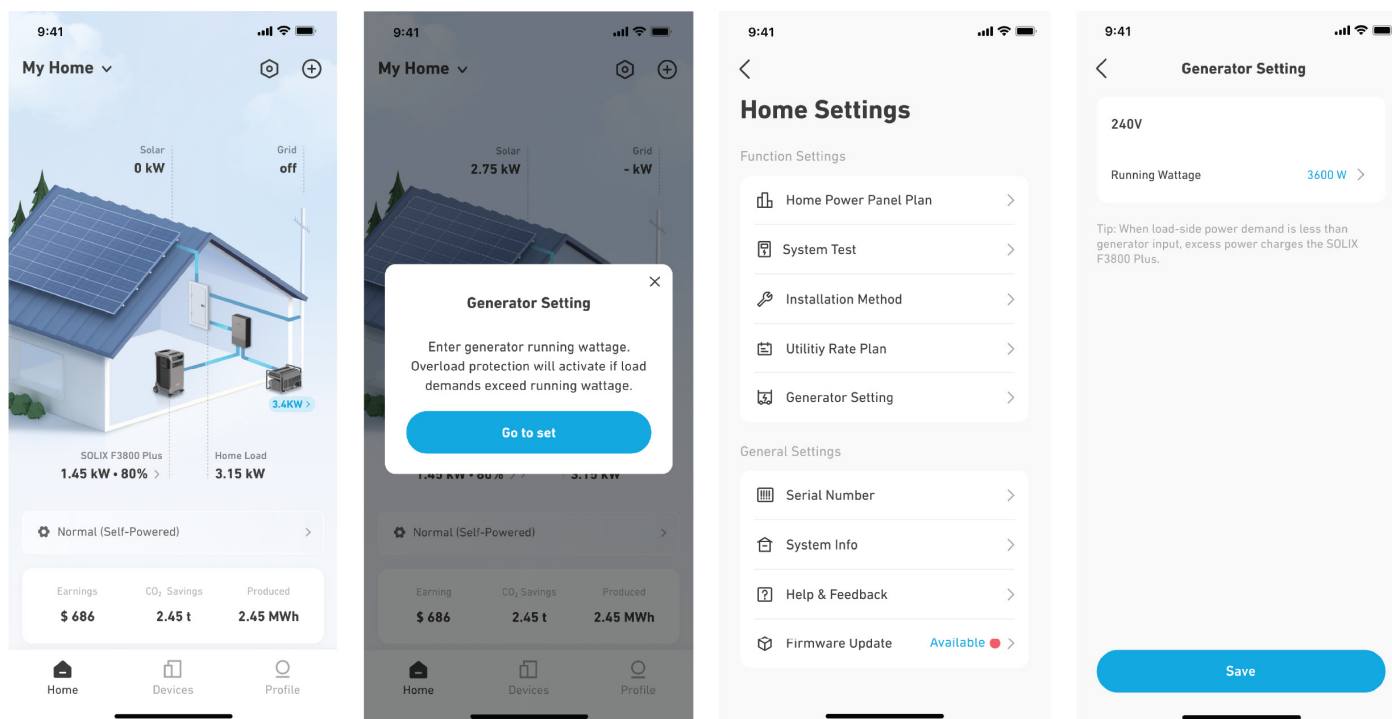


Connecting instructions

- Before connecting, make sure the breaker on the side of Home Power Panel that controls Generator Input Adapter and the generator's main power button are both turned off.
- Connect Generator Input Adapter to either power station port of Home Power Panel.
- Connect Generator Input Adapter to the generator's NEMA L14-30P port (if the generator's output port is NEMA 14-50, you will need to purchase a NEMA L14-30R to 14-50P adapter).
- Turn on the generator and the breaker on the side of Home Power Panel. When the indicator on Generator Input Adapter turns white, it indicates a successful connection.

Setup instructions

- Add Home Power Panel in the app.
- If you're using Generator Input Adapter for the first time, you need to set the generator's running wattage in the app.
- The maximum input power of Home Power Panel is 6,000W. If the generator's running wattage exceeds 6,000W, Home Power Panel will operate at 6,000W only.



Note:

- After the power grid is restored, the connection between Home Power Panel and the generator needs to be disconnected. The steps are as follows:

Turn off the breaker on the side of Home Power Panel that controls Generator Input Adapter.

Manually shut down the generator (please refer to your generator's user manual for details).

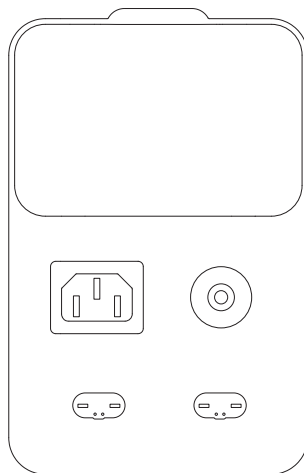
Remove Generator Input Adapter.

3.3.4 Rooftop Solar System

The Home Power Panel system is connected to a grid-tied solar inverter. During a power outage, grid-tied solar inverters must stop supplying power to the grid due to anti-islanding requirements. In these instances, the solar system will not charge F3800 Plus through Home Power Panel.

If your solar panel voltage is between 11V to 165V, connect it directly to F3800 Plus's solar input port to charge. If the voltage is over 165V, it cannot be used during a power outage.

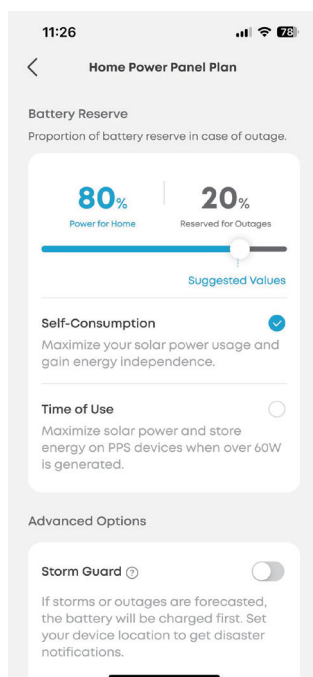
3.3.5 F3800 Plus Solar Panel Connection



Each solar input port supports a voltage range of 11-165V, a maximum current of 17A, and a maximum input of 1,600W. With two ports, the system can handle up to 3,200W in total. Ensure that the total voltage of connected solar panels does not exceed the 165V for each solar input, as this may cause damage to the product or to the solar panels themselves.

3.4 Operating Modes Overview

You can set the daily operating mode to Self-Consumption, Time of Use., Manual Backup Power or Storm Guard.



3.4.1 Self-Consumption

Features	Maximize the use of photovoltaic power and minimize the use of grid power.
Applicable Scenarios	We recommend to choose Self-Consumption mode if photovoltaic power generation is high and daytime load is low. Use photovoltaic power for loads and to charge the battery during the day. When there's no sunlight, the battery supplies power, minimizing grid use.
Prerequisites	A rooftop solar system is required with a 100A CT installed on the power line to collect power data.
Principle	• Maximize the use of photovoltaic power and reduce grid power consumption. • Photovoltaic power first supplies the load then charges F3800 Plus battery. Any excess is fed to the grid. • Power Usage Priority: Photovoltaic > F3800 Plus Battery > Grid. • Only photovoltaic power can charge the F3800 Plus battery.
Note	When the F3800 Plus's battery level falls below the reserve value and there is no photovoltaic power, it will automatically charge from the grid until it reaches the reserve value.

3.4.2 Time of Use

• Overview

Applicable Scenarios	This mode applies to scenarios where there is a large price difference between peak and off-peak hours. You can charge the battery during low-price periods and use battery power during high-price periods.
Principle	Charge the F3800 Plus battery during low-price periods and use F3800 Plus battery power during high-price periods to save on household electricity costs. There are four time periods to choose from. (Note: The grid can only charge the F3800 Plus battery during the Super Off-Peak period): • Peak and Mid-Peak: High-price periods, battery discharges to supply household power. • Off-Peak: Standard-price period, the battery SOC discharges up to 20% to supply household power, reserving at least 80% for high-price periods. (If the battery reserve SOC is set to 90%, then up to 10% can be used to supply the household.) • Super Off-Peak: Low-price period, battery charges only, no discharging.
Note	When the F3800 Plus's battery level falls below the reserve value and there is no photovoltaic power, it will automatically charge from the grid until it reaches the reserve value.

• Operating Principle

App Schedule Settings	When and How to Use	Details
Peak/Mid-Peak	Suitable for high electricity price periods, the battery discharges to power the home. • Power Usage Priority: Photovoltaic > F3800 Plus Battery > Grid. • Photovoltaic Power Supply Priority: Load is supplied first, followed by the F3800 Plus battery. Any excess is fed to the grid. • Only photovoltaic power can charge the F3800 Plus battery.	• Grid Only: Anker SOLIX F3800 Plus can only discharge, not charge. It will discharge until the reserved power level is reached, then stop discharging. • Grid and Solar: If solar output exceeds the home load, the system will prioritize powering the home load with excess power charging Anker SOLIX F3800 Plus up to 100%. If solar output is less than the home load, F3800 Plus discharges until the reserved power level is reached, then stops discharging.
Off-Peak	Suitable for standard-price periods, battery SOC discharges 20% to supply power to the household, reserving 80% for high-price periods. • Power Usage Priority: Photovoltaic > F3800 Plus Battery > Grid. • Solar Power Supply Priority: The load is supplied first, then the battery is charged with excess power, and any power that remains is fed to the grid. • Only photovoltaic power can charge the F3800 Plus battery.	• Grid Only: Anker SOLIX F3800 Plus discharges to 80%. When below 80%, it neither charges nor discharges. • Grid and Solar: If solar output exceeds the home load, the system prioritizes powering the home load with excess power charging Anker SOLIX F3800 Plus up to 100%. If solar output is less than the home load, F3800 Plus discharges to 80% and then stops discharging.

Super Off-Peak	Suitable for low-price periods, the battery only charges and does not discharge. The grid can charge the battery. • Power Usage Priority: Photovoltaic > Grid. • Solar Power Supply Priority: First charge the battery, then supply the load with any excess. • Battery Charging (From PV and Grid): Charging power is automatically adjusted based on battery SOC and available grid charging time.	• Grid Only: Anker SOLIX F3800 Plus can only charge, not discharge. It will charge to 100% or stop when the super off-peak period ends. • Grid and Solar: Anker SOLIX F3800 Plus can only charge, not discharge. It will charge to 100% or stop when the super off-peak period ends, using as much solar power as possible.
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• Setup Instructions

Your region may have two, three, or four different electricity prices. The method for setting the corresponding time periods in the app is as follows:

Actual Local Electricity Prices		How to Set Time Periods in the App and Working Logic	
Type	Electricity Price	Time Period in App	Working Logic
Two Electricity Prices	Peak	Peak	High-price periods, battery discharges to supply power to the household.
	Off-Peak	Super Off-Peak	Low-price periods, battery charges only, does not discharge. The grid can charge the battery.

Three Electricity Prices	Peak	Peak	High-price periods, battery discharges to supply power to the household.
	Mid-Peak	Mid-Peak or Off-Peak	Choose Mid-Peak or Off-Peak: • If you need the battery to discharge even when the SOC is below 80%, choose Mid-Peak. • If you need the battery to stop discharging when the SOC is below 80%, choose Off-Peak.
	Off-Peak	Super Off-Peak	Low-price periods, battery charges only, does not discharge . The grid can charge the battery.
Four Electricity Prices	Peak	Peak	High-price periods, battery discharges to supply power to the household.
	Mid-Peak	Mid-Peak	High-price periods, battery discharges to supply power to the household.
	Off-Peak	Off-Peak	Standard-price periods, the battery discharges up to 20% SOC to supply household power, reserving at least 80% SOC for high-price periods.
	Super Off-Peak	Super Off-Peak	Low-price periods, battery charges only, does not discharge . The grid can charge the battery.

• Setup Instructions

11:26 Home Power Panel Plan

Battery Reserve
Proportion of battery reserve in case of outage.

80% Power for Home | 20% Reserved for Outages

Suggested Values

Self-Consumption ☒
Maximize your solar power usage and gain energy independence.

Time of Use ☐
Maximize solar power and store energy on PPS devices when over 60W is generated.

Advanced Options

Storm Guard ☐ ?
If storms or outages are forecasted, the battery will be charged first. Set your device location to get disaster notifications.

11:33 Utility Rate Plan

Review your custom rate plan details.

Yearly Divisions Year-Long >

Year-Long

Schedule >

11:34 Yearly Divisions

Add and drag slider to adjust season

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

Season Year-Long

Next

11:34 Season Year-Long

Part 1: Schedule

☒ Keep weekend schedule the same as weekdays.

Weekday Mon-Fri

00:00 12:00 24:00

Off-Peak 00:00 - 16:00

Peak 16:00 - 21:00

Off-Peak 21:00 - 24:00

+ Add Time Frame

Weekend Sat-Sun

Next

11:34 Season Year-Long

Part 1: Schedule

☒ Keep weekend schedule the same as weekdays.

Weekday Mon-Fri

00:00 12:00 24:00

Off-Peak 00:00 - 16:00

Add Time Frame

Peak ☐

Mid-Peak ☐

Off-Peak ☐

Super Off-Peak ☐

11:34 Season Year-Long

Part 1: Schedule

☒ Keep weekend schedule the same as weekdays.

Weekday Mon-Fri

00:00 12:00 24:00

Off-Peak 00:00 - 16:00

Peak 16:00 - 21:00

Off-Peak 21:00 - 23:00

Super Off-Peak 23:00 - 24:00

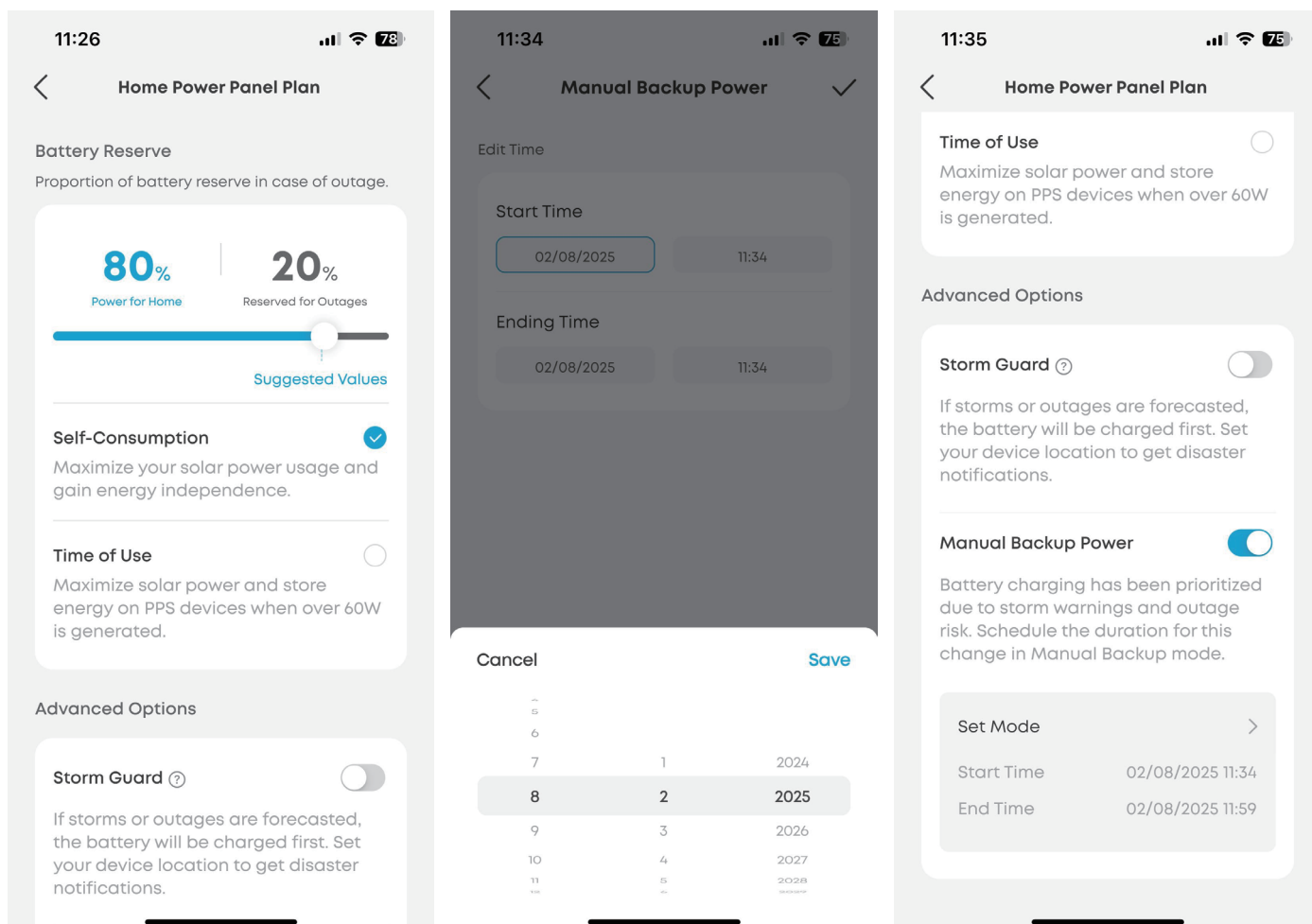
+ Add Time Frame

Next

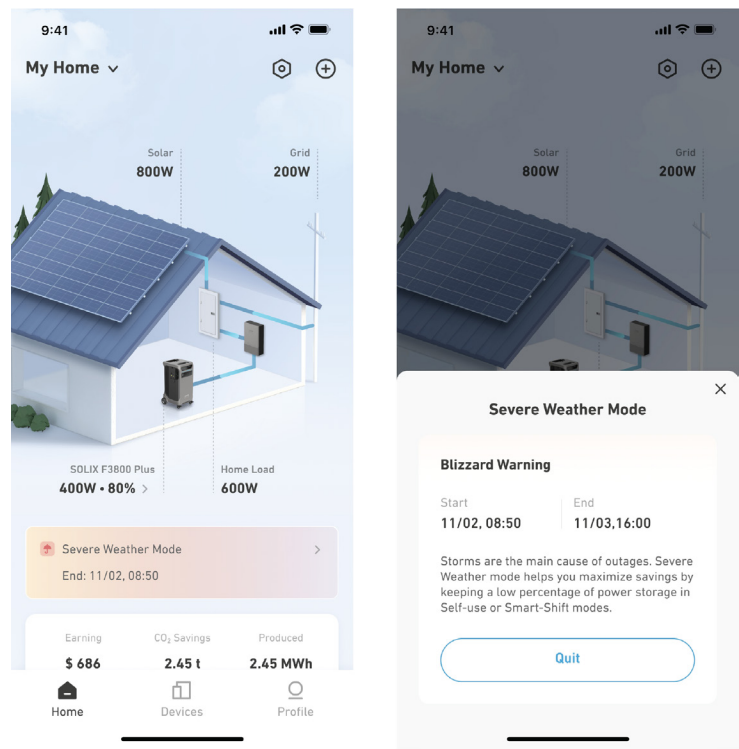
3.4.3 Manual Backup Power

Applicable Scenarios	Manual Backup Power: Implement emergency power storage and backup functions before a power outage occurs due to severe weather.
Principle	Set a time when you want your battery to quickly charge to 100%. In this mode, the battery charges at maximum power, using PV power first. If PV power is insufficient, PV and grid supply power together. • Power Usage Priority: PV > Grid. • Solar Power Supply Priority: First charge the battery, then supply the load with any excess. • Battery Charging: Comes from PV and the grid. Charging at maximum power.

Setup Instructions:



3.4.4 Storm Guard



Applicable Scenarios	After enabling this mode, if there is a power outage or disaster warning in the user's location, the system will switch to Storm Guard during the period before the disaster arrives and after it ends. Once the backup process is complete, the system will automatically revert to the previous power usage strategy.
Principle	Activate Storm Guard: 1. Enable Storm Guard in the app. 2. After enabling Storm Guard, the app will automatically redirect you to a page where you can select the location of the device. 3. Tap "Save" in the upper right corner. 4. Upon receiving an alert from the National Weather Service (NWS), the system will determine the backup time and activate the backup mode based on the time provided in the NWS alert. There are two conditions for ending Storm Guard: 1. The set end time has been reached. 2. You have manually ended Storm Guard. Note: Manual Backup Power and Storm Guard can be enabled simultaneously. When the backup times of the two modes overlap, the system will prioritize Storm Guard. Once Storm Guard is completed, the system will switch back to Manual Backup Power.

3.5 Installation Requirements and Guide

3.5.1 Installation Environment Requirements

- Environmental Requirements

Do not expose the equipment to flammable or explosive gases or smoke. Do not operate the equipment in such environments.

Do not store flammable or explosive materials near the equipment.

Install the equipment in a well-ventilated area away from liquids.

Take precautions when installing in areas prone to natural disasters (e.g., floods, mudslides, earthquakes, hurricanes).

Avoid exposing the product to rain or using it in humid environments.

- Storage and Operating Temperature Range:

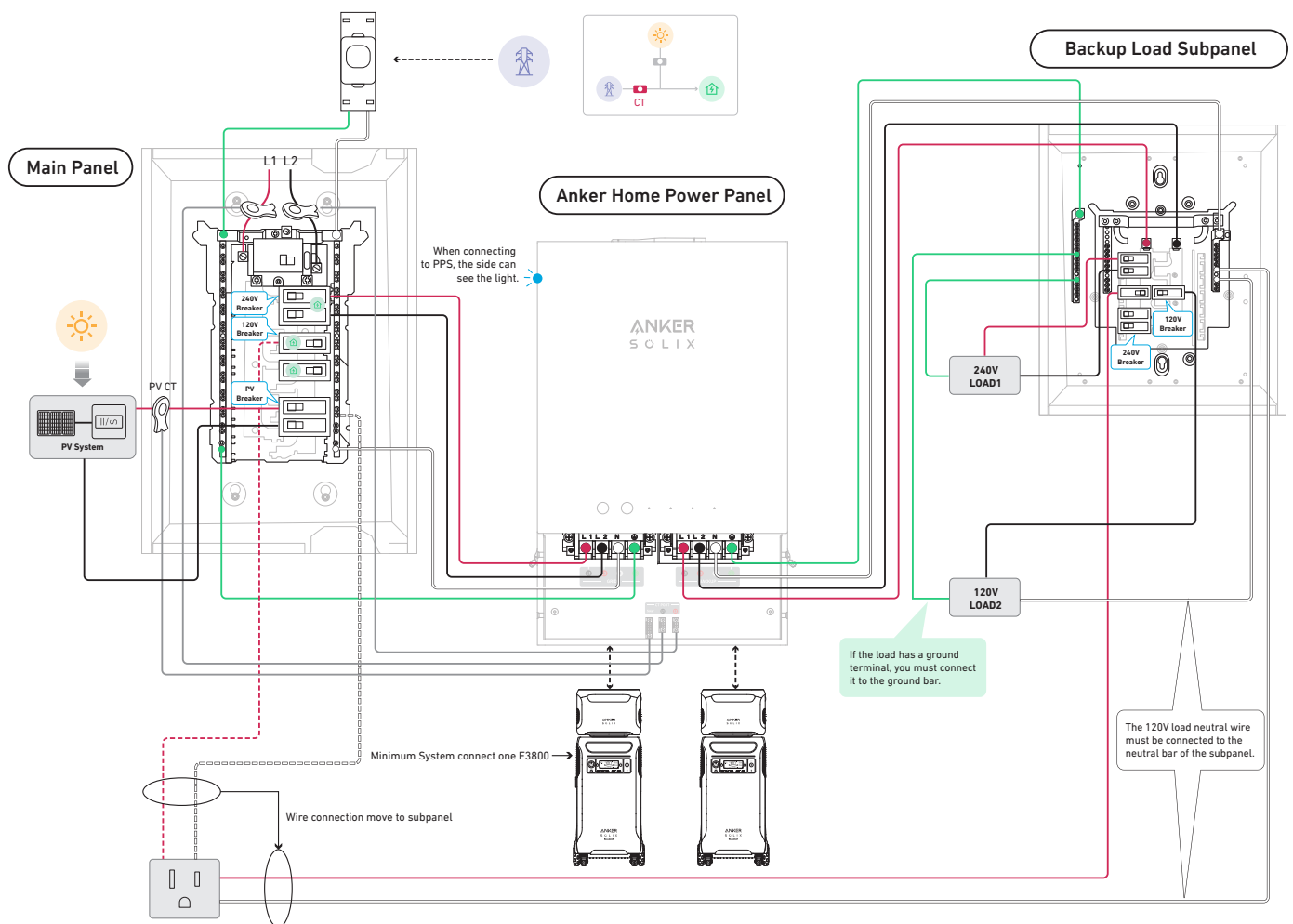
Equipment Operating Temperature: -20°C to 40°C (-4°F to 104°F).

Battery Charging Temperature: 0°C to 40°C (32°F to 104°F).

Battery Discharging Temperature: -20°C to 40°C (-4°F to 104°F).

To prolong battery life, we recommend to use or store the product at temperatures between 20°C and 30°C (68°F and 86°F).

3.5.2 Recommended Wiring Method



For more CT connection methods, see: [Anker SOLIX Home Power Panel Troubleshooting "5.1 Other CT Connection Methods."](#)

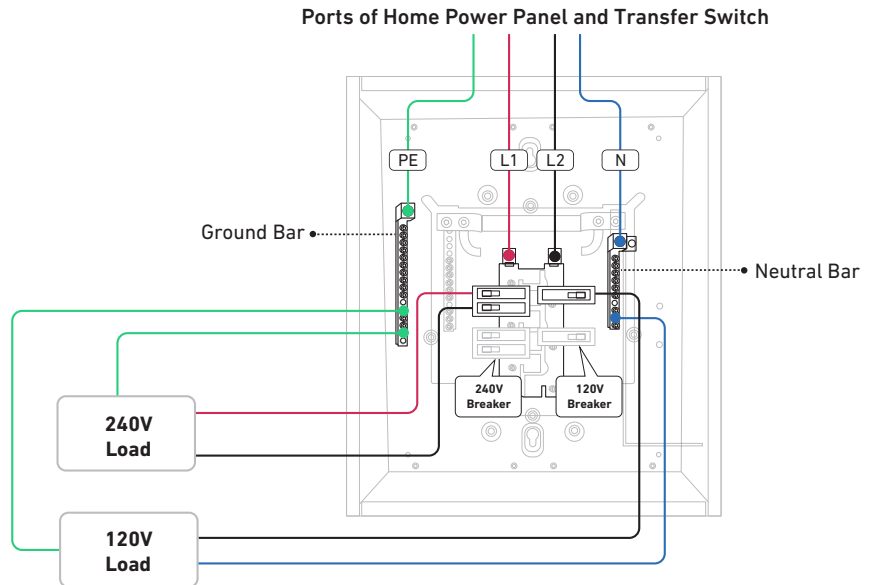
3.5.3 Installation Requirements

WARNING: Confirm the wires inside the subpanel are properly connected. If not, the connection may cause electrical damage to the circuit.

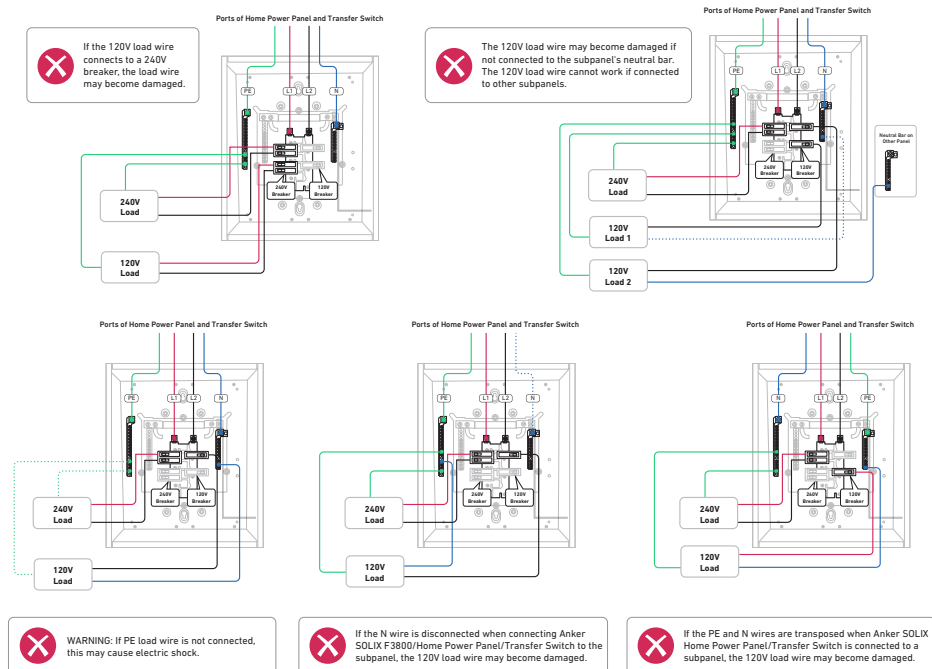


The 120V load neutral wire must be connected to the neutral bar of the subpanel.

If the load has a ground terminal, you must connect it to the ground bar.



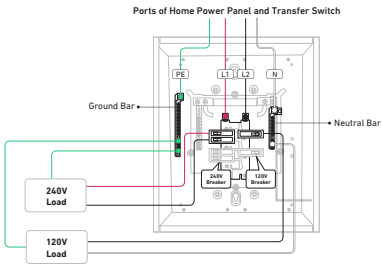
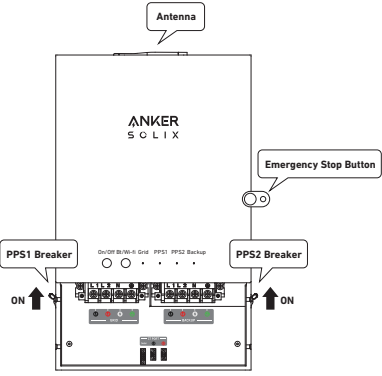
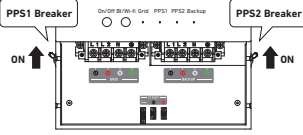
Incorrect subpanel and Home Power Panel/Transfer Switch Connection.



3.5.4 Power On Operation Guide

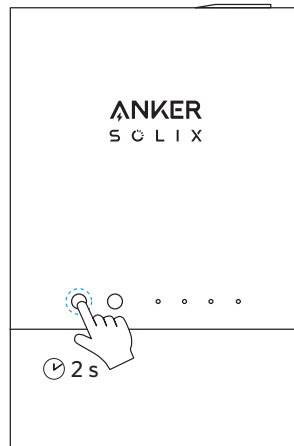
1. Pre-Power-On Check for Home Power Panel

Before turning on the breaker in the main panel that supplies power to Home Power Panel, please confirm the following information:

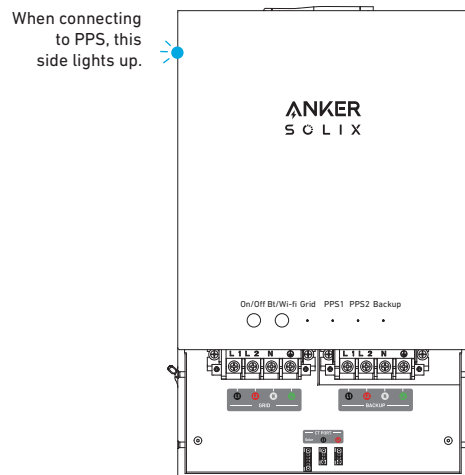
No.	Check Item	Details	Reference Image
1	Wiring	Carefully check if the connections of each subpanel are correct according to the Recommended Connection Diagram, especially the subpanel load's N wire that connects to the Home Power Panel backup.	
2	Button and Breaker Status	1. Confirm the emergency stop button is turned on. 2. Confirm the PPS1 and PPS2 breakers are turned on.	
3	Wi-Fi Antenna	Confirm the Wi-Fi antenna has been raised.	
4	CT	The CT of L1/L2 has been clamped to the correct position. Note: The wrong position of the PV CT does not affect the self-test. It does affect electricity price calculation.	/
5	F3800 Plus	Before connecting F3800 Plus to HPP: 1. Use the Anker app to connect. Confirm the F3800 Plus firmware version is 1.7.6 or above. If not, update to the latest firmware. 2. The battery SOC of the F3800 Plus is <95%. If above this amount, the self-test will be affected.	/

2. Power on Home Power Panel.

- a. Turn on the breaker that supplies power to Home Power Panel in the main panel, supply power to Home Power Panel, and press the on/off button for 2 seconds to turn it on.



- b. After powering on, confirm the indicator light is in the upper left as shown.



No.	Check Item	Details
1	Flashing on/off light.	Self-test was not performed or was unsuccessful.
2	Flashing Bluetooth light.	App is not connected.
3	Steady grid light.	Grid voltage is normal.
4	After connecting PPS, light activates on upper left of HPP.	HPP recognizes physical connection to PPS.
5	PPS 1 / PPS 2 Lights: Steady light with PPS connected. HPP icon appears in lower right of LCD when connected to F3800 Plus.	Normal communication between PPS and HPP.

6	Steady backup light.	Backup two-phase voltage is normal when connected to grid.
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3. Use the Anker app to connect to Home Power Panel.

After the connection, the Bluetooth light remains on. Perform the self-test according to the app prompts:

- Confirm that the firmware is upgraded to the latest version.
- Wait for the self-test to complete.
- Select the CT connection method.
- Select reserved power.
- Select Self-Consumption or Time of Use mode. After the self-test is completed, the on/off light remains on.

3.6 Reference Materials

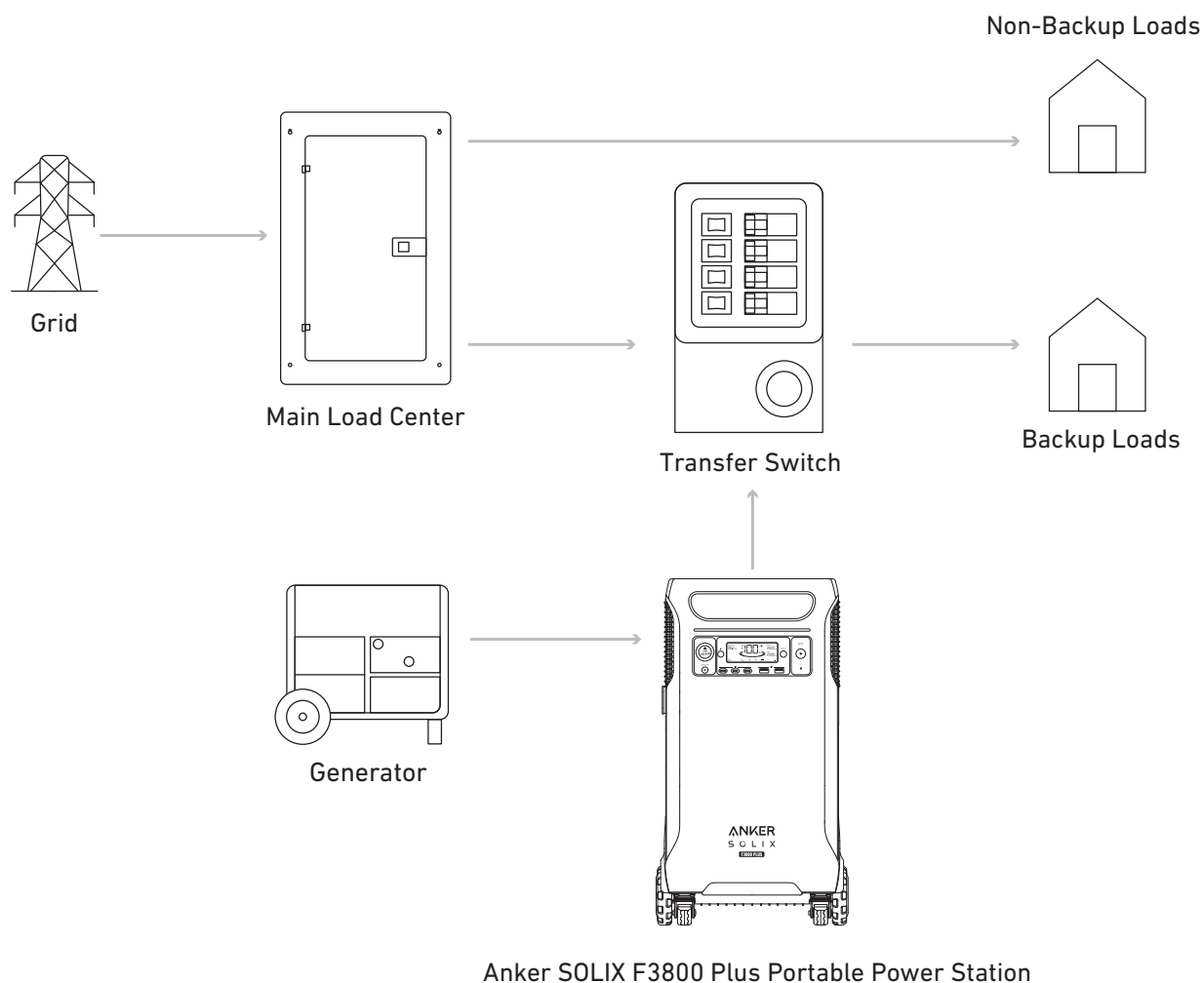
For detailed installation and wiring instructions, refer to the following materials.

Product	Type	Reference Materials
Anker SOLIX F3800 Plus Portable Power Station	User Guide	Anker SOLIX F3800 Plus Portable Power Station User Guide (1790P)
	Installation Video	How to Charge Anker SOLIX F3800 Plus Portable Power Station
Anker SOLIX Home Power Panel	User Guide	Anker SOLIX Home Power Panel User Guide
	Installation Guide	Anker SOLIX Home Power Panel Installation Guide
	Troubleshooting	Anker SOLIX Home Power Panel Troubleshooting
	Installation Videos	1. How to Install Anker SOLIX Home Power Panel 2. How to Connect a 240V Generator to Home Power Panel and F3800 Plus
	Commissioning Video	1. How to Use Anker App to Set up Anker SOLIX Home Power Panel 2. How to Set Up Home Power Panel Usage via the Anker App
Anker SOLIX BP3800 Expansion Battery	User Guide	Anker SOLIX BP3800 Expansion Battery User Guide
Anker SOLIX Generator Input Adapter	User Guide	Anker SOLIX Generator Input Adapter User Guide (A17D0)

4. F3800 Plus Manual Backup System (Home Backup Kit)

4.1 System Overview

The Home Backup Kit includes a transfer switch. F3800 Plus is connected to Anker SOLIX Transfer Switch and a third-party generator via Generator Input Adapter. During a power outage, the generator is manually switched to power household appliances and supplies excess power to charge F3800 Plus.



4.2 Component list

Product Name	Appearance	Functions
Anker SOLIX F3800 Plus Portable Power Station		A 3,840Wh, 6,000W portable power station with multiple ports for powering devices during outages or outdoors. Note: • One F3800 Plus connects to the transfer switch via the 240V port. • Two F3800 Plus units connect to the transfer switch via the 240V/50A port on Double Power Hub.
Anker SOLIX BP3800 Expansion Battery		3,840Wh Expansion Battery • One F3800 Plus can connect up to 6 expansion batteries, expandable to 26.9kWh. • Two F3800 Plus units can expand to 53.8kWh.
Anker SOLIX Transfer Switch		During a power outage, F3800 Plus provides emergency power to home loads through the transfer switch.
Anker SOLIX Double Power Hub		• Connecting two Anker SOLIX F3800 Plus units increases the maximum output from 6,000W, 25A to 12,000W, 50A. • Both Double Power Hub and Generator Input Adapter are connected to Home Power Panel Port of F3800 Plus, therefore, they cannot be used at the same time.

Anker SOLIX Generator Input Adapter		• Connect the generator to F3800 Plus or Home Power Panel.
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4.3 Backup Function

Home Backup Kit has a backup function. During a power outage, manually set the transfer switch to the generator to power the backup loads. Load capacity is as follows:

Backup Output Power	F3800 Plus Overload Capacity
• One F3800 Plus can provide up to 6kW (240V, 25A or 120V, 25A) through Home Power Panel. • Two F3800 Plus units can provide up to 12kW (240V, 50A or 120V, 50A) through Home Power Panel.	• Output Load Rate < 105% - Long-Term Operation • 105% ≤ Output Load Rate < 120% - 1 Min Operation • 120% ≤ Output Load Rate < 150% - 10 s Operation • 150% ≤ Output Load Rate < 170% - 5 s Operation • 170% ≤ Output Load Rate - 1 s Operation

4.4 Installation Requirements and Guide

4.4.1 Installation Environment Requirements

- Environmental Requirements

Do not expose the equipment to flammable or explosive gases or smoke. Do not operate the equipment in such environments.

Do not store flammable or explosive materials near the equipment.

Install the equipment in a well-ventilated area away from liquids.

Take precautions when installing in areas prone to natural disasters (e.g., floods, mudslides, earthquakes, hurricanes).

Avoid exposing the product to rain or using it in humid environments.

- Storage and Operating Temperature Range:

Equipment Operating Temperature: -20°C to 40°C (-4°F to 104°F).

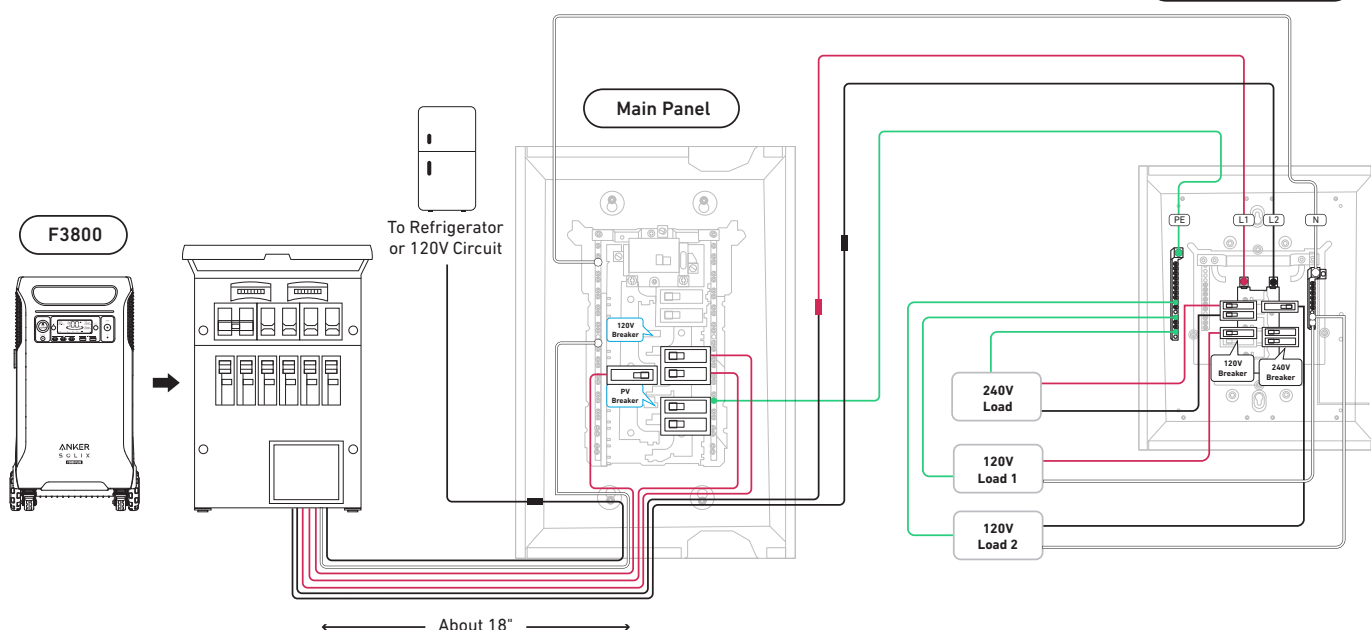
Battery Charging Temperature: 0°C to 40°C (32°F to 104°F).

Battery Discharging Temperature: -20°C to 40°C (-4°F to 104°F).

To prolong battery life, we recommend to use or store the product at temperatures between 20°C and 30°C (68°F and 86°F).

4.4.2 Recommended Wiring Method

1. Connect the transfer switch.

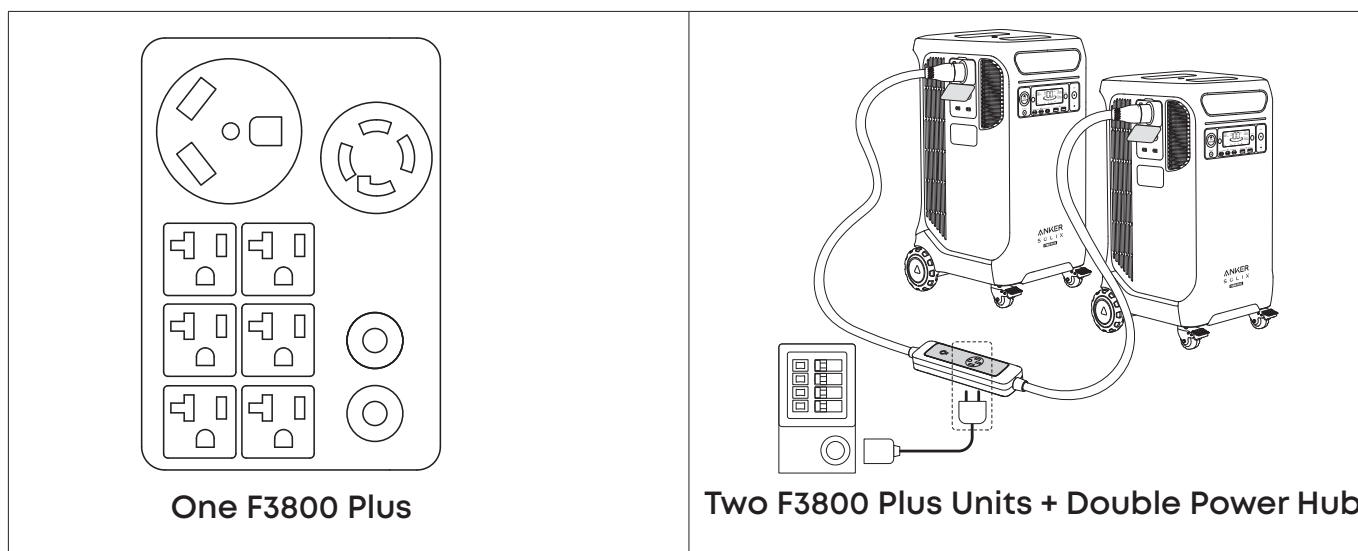


Warning:

- Check and ensure the neutral (N) and ground (PE) wires of the inlet box or transfer switch are properly connected.
- Beware that missing neutral (N) and ground wires may cause appliances damaged on the circuit.

2. Connect F3800 Plus.

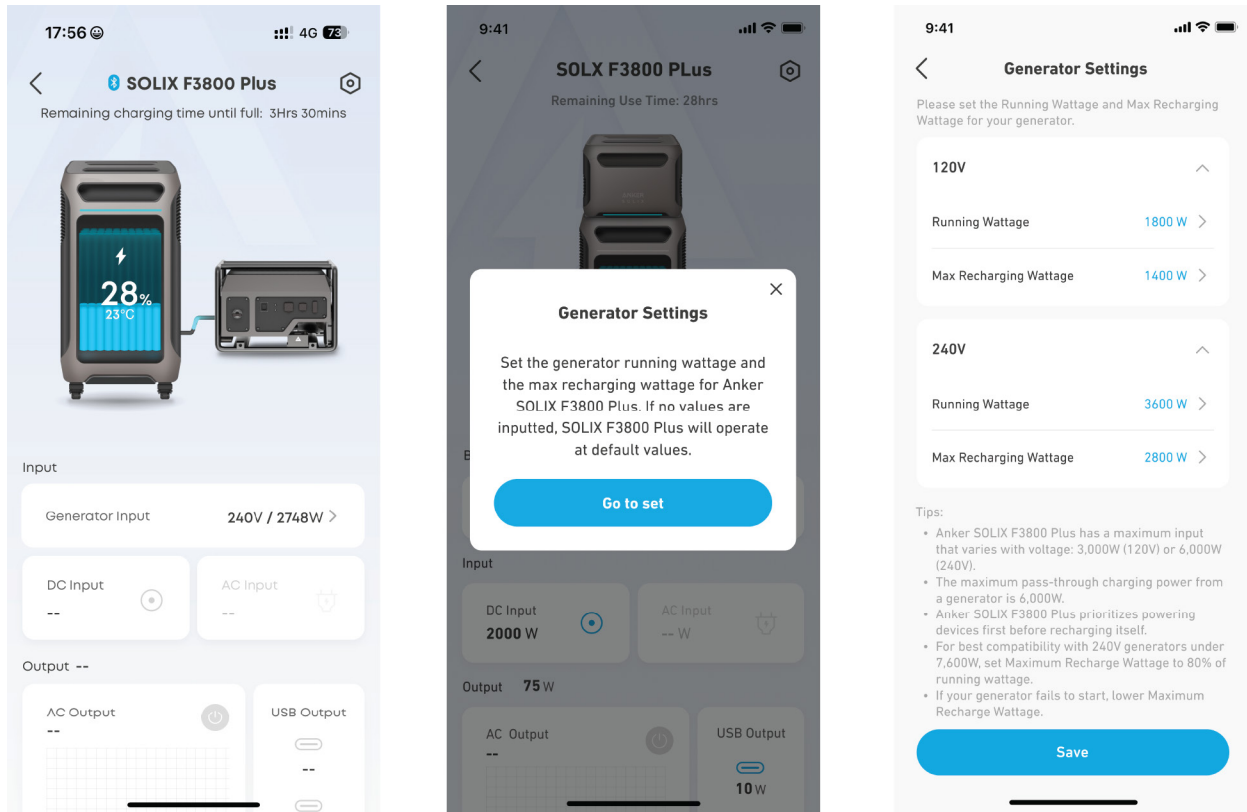
- For one F3800 Plus: Plug the power cable into the 240V port.
- For two F3800 Plus: Connect two F3800 Plus units and plug the power cables into the 240V port of Double Power Hub. Turn on the hub switch. At this point, the AC outputs of the two F3800 Plus units will be disabled, and power output must be accessed through the 14-50 port.



Note:

For 240V, use either a NEMA 14-50 or L14-30 cable, depending on your outlet.

3. Connect the other end of the power cable to the transfer switch.
4. Connect Generator Input Adapter to the Home Power Panel port of F3800 Plus (for one F3800 Plus unit) or the NEMA 14-50 AC output port of Double Power Hub (for two F3800 Plus units).
5. Connect Generator Input Adapter to the generator.
6. If using for the first time, enter the "running wattage" and "maximum recharging wattage" in the app.



7. Manually switch the transfer switch to the generator for emergency backup power.

4.4.3 Installation Requirements

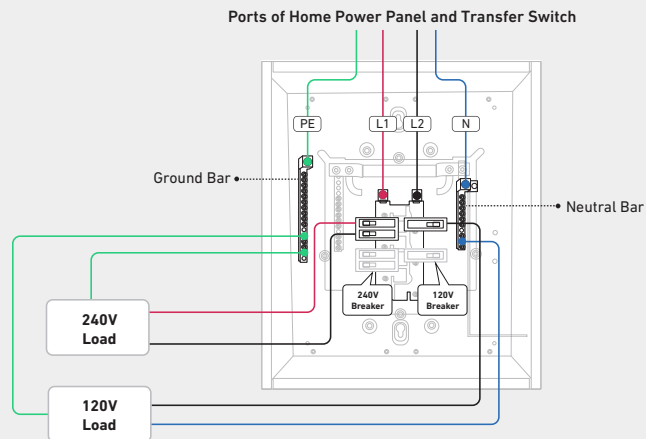
WARNING: Before connecting your Anker SOLIX F3800 Plus to a transfer switch or a subpanel with an inlet box, confirm the wires inside the transfer switch or subpanel are properly connected. If not, the connection may cause electrical damage to the circuit.

Correct Subpanel and Anker SOLIX Home Power Panel/Transfer Switch Connection



The 120V load neutral wire must be connected to the neutral bar of the subpanel.

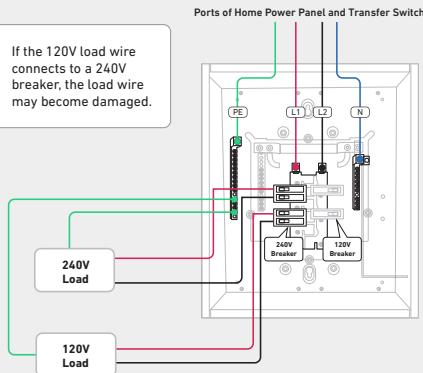
If the load has a ground terminal, you must connect it to the ground bar.



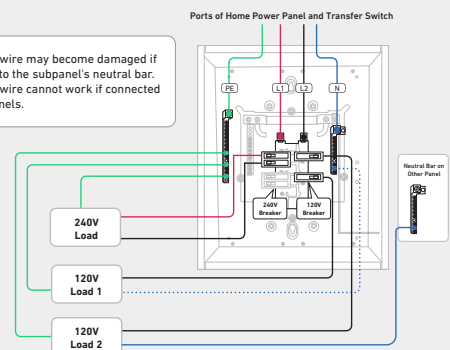
Incorrect Subpanel and Anker SOLIX Home Power Panel/Transfer Switch Connection



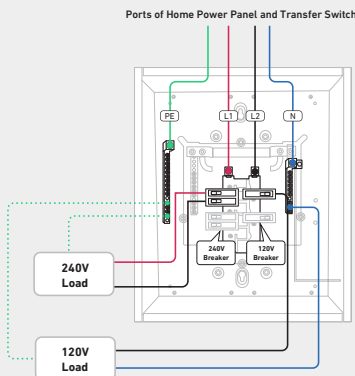
If the 120V load wire connects to a 240V breaker, the load wire may become damaged.



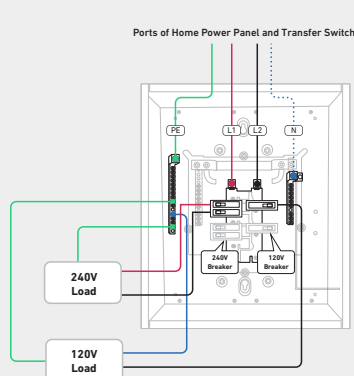
The 120V load wire may become damaged if not connected to the subpanel's neutral bar. The 120V load wire cannot work if connected to other subpanels.



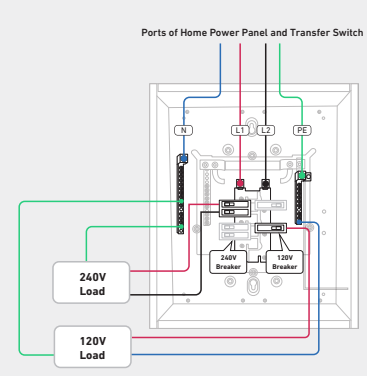
WARNING: If PE load wire is not connected, this may cause electric shock.



If the N wire is disconnected when connecting Anker SOLIX F3800/Home Power Panel/Transfer Switch to the subpanel, the 120V load wire may become damaged.



If the PE and N wires are transposed when Anker SOLIX Home Power Panel/Transfer Switch is connected to a subpanel, the 120V load wire may become damaged.



4.4.4 Reference Materials

For detailed installation and wiring instructions, refer to the following materials.

Product	Type	Reference Materials
Anker SOLIX F3800 Plus Portable Power Station	User Guide	Anker SOLIX F3800 Plus Portable Power Station User Guide (I790P)
Anker SOLIX BP3800 Expansion Battery	User Guide	Anker SOLIX BP3800 Expansion Battery User Guide
Anker SOLIX Double Power Hub	User Guide	Anker SOLIX Double Power Hub User Guide
Anker SOLIX Generator Input Adapter	User Guide	Anker SOLIX Generator Input Adapter User Guide (A17D0)
Anker SOLIX Transfer Switch	Installation Videos	1. How to install transfer Switch 01/06 2. How to install Transfer Switch 02/06 3. How to install Transfer Switch 03/06 4. How to install Transfer Switch 04/06 5. How to install Transfer Switch 05/06 6. How to install Transfer Switch 06/06

Appendix 1: Technical Specifications

Anker SOLIX F3800 Plus

General Information	
Model	A1790P
Product Dimensions	702 × 388 × 395 mm (27.6 × 15.3 × 15.6")
Net Weight	61.5 kg (135.6 lb)
Battery Information	
Battery Type	LiFePO4 Cell
Cell Part Number	32140FS-15,000mAh
Cell Number	80
Cell Capacity	51.2VDC 75Ah / 3,840Wh

Input Information	
AC Input	120V~ 15A Max (< 3 hrs)/12A Max (Continuous), 60Hz, L + N + PE
AC Input Power	Charging: 1,800W Max
	Bypass mode: 1,440W Max
Solar Panel Input	11-165V $\Rightarrow$ 17A Max (1,600W Max per Port)
DC Input Port	60V Max, 120A Max
Output Information	
Car Charging Output	12V $\Rightarrow$ 10A
Home Power Panel Port	6,000W Max (AC Input), 6,000W Max (AC Output), 120V/240V, L1+L2+N+PE
AC Output Power (Total)	6,000W Max
AC Output 1 (the 3 left ports of NEMA 5-20R)	120V~ 20A Max, 60Hz, 2,400W Max
AC Output 2 (the 3 right ports of NEMA 5-20R)	120V~ 20A Max, 60Hz, 2,400W Max
AC Output (NEMA TT-30)	120V~ 25A Max, 60Hz, 3,000W Max
AC Output (NEMA L14-30R)	120V/240V~ 25A Max, 60Hz, 6,000W Max
USB-A Output	5V $\Rightarrow$ 2.4A (12W Max per Port)
USB-C Output	5V $\Rightarrow$ 3A / 9V $\Rightarrow$ 3A / 15V $\Rightarrow$ 3A / 20V $\Rightarrow$ 3A / 20V $\Rightarrow$ 5A (100W Max per Port)
Home Power Panel Port	
AC Input	6,000W
AC Output	6,000W 120V/240V, L1 + L2 + N + PE
Temperature	
Discharging	-20°C to 40°C (-4°F to 104°F)
Charging	0°C to 40°C (32°F to 104°F)
Other	
UPS	20 ms

Anker SOLIX Home Power Panel

Model	A17B1
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Net Weight	8.8 kg (19 lb)
Dimension	500 × 330.2 × 144.8 mm (19.7 × 13 × 5.7")
Installation	Wall
Rated System Voltage	120/240V AC
Grid Wiring Area (Input)	18kW Max, 75A Max, 60Hz, L1 + L2 + N + PE
Grid Wiring Area (Output)	6kW Max (Continuous), 25A Max (Continuous) 60Hz, L1 + L2 + N + PE
Overvoltage Protection of Grid Wiring Area	Phase Voltage: • Overvoltage Point: 135 + 3V • Duration: 200 ms • Recovery Point: 132 ± 3V • Recovery Time: 30 s Line Voltage: • Overvoltage Point: 270 ± 3V • Duration: 200 ms • Recovery Point: 265 ± 3V • Recovery Time: 30 s
Undervoltage Protection of Grid Wiring Area	Phase Voltage: • Undervoltage Point: 83 ± 3V • Duration: 200 ms • Recovery Point: 86 ± 3V • Recovery Time: 30 s Line Voltage: • Undervoltage Point: 166 ± 3V • Duration: 200 ms • Recovery Point: 172 ± 3V • Recovery Time: 30 s
Backup Wiring Area (Output)	12kW Max (Continuous), 50A Max (Continuous) 60Hz, L1 + L2 + N + PE
Power Station 1 Ports (Input)	6kW Max, 25A Max, 60Hz, L1 + L2 + N + PE
Power Station 1 Ports (Output)	3.8kW Max (Continuous), 15.8A Max (Continuous) 60Hz, L1 + L2 + N + PE
Power Station 2 Ports (Input)	6kW Max, 25A Max, 60Hz, L1 + L2 + N + PE
Power Station 2 Ports (Output)	3.8kW Max (Continuous), 15.8A Max (Continuous) 60Hz, L1 + L2 + N + PE

Power Stations 1 and 2 Ports (Total Output)	6kW Max (Continuous), 25A Max (Continuous) 60Hz, L1 + L2 + N + PE
Power Stations 1 and 2 Ports (Total Input)	12kW Max (Continuous), 50A Max (Continuous) 60Hz, L1 + L2 + N + PE
Output Power Factor Rating	One Anker SOLIX F3800, (30% Load) 1.9kW Load, PF > 0.96 Two Anker SOLIX F3800s, (60% Load) 3.8kW Load, PF > 0.98 Two Anker SOLIX F3800s, (100% Load) 6kW Load, PF > 0.985
Nominal Output Voltage (AC)	120/240V
Normal Output Frequency	60Hz
Normal Temperature Range Operation	-20°C to 40°C (-4°F to 104°F)

Anker SOLIX Double Power Hub

Model	A17B2
Dimension	376 × 104.5 × 61.3 mm (14.8 × 4.1 × 2.4")
Net Weight	3.57 kg (7.87 lb)
Input Voltage	120V/240V, 60Hz
Output Voltage	240V, 60Hz
Max. AC Input/Output Power	12,000W Max, 120V/240V, 50A Max, 60Hz, L1 + L2 + N + PE
Operation Temperature	-20°C to 40°C (-4°F to 104°F)

Anker SOLIX BP3800 Expansion Battery

General Information	
Product Dimensions	393 × 355 × 262 mm (15.5 × 14.0 × 10.3 in)
Net Weight	33 kg (72 lb)
Battery Information	
Cell Capacity	51.2VDC, 75Ah / 3,840Wh

Port Information	
Expansion Battery Port Input	75A Max
Expansion Battery Port Output	170A Max
Temperature Information	
Discharging	-20°C to 40°C (-4°F to 104°F)
Charging	0°C to 40°C (32°F to 104°F)

Anker SOLIX Generator Input Adapter

Total Length	2 m (6.6 ft)
Operation Temperature	-20°C to 40°C (-4°F to 104°F)
Rated AC Input/Output	120V/240V, 25A Max (< 3 Hr), 6,000W Max/24A Max (Continuous)

Anker SOLIX Transfer Switch

Model	A17B3
Voltage	125V/250V
Frequency	60Hz
Rated Power	12,500W
Rated Current	50A
Conduit Length	45.72 cm (18")
Number of Circuit Breakers	(10) Total circuits (6) 15A 1-pole (1) 20A 2-pole (1) 30A 2-pole
Weight	7.28 kg (16.05 lb)
Product Dimensions	117.5 × 112.5 × 47.5 mm (4.6 × 4.4 × 1.9")

Appendix 2: Main Differences Between F3800 and F3800 Plus

Standalone Scenario	F3800	F3800 Plus
Power Station + Battery		
Power Station + AC Charging Cable (AC Input Port) + 120V Generator		
Power Station + Adapter + 240V Generator		
1 Power Station + HPP + Generator		
2 Power Stations + HPP + Generator		
2 Power Stations + Double Power Hub		
Power Station + 240V Transfer Switch + Generator		
Power Station + 120V Transfer Switch + Generator		
Working Mode	F3800+HPP	F3800 Plus + HPP
Self-Consumption		
Time of Use		
Manual Backup Power		
Storm Guard		

Appendix 3: Generator Compatibility

A1790

Generator	F3800	F3800 + Transfer Switch / Inlet Box	F3800 + Home Power Panel	2× F3800 + Home Power Panel	2× F3800 + Double Power Hub
240V Generator					
120V Generator	Generator connects to F3800's AC input port**. • Charging Power: 1,800W Max • Bypass Mode: AC Input Port (120V 1,440W Max)				

Note:

F3800 can be powered by a fuel generator with a pure sine wave (THD < 5%) as an alternative to grid power.

A1790P

Third-Party Generator	F3800 Plus	F3800 + Transfer Switch / Inlet Box	F3800 + Home Power Panel	2× F3800 + Home Power Panel	2× F3800 + Double Power Hub
240V Generator	The generator is connected to F3800 Plus's Home Power Panel port. • Charging Power: • 3,300W Max (Without Batteries) • 4,300W Max (With 1 Battery) • 6,000W Max (With 2 Batteries) • Bypass Mode: • L14-30R (240V 6,000W Max) • TT-30R (120V 3,000W Max)	The generator is connected to F3800 Plus's Home Power Panel port. • Charging Power: • 3,300W Max (Without Batteries) • 4,300W Max (With 1 Battery) • 6,000W Max (With 2 Batteries) • Bypass Mode: • L14-30R (240V 6,000W Max)	The generator connects to the PPS 1 or PPS 2 port of the HPP. • Output Power: 240V 6,000W Max		

120V Generator	The generator connects to F3800 Plus's HPP port: • Charging Power: 3,000W Max • Bypass Mode: • TT-30R (120V, 3,000W Max, Bypass) The generator connects to the AC input port**: • Charging Power: 1,800W Max • Bypass Mode: • AC Input Port (120V, 1,440W Max)	The generator connects to F3800 Plus's HPP port: • Charging Power: 3,000W Max • Bypass Mode: • TT-30R (120V, 3,000W Max, Bypass) The generator connects to the AC input port: • Charging Power: 1,800W Max • Bypass Mode: • AC Input Port (120V, 1,440W Max)			
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Note:

When the generator connects to the AC input port, F3800 Plus can be powered by a fuel generator with a pure sine wave (THD < 5%) as an alternative to grid power.

Appendix 4: Common Generator Faults and Solutions

Fault Description	Possible Cause	Solution
The generator is connected to F3800 Plus via the generator cable, but it either fails to recharge or recharges inconsistently.	Abnormal generator output voltage.	- Use the Anker app or a multimeter to check the generator's output voltage. For a 240V generator, ensure that the voltages of L1, L2, and L1-L2 are normal. - The indicator light on Generator Input Adapter alternates between white and red.
	Generator Input Adapter is not properly connected to the Home Power Panel port.	Ensure Generator Input Adapter is properly connected to the Home Power Panel port. If not, reconnect it securely and try recharging again.
	The Generator Input Adapter connection cable has malfunctioned.	- If the indicator light on Generator Input Adapter is off, it indicates a fault with the adapter. Replace Generator Input Adapter. - If the indicator light on Generator Input Adapter is red, it indicates a fault with the adapter or a communication issue with F3800 Plus. Replace Generator Input Adapter.
	Abnormal charging power.	If the indicator light on Generator Input Adapter is white, it indicates normal communication with F3800 Plus. Lower the charging power (start with the lowest charging level, and gradually increase it once stable), then try recharging again.
	Abnormal generator output.	If recharging remains unstable after lowering the charging power as described above, it indicates an issue with the generator's output. Proceed to troubleshoot the generator for potential faults.

The generator is connected to F3800 Plus via the generator cable and can supply power to the load. However, the generator produces abnormal noises, or the screen shows the input power repeatedly disappearing, or the load status fluctuates intermittently.	Abnormal generator output voltage.	Use the Anker app or a multimeter to check the generator's output voltage. For a 240V generator, ensure that the voltages of L1, L2, and L1-L2 are normal.
	Abnormal generator load operation.	- Attempt to operate the generator independently without connecting it to F3800 Plus to verify if it functions normally. - If the generator operates abnormally under load, it may indicate insufficient output capacity. Reduce the load to ensure proper operation.
	Generator Input Adapter is not properly connected to the Home Power Panel Port.	Ensure that Generator Input Adapter is properly connected to the Home Power Panel port. If not, reconnect it securely and try recharging again.
	Abnormal load performance on F3800 Plus.	- Attempt to operate F3800 Plus independently without connecting the generator to verify if it functions normally. - If the generator operates normally under load but F3800 Plus experiences an overload when operating independently, it indicates that the load exceeds the F3800 Plus's output capacity (maximum 6kW for split-phase, 3kW for single-phase). Reduce the load accordingly.
	Abnormal charging power.	- We recommend first testing the generator and F3800 Plus separately to power the load independently. - If both operate normally, the issue may be caused by abnormal charging power. In this case, try lowering the charging power (We recommend to start at 80% of the generator's running wattage and gradually reduce it in 20% increments based on performance). Then, manually enable the output to power the load, adding loads one at a time, ensuring the previous load operates stably before adding the next.
	The screen shows the load status fluctuating repeatedly.	Ensure that the load power connected to F3800 Plus does not exceed the generator's power capacity.

The generator is connected to F3800 Plus and can recharge it, but the F3800 Plus output is disabled and unable to power the load.	Abnormal generator output voltage.	Use the Anker app or a multimeter to check the generator's output voltage. For a 240V generator, ensure that the voltages of L1, L2, and L1-L2 are normal.
	Generator Input Adapter is not properly connected to the Home Power Panel port.	Ensure Generator Input Adapter is properly connected to the Home Power Panel port. If not, reconnect it securely and attempt recharging again.
	Abnormal generator load operation.	- Attempt to operate the generator independently without connecting it to F3800 Plus to confirm if it functions normally. - If the generator operates abnormally under load, it may indicate insufficient output capacity. Reduce the load to ensure stable operation.
	Abnormal load operation of F3800 Plus.	- Attempt to operate F3800 Plus independently without connecting the generator to confirm if it functions normally. - If the generator operates normally under load, but F3800 Plus experiences an overload when operating independently, it indicates that the load exceeds the F3800 Plus's output capacity (maximum 6kW for split-phase, 3kW for single-phase). In this case, reduce the load accordingly.
	Abnormal charging power.	- We recommend to first test the generator and F3800 Plus separately to power the load individually. - If both operate normally, the issue may be caused by abnormal charging power. In this case, try lowering the charging power (We recommend to start at 80% of the generator's running wattage and gradually reduce it in 20% increments based on performance). Then, manually enable the output to power the load, gradually adding loads one at a time, ensuring the previous load operates stably before adding the next.

The generator is connected to Home Power Panel via the generator cable but fails to supply power or provide stable power to the backup devices.	• Fault in Home Power Panel or F3800 Plus.	• Turn off the generator and connect F3800 Plus to Home Power Panel. Verify that both grid-tied and off-grid operations are functioning normally. If not, troubleshoot Home Power Panel or F3800 Plus for potential faults.
	• Abnormal generator output or load operation.	• Use the Anker app or a multimeter to check the generator's output voltage. For a 240V generator, ensure that the voltages of L1, L2, and L1-L2 are normal.
	• Adapter connection cable malfunction.	• Determine the status based on the indicator light of Generator Input Adapter: • Off: The adapter is faulty, replace it. • Red: The adapter is faulty, or there is a communication issue with F3800 Plus; replace the adapter. • White: The adapter is communicating normally with F3800 Plus. Turn off all backup loads, then gradually reconnect them one by one, ensuring the previous load is stable before adding the next.

Appendix 5: FAQ

Q1: When recharging F3800 Plus with a 120V AC input, can I use its 240V output socket to charge other devices?

No, when F3800 Plus is recharging via the 120V AC input, you can only use its three 120V UPS sockets and AC Output port (NEMA TT-30) to charge other devices. The other three 120V ports and 240V ports do not function. The connected devices get power directly from the power grid.

It supports 1,440W UPS. During a power outage, F3800 Plus switches to battery power within 20 ms, ensuring uninterrupted AC output. When grid power is restored, it switches back automatically.

Note: If the battery depletes during a long outage, F3800 Plus will shut down all output ports. The AC output must be manually turned on by pressing the AC outlet button once grid power is restored.

Q2: How should I store and maintain the power station?

When storing your power station, please make sure that you:

- Turn off the main power button.
- Store the power station in a dry and cool environment.

- Check the remaining battery capacity each week. If the battery level is below 30%, fully charge the power station. Additionally, we recommend to charge the battery to 100% every three months, then discharge it completely, and finally charge it between 50% to 80%.

Notes: F3800 Plus can be placed horizontally (flat) or vertically.

Q3: Can the rooftop solar system charge F3800 Plus through Home Power Panel during a power outage?

The rooftop solar system cannot charge the F3800 Plus through Home Power Panel in the event of a power outage. To charge F3800 Plus during an outage, the solar panels must be connected directly to the unit via the solar input ports.

If your rooftop solar array offers an output voltage of less than 165V, during an outage, you can try to disconnect the rooftop solar array from the inverter and connect it to the F3800 Plus via solar input ports directly.

If your rooftop solar array offers an output voltage of more than 165V, it cannot power F3800 Plus directly.

Q4: Why is the power of F3800 Plus only about 1.9kW when connected to Home Power Panel when there is grid power?

To preserve the battery's life, the discharge rate is limited to undergrid connected conditions, even though the unit has a rated capacity of 6kW. This precaution ensures the durability and efficient performance of the system over time.

When connected to the grid, a single F3800 Plus unit connected to your Home Power Panel can deliver approximately 1.92kW to the load. If you add one more F3800 Plus to the Home Power Panel, it can offer 3.8kW output to the loads. When you add more than three expansion batteries to Home Power Panel, the maximum combined output can reach up to 6kW.

In the event of a power outage, a single F3800 Plus unit can provide a maximum output of 6kW through Home Power Panel. Two F3800 Plus units can provide a maximum output of 12kW through Home Power Panel.

Q5: Is Anker SOLIX Generator Input Adapter compatible with Anker SOLIX F3800 Portable Power Station?

No, Anker SOLIX Generator Input Adapter is not compatible with Anker SOLIX F3800 Portable Power Station. It is only compatible with Anker SOLIX F3800 Plus Portable Power Station, or with Anker SOLIX Home Power Panel when connected in the automatic home backup scenario.

Q6: If Double Power Hub is connected to two F3800 Plus units, and one of the units is depleted and stops working, will Double Power Hub's output be affected?

When Double Power Hub is connected to two F3800 Plus units, it can only work normally if both F3800 Plus units function properly. Therefore, if the battery of one F3800 Plus unit is depleted, Double Power Hub will not output normally.

Appendix 6: Troubleshooting

Q1: What should I do if I cannot connect F3800 Plus to the Anker app via Bluetooth?

If you cannot connect F3800 Plus to the Anker app via Bluetooth, try the following steps:

- Remove F3800 Plus from the Anker app and then press the F3800 Plus IoT button for more than 7 seconds to unpair it.
- Afterward, press the IoT button once, attempt to search for and reconnect F3800 Plus to see if the issue persists.

If the issue still persists, contact Anker customer service and provide the following information:

- A short video demonstrating the issue.
- Device logs for further analysis.
- The serial number (SNXXXX) on the back of the power station.

Q2: What should I do if I cannot connect F3800 Plus to the app via Wi-Fi?

If you can not connect F3800 Plus via Wi-Fi, you can attempt to connect F3800 Plus to your phone's hotspot (2.4GHz only) without using the router to see if the issue still occurs. If F3800 Plus connection is stable, the problem may be caused by the Wi-Fi connection. In this situation, you can try to resolve the problem by completing the following steps:

- Ensure you are connecting to a 2.4GHz Wi-Fi network, not a 5GHz network
- Please confirm if the Wi-Fi username and password have been entered correctly.
- Ensure that your usage area is consistent with the registration area
- Check the distance between your router and F3800 Plus. If possible, move F3800 Plus to a position that is within 10 m (33 ft) of the router. Also, try to minimize obstacles and walls between them to ensure that there is a strong Wi-Fi signal. Alternatively, add more repeaters to enhance the signal.
- Try removing the device from the Anker app and then press the IoT button on the main unit for more than 7 seconds to unpair it. Afterward, attempt to search for and reconnect the device to see if the issue persists

If the issue still persists, contact Anker customer service and provide the following information:

- Please provide the model of your router, the phone model, and the app version.
- Please provide the serial number (SN XXXX) on the back of the power station.
- Upload the logs (both App logs and device logs) for further analysis.
- Please use another phone to take a short video showing the issue

Q3: Why is the charging power only around 680W or 700W at low temperatures? Why is F3800 Plus charging slowly?

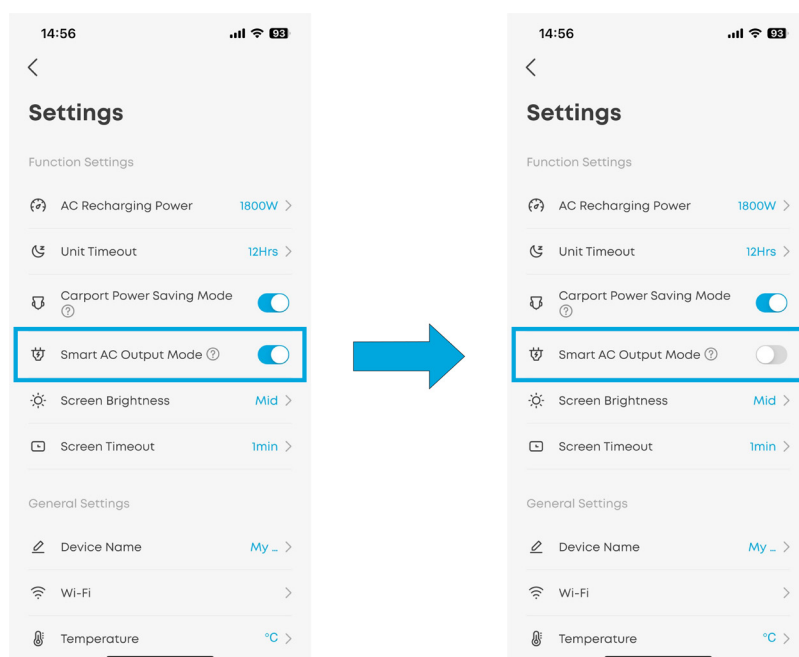
Due to the characteristics of cell batteries, the charging current is limited to below 700W when the cell temperature is below 10°C (50°F). Please charge until all cell temperatures rise above 10°C (50°F), at which point the charging power can reach its maximum of 1,800W. You can connect to the Anker app to check battery cell temperatures.

Q4: Why does the AC port of F3800 Plus shut off automatically?

The eight AC output sockets are controlled together. You can turn them on or off by pressing the AC outlet button. If the system detects no device connected to the AC outlets and the power is less than 20W, the AC output will automatically turn off after 15 minutes.

Solutions:

- Plug into one of the 120V smart outlets (without connecting a device). This way, the smart outlet detects a connected device and will not shut off the output.
- Or, in the Anker app, go to the F3800 Plus settings page and turn off Smart AC Output Mode. This will keep the AC output on.

**Q5: Why can't solar panels offer full output to F3800 Plus?**

- Please update the firmware to the latest version. Then try using the solar panel to see if it works better.
- If you have more than one solar panel to power F3800 Plus, please test each solar panel individually to see how it works.
- Factors that can influence the output power of solar panels include:
- Illuminance: The amount of light that the solar panel receives directly impacts its output power. The higher the light intensity, the more power the solar panel can generate.

- Angle: The angle at which the sunlight hits the solar panel also plays a significant role. The optimal angle can vary depending on your geographical location and the time of year.
- Temperature: Solar panels are sensitive to temperature. High temperatures can reduce the efficiency of solar panels, thus decreasing their output power.
- Panel Shading: The surface of the solar panel should not be blocked during use. Shadows, foreign objects, and shading from glass can all significantly reduce power output.

If the issue still persists, contact Anker customer service and provide the following information:

- Photos of the solar panel from various angles.
- The duration of exposure to sunlight before measuring power output
- Whether the solar panel feels hot to the touch when operating at this power level.
- If you use an extension cable and how long is the cable that connects F3800 Plus and the solar panels (If possible, try removing the extension cable).
- A short video showing how you use solar panels to power F3800 Plus.