SR PORTABLES

Take your power with you

HYPERION 5/10/15T

OFF-GRID ENERGY STORAGE SYSTEM

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Contents

1 Notes on this Manual

1.1 Scope

This manual is an integral part of Hyperion.

Off-Grid Energy Storage System		
Hyperion 5 (Single Phase)	Hyperion 10 (Single Phase)	Hyperion 15T (Three Phase)

This manual describes the assembly, installation, commissioning, maintenance and failure of the product. Please read it carefully before operating.

The manual is only for this batch of shipments.

1.2 Target Group

This manual is for qualified electricians. The tasks described in this manual only can be performed by qualified personnel.

1.3 Symbols Used

The following types of safety instructions and general information appear in this document as described below:

	**Danger!** **"**Danger"indicates a hazardous situation which, if not avoided, will result in death or serious injury.
	**Warning!** "Warning"indicates a hazardous situation which, if not avoided, could result in death or serious injury.
	**Caution!** "Caution"indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
	**Note!** "Note"provides tips that are valuable for the optimal operation of our product.

2 Safety

2.1 Important Safety Instructions

Danger!

- Electric shock and high voltage.
- Do not expose the system to temperatures in excess of 45°C.
- Do not subject the system to any strong force.
- Do not touch uninsulated cable termination.
- Do not soak the system in water or expose it to moisture environment.
- Do not touch the case of the system when it is wet in case of electric shock.
- Do not dispose of batteries in fire. The batteries may explode!
- Do not place the system near a heat source, such as direct
- sunlight, a fireplace.
- Keep inflammable and explosive dangerous items or flames
- away from the system.
- Do not charge or discharge damaged system.
- Before performing any work on the system, please disconnect the system from all voltage sources as described in this document.

Warning!

- Installation, repair, recycling, and disposal of system must be performed by qualified personnel in accordance with national and local standards and regulations.
- Risks of chemical burn electrolyte or toxic gases.
- Do not place heavy objects on the top of the system.
- If the moisture penetrates the system (e.g., due to casing
- damage), please do not install or operate the system.
- Do not use wet hands to touch the system.
- Any behavior to change the functionality of the product without permission will cause fatal injury to the operator, third parties, and equipment. Hyperion is not responsible for these losses and warranty claims.
- To ensure property and personal safety, the Hyperion shall be well grounded.

 Caution	**Caution!** • Do not modify or tamper with the system and other components of the system. • Risk of injury by hoisting or falling system. • Hyperion is heavy and personal injury can be caused if the Hyperion is improperly lifted or dropped during transport or improper operation when attached or removed from walls. Lifting and moving the products shall be conducted by more than two people.
	**Note!** • Do not reverse output of these two AC terminals of the Hyperion.

2.2 Explanation of Symbols

This section explains all the symbols shown on the Hyperion and on the type of label.

	CE mark. The system complies with the requirements of the applicable CE guild lines.
	Dangerous electrical voltage The device is directly connected to public grid, thus all work to the system shall only be carried out by qualified personnel. Do not touch any internal parts of the Hyperion being disconnected from the mains, battery and PV input for 5 minutes.
	Danger of hot surface The components inside the device will release a lot of heat during operation. Do not touch metal plate housing of the Hyperion during operating.
	Danger. Risk of electric shock!
	An error occurred Read the usage manual to troubleshoot problems
	Recyclable

2.3 Emergency Situation

Despite of its careful and professional protection design against any hazard results, damage of the battery may still occur. If a small amount of battery electrolyte is released due to a serious damage of the outer casing; or if the battery explodes due to not being treated timely after a fire breaks out nearby, and leaks out poisonous gases such as carbon monoxide, carbon dioxide etc., the following actions are recommended:

1) Eye contact: Rinse eyes with a large amount of running water and seek medical advice

2) Contact with skin: Wash the contacted area with soap thoroughly and seek medical advice

3) Inhalation: If you feel discomfort, dizziness or vomiting, seek medical advice immediately.

4) Use a FM-200 or Carbon Dioxide (CO2) fire extinguishers to extinguish the fire if there is a fire in the area where the battery pack is installed. Wear a gas mask and avoid inhaling toxic gases and harmful substances produced by the fire.

5) Use an ABC fire extinguisher, if the fire is not caused by battery and not spread to it yet.

Warning!

- If a fire has just occurred, try to disconnect the battery circuit breaker and cut off the power supply first, but only if you can do so without endangering yourself.
- If the battery is on fire, do not attempt to extinguish the fire and evacuate the crowd immediately.

Potential danger of damaged battery: Chemical Hazard: Despite of its careful and professional protection design against any hazard results, rupture of battery shall still occur due to mechanical damage, internal pressure etc., and may result in a leakage of battery electrolyte. The electrolyte is corrosive and flammable. When there is fire, the toxic gases produced will cause skin and eyes irritation, and discomfort after inhalation. Therefore:

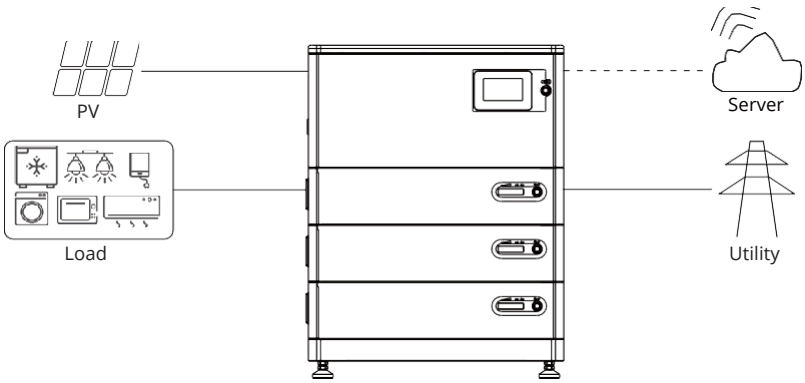
1) Do not open damaged batteries.
2) Do not damage the battery again (shock, fall, trample, etc.).
3) Keep damaged batteries away from water (except to prevent an energy system from catching fire).
4) Do not expose the damaged battery to the sun to prevent internal heating of the battery.

Electrical hazard: The reason of fire and explosion accidents in lithium batteries is battery explosion. Here are the main factors of battery explosion:

1) Short circuit of battery. Short circuit will generate high heat inside battery, resulting in partial electrolyte gasification, which will stretch the battery shell. The temperature reaching ignition point of internal material will lead to explosive combustion.
2) Overcharge of battery. Overcharge of battery may precipitate lithium metal. If the shell is broken, it will come into direct contact with the air, resulting in combustion. The electrolyte will be ignited at the same time, resulting in strong flame, rapid expansion of gas and explosion.

3 Introduction

3.1 Scope of Application



In daytime, solar power supports the loads first while the surplus power will be stored by system, to improve self-consumption rate. In peak power price hours, power from system supports the loads; while in valley power price hours, system is charged by the grid. Finally, a balance could be realized.

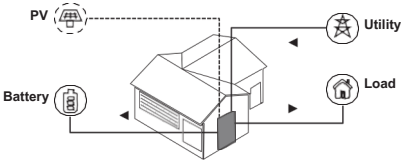
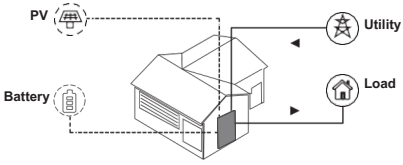
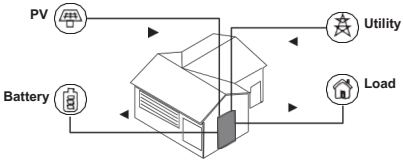
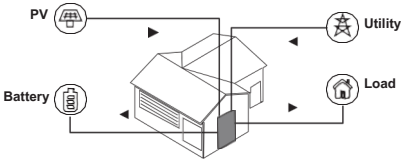
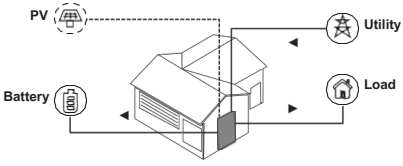
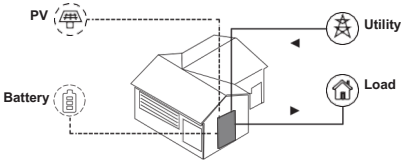
In case of grid fault, system will make sure no outage in the loads, achieving UPS function.

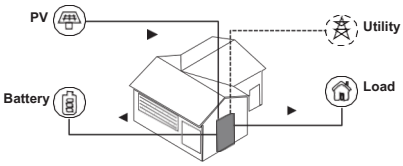
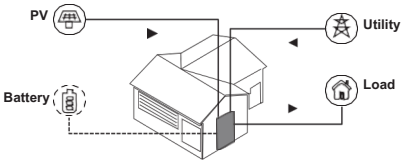
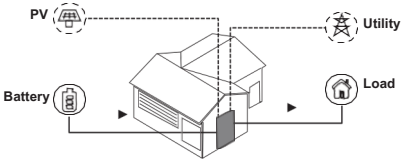
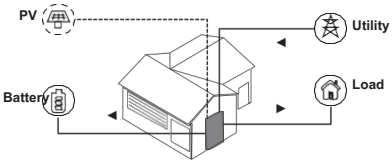
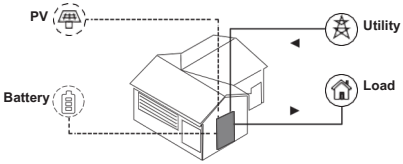
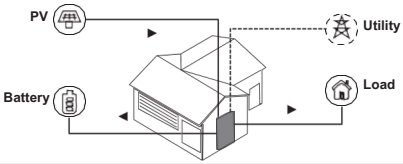
3.2 Product Model Description

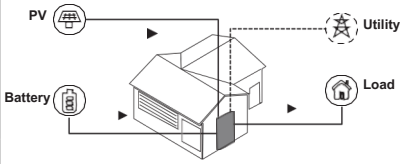
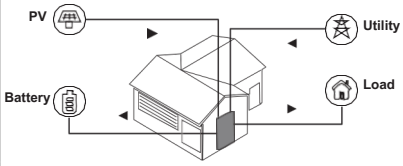
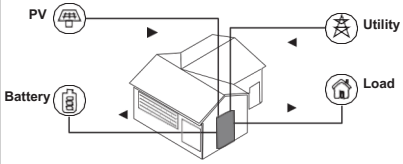
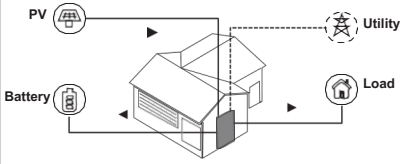
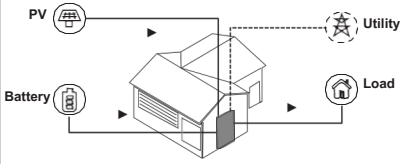
Hyperion - 15 T
① ② ③

① Hyperion is the name of Off-Grid Energy Storage System.
② 15 indicates the rated power of the system, such as 15 for 15kW.
③ No letter indicates that the output of this system is single-phase. T indicates that the output of this system is three-phase.

3.3 Hyperion 5/10/15T Work Mode Introduce

Work Mode: Uti First (Grid priority output)	
	When the charging mode is set Pv&Uti/Pv First: There is no PV, the grid prioritizes the output of the load while charging the battery.
	When the charging mode is set Pv Only: There is no PV, the grid prioritizes load output and the battery is on standby.
	When the charging mode is set Pv&Uti/Pv First: The grid prioritizes the output to the load, the PV charges the battery, and when the battery charging current is high, the shortfall is supplemented by the grid.
	When the charging mode is set Pv Only: The grid prioritizes output to the load, the PV charges the battery, and the grid does not charge the battery.
Work Mode: Pv First (PV priority output)	
	When the charging mode is set Pv&Uti/Pv First: There is no PV, the grid prioritizes the output of the load while charging the battery.
	When the charging mode is set Pv Only: There is no PV, grid output load and no charging, battery standby.

	When charging mode setting Pv&Uti/Pv First/Pv Only: PV power > load power, PV carries and charges, charging current depends on remaining PV energy; utility standby.
	When the charging mode is set Pv&Uti/Pv First/Pv Only: PV power < load power, grid replenishes load power, battery standby.
Work Mode: Bat First (PV first, Battery second, Grid third output)	
Mode 1:	When there is no PV and the charging mode is set Pv&Uti/Pv First:
	Mode 1: Battery power > load power, battery output to load, utility standby.
Mode 2: 	Mode 2: Battery power < load power (Battery SOC < "Batt. Switch to AC SOC"), grid carry and charge until Battery SOC > "AC Switch to Batt. SOC", switch to mode 1.
	When the charging mode is set Pv Only: There is no PV, battery power < load power (SOC < "Batt. Switch to AC SOC"), grid loaded, battery standby.
	When charging mode setting Pv&Uti/Pv First/Pv Only: PV power > load power, PV with load and charging, charging current depends on PV residual energy, utility standby.

<table>
<tr><td rowspan="3">Mode 1：
 
</td><td>When PV power < load power:</td></tr>
<tr><td>Mode 1: PV + battery together with load, utility standby.</td></tr>
<tr><td>Mode 2: When the charging mode is set to Pv&Uti/Pv First and the battery SOC < "Batt. switch to AC SOC", utility output to load, utility + PV to charge battery (PV priority), charge until Battery SOC＞"AC Switch to Batt. Switch to Batt. SOC", turn to Mode 1.</td></tr>
<tr><td>Mode 2：
 
</td><td></td></tr>
<tr><td>Mode 3：
 
</td><td>Mode 3: When the charging mode is set to Pv Only and the battery SOC < "Batt. switch to AC SOC", utility output to load, PV charging to Battery SOC＞"AC Switch to Batt. SOC", turn to Mode 1.</td></tr>
<tr><td colspan="2">When the power grid is absent (regardless of operating/charging mode)</td></tr>
<tr><td> 
</td><td>PV power > load power, PV output to the load and charging the battery at the same time.</td></tr>
<tr><td> 
</td><td>PV power < load power, battery power is sufficient, PV and battery output to load at the same time. When battery SOC＜"Batt. Switch to AC SOC", stop load output, 15s later PV charge the battery, charge to 52V, stop charging, 8s later PV and battery carry load at the same time.</td></tr>
</table>

3.4 Datasheet

Model	Hyperion 5	Hyperion 10	Hyperion 15T
Inverter Module			
Rated Voltage	51.2V		
Voltage Range	44.8~57.6V		
Depth Of Discharge [DOD]	95% (MAX) / 80% (Default)		
Max. Discharge Current	110A	220A	110A*3
Max. Charge Current (AC+PV)	80A	80A/80A	80A/80A/80A
Battery Type	Li-ion (LFP)		
AC Output (Backup)			
Rated Power	5000W	10000W	15000W
Output Voltage	208/220/230/240Vac ± 5%		220/380,230/400,240/ 415Vac±5%
Output Frequency	50/60Hz ± 1%		
Max Output Current	22.7A	45.4A	22.7A/phase
Rated Current	21.7A	43.4A	21.7A/phase
Peak Power	10000W	20000W	30000W
Overload Ability [1]	Battery Mode(Battery Max Output Current>200A): 1min@102~110%Load 10s@110~130%Load 3s@130~150%Load 200ms@>150%Load	Battery Mode(Battery Max Output Current>300A): 1min@102~110%Load 10s@110~130%Load 3s@130~150%Load 200ms@>150%Load	Battery Mode (Battery Max Output Current>400A): 1min@102~110%Load 10s@110~130%Load 3s@130~150%Load 200ms@>150%Load
Output Wave	Pure Sine Wave		
Peak Efficiency (Battery Mode)	>92%		
Transfer Time	UPS Mode:10ms/APL Mode: 20ms		
AC Input			
Input Sources	L+N+PE		L1+L2+L3+N+PE
AC Input Voltage Range	APL Mode:154~264Vac/UPS Mode:185~264Vac		APLMode:154~264Vac/UPS Mode:185~264Vac /Phase
Rated Input Voltage	208/220/230/240Vac±5%		220/380,230/400, 240/415Vac±5%
AC Input Frequency	50/60Hz		
PV Input			
Max PV Input Power	5500W	5500W/5500W	5500W/5500W/5500W
No. of MPP Trackers	1	2	3
Max. PV Input Voltage	450Vdc		
MPPT Voltage Range	120~430Vdc		
Best Voltage Range	300~340Vdc		
Max. DC Input Current	18A		
Max. DC Short Circuit Current	20A		
General Data			
Range of WorkingTemperature	Charge: 0℃~50℃/Discharge: -10℃~55℃		
Optimal Working Temperature range	20℃~30℃		
Storage Temperature	-15℃~60℃		
Humidity	20-95% Non-Condensing		
Altitude	<1000m		
Cooling Strategy	Fan		
Weight	14kg	28kg	38kg
Dimension [W x H x D]	620*170.5*365mm	620*207*365mm	620*298.5*365mm
Enclosure Protection Rating	IP20		
Communication	Wi-Fi (Optional)		

[1] Overload requires that the maximum battery output is greater than the inverter output.

Battery Module	Hyperion Bat
Electrical Parameter	
Battery Type	LiFePO4
Battery Capacity Per Kit [Wh]	5120
Usable Energy [Wh]	4600
Rated Voltage [V]	51.2
Voltage Range [V]	44.8-57.6
Max. Charging and Discharging Rate	100A
Depth Of Discharge [DOD]	≤90%
Cycle Life(25℃,0.5C)	≥6000 Times,80% Capacity Retention
Scalability	Yes（up to 40.96kWh）
General Data	
Communication Mode	RS485/CAN2.0
Operating Temperature Range	0~50°C (Charge)/-10~50°C(Discharge)
Storage Temperature Range	-15°C~60°C
Cooling Method	Natural Convection
Altitude	<1000m
Ambient Humidity	20-95% Non-Condensing
Noise[dBA]	<25
Ingress Protection	IP20
Dimensions [W x H x D]	620*139*365mm
Weight	46.7kg

System Parameters

System Structure									
Rated Output Power		5000 / 10000W / 15000W							
Number of Battery		1	2	3	4	5	6	7	8
Battery Capacity		5.12 kWh	10.24 kWh	15.36 kWh	20.48 kWh	25.6 kWh	30.72 kWh	35.84 kWh	40.96kWh
Operating Temperature		0℃~50℃ (Charge) / -10℃~55℃ (Discharge)							
Storage Temperature		-15~60℃							
Humidity		20-95% Non-Condensing							
Enclosure Protection Rating		IP20							
Communication		Wi-Fi (Optional)							
Weight	Hyper-05	66.1 kg	112.8 kg	159.5 kg	206.2 kg	252.9 kg	299.6 kg	346.3 kg	393.0 kg
	Hyper-10	/	126.8 kg	173.5 kg	220.2 kg	266.9 kg	313.6 kg	360.3 kg	407 kg
	Hyper-15T	/	/	183.5 kg	230.2 kg	276.9 kg	323.6 kg	370.3 kg	417.0 kg
Dimension [WxHxD,mm]	Hyper-05	620*406.5*365	620*545.5*365	620*684.5*365	620*823.5*365	620*962.5*365	620*1101.5*365	620*1240.5*365	620*1379.5*365
	Hyper-10	/	620*582*365	620*721*365	620*860*365	620*999*365	620*1138*365	620*1277*365	620*1416*365
	Hyper-15T	/	/	620*812.5*365	620*951.5*365	620*1090.5*365	620*1229.5*365	620*1368.5*365	620*1507.5*365

4 Installation Instructions

4.1 Safety Tips

Danger!

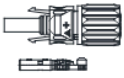
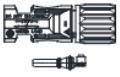
- Potential fires and electric shocks that are life threatening.
- Do not place any flammable or explosive materials beside system.
- Equipment connected to high-voltage power generation equipment must be performed by qualified personnel in compliance with national and local standards and regulations.

Note!

- The pollution level applicable to system is Class II.
- Inappropriate or inconsistent installation environment can shorten the life of system.
- Do not install Hyperion directly by exposing it under strong sunlight.
- Please do not install in damp places.
- The installation location must be well ventilated.

4.2 Packing List

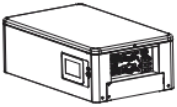
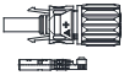
4.2.1 Hyperion 5 Inverter Module Packing List

Hyperion 5 Inverter Packing List			
			
Inverter Module × 1 Pcs	WiFi Plug (Optional) × 1 Pcs	Circular Terminal RNB 5.5-4L × 1 Pcs	Grub Screw (M4-8) × 4 Pcs
			
PV Connector (Male) × 1 Pcs	PV Connector (Female) × 1 Pcs	Tube Terminal (Red) × 3 Pcs	Tube Terminal (Black) × 3 Pcs
				
Tube Terminal (Yellow) × 1 Pcs	Battery Connection Copper Bar (Red) × 1 Pcs	User Manual × 1 Pcs	Packing List × 1 Pcs	Qualified Certificate × 1 Pcs

Hyperion 5 Wire Packing List

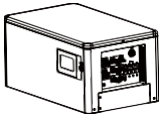
Negative Wire (Black) × 1 Pcs

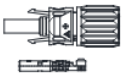
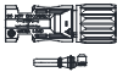
4.2.2 Hyperion 10 Inverter Module Packing List

Hyperion 10 Inverter Packing List			
			
Inverter Module × 1 Pcs	WiFi Plug (Optional) × 1 Pcs	Circular Terminal RNB 5.5-4L × 1 Pcs	Grub Screw (M4-8) × 4 Pcs
			
PV Connector (Male) × 2 Pcs	PV Connector (Female) × 2 Pcs	Tube Terminal (Red) × 4 Pcs	Tube Terminal (Black) × 4 Pcs
			
Tube Terminal (Yellow) × 1 Pcs	User Manual × 1 Pcs	Packing List × 1 Pcs	Qualified Certificate × 1 Pcs

Hyperion 10 Wire Packing List	
	
Negative Wire (Black) × 1 Pcs	Positive Wire (Red) × 1 Pcs

4.2.3 Hyperion 15T Inverter Module Packing List

Hyperion 15T Inverter Packing List			
			
Inverter Module × 1 Pcs	WiFi Plug (Optional) × 1 Pcs	Circular Terminal RNB 5.5-4L × 1 Pcs	Grub Screw (M4-8) × 4 Pcs

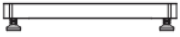
			
PV Connector (Male) × 3 Pcs	PV Connector (Female) × 3 Pcs	Tube Terminal (Red) × 6 Pcs	Tube Terminal (Black) × 2 Pcs
			
Tube Terminal (Yellow) × 1 Pcs	User Manual × 1 Pcs	Packing List × 1 Pcs	Qualified Certificate × 1 Pcs

Hyperion 15T Wire Packing List	
	
Negative Wire (Black) × 1 Pcs	Positive Wire (Red) × 1 Pcs

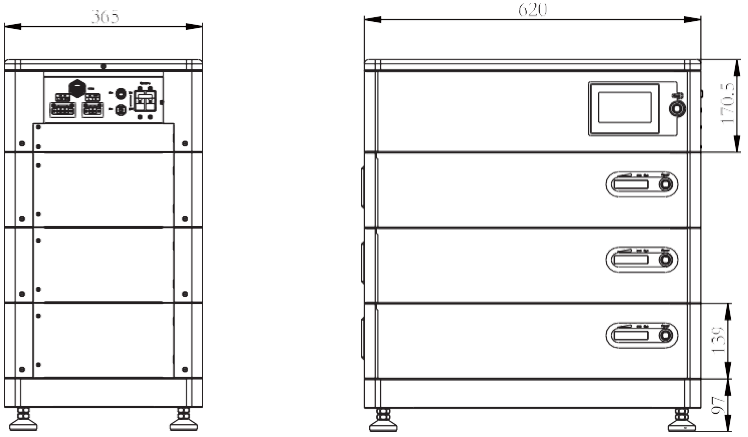
4.2.4 Battery Module Packing List

Battery Packing List				
				
Battery Module × 1 Pcs	Battery Connection Copper Bar (Red) × 1 Pcs	Battery Connection Copper Bar (Black) × 1 Pcs	Guide Pin × 4 Pcs	
				
Network Cable × 1 Pcs	Grounding Wire × 1 Pcs	Grub Screw (M4-8) × 4 Pcs	Packing List × 1 Pcs	Qualified Certificate × 1 Pcs

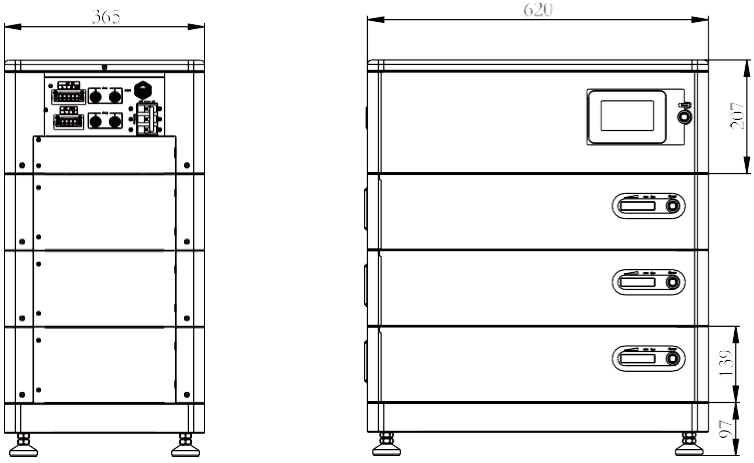
4.2.5 Battery Base Packing List

Battery Base Packing List			
			
Base × 1 Pcs	Guide Pin × 4 Pcs	Qualified Certificate × 1 Pcs	Packing List × 1 Pcs

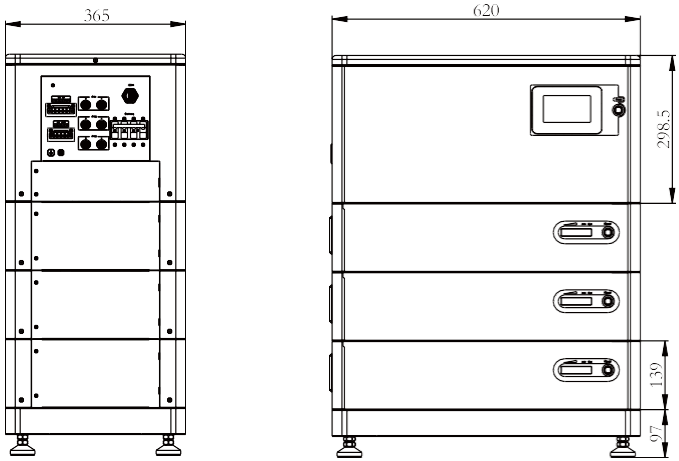
4.3 Determine the Installation location



Hyperion 5 Dimension (mm)

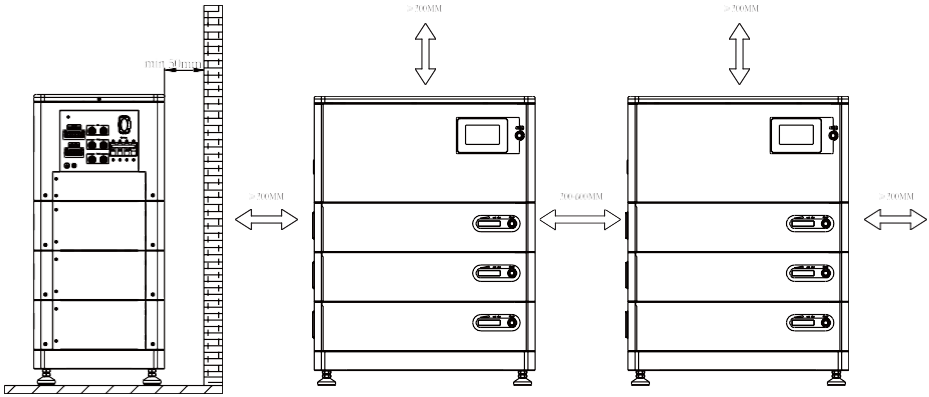


Hyperion 10 Dimension (mm)



Hyperion 15T Dimension (mm)

Hyperion heat dissipation by fan cooling. It is recommended to install in indoors or sheltered areas to avoid direct sunlight, rain and snow. Please ensure that the air at the installation point is circulated. Bad air ventilation will affect the working performance of internal electronic components and shorten the service life of Hyperion.

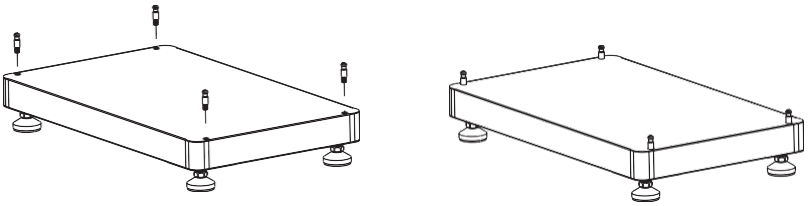


The following sites are not allowed for installation:

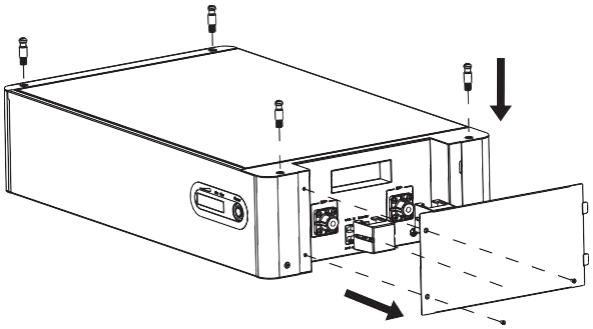
- within 600mm of any exit.
- within 600mm of any vertical side of a window or building ventilation that ventilates a habitable room.
- in celling spaces.
- in wall cavities or under stairways.
- on roofs, except for were specially deemed suitable.
- under access walkways.
- sites where the freezing point is reached, like garages, carports or other places.
- places with plenty of salt.
- flooded areas.
- within 600mm of any hot water unit, air conditioning unit or any other appliance associated with the pre-assembled integrated battery energy storage system.
- Ensure that the distance from the wall is more than 50mm.

4.4 Installation

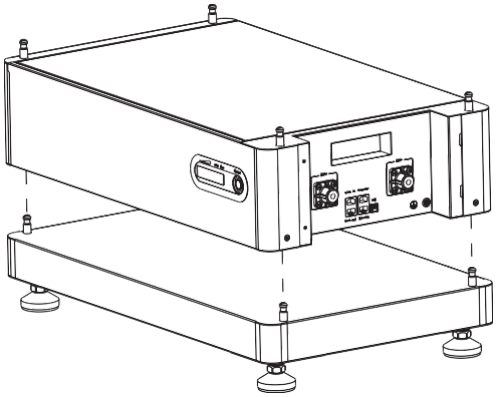
Step 1: Place the base in the proper position and adjust to horizontal. Install the locating pins.



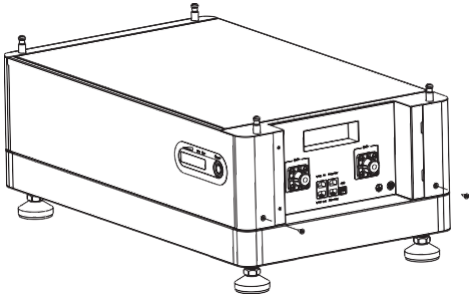
Step 2: Remove the battery side cover and connector shield and install the 4 locating pins.



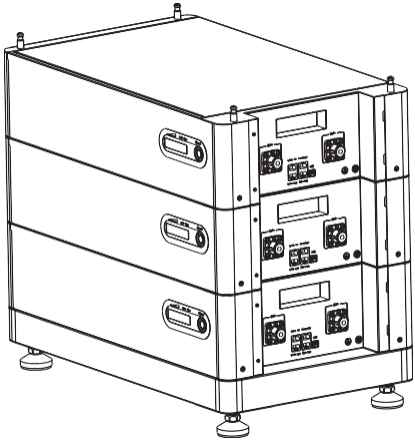
Step 3: Align the holes in the bottom of the battery module with the locating pins on the base, then stack the battery module vertically on the base.



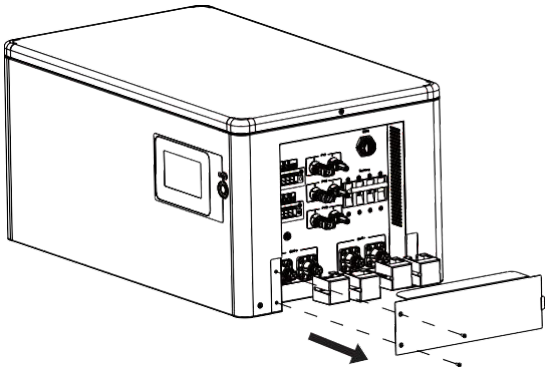
Step 4: Lock the 4 fixing screws.



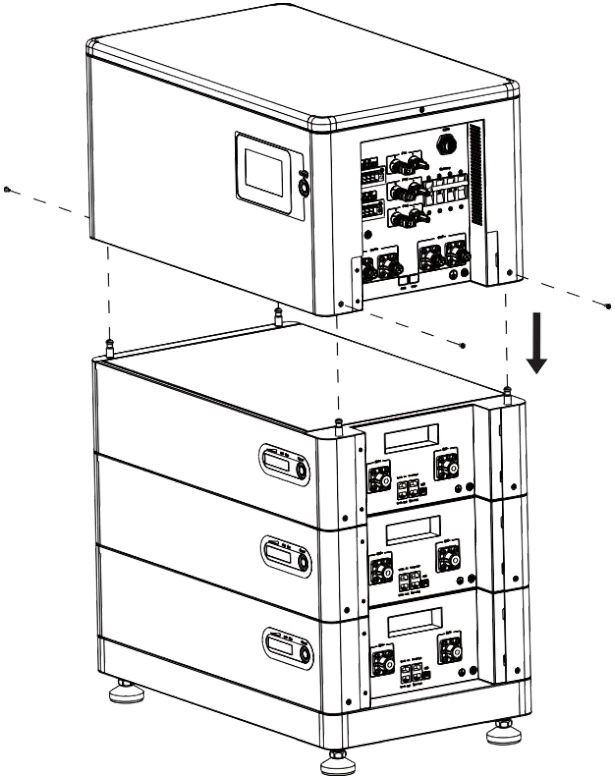
Step 5: Repeat the above steps to install all battery modules.



Step 6: Remove the Inverter side cover and connector shield.



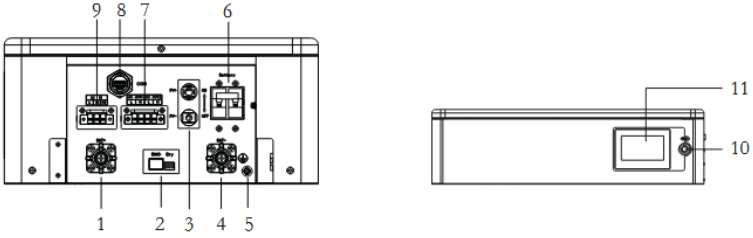
Step 7: Install the inverter and tighten the 4 fixing screws.



5 Electrical Connections

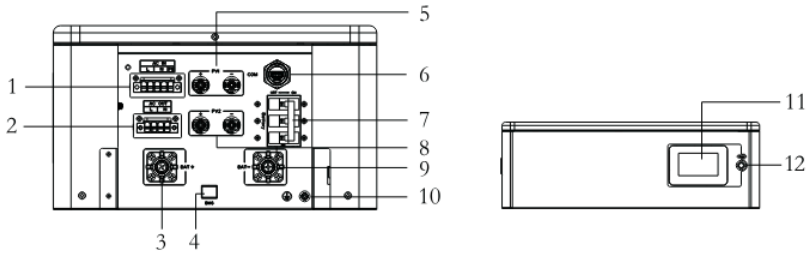
5.1 Electrical Interface Description

5.1.1Hyperion 5 Inverter Module Interface Description



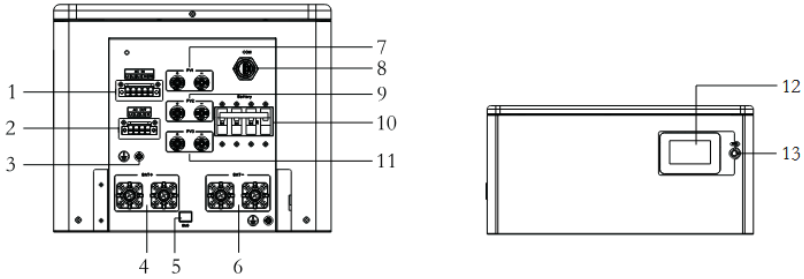
Object	Description	Object	Description
1	Battery + Terminal	7	AC Output
2	Communication Interface	8	COM(Wi-Fi)
3	PV Input	9	AC Input
4	Battery - Terminal	10	Inverter Power Button
5	Ground Screw	11	LCD Screen
6	Battery Breaker	12	/

5.1.2 Hyperion 10 Inverter Module Interface Description



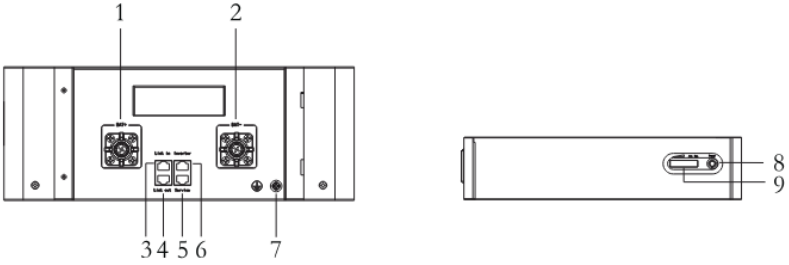
Object	Description	Object	Description
1	AC Input	7	Battery Breaker
2	AC Output	8	PV Input 2
3	Battery + Terminal	9	Battery - Terminal
4	BMS Communication	10	Ground Screw
5	PV Input 1	11	LCD Screen
6	COM (Wi-Fi)	12	Inverter Power Button

5.1.3 Hyperion 15T Inverter Module Interface Description



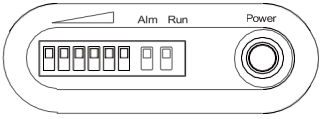
Object	Description	Object	Description
1	AC Input	8	COM(Wi-Fi)
2	AC Output	9	PV Input 2
3	Ground Screw	10	Battery Breaker
4	Battery + Terminal	11	PV Input 3
5	BMS Communication	12	LCD Screen
6	Battery - Terminal	13	Inverter Power Button
7	PV Input 1	14	/

5.1.4 Battery Module Interface Description



Object	Description	Object	Description
1	Battery + Terminal	6	Inverter Communication Port
2	Battery - Terminal	7	Ground Screw
3	Link in Communication Port	8	Battery Power Button
4	Link Out Communication Port	9	Battery LED Indicator Light
5	Service Communication Port	10	/

Communication Line Interface Definition			
1	485-B	5	CAN L
2	485-A	6	/
3	/	7	/
4	CAN H	8	/



Battery LED Indicator Light Status

Battery Status	Protection alarm normal	RUN	ALM	Capacity						Description
Off		Green	Red	Green	Green	Green	Green	Green	Green	/
	/	Off	Off	Off	Off	Off	Off	Off	Off	All off
On	Normal	Flash 1	Off	Display based on actual capacity						No charging or discharging
	Warning	Flash 1	Flash 3							PACK low voltage
Charge	Normal	ON	Off	Display based on actual capacity (Maximum power level indicator LED Flash 2)						/
	Warning	ON	Flash 3							/
	Over Charge	On	Off	ON	ON	ON	ON	ON	ON	Stop charging
	Over Temp/Current,Failure	Off	On	Off	Off	Off	Off	Off	Off	
Discharge	Normal	Flash 3	Off	Display based on actual capacity						/
	Warning	Flash 3	Flash 3							
	Over Discharge	Off	Off	Off	Off	Off	Off	Off	Off	Stop discharging
	Over Temp/Current,Failure	Off	On	Off	Off	Off	Off	Off	Off	
Failure	/	Off	On	Off	Off	Off	Off	Off	Off	Stop charging and discharging

Flash description:

Flash 1: 0.25s on/3.75s off

Flash 2: 0.5s on/0.5s off

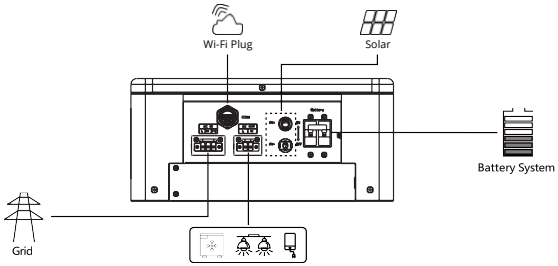
Flash 3: 0.5s on/1.5s off

5.2 System Wiring Schematic

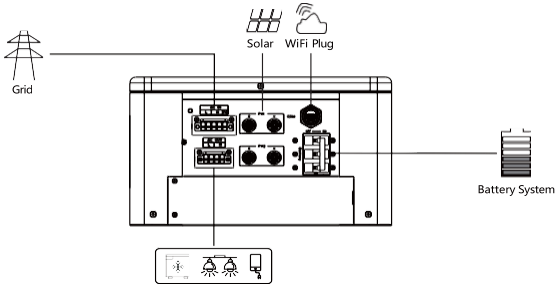
Installation ground wire, battery positive and negative connection copper row, battery and inverter positive and negative connection wire.

Note!

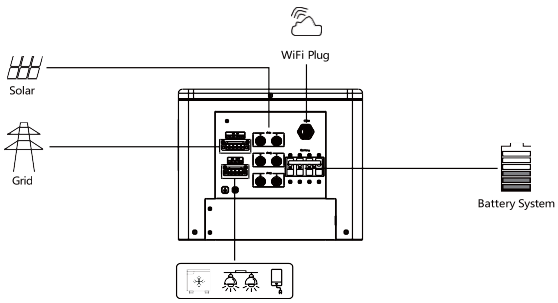
- Installation of the copper busbar requires that the busbar be threaded through the connector shield first.
- The batteries are connected to the positive terminal of the inverter with a copper drain from the battery closest to the inverter.
- The battery is connected to the negative terminal of the inverter with a wire harness, from the battery furthest from the inverter.
- Ensure that the battery connection screws are tight.



Hyperion 5 System Wiring Diagram



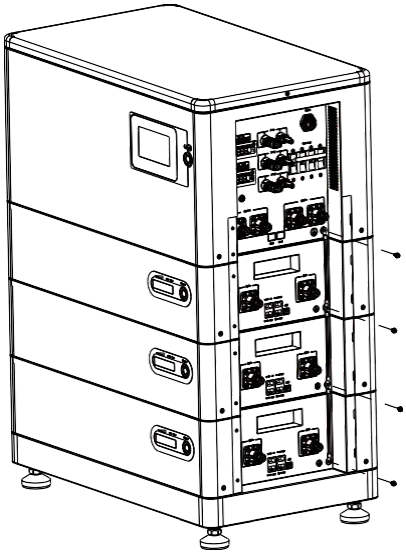
Hyperion 10 System Wiring Diagram



Hyperion 15T System Wiring Diagram

5.3 Grounding Wiring

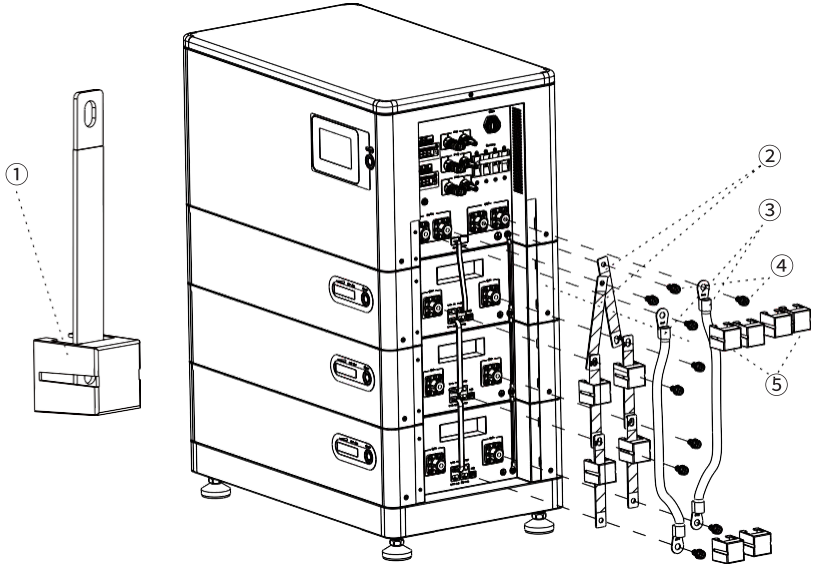
Remove the ground screw with a screwdriver and re-secure the ground screw after aligning the ground wire in the position shown below.

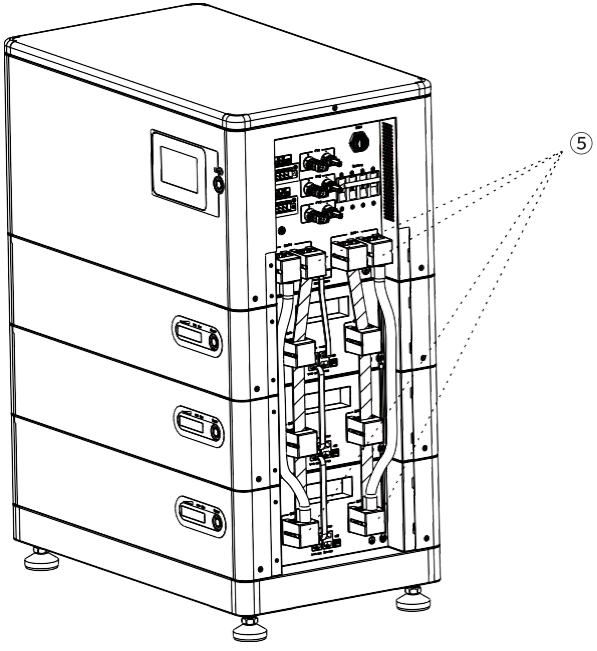


5.4 Battery Wiring

(1) Remove the protective casing and screws on the terminals, and fix the copper rows after aligning them according to the position shown in the following figure. Note: Several copper plates in the middle part should be passed through the terminal protective shell in advance before fixing, as prompted in the following figure.

(2) Find the positive and negative wires in the accessory box and fix them with screws after aligning them according to the position shown in the following figure. Finally, install the protective casing.


①
②
③
④
⑤

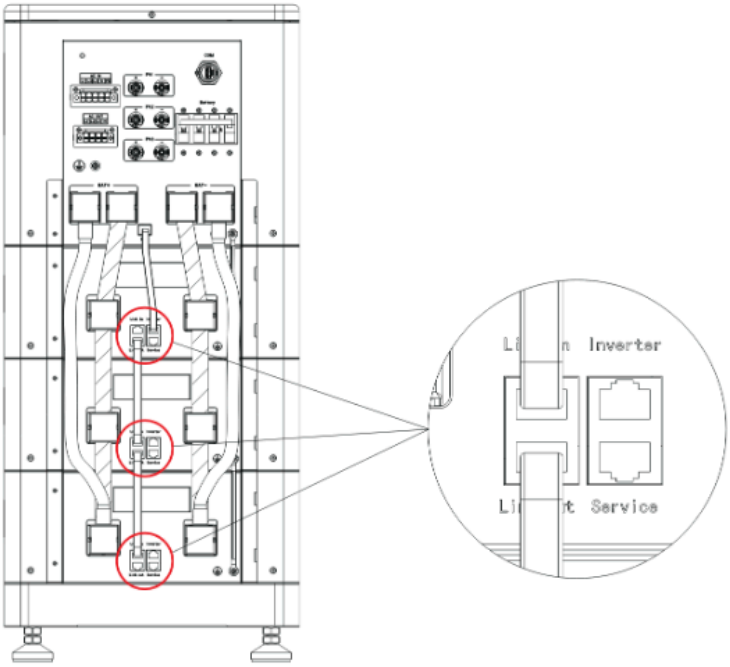

⑤

5.5 Communication Link

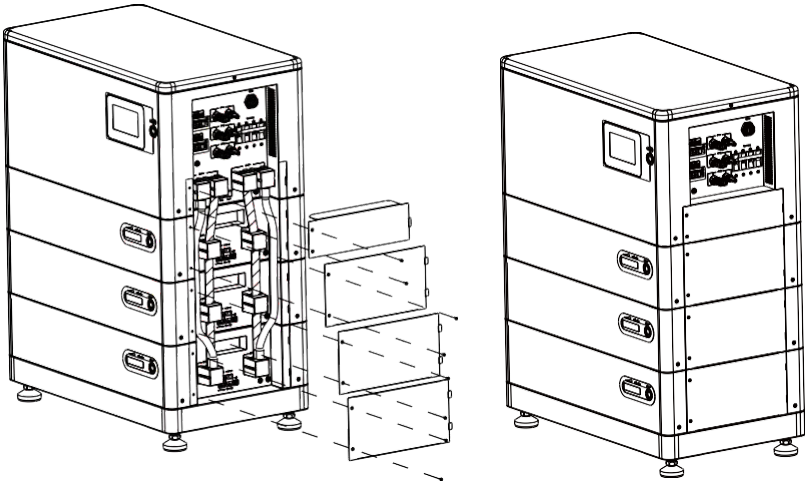
(1) Connect the communication line between the inverter and the battery (BMS-Inverter). If you hear a “click”, the connection is in place.

(2) Connect the communication line between the batteries (Link out-Link in). If you hear a “click”, the connection is in place.

(3) When it is necessary to remove the communication line, it can be pulled out by pressing the clip on the port.



5.6 Installation of Side Guards

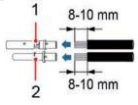
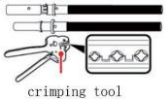


5.7 PV Input Wiring Schematic

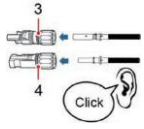
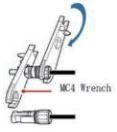
Note!

- Use 4 mm2 DC cable for the DC input cable.

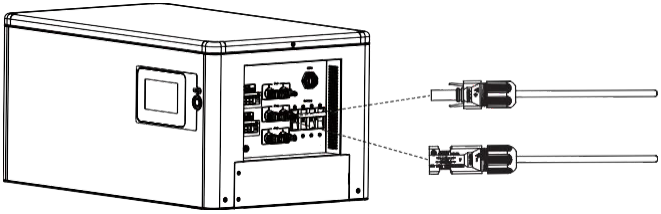
Step 1： Prepare PV positive and negative power cables.

	
1. Positive connector 2. Negative connector	Core Crimping

Step 2： Insert the crimped photovoltaic positive and negative power cable into the corresponding photovoltaic connector.

	
3. Positive connector 4. Negative connector	Tightening of insulating shells

Step 3: Insert the positive and negative connectors into the corresponding PV region until a click is heard.



Warning!

- Make sure that the DC voltage of each PV string is less than 450V and the polarity of PV cables are correct.
- Ensure wiring is not energized.

5.8 AC in/AC out Wiring

Warning!

- Turn off the external AC breaker after unpacking in any cases before and during wiring in case of electric shock.

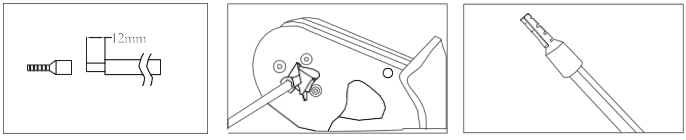
Step 1:

① Choose the right cable.

Cable Type	Core Cross Sectional Area (mm^2)
10 AWG	5-6

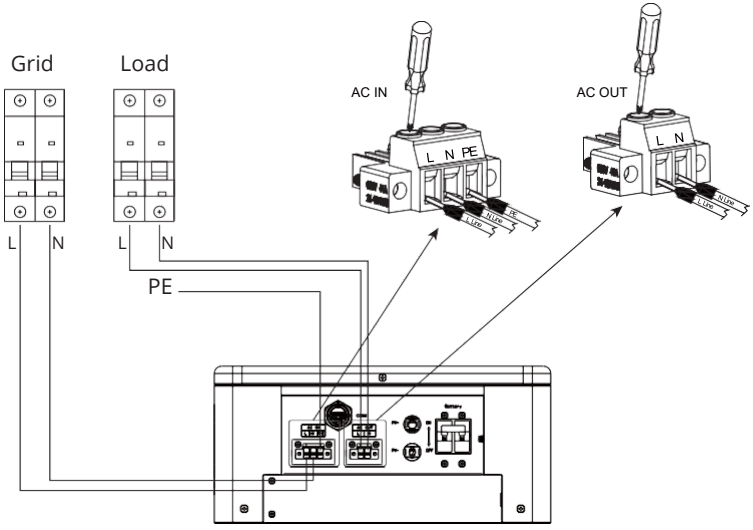
② Peel off the cable insulation sleeve for 12mm, as shown in Figure:

Step 2: Crimp terminals with special tools.

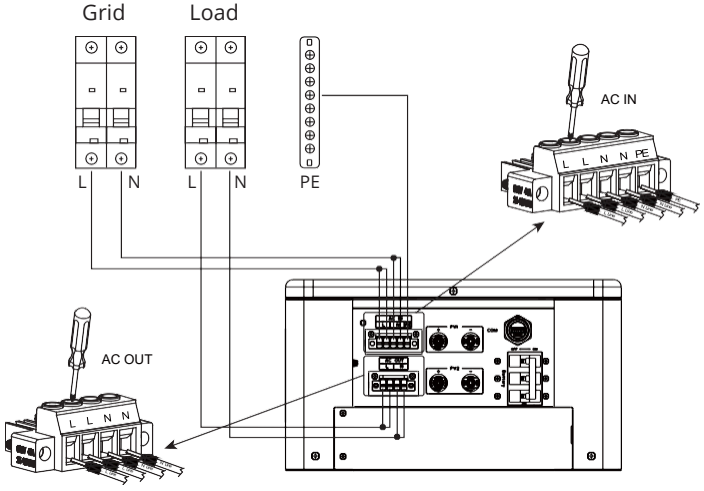


Cable	Color
L	Red
N	Black
PE	Yellow-green

Step 3: Connect the wires to the corresponding ports as indicated in the picture below.

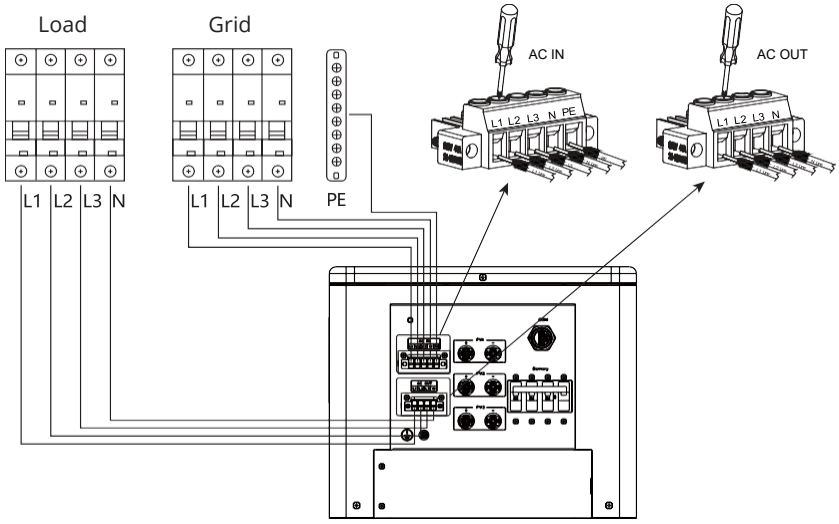


Hyperion 5：Connect cable to AC in/AC out terminals.



Hyperion 10：Connect cable to AC in/AC out terminals.

Note：L1&L2 of Hyperion-10 are connected in parallel, as are N1&N2. To prevent overcurrent, be sure to have both wires connected.

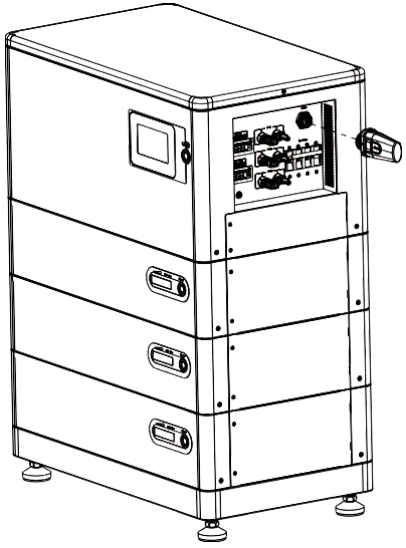


Hyperion 15T：Connect cable to AC in/AC out terminals.

Note：Hyperion-15T's AC input and output need to correspond to the phase sequence, L1-R, L2-S, L3-T.

5.9 Wi-Fi Plug

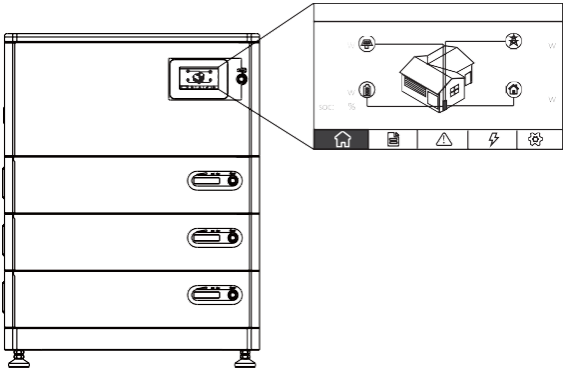
Installation of monitor. Refer to the monitor's manual (in the monitor box) for specific instructions on how to use it.



6 Local Configuration

6.1 Local Interface Introduction

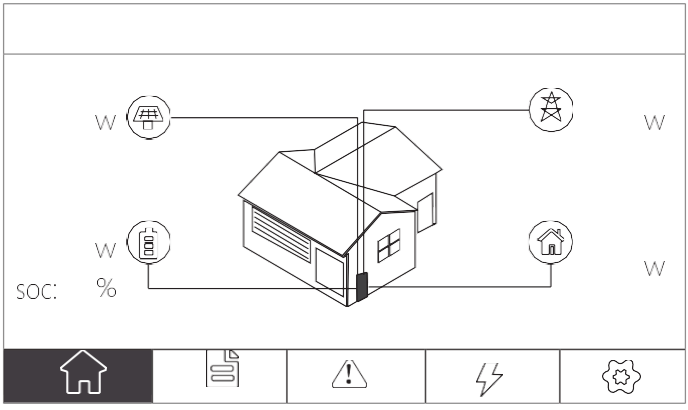
Hyperion has a touch screen on the front.



	Home Page
	Detail Info Page
	Fault Page
	Statistics Page
	Setting Page

6.2 Home Page

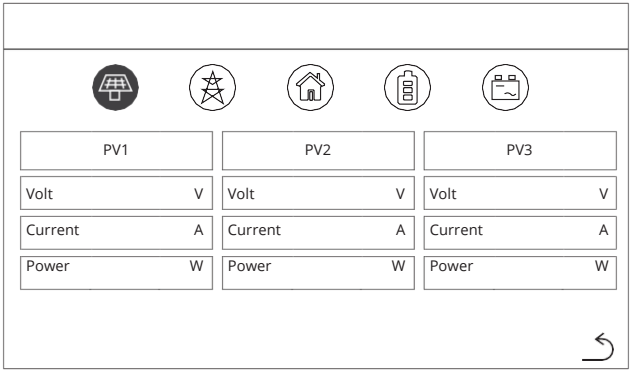
This page shows the total PV input power, AC grid power, battery power and SOC, load power.

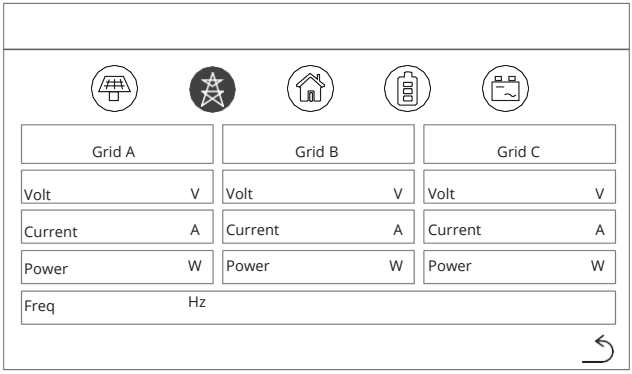


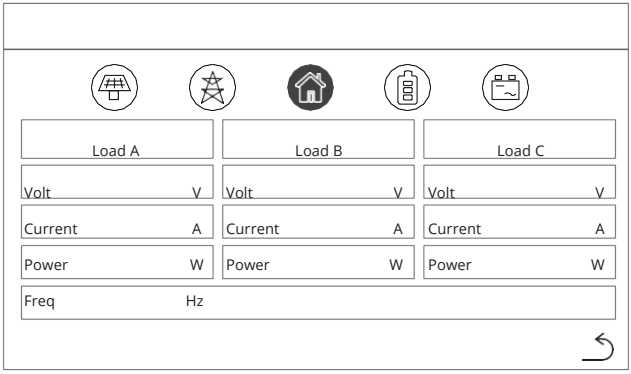
6.3 Detail Info Page

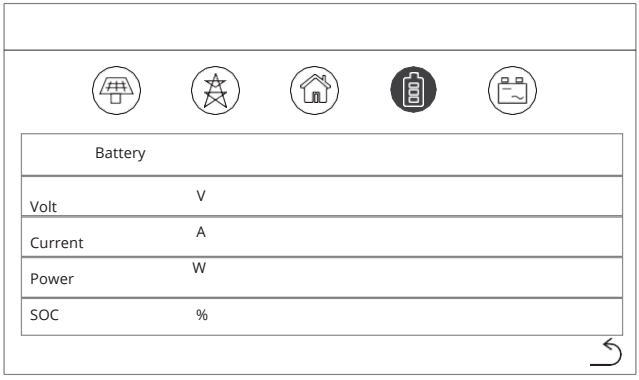
6.3.1 I/O Info Page

This page shows the PV, Grid, Load and Battery information.
The display varies slightly from model to model, please refer to the actual screen display when operating.



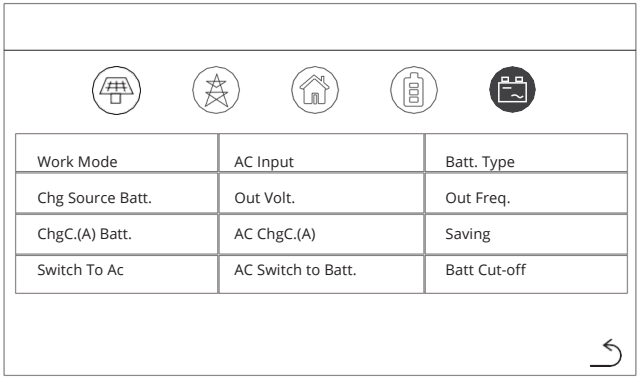






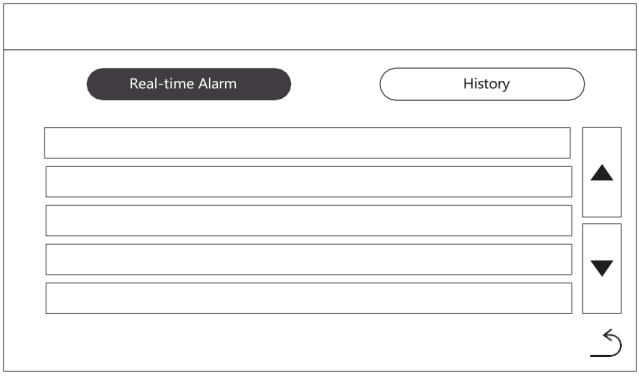
6.3.2 System Info Page

This page shows the Work Mode, Batt. Type and other system information.



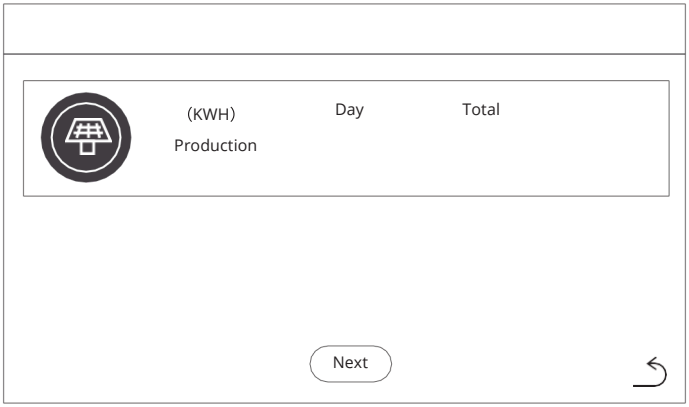
6.4 Fault Page

This page ⚠ shows the real-time fault alarm and fault history of the system.



6.5 Statistics Page

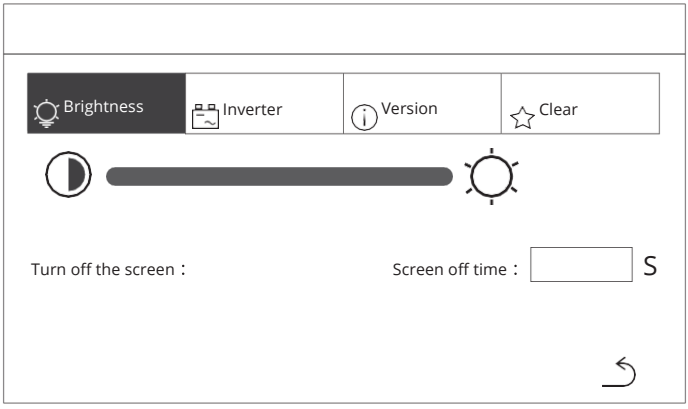
These two pages show statistics info of Grid, Battery, PV and Load.



6.6 Setting Page

6.6.1 Brightness Setting Page

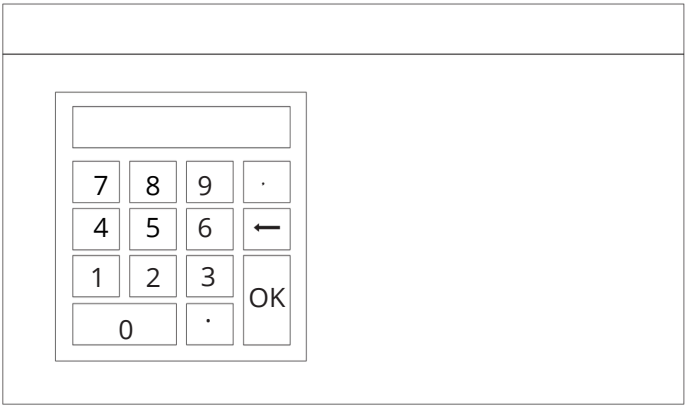
This page shows the brightness setting and screen off time setting. The value range is shown as below:



Item	Description	Range
Brightness	the brightness of screen	Min - Max
Screen off time	the time to turn off the screen	5 - 500 s
Turn off the screen	the switch to turn off the screen	ON/OFF

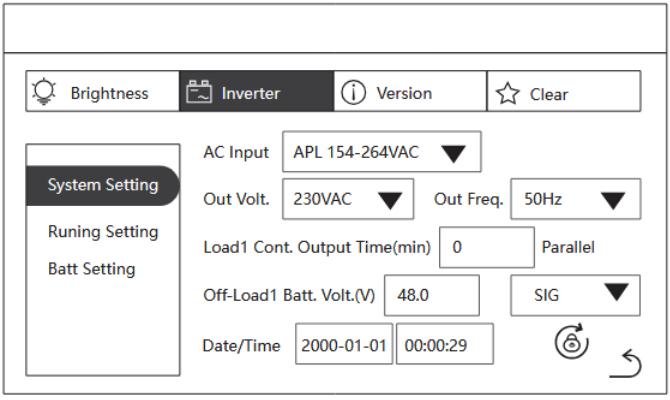
6.6.2 Inverter Setting Page

This page needs a password. The default password is “12345”. Installer can change it in this menu.



6.6.2.1 Hyperion 5 System Setting Page

This page shows the AC Input setting, Out Voltage setting, Out Frequency setting, Parallel setting, Date and Time setting.

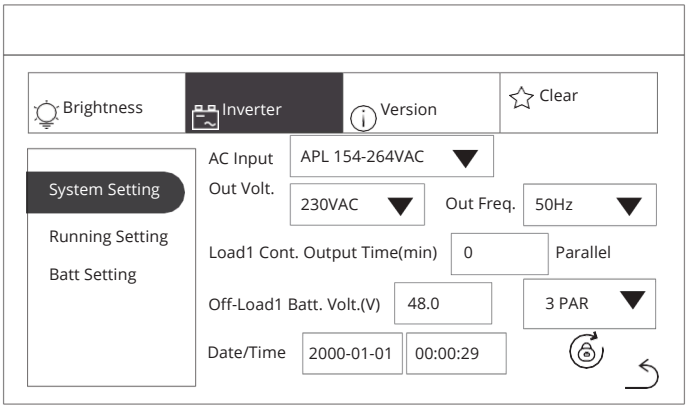


The value range is shown as below:

Item	Description	Default Setting	Range
AC Input	AC input voltage range	APL	APL 154~264Vac
			UPS 185~264Vac
Out Vol.	Output Voltage setting	230V	208V
			220V
			230V
			240V
Out Freq.	Output Frequency setting	50Hz	50Hz / 60Hz
Parallel	Parallel setting: SIG: single mode. PAR: parallel mode. 3P1: R-phase mode. 3P2: T-phase mode. 3P3: S-phase mode.	SIG	SIG
			PAR
			3P1
			3P2
			3P3
Date	Date	-	20000101 – 20991231
Time	Time	-	000000 – 235959
Password	Reset the password	******	10000 - 65535

6.6.2.2 Hyperion 10/15T System Setting Page

This page shows the AC Input setting, Out Voltage setting, Out Frequency setting, Parallel setting, Date and Time setting.



The value range is shown as below:

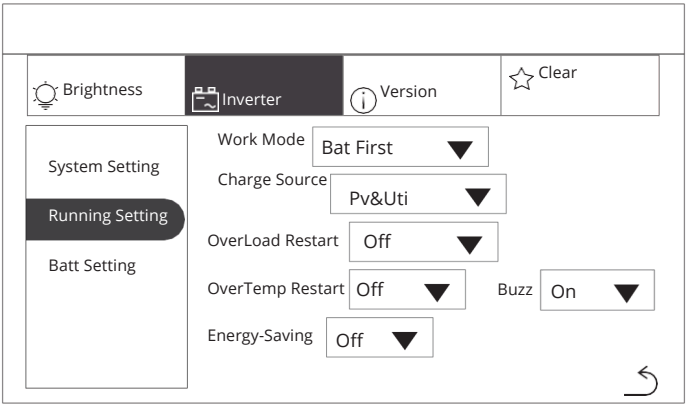
Item	Description	Default Setting	Range
AC Input	AC input voltage range	APL	APL 154~264Vac UPS 185~264Vac
Out Vol.	Output Voltage setting	230V	208V 220V 230V 240V
Out Freq.	Output Frequency setting	50Hz	50Hz / 60Hz
Parallel	Parallel setting: 3 PAR: 3-phase mode. Indep PAR: parallel mode.	3 PAR(ET) Indep PAR (ES)	3 PAR Indep PAR
Load1 Cont. Output Time(min)	Second output relay time control: the second output is not turned on by default, the second output is turned on after setting the time, and the second output is turned off after reaching the time point.	-	0~890 (5-minute scale)
Off-Load1 Batt.Volt.(V)	Off-Load1 Batt.Volt. = 45.0V, it means when the battery voltage is lower than the 45.0v, the 2nd outout will be cut-off The restore value is 45V+4V=49.0V. When the working mode switches to PV or Grid, the 2nd output will restore, even when the battery voltage is lower than Off-Load1 Batt.Volt. value.	-	44~60V
Date	Date	-	20000101 – 20991231
Time	Time	-	000000 – 235959
Password	Reset the password	******	10000 - 65535

Note!

- The “Date” should be set with 8 numbers. First 4 numbers are “year”. Second 2 numbers are “Month”. Last 2 numbers are “Day”. “20000101” means January 1st, 2000.
- The“Time”should be set with 6 numbers. First 2 numbers are “hour”. Second 2 numbers are “minute”. Last 2 numbers are “second”. “120101” means 12:01:01.

6.6.2.3 Hyperion 5 Running Setting Page

This page shows the Work mode setting, Charge Source setting, Overload Restart setting, OverTemp Restart setting, Buzzer setting, Energy-Saving setting and Bypass setting.



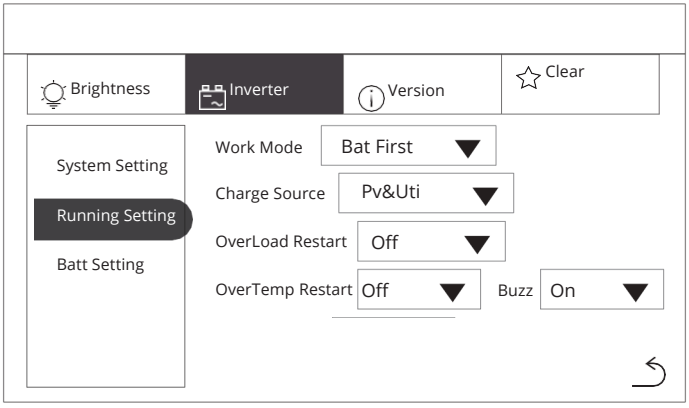
The value range is shown as below:

Item	Description	Default Setting	Range
Work mode	Output priority setting: Bat First: PV first, Battery second, Grid third output. Pv First: PV priority output. Uti Firs: Grid priority output.	Bat First	Bat First Pv First Uti First
Charge Source	Charging priority setting: Pv First: PV charging priority. Pv&Uti: PV and Grid are charged at the same time. Pv Only: Only PV charging.	Pv&Uti	Pv First Pv&Uti Pv Only

Overload Restart	Overload restart setting: ON: Automatic restart when the machine is overloaded and shut down. OFF: the function is not turned on.	OFF	ON OFF
OverTemp Restart	Over temperature restart setting: ON: Automatic restart when the machine is over temperature and shutdown. OFF: the function is not turned on.	OFF	ON OFF
Buzz	Buzzer setting: ON: the buzzer does not sound under any circumstances, such as alarms, faults, etc. OFF: the function is not turned on.	ON	ON OFF
Energy-Saving	Power Save setting: ON: In battery mode, if the load is lower than 25W, the system will temporarily stop the output. If the load is higher than 35W, the system will resume continuous normal output. OFF: Continuous output regardless of load.	OFF	ON OFF

6.6.2.4 Hyperion 10/15T Running Setting Page

This page shows the Work mode setting, Charge Source setting, Overload Restart setting, OverTemp Restart setting, Buzzer setting, Energy-Saving setting and Bypass setting.

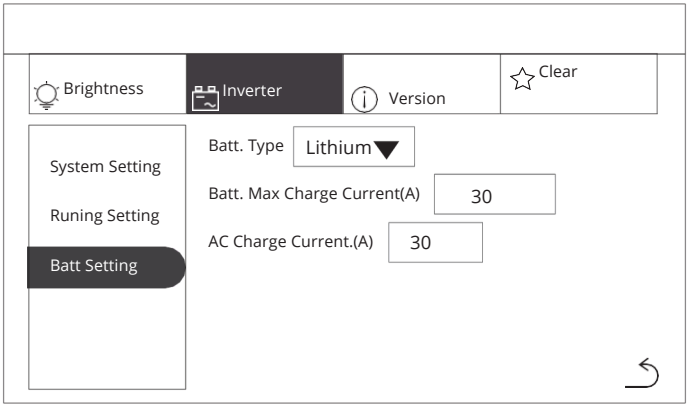


The value range is shown as below:

Item	Description	Default Setting	Range
Work mode	Output priority setting: Bat First: PV first, Battery second,Grid third output. Pv First: PV priority output. Uti Firs: Grid priority output.	Bat First	Bat First Pv First Uti First
Charge Source	Charging priority setting: Pv First: PV charging priority. Pv&Uti: PV and Grid are charged at the same time. Pv Only: Only PV charging.	Pv&Uti	Pv First Uti First Pv&Uti Pv Only
Overload Restart	Overload restart setting: ON: Automatic restart when the machine is overloaded and shut down. OFF: the function is not turned on.	OFF	ON OFF
OverTemp Restart	Over temperature restart setting: ON: Automatic restart when the machine is over temperature and shut down. OFF: the function is not turned on.	OFF	ON OFF
Buzz	Buzzer setting: ON: the buzzer does not sound under any circumstances, such as alarms, faults, etc. OFF: the function is not turned on.	ON	ON OFF

6.6.2.5 Hyperion 5/10/15T Batt Setting Page

This page shows the battery type setting, battery max charge current setting, AC charge current setting.



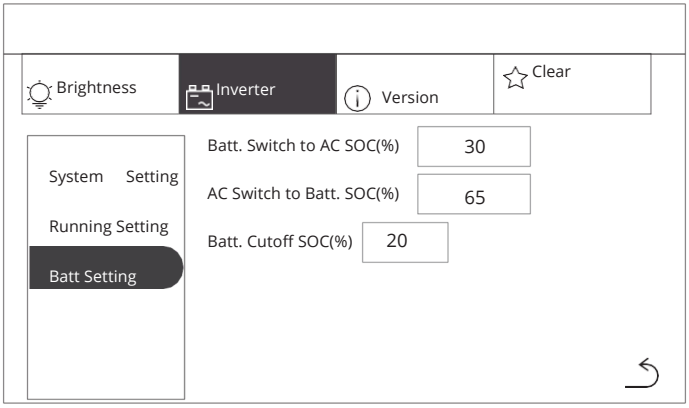
The value range is shown as below:

Item	Description	Default Setting	Range
Batt Type	Battery Type: Lead-acid: lead-acid battery. Lithium: lithium battery. USE2: customer setting type.	Lithium	Lead-acid Lithium USE2
Batt. Max Charge Current	The maximum PV and Gird charging current.	30A	2/10/20/30/40/50/60/70/80A
AC Charge current	The maximum Gird charging current.	30A	1~80A

Note!

- The “Batt Type” should be set as “Lithium”. Don’t choose others during the installation.

After selecting the lithium battery:

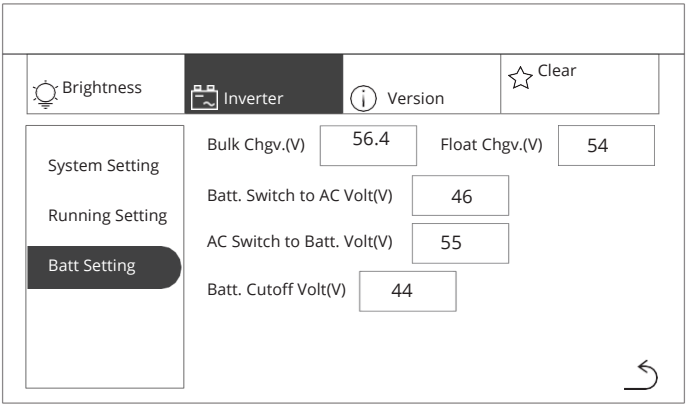


Item	Description	Default Setting	Range
Batt. Switch to AC SOC (%)	Work mode selection Bat First: Switch to gird mode only when the SOC is above the set point.	30%	10~90%
AC Switch to Batt. SOC (%)	Work mode selection Bat First: Switch to battery mode only when the SOC is above the set point.	65%	10~100%
Batt. Cutoff SOC (%)	When the SOC of lithium battery reaches the set value in battery mode, the power will be turned off and the alarm fault code 103.	20%	5~50%

Note!

- The AC Switch to Batt. SOC needs to be higher than The Batt. Switch to AC SOC.
- The fault code 103 will be cleared when the SOC returns to the cutoff SOC + 5%. When the standby is on, the SOC of lithium battery reaches the cutoff SOC + 10% before it can be transferred to battery mode, and the alarm fault code 103 will be alarmed when the SOC does not reach the cutoff SOC + 10%. When the function is turned on, the fault code 103 is warned when the lithium battery SOC reaches the cutoff SOC + 5%, and clears warning 103 when it returns to the cutoff SOC + 10%.

After selecting the lead-acid battery/USE2 setting:



The value range is shown as below:

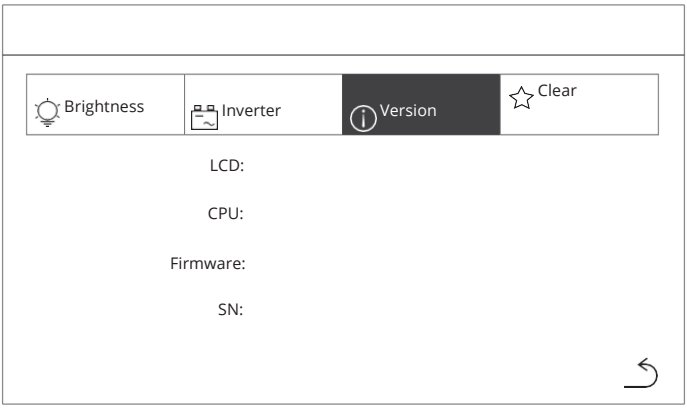
Item	Description	Default Setting	Range
Bulk ChgV. (V)	Constant voltage point setting Lead-acid battery cannot be set.	57.6V	48~56V
Float ChgV. (V)	Float voltage point setting	57.6V	50~58V
Batt. Switch to AC Volt (V)	Switch to Gird mode when the battery voltage reaches the set value in battery mode.	46V	44~50V
AC Switch to Batt. Volt (V)	Switch to battery mode when the battery voltage reaches the set value in battery mode.	55V	48~58V
Batt. Cutoff Volt (V)	When the battery voltage reaches the set value in battery mode, the power will be turned off.	44V	40~48V

Note!

- The AC Switch to Batt. Volt needs to be higher than The Batt. Switch to AC Volt.

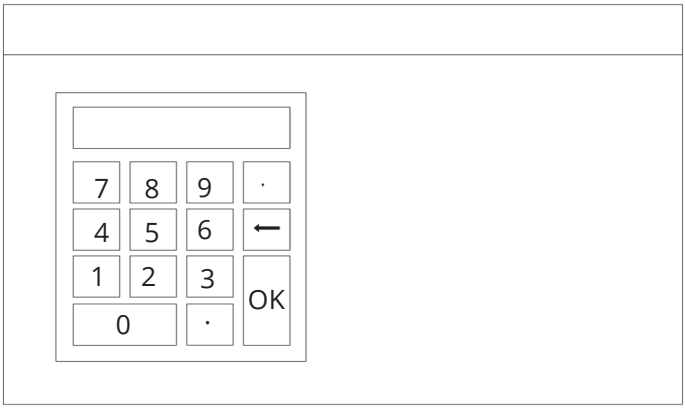
6.6.3 Version Page

This page shows the version and serial number of the system.

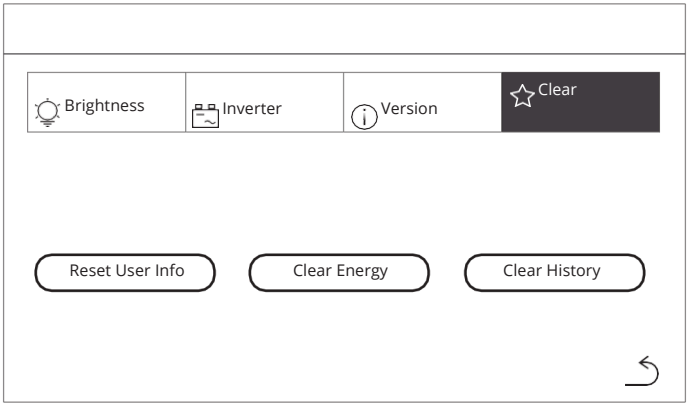


6.6.4 Clear Page

This page needs a password. The default password is “******”. Installer can change it in the setting.



This page shows the clear options of the storage.



Note!

- All the data cannot be restored after the clearance!

6.7 Start up the System

The system shall be turned on in the correct sequence as follows:

1) Turn on the BAT Breaker.

2) Press power button to turn on batteries, the order should be Battery No.4> Battery No.3> Battery No.2> Battery No.1; Observe the status light on the front of the battery.

3) Press power button to turn on the inverter.

4) Wait for 30s and observe the LCD to check the running status.

5) If the system is running normal, please do commission configuration.
   If the system is not work normally, please re-check the wiring and setting until the system runs normal.

6) Set the details on the local screen.

6.8 Shut Down the System

System shall be turned OFF in the correct sequence as follows:

1) Press Inverter button.

2) Turn off the BAT Breaker.

3) Press the battery power button to turn off the battery modules.

7 Fault Codes and Common Troubleshooting

7.1 System Module Fault Codes and Common Troubleshooting

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
001	Fan Lock	Fault	Fan speed signal not detected.	Recoverable after reboot. If it is not recoverable, please contact us.
002	Over Temperature	Fault	High inverter temperature.	After six occurrences, a reboot is required to recover. If it is not recoverable, please contact us.
003	Batt. Volt High	Fault	High battery voltage.	Reduce battery voltage and reboot to recover. If it is not recoverable, please contact us.
004	Batt. Volt Low	Fault	Low battery voltage.	Reboot after charging the battery/ Reboot after setting battery low voltage cutoff point. If it is not recoverable, please contact us.
005	Output short	Fault	Output short circuit.	Reboot after disconnecting load. If it is not recoverable, please contact us.
006	Output Volt High	Fault	Output voltage too high.	Recoverable after reboot. If it is not recoverable, please contact us.
007	Overload	Fault	Loads out of specification.	After six occurrences, a reboot is required to recover. If it is not recoverable, please contact us.
008	Bus Volt High	Fault	High bus voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
009	Bus star Fail	Fault	Bus soft start, unable to reach the set voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
011	Main Relay Fail.	Fault	Relay failure.	Recoverable after reboot. If it is not recoverable, please contact us.
051	Over Current	Fault	Output over current.	Recoverable after reboot. If it is not recoverable, please contact us.
052	Bus Volt Low	Fault	Low bus voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
053	Inv. Soft start Fail	Fault	Inverter soft start failure.	Recoverable after reboot. If it is not recoverable, please contact us.
054	DC Volt High	Fault	DC overvoltage.	Recoverable after reboot. If it is not recoverable, please contact us.
056	Batt. Open	Fault	Battery not connected.	Check battery wiring and circuit breaker. If it is not recoverable, please contact us.
057	Current Sensor Fail1	Fault	Current detection failure.	Recoverable after reboot. If it is not recoverable, please contact us.

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
058	Output Volt Low	Fault	Low output voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
060	Negative Power	Fault	Output Negative Power.	Recoverable after reboot. If it is not recoverable, please contact us.
061	PV Volt High	Fault	PV voltage too high.	Reduce voltage and reboot to recover. If it is not recoverable, please contact us.
062	SCI Comm. Error	Fault	Internal communications failure.	Recoverable after reboot. If it is not recoverable, please contact us.
063	IGBT Over Current	Fault	IGBT overcurrent.	Recoverable after reboot. If it is not recoverable, please contact us.
064	Ver Different	Fault	Inconsistent versions.	Check the version and reboot. If it is not recoverable, please contact us.
080	Can fault	Fault	In parallel mode, CAN bus communication is abnormal.	Check parallel communication and restart. If it is not recoverable, please contact us.
081	Host Loss	Fault	In parallel mode, host lost.	Check parallel communication and restart. If it is not recoverable, please contact us.
099	Device Comm. Fail	Fault	LCD display communication failure.	Recoverable after reboot. If it is not recoverable, please contact us.
200	DCDC Abnormal	Fault	DC/DC circuit abnormality.	Recoverable after reboot. If it is not recoverable, please contact us.
201	Bus Input Boost Fail	Fault	Bus input boost failed.	Recoverable after reboot. If it is not recoverable, please contact us.
202	Bus short	Fault	Busbar short-circuit faults.	Recoverable after reboot. If it is not recoverable, please contact us.
203	Inv. High Volt	Fault	Inverter High Voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
204	Inv. Low Volt	Fault	Inverter Low Voltage.	Recoverable after reboot. If it is not recoverable, please contact us.
205	Inv. short	Fault	Inverter short circuit.	Recoverable after reboot. If it is not recoverable, please contact us.
206	Machine Model Fail	Fault	Faulty machine type.	Recoverable after reboot. If it is not recoverable, please contact us.
207	No Boot Program	Fault	No bootloader.	Recoverable after reboot. If it is not recoverable, please contact us.
208	Machine Burn-in Fail	Fault	Machine burn-in failure.	Recoverable after reboot. If it is not recoverable, please contact us.

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
209	PV OverCurrent	Fault	PV input overcurrent.	Check the PV input and restart, please do not exceed the specification power. If it is not recoverable, please contact us.
210	Parallel sn same Fault	Fault	The parallel serial number is the same.	Recoverable after reboot. If it is not recoverable, please contact us.
212	Parallel Bat Volt Diff	Fault	Excessive voltage difference between parallel batteries.	Check parallel wiring. If it is not recoverable, please contact us.
213	Parallel Grid Volt Diff	Fault	Excessive difference in parallel mains voltage.	Check mains voltage. If it is not recoverable, please contact us.
214	Parallel Grid Freq. Diff	Fault	Excessive difference in parallel utility frequency.	Check the mains input frequency. If it is not recoverable, please contact us.
215	Parallel Output Set Error	Fault	Parallel output setting error.	Check the parallel setting. If it is not recoverable, please contact us.
216	Parallel Lost Synchronous	Fault	Parallel loss of synchronization.	Check parallel wiring. If it is not recoverable, please contact us.
217	BMS Fail	Fault	BMS communication failure.	Recoverable after reboot. If it is not recoverable, please contact us.
218	EEPROM Fail	Fault	EEPROM failure.	Recoverable after reboot. If it is not recoverable, please contact us.

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
101	Fan Lock	Alarm	Fan speed signal not detected.	Recoverable after reboot. If it is not recoverable, please contact us.
102	Over Charge	Alarm	Battery voltage is higher than the set value.	Recoverable after reboot. If it is not recoverable, please contact us.
103	Batt. Volt Low	Alarm	The battery low voltage point.	Reboot after charging the battery/ Reboot after setting battery low voltage cutoff point. If it is not recoverable, please contact us.
104	Overload	Alarm	Load>102%.	eboot after disconnecting load. If it is not recoverable, please contact us.
105	Op Power derating	Alarm	Output derating.	Check that information such as temperature and elevation meets specifications. If it is not recoverable, please contact us.

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
106	solar stop due to Batt. Low	Alarm	Low battery voltage stops solar charging.	Check the batteries. If it is not recoverable, please contact us.
107	solar stop due to PV High	Alarm	Solar voltage too high Solar stops charging.	Check PV input. If it is not recoverable, please contact us.
108	solar stop due to overload	Alarm	Overloaded solar power stops charging.	Check the load. If it is not recoverable, please contact us.
109	Grid different	Alarm	Inconsistent parallel utility input.	Recover when it detects that the mains voltage and frequency errors of each machine are reasonable. If it is not recoverable, please contact us.
110	Grid phase error	Alarm	Parallel grid input phase sequence error.	Check grid wiring. If it is not recoverable, please contact us.
111	Parallel phase loss	Alarm	Parallel output phase loss.	Check parallel settings and output. If it is not recoverable, please contact us.
112	Over Temperature	Alarm	The temperature sensor of PFC or INV is higher than the set value.	The temperature sensor of PFC or INV is lower than the set value. If it is not recoverable, please contact us.
113	Buck Curr. Over	Alarm	Buck current is too high.	Recoverable after reboot. If it is not recoverable, please contact us.
114	Batt. Disconnected	Alarm	Battery not connected.	Ensure reboot with normal battery output. If it is not recoverable, please contact us.
115	BMS Comm. Error	Alarm	Battery BMS communication error.	Reboot after checking communications. If it is not recoverable, please contact us.
116	PV Power Insufficient	Alarm	When the battery is not connected, the bus voltage is lower than the set value.	Recover after 10mins. If it is not recoverable, please contact us.
117	No Batt. No parallel	Alarm	No batteries, no paralleling.	Ensure reboot with normal battery output. If it is not recoverable, please contact us.
118	Parallel Ver Different	Alarm	There are incompatible version numbers in the parallel system.	Recoverable after reboot. If it is not recoverable, please contact us.
120	Capacity Different	Alarm	Inconsistent capacity of parallel machines.	Check parallel wiring. If it is not recoverable, please contact us.

Fault Codes	Content	Fault/Alarm	Explanation	Troubleshooting
121	Host Loss	Alarm	Loss of parallel host.	Check parallel wiring. If it is not recoverable, please contact us.
122	BMS Cell Over Volt	Alarm	BMS Single Overvoltage.	Recoverable after reboot. If it is not recoverable, please contact us.
123	BMS Total Over Volt	Alarm	Overvoltage of the BMS as a whole.	Recoverable after reboot. If it is not recoverable, please contact us.
124	BMS. Dsichg Over Curr	Alarm	BMS discharge overcurrent.	Recoverable after reboot. If it is not recoverable, please contact us.
125	BMS. Chg Over Curr	Alarm	BMS charging overcurrent.	Recoverable after reboot. If it is not recoverable, please contact us.
126	BMS. Over Temp.	Alarm	BMS over-temperature.	Recoverable after reboot. If it is not recoverable, please contact us.
127	Batt. Volt Consistent	Alarm	Battery voltage inconsistency.	Check the batteries. If it is not recoverable, please contact us.
128	PV IOS Fail	Alarm	PV insulation impedance is too low.	Check PV input. If it is not recoverable, please contact us.
129	Low soc During Runtime	Alarm	Running with low soc.	Check the battery level. If it is not recoverable, please contact us.
130	Low soc start-up Fail	Alarm	Low soc boot failure.	Check the battery level. If it is not recoverable, please contact us.
131	Generator Abnormal	Alarm	Abnormal generator fluctuations.	Check the generator. Check the battery level. If it is not recoverable, please contact us.

7.2 Battery Module Fault Codes and Common Troubleshooting

For the introduction of BMS fault information, please refer to 5.1.4 Battery Module LED Indicator Status Information Introduction.

8 System Maintenance

8.1 Transportation

Lithium batteries are dangerous goods. Passed the test of UN38.3, this product meets the transportation requirements for dangerous goods for lithium batteries. After the installation of the battery on site, the original packaging (contains the lithium battery identification) should be kept. When the battery needs to be returned to the factory for repair, please pack the battery with the original packaging to reduce unnecessary trouble.

8.2 Storage

After purchasing the system, please store it with following instructions:

1) Please store it in a dry and ventilated environment, keep it away from heat sources.

2) Please keep it in an environment with storage temperature as -15 °C ~ 60 °C, humidity <85% RH.

3) For long-term storage (>3 months), please put it in an environment with a temperature of 18 °C to 28 °C and a humidity of < 85% RH.

4) The system should be stored in accordance with the storage require- ments mentioned above, and the system should be installed within 6 months since delivered from the factory. Failure to install beyond 6 months is not covered by the manufacturer's warranty.

5) Failure to complete the installation within 6 months from the factory is subject to recharge operation. Consult the dealer or manufacturer for details of the operation.

Note!

- The battery remains 30% power when it is sent from the factory.
- The longer the battery is stored, the DOD value is getting bigger. When the battery remaining voltage fails to reach the startup voltage require- ment, the battery may be damaged.

The battery cannot be disposed of as household refuse. When the service life of the battery reaches to the limit, it is not required to return it to the dealer, but it must be recycled to the special waste lithium battery recycling station in the area.

8.3 Cleanliness

Clean the enclosure lid, LCD of the inverter with moistened cloth with clear water only. Do not use any cleaning agents as it may damage the components.