

# 100KWh ALL-TERRAIN MOBILE POWER STATION



**PV-BAT**

POWER TODAY. SUSTAIN TOMORROW.

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## 1 Introduction

### MPS-100 All-Terrain Power Station

The MPS-100 is a versatile and robust all-terrain power station designed to meet diverse energy needs. It provides reliable 110/220V AC power, solar charging, and EV powering capabilities, making it an ideal solution for remote and off-grid energy requirements.

With a 100-kilowatt-hour battery capacity and a powerful 18KW inverter, the MPS-100 ensures high performance for demanding applications. This user manual offers detailed information on specifications, features, and safe operation procedures. Users are strongly encouraged to read and adhere to all safety instructions before operating the device.

This document specifically pertains to the MPS-100 model.



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## 2 Features & Applications

The MPS-100 is a versatile 100kWh all-terrain power station, designed to meet a wide range of residential, industrial, and mobile energy needs. It provides reliable power for homes, warehouses, and industrial buildings while offering advanced EV charging capabilities with a 48A @ 220V, 11kW CCS1 charger gun. The MPS-100's exceptional mobility allows for all-terrain operation, with impressive towing capacity of up to 500lbs lift and 3500lbs towing max. Equipped with a 300ft range remote control, it ensures convenient operation, even in challenging environments.

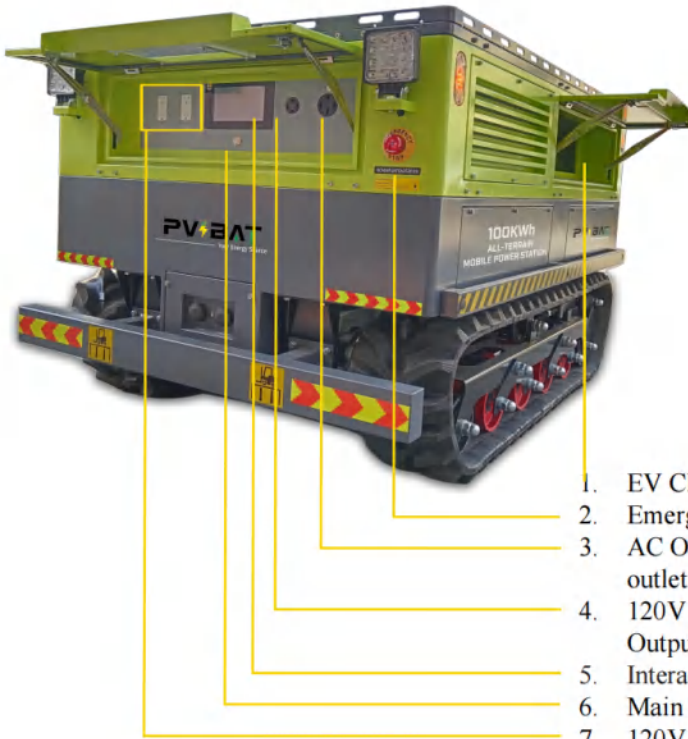
Built to handle rugged conditions, the MPS-100 features IP54 waterproof protection and supports both solar charging and grid charging, offering flexibility for off-grid or emergency use. Whether powering heavy-duty equipment, driving long distances on a single charge, or supporting sustainable energy solutions, the MPS-100 delivers robust performance and reliable energy for residential, industrial, and outdoor applications.

## 3 Product Specifications

### 3.1 Unit Specification

SKU #	MSP-100
INVERTER POWER (KVA)	22
BATTERY CAPACITY (KWh)	100
MAX CHARGE VOLTAGE	87.6V
CELL CONFIGURATION	24S2P
DIMENSION	L:170cm / W: 112cm / H:113cm L:66.93in / W: 44.1in / H:44.5in
NET WEIGHT	1280KG / 2821.9LBS
PV IN CONNECTOR	Blue BE175
PV INPUT VOLTAGE	PV input 1, PV input 2 90VDC-230VDC (Open Circuit Voltage)
PV INPUT MAX CURRENT	2 * 80 Amps (14KW)
PV CHARGING VOLTAGE	90 V-230 VDC
DC PORT INPUT VOLTAGE RANGE (FOR BATTERY PARALLEL)	81.6 V-87.6 VDC
AC OUTPUT BREAKER CAPACITY	63 Amps
AC INPUT BREAKER CAPACITY	63 Amps
AC INPUT VOLTAGE RANGE	160VAC to 260VAC (UPS Mode) (2 Hot Wire , 1 Neutral Wire , 1 Ground)
AC INPUT CONNECTOR (ON THE SIDE)	NEMA SS2-50P (120VAC/240VAC , 50Amp)
AC OUTPUT RECEPTACLE (2*ON THE SIDE)	NEMA 14-50R (120VAC/240VAC , 50Amp)
AC OUTPUT RECEPTACLE (ON FRONT PANEL)	4x 120V Receptacle , 1x L14-30R (120VAC/240VAC , 30Amp)
USB PORT	N/A
COMMUNICATION PORT	2x Rs485, 1x Generator Kick Off Port , Wi-Fi

## 3.2 Product Detail



1. EV Charger Gun
2. Emergency Stop Button
3. AC Out (Max 50A) (NEMA14-50R) outlet
4. 120V / 240V AC (NEMA L14-30R) Output Outlet
5. Interaction area
6. Main Switch
7. 120V AC (GFCI) Outlets 1&2

### Descriptions:

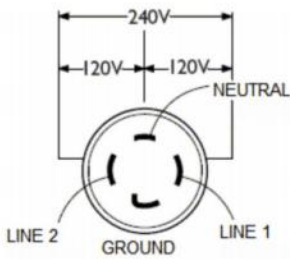
1. It's an electric vehicle charging with a 48A @ 220V, 11kW CCS1 charger gun, delivering reliable and rapid charging performance.
2. Press the front emergency stop button, immediately cuts off all input and output power. The inverter and battery stop working. (Press the back end emergency stop button, the car immediately stop moving. The inverter and battery work normally.
3. This 50A Embedded Ground Blade Power Outlet (NEMA14-50R) provides 120 or 240V AC power.
4. It's a 30A Twist Lock Outlet (NEMA L14-30) provides 120V / 240V power.
5. The area for getting MPS-100 information and performing settings. For detailed information, please refer to Section 4;
6. This is the main switch. When turned off, it cuts off all power supply. However, if the grid is connected, MPS-100 can still provide AC power by bypassing grid power. In this status, known as 'bypass mode', the battery of MPS-100 's battery cannot be charged or discharged.
7. Standard GFCI class A Outlet providing 30A max @ 120V power.



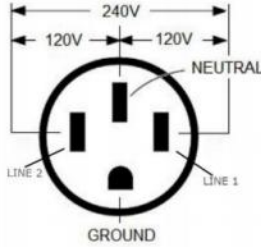
1. AC Input 120V/240V (SS2-50P) outlet
2. AC Out (Max 50A) (NEMA14-50R) outlet 1&2
3. Breakers
4. PV Input 1&2 (90V-230V DC)
5. DC Input (Max 87.6V)
6. 120V AC (GFCI) Outlets 1&2

**Descriptions:**

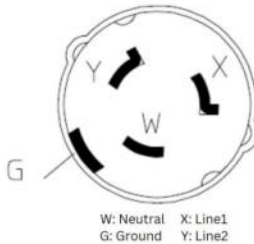
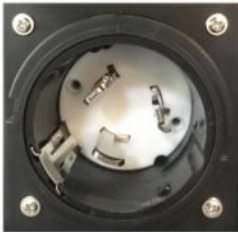
1. It is a 50A Twist Lock Outlet (SS2-50P) used to charge the MPS-100 from the grid.
2. There are two of 50A Embedded Ground Blade Power Outlets (NEMA14-50R) provides 120 or 240V AC power.
3. There are safety circuit breakers for EV charging, AC output, AC input, and the PV panel. These breakers are designed to manage circuits and control the maximum current flow. MPS-100 remains completely disconnected from the grid until the AC input breaker is turned on, preventing AC charging and bypass functionality during this time.
4. There are two blue BE175 connectors used to connect to solar charging systems.
5. It is an BE175 connector that connects an external DC charger or expansion battery packs
6. Standard GFCI class A Outlet providing 30A max @ 120V power.



NEMA L14-30



NEMA14-50R

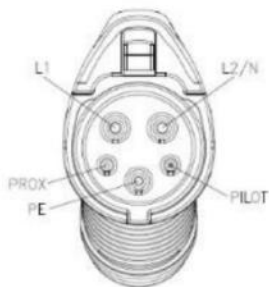


SS2-50P

The ground wire should always remain connected to prevent short circuits and avoid potential damage.

NEMA L14-30 & NEMA14-50R: Line1 + Neutral = 120VAC  
 Line2 + Neutral = 120VAC  
 Line1 + Line2 = 240VAC

SS2-50P:  
 X + W = 120VAC  
 Y + W = 120VAC  
 X + Y = 240VAC



## CCS1 AC

When inserting the charging gun, align the CCS1 plug with the electric vehicle's charging port, ensuring the direction is correct. Push the plug firmly until you hear a clicking sound, confirming that the plug is securely connected to the port.

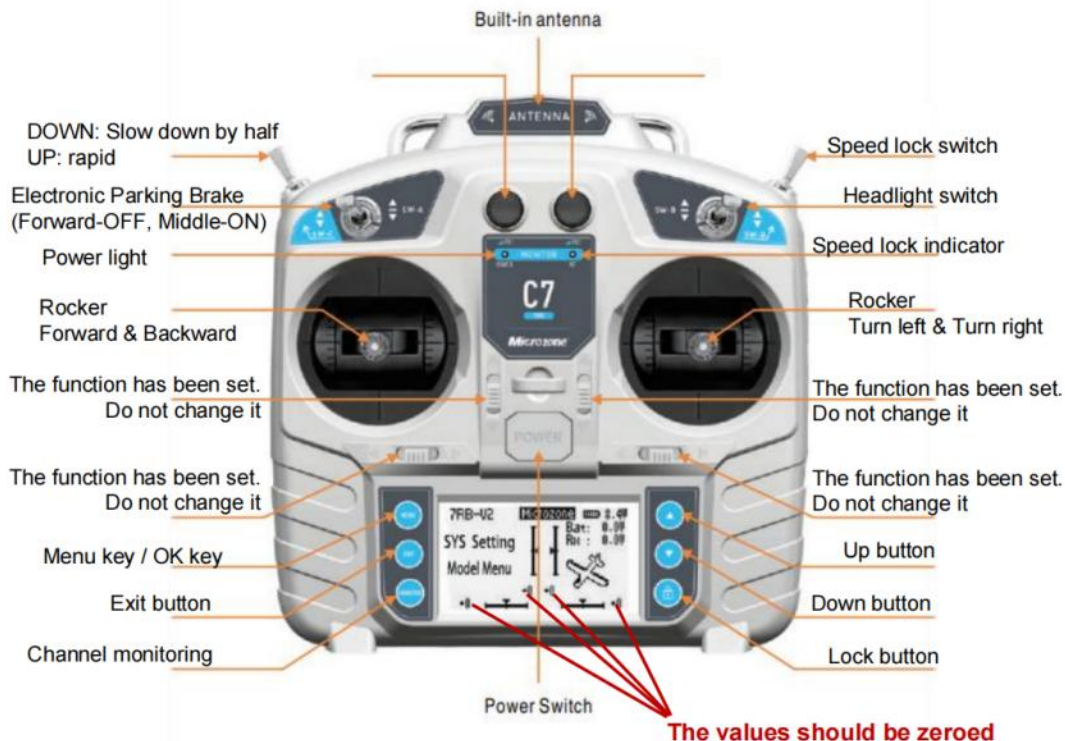
L1, L2/N: 110V hot line and neutral line,  $L1 + L2 = 220V$

PE: Protective Earth, ground wire

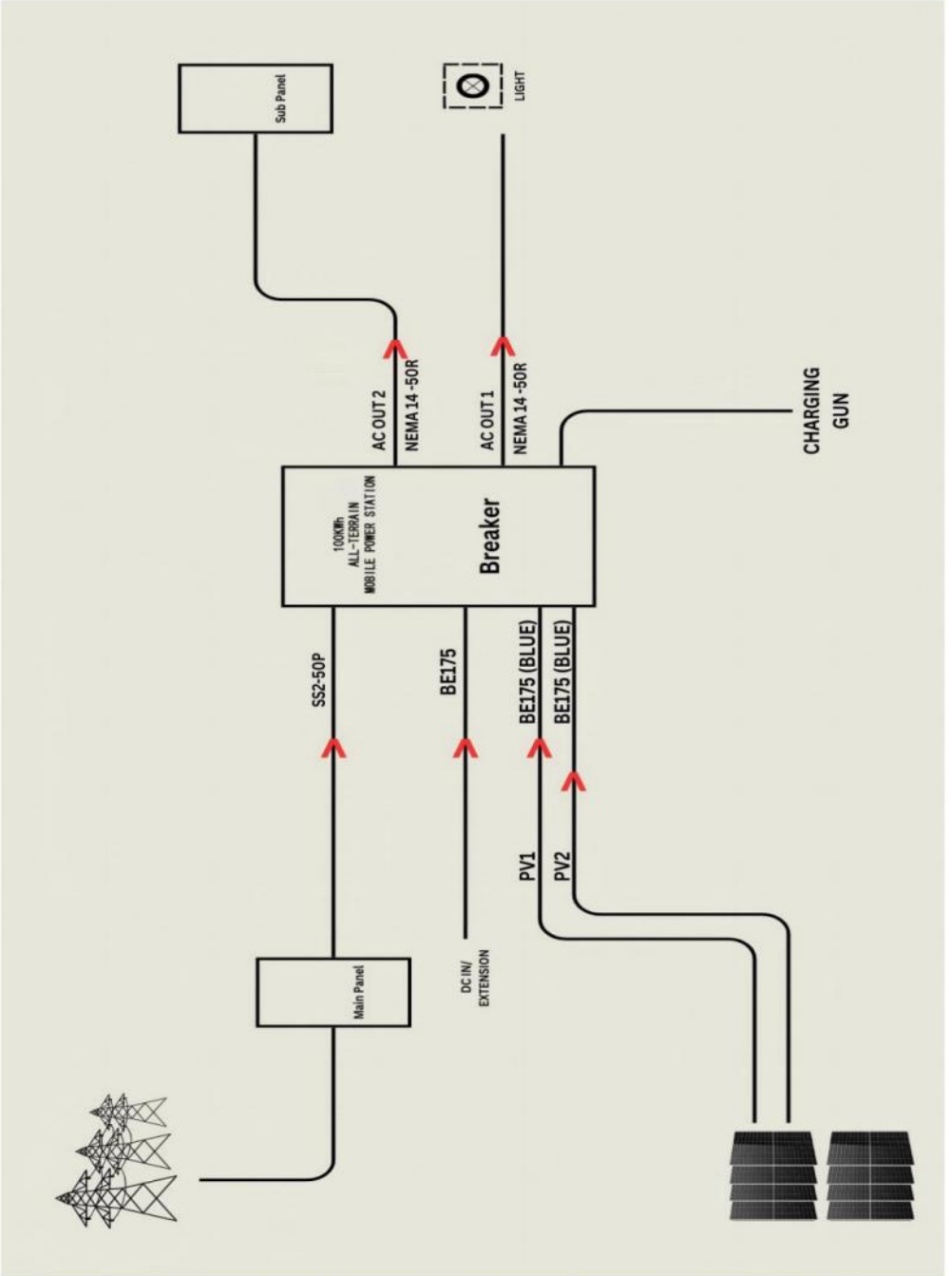
PROX: Proximity signal wire to confirm that a vehicle is connected

PILOT: Control line for transmitting charging control signals

### 3.4 Remote control



### 3.3 System Diagram



## 4 Screen Menu

The most system interactions of MPS-100 can be operated via the front 7-inch smart touchscreen. Users can configure various working parameters on this screen, such as charging power and operational mode, for the MPS-100 .

Additionally, it provides real-time information on the MPS-100 's operational status, including the inverter's output power and load percentage, parameters, and the working status of each feature.



PV BAT

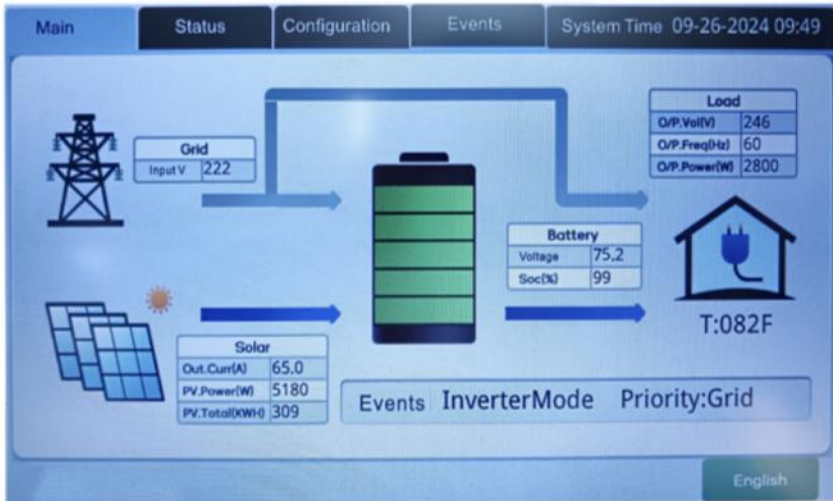


100KWh  
ALL-TERRAIN  
MOBILE POWER STATION

Touch screen

**Note:** When the total power of the connected appliances exceeds 18KW, a red light will flash, and an alarm will sound for 30 seconds, after which the system will shut down. Upon hearing the alarm, it is recommended that the total power of the appliances need to be reduced. The system will automatically restart within 3-5 seconds. If the total power of the appliances continuously exceeds 18KW three times, the inverter will shut down completely to protect the system.

## Main Page

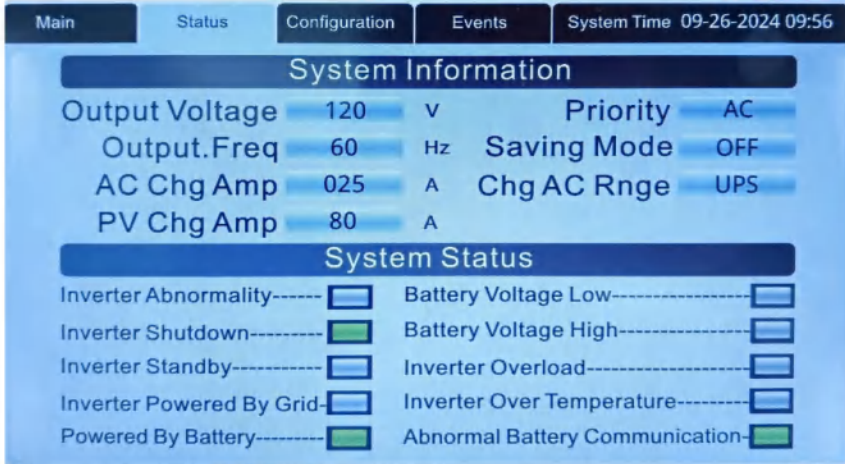


The main interface of the MPS-100 displays the real-time operational status of the system, including interactions between the grid, solar power, load, and battery. Key data on the main interface includes:

- **Grid Information:** Shows real-time input voltage data.
- **Solar Information:** Displays the operating status of the photovoltaic system, including output current, output power, and total PV input power.
- **Battery Information:** Includes battery voltage and state of charge (SoC), helping users monitor the current battery charge level.
- **Load Information:** Shows real-time load voltage, frequency, and output power.
- **Temperature Information (T):** Displays the internal system temperature in Fahrenheit, ensuring the device operates within a safe temperature range.

At the bottom of the screen, there are options for different operating modes (e.g., Inverter Mode, Priority Mode) and access to event logs, allowing users to monitor and configure the system's operating mode.

## Status Page



The status page of the MPS-100 provides detailed operational information and displays the current system status. The page is divided into two sections:

### 1.System Information:

1. **Output Voltage:** Displays the set output voltage;
2. **Output Frequency:** Shows the set output frequency(in Hz);
3. **AC Charge Amp:** Displays the maximum AC charging current;
4. **PV Charge Amp:** Shows the maximum solar charging current;
5. **Priority:** Displays the system's current priority mode;
6. **Saving Mode:** Shows the status of the saving mode;
7. **AC Charge Range:** Displays the current mode of the grid power.

### 2.System Status:

1. This section uses indicator lights to show the system's operational status:
  1. **Green light on:** Indicates the current state.
  2. **Red light on:** Indicates a warning state in the system.
  3. **No light on:** Indicates the system is not in this state.
2. The statuses include: inverter abnormality, inverter shutdown, inverter standby, inverter powered by grid, powered by battery, battery voltage low, battery voltage high, inverter overload, inverter over temperature, and abnormal battery communication.

## Configuration Page



Password is required every time you enter the configuration page.  
(default password is: **101**)

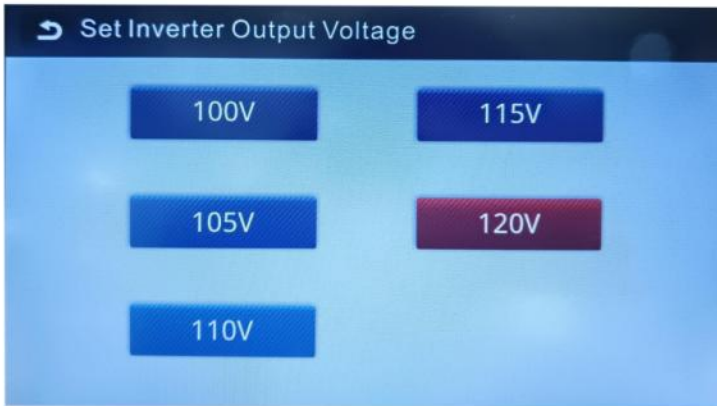
### Configuration Page Explanation

The configuration page of the MPS-100 allows users to adjust several key parameters based on system requirements. The available settings on this page include:

- 1.Output Voltage:** Users can set the system's output voltage;
- 2.Output Frequency:** Set the system's output frequency (in Hz);
- 3.AC Charge Amps:** Adjust the maximum charging current from the AC power source;
- 4.PV Charge Amps:** Set the maximum charging current for the solar system;
- 5.Chg AC Range:** Select the AC charging range, depending on different application scenarios;
- 6.Priority:** Set the system's priority mode, such as AC or solar priority.
- 7.Saving Mode:** Turn the saving mode on or off to improve energy efficiency.
- 8.Set Battery:** Configure battery-related parameters to ensure proper integration with the system. (Separate password required)
- 9.Save Time:** Allows users to set the system time and date to ensure synchronized operations.

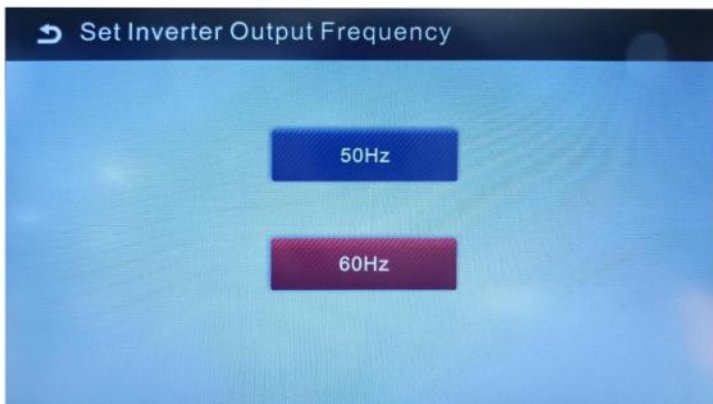
This page enables users to fine-tune the system according to different operating environments and needs, ensuring the MPS-100 runs optimally.

## Output Voltage setting



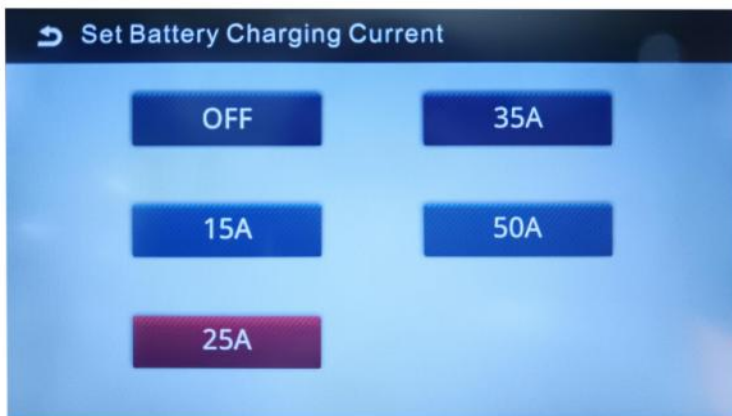
Editing the output voltage of the standard GFCI class A outlets, while the output voltage of the Twist Lock Outlet (NEMA L14-30) will be two times (= 2 X selected voltage).

## Output Freq-(Hz) setting



Editing the output AC frequency for both Standard GFCI class A Outlet, Twist Lock Outlet (NEMA L14-30), and Embedded Ground Blade Power Outlet (NEMA14-50R).

## AC Chg Amps(A) setting



Select the AC charging current from the options provided.

## PV Chg Amps(A) setting



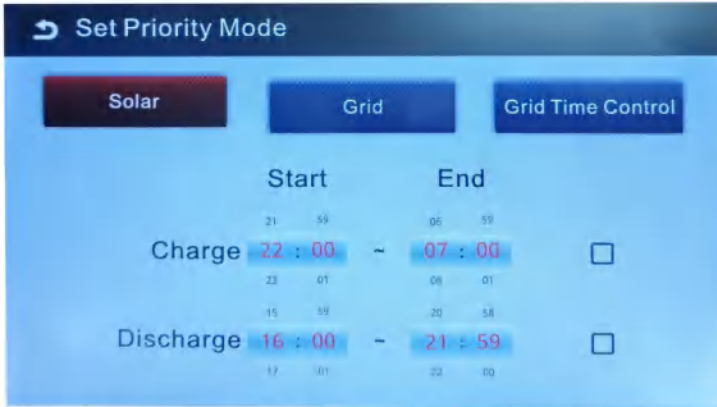
Select the AC charging current from the options provided.

## AC Chg Amps(A) setting



The AC input voltage range varies with the power mode—UPS or INV. In Uninterruptible Power Supply mode, the device uses external AC as the main power and switches to the battery if AC fails, maintaining power without interruption. Inverter mode mainly uses the battery, converting DC to AC, and can keep powering loads even without external AC, provided the battery has enough charge.

## Priority setting



Select one of the provided charging modes; When the solar charging mode is selected, grid charging will be disconnected. However, when the grid charging mode is chosen, both solar and grid charging will occur simultaneously. For 'Grid Time Control', requires input time information. **Attention:** Before setting the AC/Grid Time Control (ATC), please ensure that MPS-100's local time is set correctly.

In the 'charging time management' setting, "Charge" refers to MPS-100 being charged within the set time frame. During this period, only the bypass power supply mode is available when connected to the grid; the inverter power is charging the battery only.

Conversely, during the set discharge time period, MPS-100 will not charge and will operate in an inverter-priority power supply status.

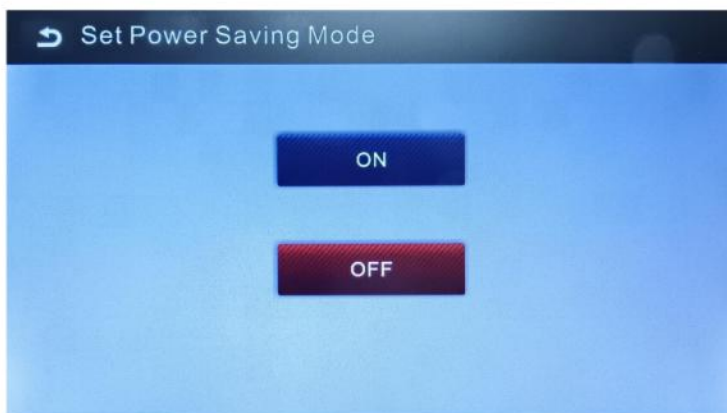
Let us take the data from the image above as an example. It shows from 10 PM to 7 AM the following day, MPS-100 will be in charging mode. During this time, the MPS-100's battery will choose the charging mode based on the available options and selected priorities, and the electricity the machine provides comes from the grid. Conversely, MPS-100 will be discharging from 4 PM to 9:59 PM. This means that during this period, MPS-100 will not charge the battery anymore. it will release the electrical energy it has stored or bypass the grid energy to the application/payload .

**Note:** Do not overlap the time setting for charge and discharge. If there is an overlap, the MPS-100 will only operate in charging mode during this period until the set charging time ends.

The time here can be set manually. To change it, move the cursor to the desired data field and select it, then adjust the time using the up and down buttons. Once the time is set, move the cursor to the box on the right side and click; a displayed '■' indicates this charging time setting is activated.

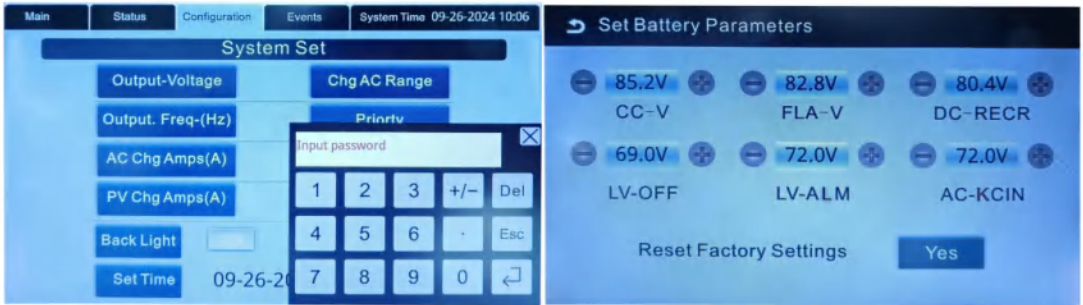
ACT is actually the most cost-effective solution. During charging, if the PV remains connected, MPS-100 will not block it. Once the battery is fully charged, MPS-100 will not continue to charge and will only operate in bypass mode.

## SAV MODE setting



Select whether to activate the power saving mode, which will limit the power consumption of MPS-100 in standby mode.

## Set Battery setting

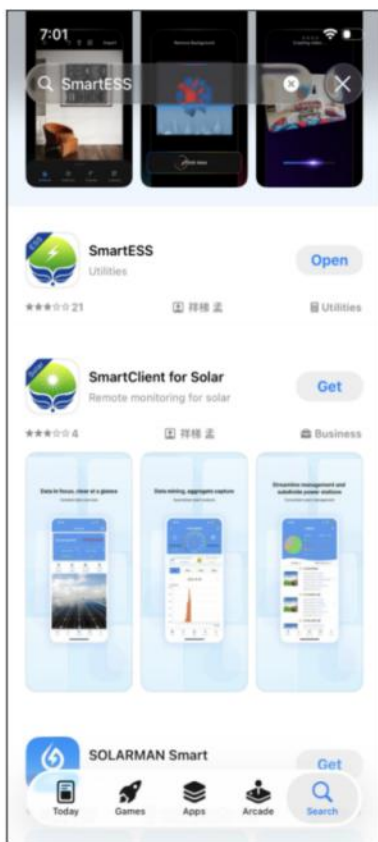


- CC-V: Constant Current/Constant Voltage. The 85.2V represents the battery charging voltage;
- FLA-V: Float Voltage. It is the voltage (82.8V) at which a battery is maintained after being fully charged to maintain that capacity by compensating for battery self-discharge;
- DC-RECR: DC Recover. The voltage must exceed 78.6V in order for the inverter to restore;
- LV-OFF: Low Voltage Cut-OFF. When the battery voltage falls below 69.0V, the power supply from the battery will be cut off;
- LV-ALM: Low Voltage Alarm. Over-low Voltage Warning value, the battery will alarm when the voltage lower than 72.0V;
- AC-KCIN: Grid Kick in. When the battery voltage is lower than 72.0V, the grid will prioritize charging the battery only when the grid is connected. Once the voltage reaches the 72.0V, DC charging will become available. This may occur when setting the priority to solar, and the solar charging is no longer available.

(default password is: 505)

**Warning:** Please don't change any parameter, It might lead to a very danger situation.

## 5 Mobile Application Guide



### Downloading the App

- **Android Users:** Scan below "SmartESS" QR code to download, and then install it.

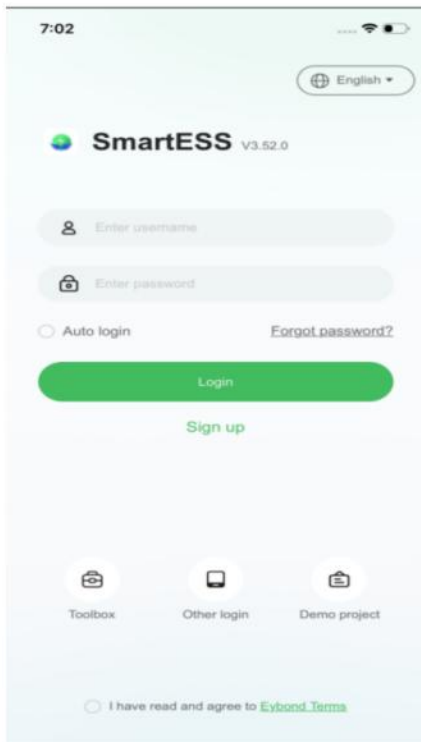


- **iOS Users:** Open the Apple App Store, search for "SmartESS," select the app, and tap "Get" to download and install it.



### Installing the App

- Once the download is complete, the app will automatically begin the installation process.
- After installation, you'll find the SmartESSapp icon on your home screen or app drawer.

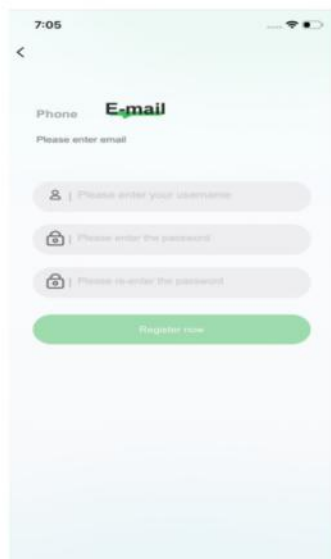


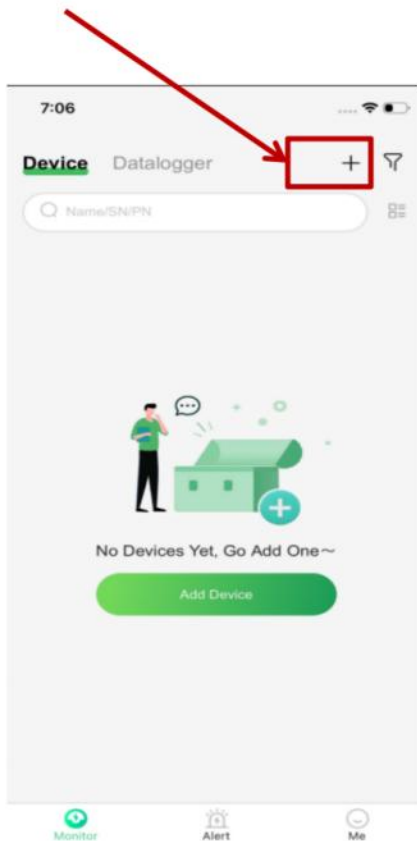
## Logging In to the App

- Open the SmartESS app.
- Enter your registered username/email/phone and password, then click the checkbox and tap "Sign in" to access your account.

## Registering an Account

- On the log-in page, select "Sign Up" to register a new Account.
- Fill in the required fields with your details, such as username, email address, and password.
- Read and accept the Terms of Service and Privacy Policy, then submit your registration.
- You may be asked to verify your email address. Check your email inbox for a verification code from SmartESS and click on it to confirm your account.





### Add a device (datalogger)

- After logged in, there will be the list of added devices or datalogger.
- To add a new datalogger, you need to click the “+” button.

- Find the PN number and bar code at the top of the Wi-Fi antenna.
- Enter the provided PN number to the input text bar at the bottom, or use the scan option to scan the bar code to get the PN number.
- After the PN number is entered, you can go to the next step.



11:23 5G+ 78%

← Add a datalogger Done

PN E50000220248230672

Design power(KW) 15

Datalogger name Please input the datalogger name

Installer No installer

Installation date 2024-12-09

Time zone GMT -8

Country United States

Datalogger address 8966 Mason Ave

Currency RMB( ¥ )

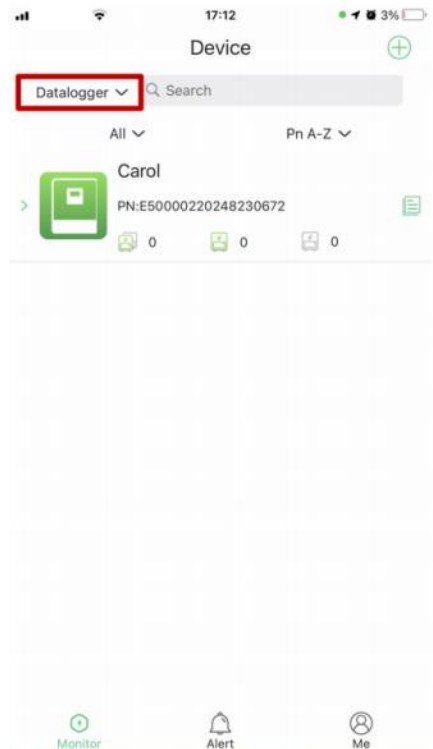
Generation income 1.2

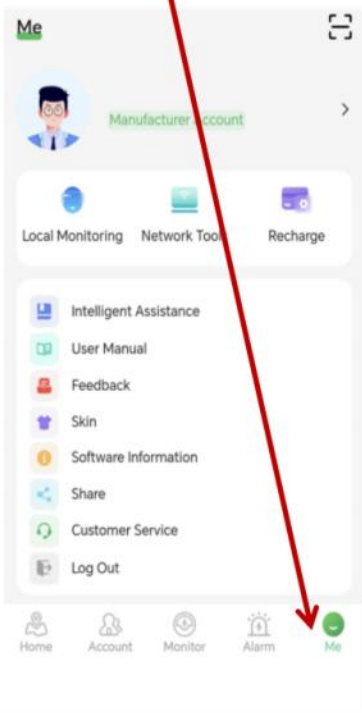
Buying electricity price 1.2

Selling price 1.2

- Complete the parameter as far as possible
- There are two required fields: “Design power(KW)” ---10  
“Datalogger address”--- Your location, you can click the icon to enter to the GPS to get the location.

- At the top left of the page, find the drop-down list of presentation types.
- Click on the drop-down list and select "Datalogger". Added devices will display in the list.

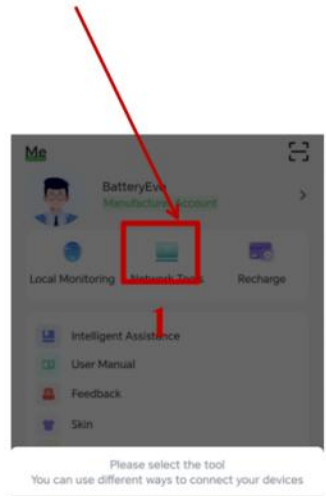




## Wi-Fi Pairing

- To pair MPS-100 to the local Wi-Fi, we need to ensure the local Wi-Fi is working properly.
- Click the “Me” option on the navigation menu at the button.

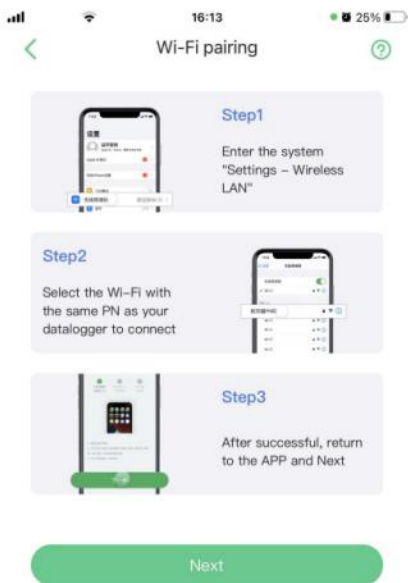
- Click the “Network tools” icon the option box will pop up here.
- Select “Wi-Fi network” to go to the Wi-Fi pairing setting page.



2



Cancel



- Before the next step, the mobile device should connect to the datalogger as the Wi-Fi connection.

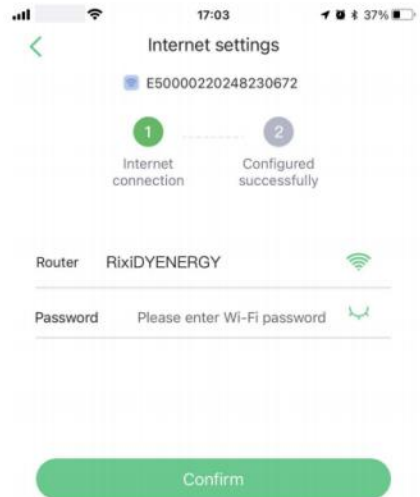
- Select the datalogger network that is the same as the PN number on MPS-100 .
- The password for the datalogger: 12345678





- Click the “Next” button to access the next page.
- If a prompt window pops up, the datalogger connection has failed and needs to try again.

- Enter or select (by clicking the Wi-Fi icon) the local router to which the datalogger should be connected.
- Enter the router’s password.



**Reminder**

1. Please ensure that the signal connecting to the network is good and the network is unblocked.
2. Currently, routers in the 5G band are not supported. Please use routers in the 2.4G band.
3. Ensure that the password of the router is correct.

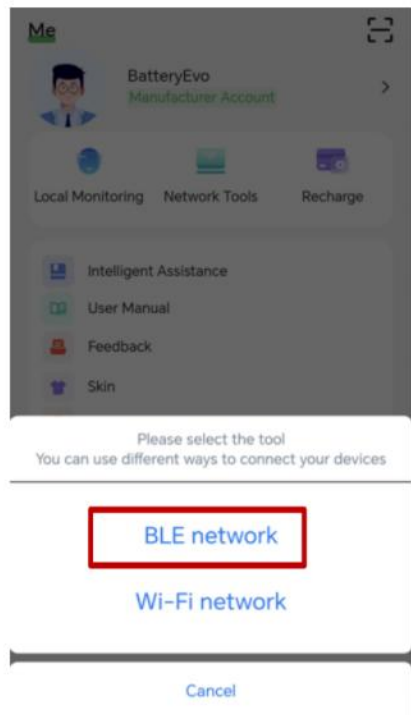
Setup failed? [Network diagnostics](#)

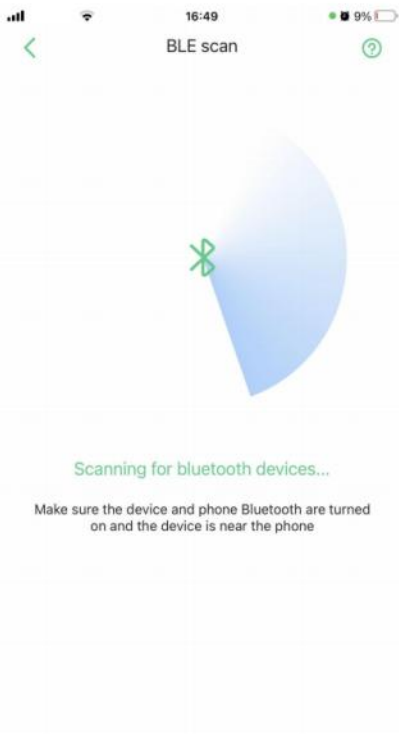


- Once the network is paired, the mobile device can directly read MPS-100 's real-time status in the software by connecting to the local network.
- If the system reports an error or the connection fails, then it is recommended that the pair be done again or try another connection solution. Alternatively, contact SmartESS technical support team for assistance.

## Bluetooth Pairing

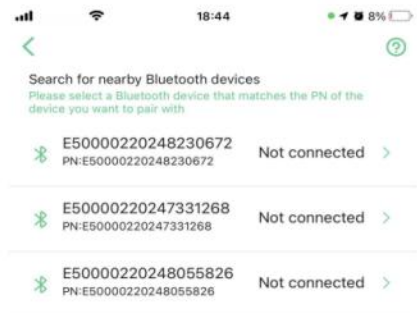
- Click the “Network tools” icon the option box will pop up here.
- Select “BLE network” to go to the Bluetooth pairing setting page.





- Bluetooth either activates automatically or requires manual enabling.
- The App then initiates a search for nearby devices with Bluetooth capabilities.

- Select the Bluetooth which has same PN number with datalogger from the listed device.





You have connected the datalogger:  
E50000220248230672

Internet settings

- Bluetooth connected successful to the datalogger.
- Click “Internet Settings” to continue the datalogger pairing to the local router.



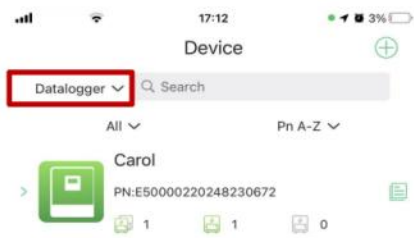
- Enter or select (by clicking the Wi-Fi icon) the local router to which the datalogger should be connected.
- Enter the router’s password.

Set up

Setup failed? Network diagnostics

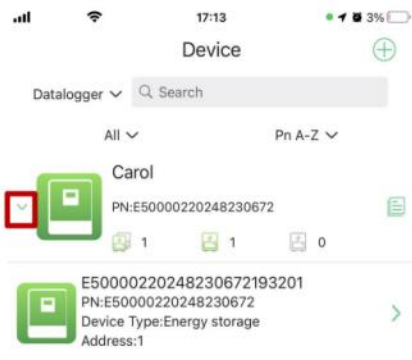


- Once the network is paired, the mobile device can directly read MPS-100 's real-time status in the software.
- If the system reports an error or the connection fails, then it is recommended that the pair be done again or try another connection solution. Alternatively, contact SmartESS technical support team for assistance.



## Viewing MPS-100 Status

- At the top left of the page, find the drop-down list of presentation types.
- Click on the drop-down list and select "Datalogger". Added dataloggers will displayed in the list.






- Click triangle icon on the left of the datalogger. Devices that are already connected to datalogger will be shown below.
- Click the device.



- The system status and data are synchronized in real-time.



## 6 Accessories

Name	Description	Status	Image
PV to BE 175 Cable	This cable is used for connections from the PV connector to the blue BE connector.	In box	
72V Battery Charger	A 72V battery charger can charge the battery via a DC input. Charging Voltage is 87.6V.	Optional	
Twist Lock Socket (SS2-50P)	120 Volt / 240 Volt Power Cord Twist Lock Socket, which can be installed on the power grid to serve as a connection point for the battery to supply power to the grid.	Optional	
Embedded Ground Blade power Socket (NEMA14-50R)	This socket can be installed on the power grid to serve as a connection point for providing power to the battery from the grid.	Optional	
50 Amp 10 Ft RV Extension Cable	This cable is suitable for connecting the battery output to the power grid.	Optional	

Optional items are available on the [MPS-100 website](http://MPS-100.com).

## 7 Technical Safety Guidelines

**⚠ WARNING:** Before installing or operating MPS-100, please make sure to review all safety guidelines, warnings, and precautions thoroughly.

Do not install MPS-100 in a location that is exposed to direct sunlight and water. Do not charge MPS-100 with a voltage exceeding 87.6V. Do not charge the MPS-100 when the temperature is below  $-20^{\circ}\text{C}$ . Do not discharge MPS-100 when the temperature is below  $-35^{\circ}\text{C}$ . Do not charge or discharge MPS-100 when the temperature is above  $65^{\circ}\text{C}$ . Do not charge MPS-100 to 76.8V or higher if you intend to store the MPS-100 for more than 6 months.

Additionally, when installing the MPS-100, cooling is a very important consideration. To ensure the efficient and safe operation of the device, it is recommended to install it in a place with good air circulation. The MPS-100 has two fans, one on the left side (without a connection port) that serves as the air intake, and another on the right side (with a connection port) that serves as the air outlet. Good airflow helps to dissipate the heat generated by the device's operation, thus preventing overheating and extending the life of the device. Avoid installing the device in enclosed or narrow spaces, as the air circulation in these places is poor and not conducive to the timely discharge of heat. Regularly checking and maintaining the air circulation paths around the device is also key to maintaining effective cooling, ensuring that there are no obstacles hindering air flow.



## 8 Transportation

**⚠ WARNING:** Before installing, make sure to review all safety guidelines, warnings, and precautions thoroughly.

1. MPS-100 should be kept upright



2.MPS-100 gross weight 1320KG (2910 lbs). Special equipment is required to load it in the truck (e.g. forklift)



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## 9 Recycling

Dispose of LiFePO<sub>4</sub> batteries at an authorized lithium recycling facility.

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## 10 Warranty & Return Information

In the unlikely event you are having an issue with one of our batteries we have developed a straightforward warranty & return policy:

- For all returns or warranty claims contact [service@pvbat.com](mailto:service@pvbat.com)
- 30-day money back guarantee. Full refunds may be issued for returns of undamaged batteries not related to warranty claims, subject to a 20% restocking fee.

- » We take pride in the durability of our batteries, confidently endorsing both our engineering prowess and the high standards of our quality. If we made a mistake or there is a defect in the build of your MPS-100, we will fix it or fully replace it.
  - » The average lifespan of a MPS-100 battery at 100% Depth of Discharge is between 1,000 – 3,000 recharge cycles depending on chemistry, or roughly 5 to 10 years with standard use (see the specifications of MPS-100 for more information). This warranty does not cover negligence or misuse of MPS-100 or the normal wear and tear. If it is deemed that MPS-100 was used improperly, you will be subject to a \$150 an hour repair charge plus parts and shipping.
  - » To submit a warranty claim, please contact us directly at **support@MPS-100.system.com**. The owner may be required to ship MPS-100 back to our MPS-100 warehouse in Chatsworth, California for further inspection.
- We offer a 30-day warranty on all accessories & complimentary products (BE connectors, wiring, etc.).
  - Free lifetime technical support & troubleshooting.
  - Warranty is non transferable and only applies to its original owner.
  - Warranties can be used once per internal component for an exchange/replacement.
  - Customer pays return shipping on all returns or warranted component inspections initiated after the first 30 days of ownership. Please note some MPS-100 returns may require special documentation and packaging, and these instances will incur extra fees. This is to correctly comply with lithium battery shipping regulations.
  - If you have a quality issue with a product, please contact our support team to help properly diagnose the problem. If the product you received does not meet our rigorous quality standards, then we will issue you a replacement component or fix the original at no additional cost. Replacement batteries or components will only be sent after we have received and inspected your returned MPS-100 or component to determine the cause of any problems. MPS-100 is not responsible for return shipping.
  - DIY modifications or damage due to gross negligence or abuse are not covered by the warranty.

For all returns, please mail your package in a traceable method to the address below. Include a note with your name, your order number and describing your situation and/or request.

Limited Liability Company Name PVBAT LLC  
 Principal Address 16419 ALTWOOD ST  
 AL PUENTE, CA 91744

## 11 Warnings & Precautions

Lithium Iron Phosphate (LiFePO<sub>4</sub>) batteries are a safe chemistry, but it is important to follow safety measures when handling any electronics. Please adhere to this manual's instructions for safe handling and operation.

### General Safety

#### Do:

1. Always wear protective gear when handling batteries.
2. Use a wrench with a rubber-coated handle to avoid electrical shocks.
3. Keep any flammable/combustible material (e.g., paper, cloth, plastic) at least two feet away from the batteries.
4. Ensure the area has a Class ABC fire extinguisher on-site.
5. Dispose of batteries in a chemical recycling bin.
6. Maintain at least 4 inches of clearance on all sides and the top of MPS-100 for proper heat dissipation, especially during extended periods of stationary operation.
7. Install and remove batteries using the provided handles.
8. Check that all cables are in good condition and properly tightened before operation.
9. Drive MPS-100 in shallow water.
10. Operate with adult supervision.

#### Don't:

1. Place MPS-100 on conductive materials or damp ground for a long time.
2. Allow sparks, flames, or metal objects near the batteries.
3. Inhale gases emitted from MPS-100 during operation or emergency.
4. Expose batteries to high temperatures, strong mechanical shocks, or impacts.
5. Modify, disassemble, or deform batteries.
6. Connect the positive terminal to the negative terminal with conductive material.
7. Use MPS-100 in the rain or under direct sunlight.
8. Dispose of batteries or the unit in the environment or in fire.
9. Ride on the MPS-100 when it is moving.
10. Accelerate your MPS-100 while sideways.
11. Drive the MPS-100 up/downstairs, or drop the unit from high elevations.
12. Submerge MPS-100 lower than the treads.
13. Expose MPS-100 to fire hazards.
14. Put the hands into the treads.
15. Drive on public roads.

## **Installation Precautions**

### **Do:**

1. Ensure cables and connections are in proper working order.
2. Use the handles to move and install MPS-100 safely.
3. Install MPS-100 in a location with adequate ventilation to avoid overheating.
4. Use noncombustible materials within two feet of the MPS-100 compartment.

### **Don't:**

1. Install MPS-100 in a zero-clearance compartment.
2. Operate MPS-100 if cables are damaged or connections are loose.

## **Charging and Handling**

### **Do:**

1. Use only a dedicated charger compatible with MPS-100.
2. Ensure charging voltage does not exceed 83VDC.
3. Follow all charging conditions specified in the user manual.

### **Don't:**

1. Charge MPS-100 using non-specified equipment.
2. Operate MPS-100 while it is being charged.

## **Emergency Protocols**

### **Do:**

1. Immediately disconnect all connections if MPS-100 shows abnormal conditions such as overheating or smoking.
2. Use a fire extinguisher promptly in case of fire and apply water to suppress the chemical reaction.
3. Move MPS-100 to a safe, open area for 2-3 days if damaged to prevent potential hazards.
4. Wear breathing apparatus during a fire due to the release of corrosive gases.

### **Don't:**

1. Attempt to operate MPS-100 until it has been inspected and deemed safe after an emergency.
2. Stay near MPS-100 if it releases large amounts of smoke or catches fire without proper protective equipment.



**THANK YOU**

Thank you for choosing PVBAT.

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