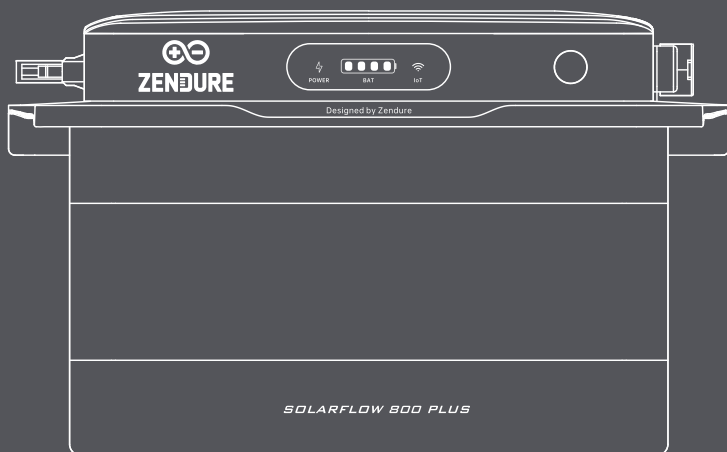




ZENDURE

The Global Pioneer of Plug-in HEMS



SolarFlow 800 Plus

User Manual/Bedienungsanleitung/Manuel d'utilisation/
Manuale d'uso/Manual de usuario/Gebruikershandleiding

Disclaimer

Please read all safety guidelines, warnings, and other product information in this manual carefully, and read any labels or stickers attached to the product before using. Users are fully responsible for the safe usage and operation of this product. Make sure you are familiar with the relevant regulations in your area. It is your sole responsibility to ensure compliance with these regulations while using Zendure products.

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1. SolarFlow 800 Plus Specification

SolarFlow 800 Plus Power Station	
Parameter	Specification
Model	ZDSF800PLS
PV Input	
Max. PV Input Voltage	55V d.c.
Max. PV Input Current	18A d.c.
Max. PV Input Isc	22.5A d.c.
Max. PV Input Power	1500W(2*750W)
Operating Voltage Range	14-55V d.c.
AC Parameter	
Max. AC Continuous Output Power (on-grid)	800W
Max. AC Continuous Output Current (on-grid)	3.5A a.c.
Max. AC Continuous Input Power	1000W
Max. AC Continuous Input Current	4.35A a.c.
AC Input/Output Voltage/Frequency	230V a.c. ,50Hz
Power Factor	0.8(lagging)-0.8(leading)
SolarFlow 800 Plus Battery (Port)	
Battery Type	LiFePO ₄
Battery Rated Energy	1920Wh
Battery Rated Voltage	48V d.c.
Charge/Discharge Power	1200W/800W
Charge/Discharge Current (Without Extra Battery)	25A d.c./16.7A d.c.
Charge Temperature	0° C to 55° C
Discharge Temperature	-20° C to 60° C
Charge/Discharge Voltage Range	37.5V d.c. to 54.75V d.c.
Max. Charge/Discharge Current	25A d.c.
General Information	
Protection Class	Class I
Recommended Temperature Range	-20° C to 55° C
Type of Enclosure	IP65
Bluetooth	Bluetooth 5.0 Frequency 2402-2480MHZ
	Maximum Transmit Power20.0 dBm
Wi-Fi	Wi-Fi 4 (802.11b/n/g) Frequency:2412-2472MHZ
	Maximum Transmit Power20.0 dBm
Dimensions	393 × 236 × 242 mm
Weight	21.1kg

2. Safety Instruction

2.1 Safety Guidelines

1. Please carefully read all current documentation before installing, using, or servicing the product, as documentation may be updated over time.
2. Please check whether the product is damaged, cracked, leaking liquids, becoming hot, or exhibiting other abnormalities, and check any cables for damage before operating. If there are any problems, please stop using the product immediately and contact our customer service.
3. To ensure safe use of the product and maintain your warranty rights, please avoid the following improper operations: overcharging, over-discharging, using non-original accessories, or disassembling the product yourself. Damage caused by such improper use is not covered under warranty. For detailed disclaimer terms, please refer to <https://eu.zendure.com/pages/warranty-policy>.
4. Do not place heavy objects on top of the product.
5. Make sure all cords and plugs are intact and dry before connecting to avoid electric shock.
6. Do not install or operate the system under extreme climatic conditions such as lightning, snow, heavy rain, strong winds, etc.
7. To reduce the risk of injury, close supervision is necessary when the product is used near children.
8. Keep hands and fingers away from the product's internal components.
9. For safety purposes, please use only the original charger and cables designed for the equipment. We are not liable for damage caused by third-party equipment, and this may render your warranty invalid.
10. Maintain a minimum clearance of 50mm between the product and any surrounding objects.
11. During the operation of the solar energy system, avoid direct sunlight to prevent the product from overheating. Do not place the product near any heat source.
12. Please install the product according to our user manual to avoid damage to the product or injury to other people.
13. Do not use this product near strong static electricity or strong magnetic fields.
14. Do not place the equipment in an environment with flammable or explosive compounds, gas, or smoke. Since the product relies on the shell to dissipate heat, exposing the enclosure to excessive heat will lead to damage.
15. To reduce the risk of damage to the electric cords and connectors, pull the connectors rather than the cord when disconnecting the product.
16. Do not use the product in excess of its output rating. Overloads may result in a risk of fire or injury to persons.
17. Do not use any products or accessories that are damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior, resulting in fire, explosion, or risk of injury.
18. Do not operate the product with a damaged cord or plug, or a damaged output cable.
19. Do not disassemble the product. Take it to a qualified service person when service or repair is required. Incorrect reassembly may result in a risk of fire or electric shock.
20. Do not expose the product to fire or high temperatures.
21. Do not attempt to replace the internal components of the equipment by any unauthorized personnel. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
22. The product has a protection level of IP65, so the product cannot be immersed in liquids. If the product accidentally falls into water during use, please place it in a safe and open area and stay away from it until it is completely dry. The dried product should not be used again and should be properly disposed of according to the disposal guidelines in this manual.
23. The product may feel warm when it's working. This is a normal operating condition and should not be a cause for concern.
24. To reduce the risk of electric shock, disconnect the solar photovoltaic panels, batteries, and home grid before attempting any instructed servicing.
25. When charging the battery, work in a well-ventilated area and do not restrict ventilation in any way, as inadequate ventilation may cause permanent damage to the equipment.
26. Do not clean the product with harmful chemicals or detergents. Only clean it with a dry cloth.
27. Do not move or shake the unit while operating, as vibrations and sudden impacts may lead to poor connections to the hardware inside.
28. Ensure that the product and the batteries are installed securely to avoid accidents and product damage caused by falling.
29. In case of a fire, only a dry powder fire extinguisher is suitable for this product.
30. Servicing of batteries should be performed or supervised by personnel knowledgeable about batteries and the required precautions.

2.2 Disposal Guide

1. Fully Discharge the Battery (if possible): Before disposal, ensure the battery is fully discharged. This can reduce potential hazards. Always refer to local laws and guidelines for battery recycling and disposal procedures.
2. Handling Failed Batteries: If the battery cannot be fully discharged due to malfunction or product failure, consult a licensed battery recycling facility or professional for proper and safe handling.
3. Segregation of Battery Types: Ensure batteries or cells from different electrochemical systems (e.g., lithium-ion, nickel-metal hydride) are disposed of separately. Mixing different types of batteries can lead to chemical reactions or safety risks.
4. Avoid Physical Damage: Do not expose the battery to physical impacts, punctures, or high temperatures during disposal, as it may lead to leakage, fire, or explosion.
5. Follow Local Regulations: Always adhere to local regulations and guidelines for battery disposal, as improper handling can harm the environment and violate legal requirements.

2.3 EC DECLARATION OF CONFORMITY

ZENDURE TECHNOLOGY CO., LIMITED declares that the SolarFlow 800 Plus complies with the directive 2014/53/EU (RED), 2011/65/EU(RoHS), 2015/863/EU(RoHS).

The full text of the Declaration of Conformity is available at the following web address: <https://zendure.de/pages/download-center>

	Declaration of conformity The EU Declaration of Conformity can be requested at this address: https://zendure.de/pages/download-center
	Disposal and Recycling Disposal of packaging: dispose of the packaging separately by type of material.
	Disposal of old equipment (applies in the European Union and other European countries with separate collection (waste collection) Old equipment must not be disposed of in household waste. Every consumer is legally obligated to dispose of old equipment that can no longer be used separately from household waste, for example at a collection point for recyclables. To ensure proper recycling and avoid negative impact on the environment, electronic devices must be taken to an appropriate collection site. For this reason, electronic devices are marked with the symbol shown to the left.
	Batteries and accumulators must not be disposed of in household waste. As a consumer, you are legally obligated to dispose of all batteries and accumulators, regardless of whether they contain pollutants or not, at a designated collection point. Marked with: Cd = Cadmium, Hg = Mercury, Pb = Lead. Discharge any built-in or accessory batteries before disposing.

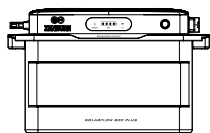
3. Symbols Used in This Guide

Symbol	Explanation
	A high-risk hazard that, if not avoided, could result in death or serious injury.
	Important information that you must pay attention to.
	Included with your product
	Optional (not included)
	Indicates additional information on correct use or useful tips.

4. Important Tips

	Grid-tied Regulation: The solar PV system is grid-tied. Please check if it is allowed in your area.
	Protect from Direct Sunlight: Ensure that the SolarFlow 800 Plus is placed in a shaded area to avoid rapid temperature increases that could affect performance.
	Accessory Check: Verify the necessary accessories prior to installation, as some may need to be purchased separately.
	Download the Zendure App: After installation, download the Zendure app to unlock additional smart features and remote control options.
	Grid Connection Time: Once installation and the initial startup are complete, allow approximately 1 minute for the SolarFlow 800 Plus to connect to the grid.
	Set Safe AC Output: Use the Zendure app to configure the AC output for home use. Ensure the output complies with your country or region's safety power limits to prevent overloads.
	Shutdown Procedure: Before removing the SolarFlow 800 Plus, press and hold the button for 6 seconds to turn off the device, and disconnect all power cables for safety.
	Optimal Operating Conditions: It is recommended to use this product in environments ranging from 15°C to 30°C, away from water, heat sources, or sharp objects that could cause damage.
	Long-Term Storage: For long-term storage, discharge the battery to 30% and recharge it to 60% every 3 months. If it drops below 1% after use, recharge it to 60% before storing. Prolonged low power can cause irreversible damage and shorten the battery's lifespan.
	No Disassembly: Do not attempt to disassemble the product. For repairs or servicing, consult official Zendure channels. Improper handling could pose risks of fire or personal injury.
	Low SOC Protection: The battery has a 5% discharge limit to prevent over-discharge and extend its lifespan.

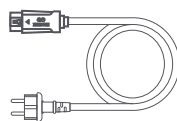
5. What's in the Box



SolarFlow 800 Plus *1



User Manual *1



3m 10A AC Power Cable*1



Bracket Kite



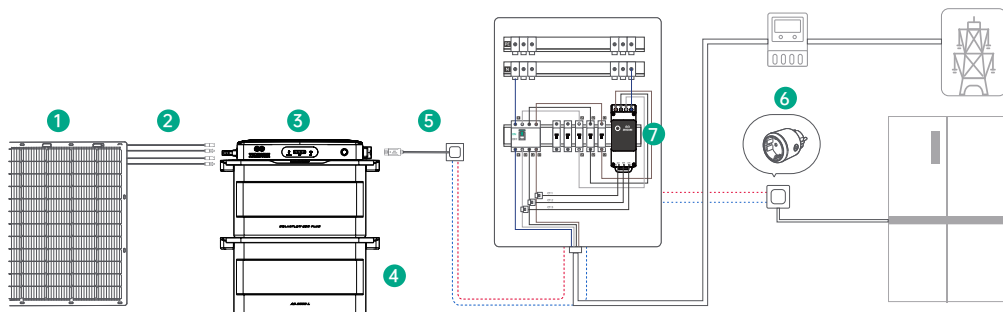
Wrench for Removing Solar Connector
and AC Connector*1

Before unpacking, check the packaging for any damage (e.g., holes or cracks). If damaged, do not unpack and contact Zendure service team immediately.

After unpacking, verify that all items are intact, complete. If anything is missing or damaged, contact customer service.

6. Overview

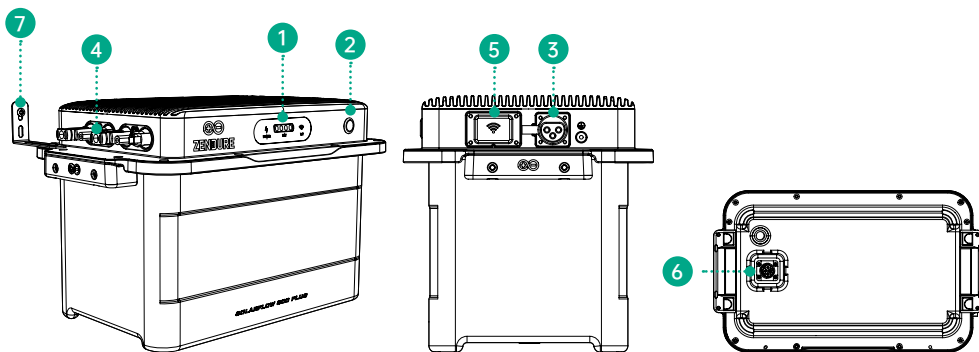
6.1 System Overview



	Name	Description	Included/Not Included
1	Solar Panel	The SolarFlow 800 Plus supports up to four sets of solar panels for efficient power generation.	
2	Solar Cables	Used to connect the SolarFlow 800 Plus to the solar panels.	
3	SolarFlow 800 Plus	Interconnects solar panels, add-on batteries, and the household grid, ensuring efficient energy storage and seamless power conversion.	
4	Add-on Battery	Expandable batteries that store electricity for household use. The SolarFlow 800 Plus can connect to up to 5 add-on batteries.	
5	AC Power Cable	Connects the SolarFlow 800 Plus inverter to the household power socket.	
6	Zendure Satellite Plug	Monitors device performance and wirelessly communicates with the SolarFlow 800 Plus to optimize energy usage.	
7	Zendure Smart Monitor CT	Monitors household electricity consumption and wirelessly communicates with the SolarFlow 800 Plus for energy optimization.	

Optional accessories are available for purchase on the official Zendure website.

6.2 Product Overview



1	LED Light Strip	LED indicators for battery status, power, and IoT connectivity.
2	Button	Front control button for system controls.
3	AC Port	AC input port for connecting to the AC power cable.
4	PV Port 1-2	Ports for connecting up to four sets of solar panels.
5	Antenna	Wireless communication antenna for system connectivity.
6	Battery Terminal	Port for connecting add-on batteries to the system.
7	Brackets	Mounting brackets for securing the system to a wall.

6.3 Button Controls

Button	Action	Function
	Press once (powered on)	LED indicator lights up to show remaining battery level or other operational statuses.
	Press for 2 seconds	Turns on the SolarFlow 800 Plus.
	Press for 3 seconds	Resets the Wi-Fi connection.
	Press for 6 seconds	Turns off the SolarFlow 800 Plus.

6.4 LED Display

LED Indicator	LED Description	Detailed Explanation
	Green solid light	Device is powered on.
	Off	Device is powered off.
	Red fast flashing	Device has detected a fault.
	Green slow flashing	Device is in automatic network configuration mode.
	Red fast flashing	Network connection failure.
	Green fast flashing	Press and hold the button for 3 seconds to enter manual network setup.
	Green solid light	Network configuration successful.
	Yellow slow flashing	OTA (Over-the-Air) update in progress.
	Green slow flashing	Battery is charging.
	Green solid light	Battery is connected and operating normally.
	Yellow fast flashing	Battery is low on charge.
	Yellow solid light	Battery BMS (Battery Management System) has triggered protection.
	Yellow slow flashing	Battery is heating up due to low temperature.
	Red fast flashing	Battery BMS has detected an error.

7. Installing the SolarFlow 800 Plus

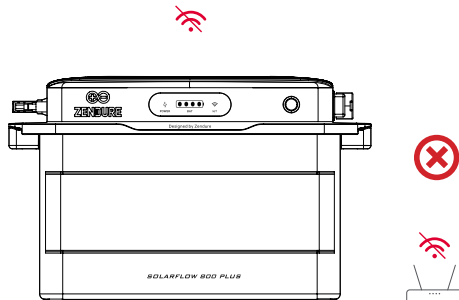
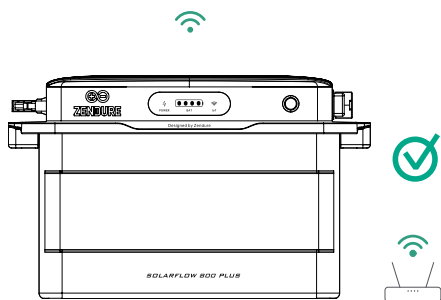
7.1 Before Assemble



- This user guide only describes the cable connection method and assembly of the SolarFlow 800 Plus system. To install solar modules, please read the instructions for the solar module and accessories.
- We recommend carrying out any solar-related setup on a sunny day, as it will be easier to assess the performance of your system and check for any issues.

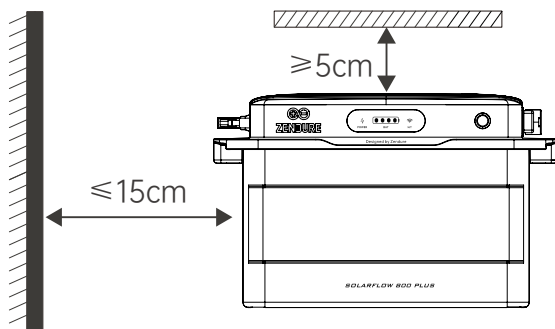
7.2 Selecting a Location for the SolarFlow 800 Plus

Make sure the Device is within the Wi-Fi coverage area.

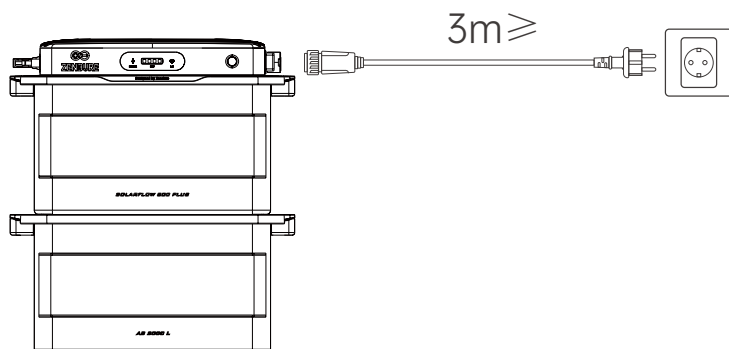


The antenna casing on the device needs to be at least 15cm away from the wall.

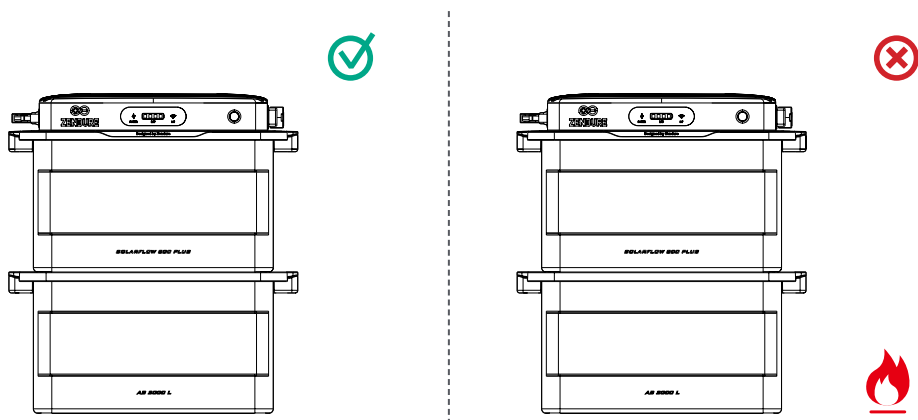
Maintain at least 5 cm of clearance around the top surface of the product, where the heat dissipation fins are located, to ensure proper ventilation, efficient heat dissipation, and reliable wireless communication.



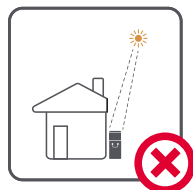
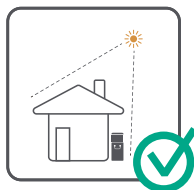
Ensure that the SolarFlow 800 Plus is installed within the length range of the solar panel cables and the 3m AC connection cable. Before making any connections, measure the distance and position the solar panels in the desired location.



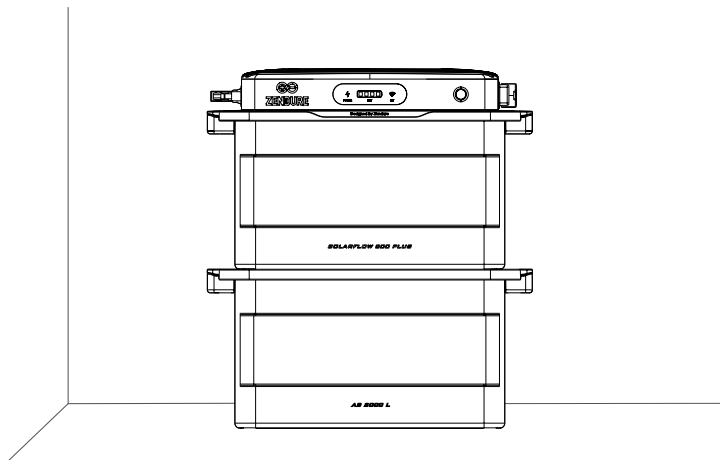
Do not place the device in an area where flammable or explosive materials are stored.



The SolarFlow 800 Plus can be installed indoors or outdoors. Be sure the device is placed in area where it will not be subjected to direct sunlight or rain.



Place SolarFlow 800 Plus on a solid, level surface.

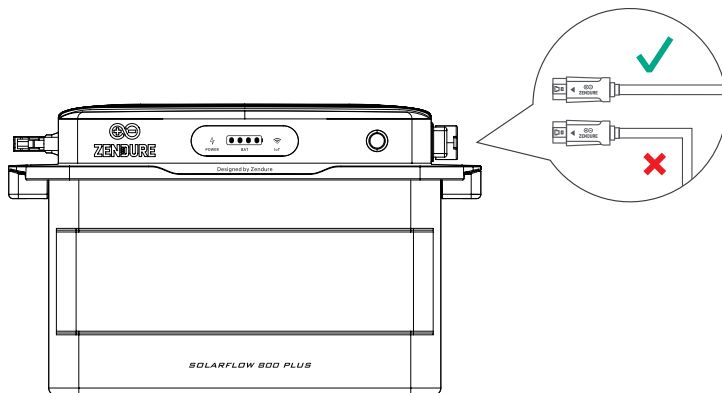


7.3 Cable Connection

Image	Name	Description	Included/Not Included
	SolarFlow 800 Plus	The SolarFlow 800 Plus supports up to 4 sets of solar modules and up to 5 additional add-on batteries.	
	3m 10A AC Cable	Used to connect the SolarFlow 800 Plus to the grid.	
	AB1000/2000 Series Batteries	Add-on batteries stacked beneath the SolarFlow 800 Plus, storing solar energy for household use.	
	Solar Panels	The SolarFlow 800 Plus connects to solar panels to generate power. It is recommended to connect between 400W and 750W of solar panels per pair of PV ports.	
	Solar Cables	Standard photovoltaic module cables used to connect solar panels to the SolarFlow 800 Plus.	
	Solar Parallel Cable	Standard photovoltaic cables designed to connect two solar panels to a single pair of PV input.	

7.3.1 Cable Management

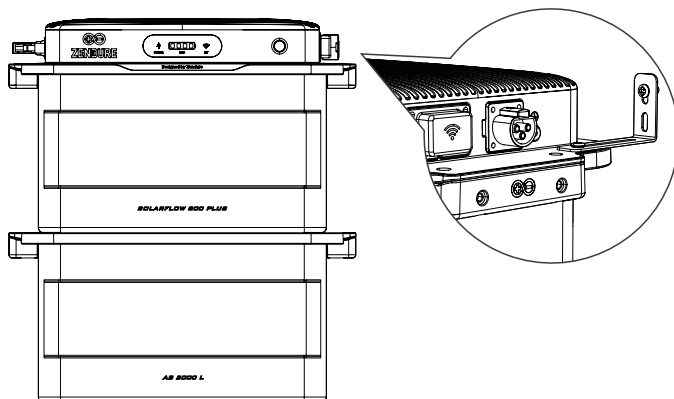
The SolarFlow 800 Plus should be positioned such that AC cables can run straight down without significant bending.



7.3.2 Connect to the Add-on Batteries

Remove the silicone protective cover from the battery terminals on the SolarFlow 800 Plus and Add-on Batteries (sold separately).

Connect the Add-on Batteries to the SolarFlow 800 Plus by stacking them underneath, ensuring the battery cable terminals lock into place.



A single SolarFlow 800 Plus can be connected up to 5 AB1000/AB2000 series batteries, which can maximumly reach to 11.52kWh capacity.

- Do not disconnect them during the charging/discharging process.
- Do not touch the metal pins of the ports with your hands or other objects. Gently clean them with a dry cloth when necessary.
- It is recommended to use the brackets and screws provided with the battery packs to securely fix the SolarFlow 800 Plus on the top and ensure stability.

7.3.3 Connect to a Solar Panel

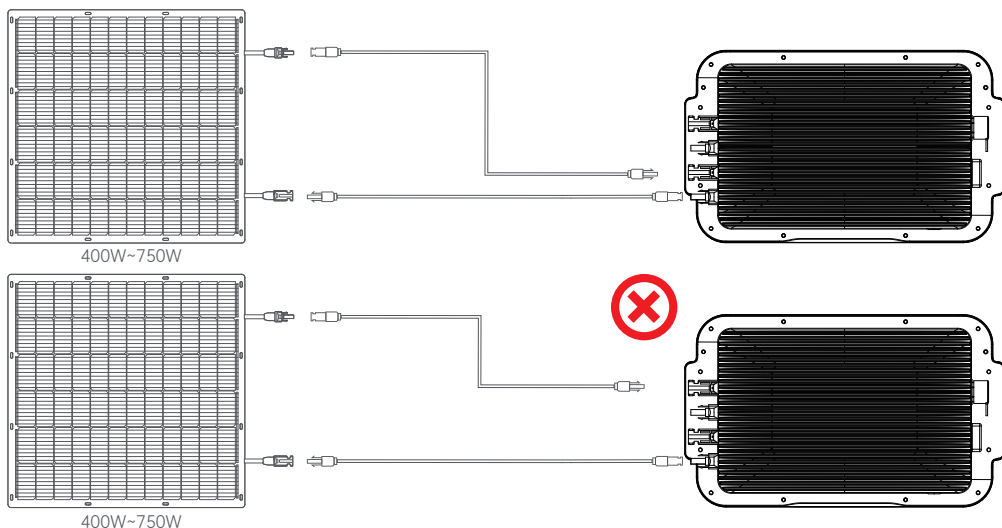


1. The SolarFlow 800 Plus features two independent MPPTs, with each PV input operating as an isolated MPPT
 - Open Circuit Voltage (Voc): Must be below 55V per PV input.
 - Short Circuit Current (Isc): Must be below 22.5A per PV input.
 - Recommended Power Range: Each PV input supports solar panels rated between 400W and 750W.
2. For optimal inverter efficiency, it is recommended to use a solar cable that is 3 meters or shorter. This ensures reduced energy loss during transmission.

(1) Connect one solar panel to the SolarFlow 800 Plus

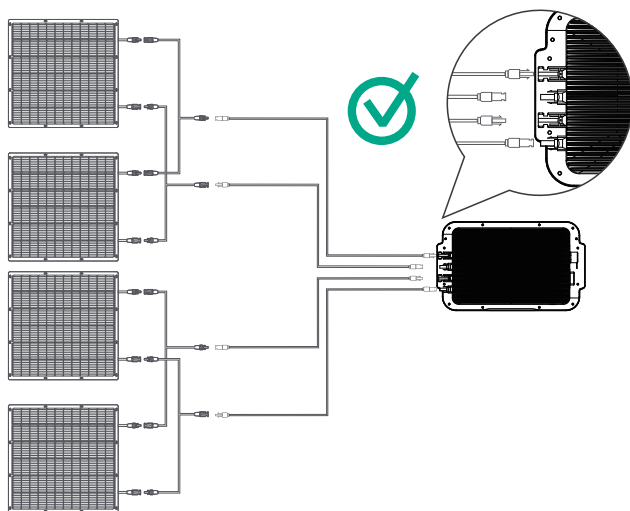
Ensure you measure the distance and install the solar panels in the desired location before connecting them to the SolarFlow 800 Plus.

- The positive and negative terminals of a single solar panel must be connected to the same PV port.



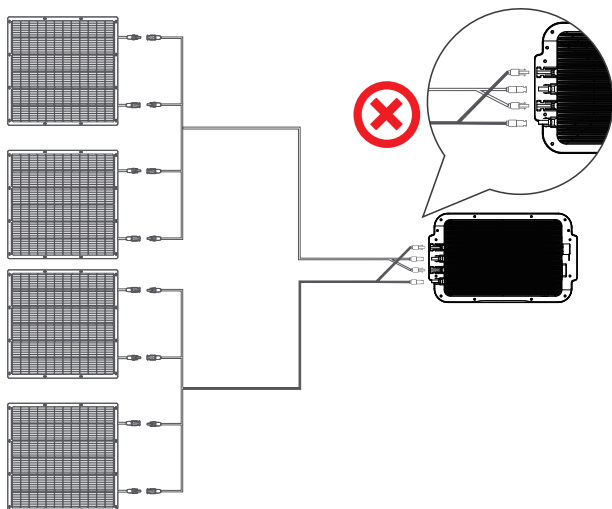
(2) Connecting Solar Panels in Parallel

- Ensure the combined Voc (open circuit voltage) of the panels connected to a single PV input is below 55V.
- The total current for a single PV input must not exceed Isc (short circuit current) 22.5A.



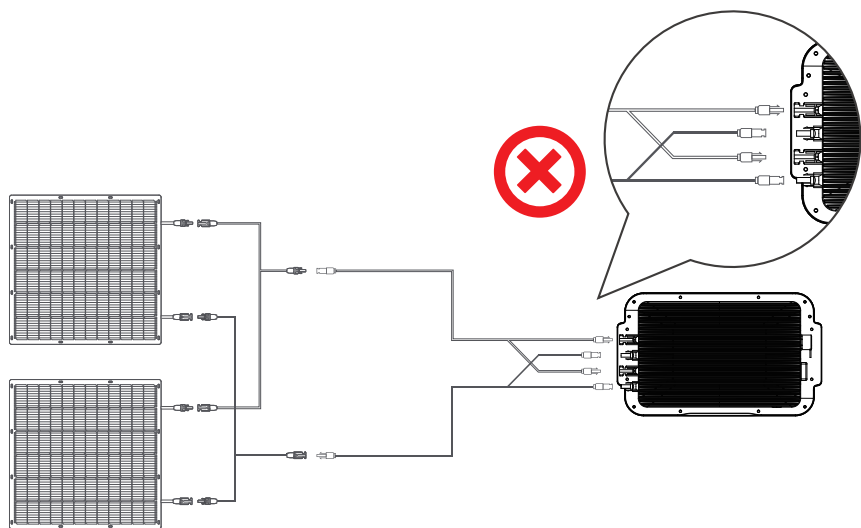
The positive and negative terminals of the same solar panel must be connected to the corresponding positive and negative terminals of the same PV input to ensure proper electrical flow and system functionality. Do not connect panels across different PV Inputs.

We are not liable for any damages resulting from improper connections.



(3) PV Cross-Source Error

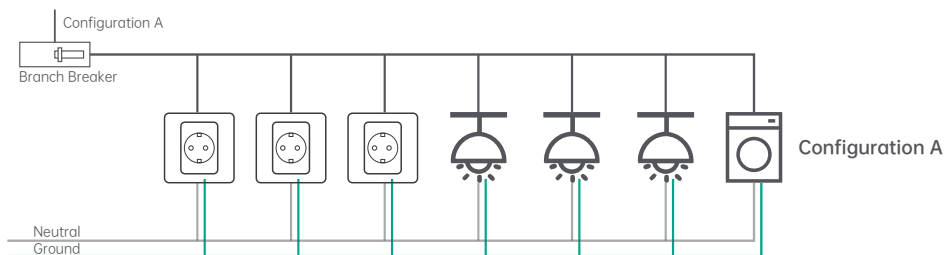
The SolarFlow 800 Plus has two independent PV ports, each linked to its own MPPT. The connection method illustrated in the diagram incorrectly parallels two originally independent PV ports. This wiring approach can create a PV cross-source issue, resulting in uneven power distribution between the ports and potentially damaging the product.



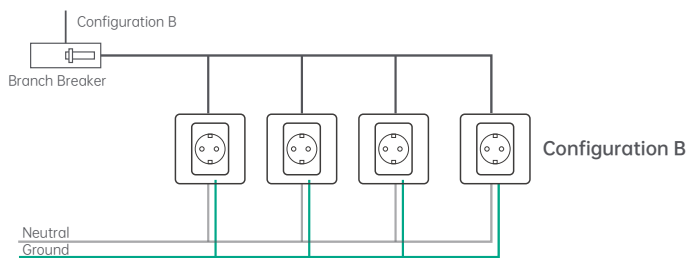
7.3.4 Connect to the Grid

(1) Select the appropriate Circuit

When connecting the SolarFlow 800 Plus to a branch circuit, it's important to choose the right configuration to ensure safe and efficient operation.



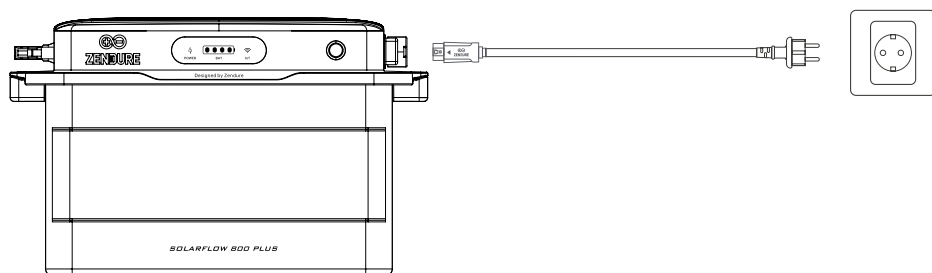
This configuration is unsuitable for SolarFlow 800 Plus as it includes multiple loads, such as receptacles, lights, and high power appliances (e.g., dishwashers, laundry machines). These unpredictable and high-current loads increase the risk of exceeding branch circuit limits during solar production.



This setup is ideal for connecting the SolarFlow 800 Plus as it contains only receptacles. Each receptacle can be individually protected using the methods outlined. If there are unused slots in your distribution panel, an electrician can implement this configuration at a relatively low cost.

(2) Plug to the Socket

Using the provided AC power cord, first connect the cable to the SolarFlow 800 Plus, then plug it into a household power outlet on the appropriate circuit.

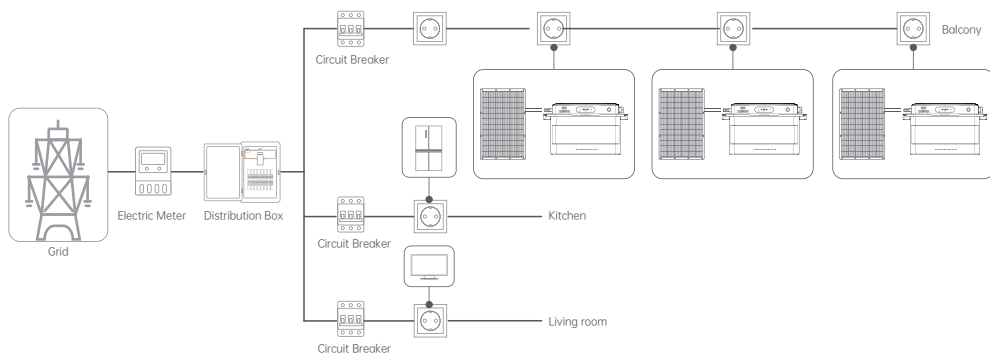


1. Please confirm that the AC socket is switched on, and the power grid is being powered.
2. To maximize power generation efficiency and enhance safety, it is recommended to connect the device to a circuit branch with minimal or no other loads.

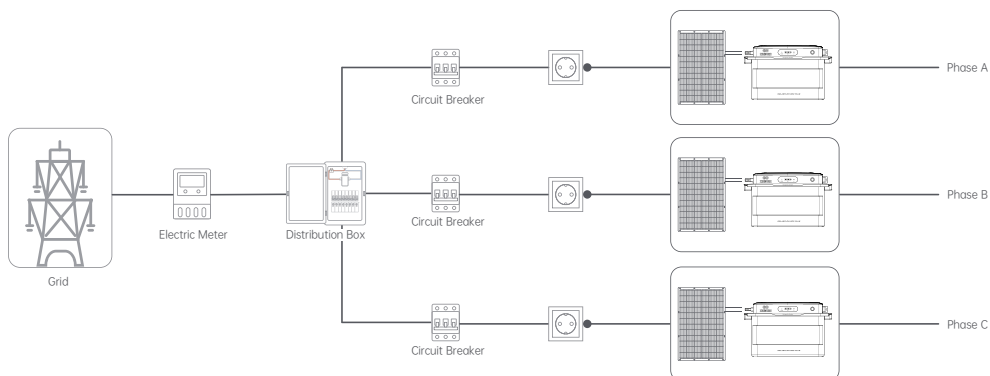
7.4 Installing Multiple SolarFlow 800 Plus Sets

1. Multiple SolarFlow 800 Plus sets can be installed on a single phase/installed separately across the three individual phases of a three-phase system.
2. Use the Zendure app to configure the AC power output to the grid, ensuring it does not exceed the safety limits required by your country or region.

Installation in single-phase electricity system



Installation in three-phase electricity system



8. Maintenance

8.1 Disconnection of SolarFlow 800 Plus

1. AC Power Cable Disconnection:

- First, unplug the AC cable from the AC outlet.
- Press the AC connector release button on the SolarFlow 800 Plus and pull out the cable.

2. Solar Cable Removal: Use the disconnection wrench included in the package to safely unplug the solar cable connectors.

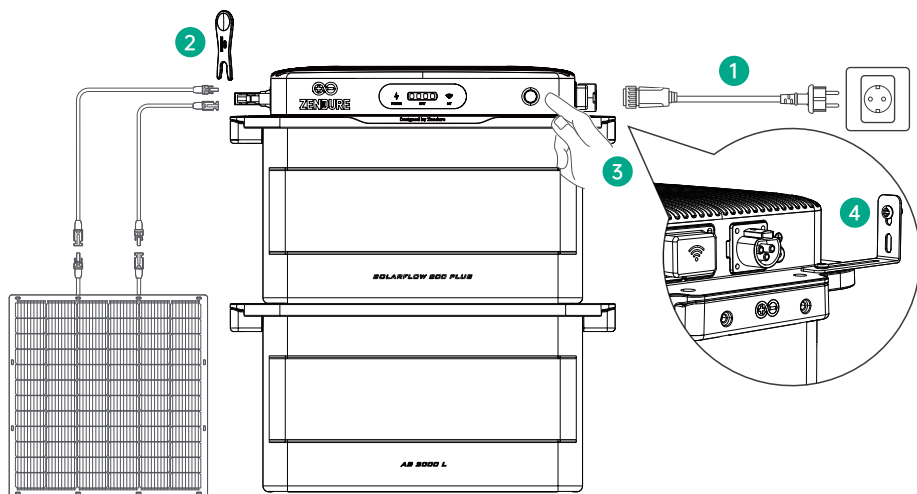
3. Power Off: Press and hold the power button on the SolarFlow 800 Plus for 6 seconds to turn off the device.

4. Bracket Removal: Unscrew and detach the brackets securing the SolarFlow 800 Plus unit to the wall.

5. Battery Disconnection: Disconnect the main unit from the add-on battery by lifting and removing the SolarFlow 800 unit.

6. Store the Product: Store the product indoors, away from direct sunlight and flammable materials, with a temperature range of -20°C to 65°C .

7. To prevent battery degradation during long-term storage, the battery must be discharged to 30% and recharged to 60% every three months. If the charge level drops below 1% after use, the battery must be recharged to 60% prior to storage.



In accordance with applicable laws and regulations, Zendure retains the final right to interpret this document and all related product documents, including but not limited to warranty periods, eligibility for warranty services, and other terms. Zendure also reserves the right to modify these documents in response to product updates.

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zendure.com/pages/zendure-global-warranty