

Wattsonic Li-LV Battery Series

User Manual





**Power your home,
and you will power the planet.**

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Overview

To secure the full 10-year product warranty, be sure to install the Wattsonic Li-LV battery modules by qualified installers.



Warning: Read this document before installing or using the Wattsonic Li-LV LiFePO4 battery modules. Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, death, or damage to the Wattsonic Li-LV LiFePO4 battery modules, potentially rendering it unusable.

Product Specifications

All specifications and descriptions in this document are verified to be accurate when printed. However, because continuous improvement is a goal at Wattsonic, we reserve the right to make product modifications at any time.

The illustrations in this document are solely for demonstrative purposes. Details may appear slightly different depending on the product version and market region.

Errors or Omissions

To communicate any inaccuracies or omissions in this manual, please send an email to : service@wattsonic.com



DEKRA



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ELECTRONIC DEVICE: DO NOT THROW AWAY

Proper disposal of batteries is required. Refer to your local codes for disposal requirements (ie. EC N 1013/2006 among European Union).

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Important Safety Instructions

SAVE THESE IMPORTANT SAFETY INSTRUCTIONS. Wattsonic Li-LV LiFePO4 battery module installation and repair instructions assume knowledge of high voltage electricity and should only be performed by Wattsonic Certified Installers.


Wattsonic assumes no liability for injury or property damage due to repairs attempted by unqualified individuals or a failure to follow these instructions correctly. These warnings and cautions must be followed when using Wattsonic.

Symbols in this document

This manual uses the following symbols to highlight important information:

	WARNING	Warning indicates a hazardous situation that, if not avoided, could result in injury or death.
	CAUTION	Caution indicates a hazardous situation that, if not avoided, could damage the equipment.
	NOTE	NOTE indicates a vital step or tip that leads to the best results but is not safety or damage-related.

General Information



1. Read this document before installing or using Wattsonic Li-LV battery. Failure to do so or to follow any of the instructions or warnings in this document can result in electrical shock, serious injury, or death, or can damage Wattsonic Battery, potentially rendering it inoperable.
2. A battery can present a risk of electrical shock, fire, or explosion from vented gases. Observe proper precautions.
3. Wattsonic Li-LV Battery installation must be carried out only by Wattsonic Certified Installers, who have been trained in dealing with high voltage electricity.
4. Wattsonic Li-LV battery is heavy and challenging to lift.
5. Use Wattsonic Li-LV Battery only as directed.
6. Do not use Wattsonic Li-LV Battery if it is defective, appears cracked, broken, or otherwise damaged, or fails to operate.
7. Before beginning the wiring portion of the installation, first power off the inverter and then open the AC and DC disconnect switches (if applicable for the installation).
8. Do not attempt to open, disassemble, repair, tamper with, or modify Wattsonic Li-LV Battery. Wattsonic Li-LV Battery is not user serviceable. LiFePO4 battery Cells in Wattsonic Li-LV Battery are not replaceable. Contact the Wattsonic Authorized Reseller who sold the Wattsonic Li-LV Battery for any repairs.
9. Do not connect Wattsonic Li-LV Battery to alternating current(AC) carrying conductors. Wattsonic Li-LV Battery must be wired to either an inverter or a DC combiner panel that is then wired to an inverter. No other wiring configuration may be used.





10. Wattsonic Li-LV Battery contains components, such as switches and relays, that can produce arcs or sparks.

11. Handle with care to protect the Wattsonic Li-LV Battery and its components from damage when transporting. Do not impact, pull, drag, or step on Wattsonic Li-LV Battery. Do not subject Wattsonic Li-LV Battery to any strong force. To help prevent damage, leave Wattsonic Li-LV Battery in its shipping packaging until it is ready to be installed.

12. Do not insert foreign objects into any part of Wattsonic Li-LV Battery.

13. Do not expose Wattsonic Li-LV Battery or its components to direct flame.

14. Do not install Wattsonic Li-LV Battery near heating equipment.

15. Do not immerse Wattsonic Li-LV Battery or its components in water or other fluids.



1. Do not use cleaning solvents to clean Wattsonic Li-LV Battery, or expose Wattsonic Li-LV Battery to flammable or harsh chemicals or vapors.

2. Do not use fluids, parts, or accessories other than those specified in this manual, including use of non-genuine Wattsonic Li-LV parts or accessories, or parts or accessories not purchased directly from Wattsonic or a Wattsonic-certified party.

3. Do not place Wattsonic Li-LV Battery in a storage condition for more than one (1) month, or permit the electrical feed on the Wattsonic Li-LV Battery to be severed for more than one (1) month, without placing Wattsonic Li-LV Battery into a storage condition in accordance with Wattsonic's storage specifications.

4. Do not paint any part of Soltaro Li-LV Battery, including any internal or external components such as the exterior shell or casing.

5. Do not connect Wattsonic Li-LV Battery directly to photovoltaic (PV) solar wiring.

6. When installing Wattsonic Li-LV Battery in a garage or near vehicles, keep it out of the driving path. Install the Wattsonic Li-LV Battery on a side wall and above the height of vehicle bumpers.

Environmental Conditions



1. Install Wattsonic Li-LV Battery at a height that prevents damage from flooding.

2. Operating or storing Wattsonic Li-LV Battery in temperatures outside its specified range might cause damage to Wattsonic Li-LV Battery.

3. Do not expose the Wattsonic Li-LV Battery to ambient temperatures above 60°C (140°F) or below -30°C (-22°F).



Ensure that no water sources are above or near Wattsonic Li-LV Battery, including downspouts, sprinklers, or faucets.

Specifications

5kwh wall mounted/free stand lifepo4 battery module

Total Energy [kWh]	5.0
Useable Energy [kWh]	4.5
Nominal Voltage [V]	51.2
Nominal Capacity [Ah]	100
Operating Voltage Range [V]	40~58.4
Nominal Charge Current [A]	100
Nominal Discharge Current [A]	100
Peak Discharge Current [A]	110
Calender Life [Year]	20 years @25°C , 15 years @35°C , 10 years @45°C
Depth of Discharge [%]	90
Data Communication	CAN/RS485
Temperature	0~45°C Charge, -20~55°C Discharge, -10~45°C Stock Storage
Enclosure Protection Rating	IP 65
DC Isolator	Integrated
Certificate	IEC60950/ IEC60068/ CE
Scalability Range/Mode	Max. 5 Modules Parallel
Installation Mode	Wall Mounted
Dimensions [W*H*D]	386.40*737*150.30mm
Weight	62KG
Warranty	10,000 cycles at 90% DOD, or 10 years(optional 6000 cycles)

* Compatible inverter brands: Wattsonic/ SMA SunnyIsland/ Victron/ Imeon/ Voltronic/ SolaX/ GoodWe/ SofarSolar/ Solis/ Studer.

* Wattsonic reserves the right to modify the technical datasheet and appearance of the product in the manual without prior advice to the users.



Mechanical Installation-Size

Installation environment checking before installation

The area is completely water proof.

The floor is flat and level.

There are no flammable or explosive materials.

The ambient temperature is within the range of 0 to 50.

The temperature and humidity remain constant.

There is minimal dust and dirt in the area.

The distance from a heat source is more than 2 meters.

The distance from the air outlet to the system is more than 0.5 meters.

Do not cover or wrap the battery case or cabinet.

Do not place it in a children's or pet-touchable area.

The installation area shall avoid direct sunlight.

There are no mandatory ventilation requirements for the battery module, but please avoid installation in a confined area (minimum 300mm to top/left/right/front).

The aeration shall avoid high salinity, humidity, or temperature.

Standard Packing List



Li-LV LFP Battery



Battery Backsheet



Expansion Screws



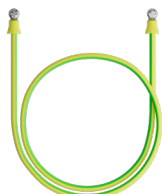
Battery <-> Inverter
Positive Power Cable



Battery <-> Inverter
Negative Power Cable



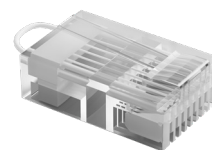
Battery <-> Battery
Power cable



Grounding Cable



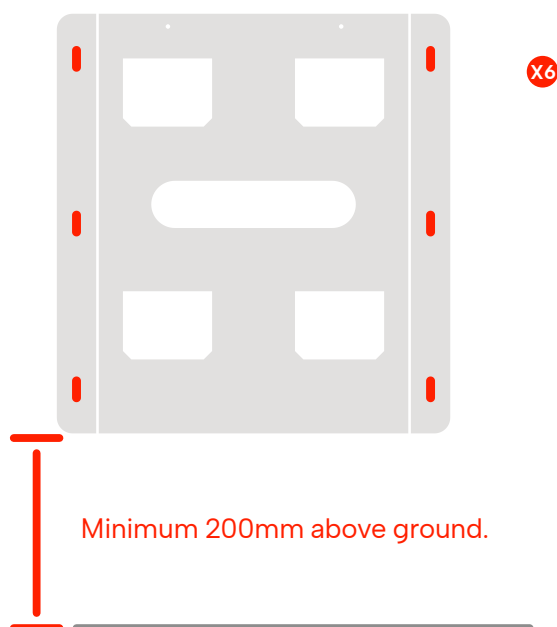
Battery<->Inverter
Rj45 Communication
Cable



COM Resistor

Mechanical Installation

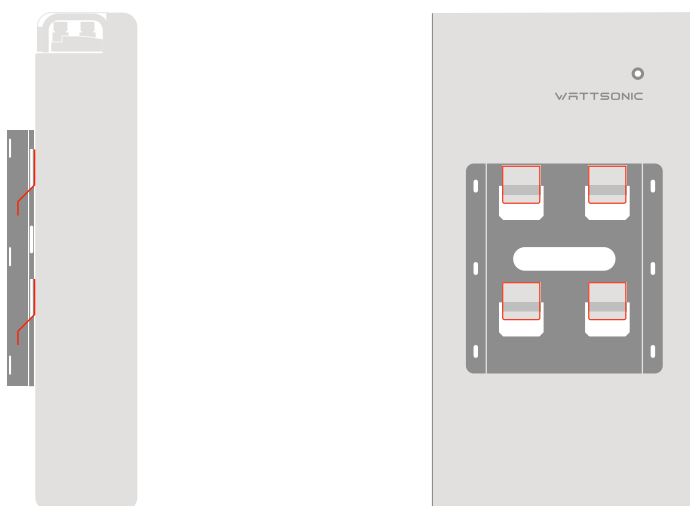
Single Battery Installation



Step 1

Confirm the exact mounting position of the battery backsheet.

Please use expansion screws to fix the battery backsheet on the wall in the specified position.

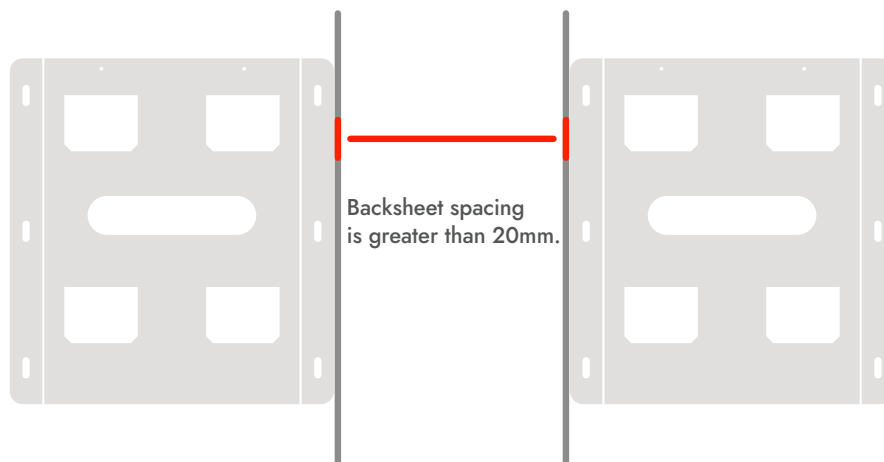


Step 2

Hanging the battery module on the mounted battery back sheet.



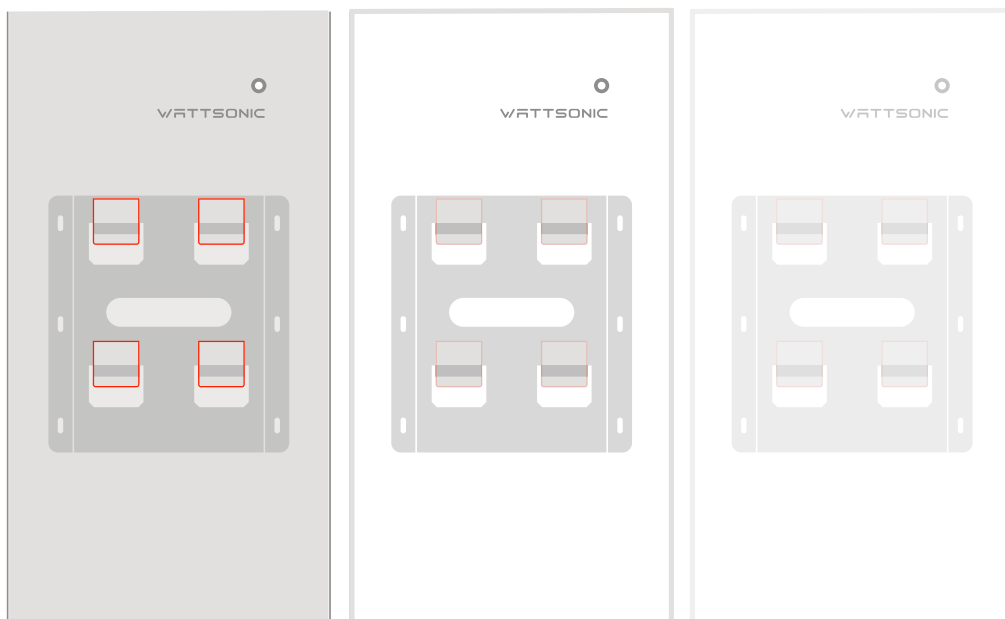
Multiple Battery Installation



Step 1

Confirm the exact mounting position of battery backsheet.

Please use M6 expansion screws to fix the battery backsheet on the wall in the specified position.

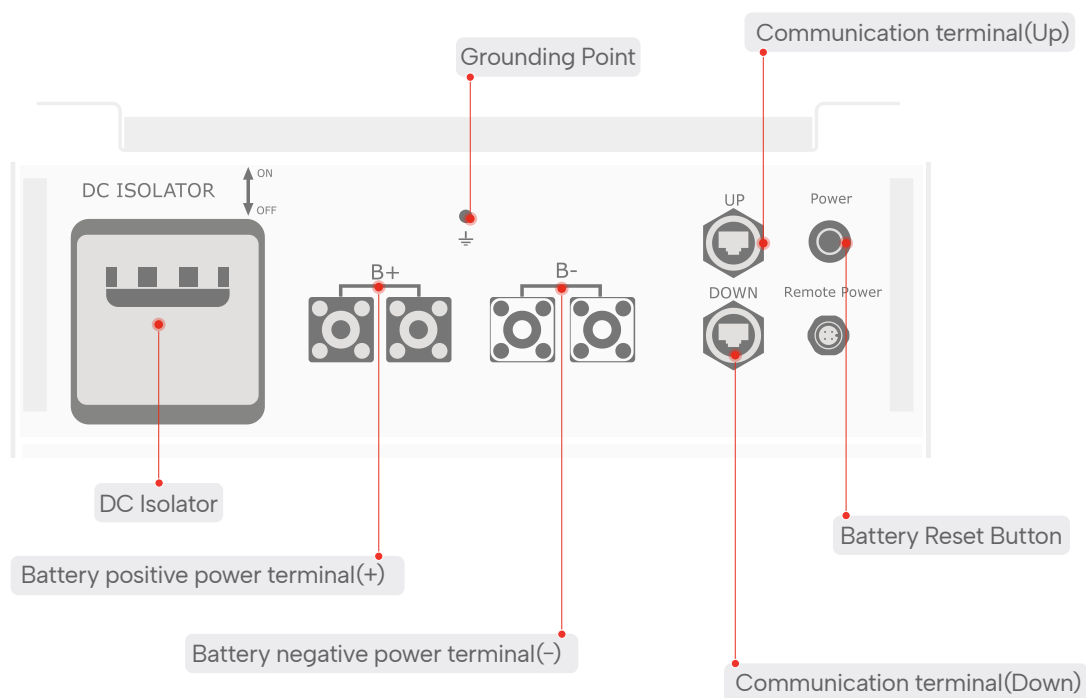


Step 2

Hanging the battery module on the mounted battery back sheet.

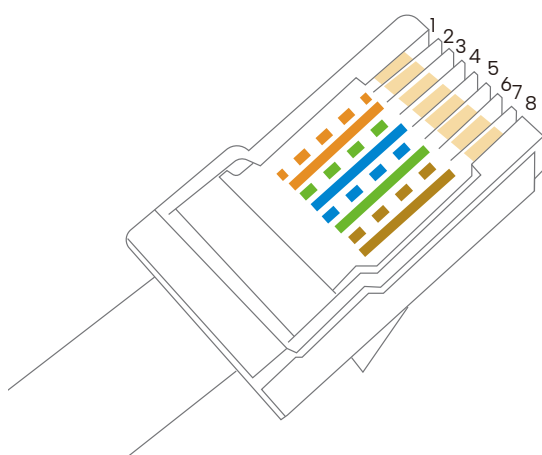
Electric Connection

Top connection interface



RJ45 terminal connection sequence and definition

For "UP" and "DOWN" port connection.



COM. (Pin)	Definition
1	CAN Resistor
2	485B
3	485A
4	CANH
5	CANL
6	/
7	/
8	/

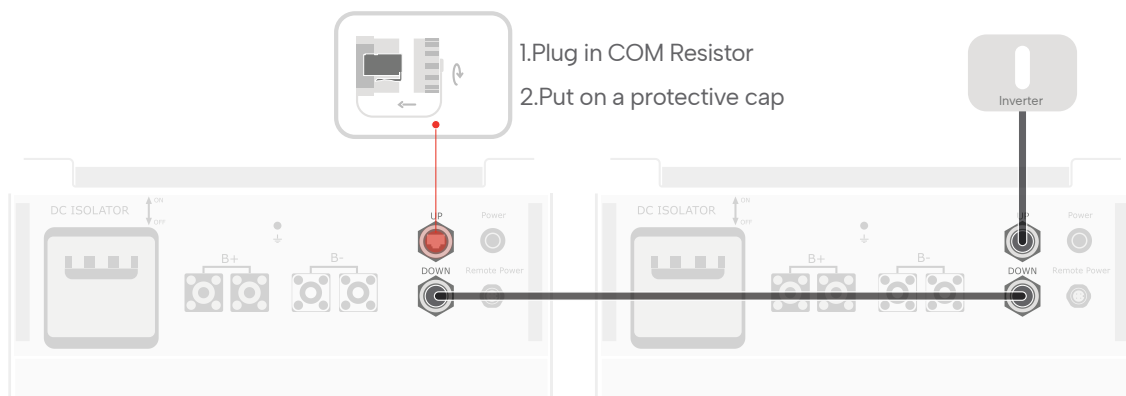
Step 3

Cable Connection and COM Resistor

Connect battery power cables and communication cables as shown in the pictures below.

Then please plug in the COM resistor to the last communication terminal, which is open.

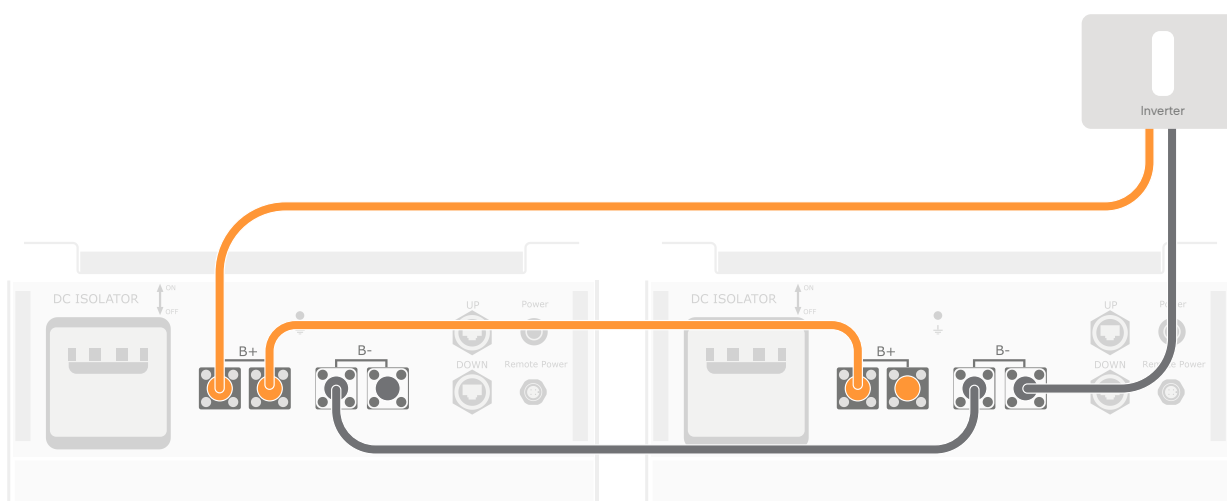
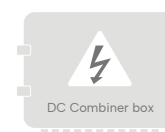
Please note that whether it is a single battery installation or a multi-battery parallel connection, a COM resistor is mandatory to strengthen the CAN Bus signal.



Wattsonic standard parallel kits

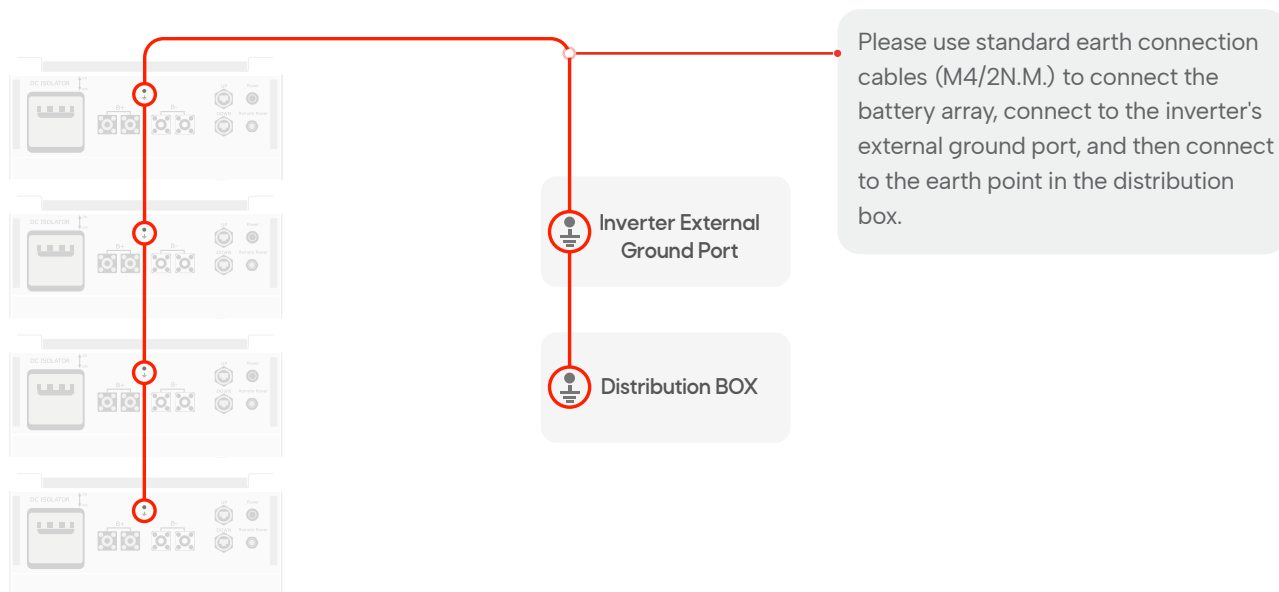
Maximum withstand current is 100A.

If you have a larger load demand, you can choose to configure the DC Combiner box.



Battery<->Inverter Connection

Battery earth cables connection

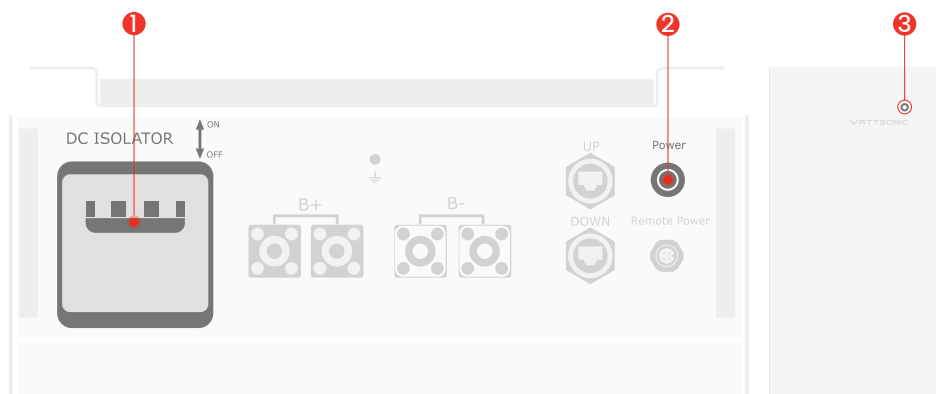


Please refer to the inverter manual for inverter mechanical/PV/AC installation.

Start and Stop the Battery Array

Step 4

Please turn on/off the each battery one by one in parallel system.



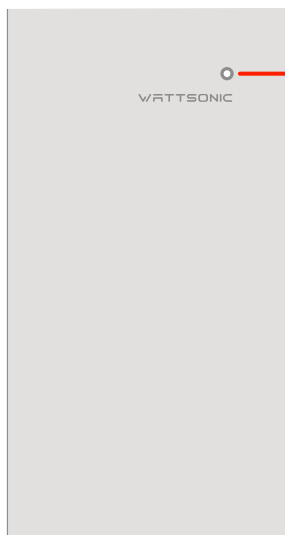
startup

- Pull on the ① DC Isolator.
- Turn on the ② power button.
- Turn on the ③ indicator light button.

shutdown

- Push down the ① DC Isolator.
- Turn off the ② power button.

The indicator light is on, showing green, and the machine is on normally.



- Green** Normal
- Red** Alarm or Protection
- None** Power Off or Sleep

Alarm or Protection list

- Cell Voltage High
- Total Voltage Low
- Discharge Temp Low
- Charge Current Over
- Short Circuit
- Current sample fault
- Cell Voltage Low
- Charge Temp Low
- Environment Temp High
- Discharge Current Over
- MOS Temp High
- Temp Sample Fault
- Total Voltage High
- Discharge Temp High
- Charge Temp High
- Cell Voltage differential
- EEP Fault
- Voltage Sample Fault

The preceding situation occurs in the system; the red light is on.

Please follow the steps below:

1. Shut down the device and restart it after 10 minutes.
2. Contact the dealer or after-sales service department.

System Setting

Normal Operation

If the Li-LV LFP Battery Module is installed correctly during regular operation, the inverter and battery will start communication immediately and then process power commands. See the inverter manual for further configuration instructions.



1. Do not operate the Li-LV LFP Battery Module unless all covers are in place.
2. Do not disconnect anything from or add anything to the Li-LV LFP Battery Module.



1. Do not try to communicate with the Li-LV LFP Battery Module using third party tools or diagnostics the Li-LV LFP Battery Module and the inverter.



Do not lean on, stack anything on top of, or hang anything from the Li-LV LFP Battery Module or the conduit.

Li-Lv Battery Module Care

Keep the top edge of the Li-LV LFP Battery Module clear of articles to maintain optimal airflow.

To clean the Li-LV LFP Battery Module, use a soft, lint-free cloth. The cloth can be dampened with only water if needed. It should not be dripping.



Do not use cleaning solvents to clean the Li-LV LFP Battery Module.

China (HQ)

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