



■ Product User Manual

Please read the manual carefully before operation



Email: support@aolithium.com

www.aolithium.com

www.amazon.com/aolithium

Safety Precautions



Please observe the following safety rules when using batteries. Abuse of batteries can lead to overheating , bulging and fire of batteries and cause serious damage.

- DO **NOT** disassemble or modify the battery.
- DO **NOT** short circuit positive and negative terminals.
- DO **NOT** puncture, drop, crush, burn, penetrate, shake, or strike the battery.
- DO **NOT** expose to the environment, this battery is not sealed. Please keep the battery away from water, heat sources, sparks, and hazardous chemicals.
- DO **NOT** dispose of the battery as household waste. Please use recycling channels in accordance with local, state, and federal regulations.
- Only charge the battery with a battery charger or charge controller that is compatible with lithium iron phosphate batteries.
- If the battery shuts off due to low state of charge, please disconnect the batter from your equipment to eliminate parasitic loads and charge the battery as soon as possible.
- Please wear proper protective equipment when working on the battery.
- Please use insulated tools when working on battery.
- Please keep the battery out of the reach of young children.
- Please use suitable handling equipment for safe transportation of the battery.

Battery Specifications



		Bluetooth 12V100Ah	Bluetooth 12V100Ah-4S
Nominal Characteristics	Nominal Voltage/V	12.8	12.8
	Nominal Capacity/Ah(25 C, 0.2C)	100	100
	Energy	1280 Wh	1280 Wh
Mechanical Characteristics	Weight	23.15 lb	23.15 lb
	Dimensions LxWxH	12.00x6.85x7.40 in	12.00x6.85x7.40 in
	Terminal	M8	M8
Electrical Characteristics	Voltage Window	10V-14.6V	10V-14.6V
	Charge Voltage	14.6V	14.6V
	Recommended Charge Current	≤50A	≤50A
	Max. Charge Current	100A	100A
	Max. Continue Discharge Current	100A	100A
	Maximum Pulse Discharge Current	200A, <3min	200A, <10s
Operation Conditions	Cycle Life(+20 C 0.2C 100%DOD)	≥4000	≥4000
	Operating Temperature	Charge: 0 C ~55 C Discharge: -20 C ~60 C	Charge: 0 C ~55 C Discharge: -20 C ~55 C
	Storage Temperature	-20 C ~35 C	-20 C ~35 C

Bluetooth App Introduction

AOLITHIUM - BATTERY SMART BLUETOOTH APP CONNECT GUIDE

Basic Information

All information available in the battery, such as state of charge, voltage, operating current, temperature, and other operating information are transmitted in real time via the Bluetooth transmitter. The parameters can be made visible with the Aolithium App.

Note: The battery needs two deep charge/discharge cycles before it can be calibrated to the correct nominal capacity.

Download and Installation of The APP

The app is available for Apple and Android smartphones. Download the Aolithium App from the Google Play Store or the Apple App Store.



ANDROID:

Requires Android 6.0 (and higher)
Active Distance < 30m (No Obstacles)



IOS:

Supports iphone 4S/ 5c /5 /5S /6 /6plus (and higher)
Requires IOS 10.0 (and higher)
Active Distance < 30m (No Obstacles)

Search & Connect to The Battery

Make sure you are close to the battery (30m maximum) and the Bluetooth on your smartphone is turned on. When activated, the app will automatically search for Aolithium batteries. Found batteries are displayed on the screen. If your battery is not displayed, press "Refresh". Click on the battery you want to connect. The APP will automatically connect to the battery and displays the battery data in real time.

1 Devices Search 2 Choose Devices Connecting 3 Real-time Page Display



Note

If you have selected a battery to connect with and the APP is not confirming the connection, it may be because someone else has already connected to the battery. Only one device can be connected to a battery at any one time.

Information Available in Your APP

After the connection is established, we can click on the TabBar below and swipe left successively to display different information.

Tips

- Please install the latest version APP.
- Requires Android 6.0 (and higher), IOS 10.0 (and higher).
- The APP only supports one-to-one mode. (Bluetooth hardware function).
- You can only connect to a battery from one device at a time.
- The APP only works for Aolithium lithium battery, and cannot connect to other devices.
- Please make sure the battery has enough power and running normally.
- If you want to use another phone to display the same battery, please exit the App first.
- The battery needs two deep charge/discharge cycles before it can be calibrated to the correct nominal capacity.
- Any questions please contact us for help.

Frequently Asked Questions about Bluetooth:

Q After connecting to the battery, there is no data display in Bluetooth APP.

A There are three possibilities:

1. Please confirm whether the Bluetooth is open, and confirm that the distance between you and the battery is not more than 30 meters.
2. Please make sure there is no metal block between the battery and the mobile app; because the metal will block the Bluetooth signal.
3. Please make sure your phone is not equipped with other brand battery APP, if so, please follow the steps below to clear the Aolithium APP cache: long press the Aolithium App, select "Application information", select "Store and cache", select "Clear cache", and select "Delete data".

Typical Applications

RVs, Golf Carts, Home Energy Storage, Solar System, Emergency Power, and More.

Charging and Discharging

Charging

1. Only charge the battery with a battery charger (14.6V) or charge controller that is compatible with lithium iron phosphate batteries. For charging current, please check the battery specification in this manual according to the product model.
2. DO NOT exceed the maximum charge current to the battery.
3. Fully charge the battery before first use. This depends on the output of the charger but is typically between 2-3 hours.
4. If you want to know the capacity of the battery, you can use coulometer (it is not include in our battery). If the battery with Bluetooth QR code, please scan the QR install Aolithium Bluetooth APP , you can use this app to check the battery information.
5. LiFePO4 does not suffer "memory effect" so please keep the battery fully charged for daily use.
6. Do not charge the battery in temperatures below 0°C. This can cause damage to the battery cells.

Discharging

1. Make sure your load accepts 12.8V nominal voltage. DO NOT exceed the maximum discharge current to the battery.
2. Ensure the connection between the battery and the load can handle the current draw. Please consult references for the appropriate wire type.
3. DO NOT connect large loads to the battery when it is running low.
4. The battery outputs a steady voltage around 12.8V until very little capacity remain, operating voltage range is 10V - 14.6V, do NOT rely on voltage as an indicator of remaining capacity.
5. If the battery shuts off due to low state of charge (SoC), please disconnect the battery from the discharge equipment to eliminate potential parasitic loads and charge the battery as soon as possible. Failure to do so may cause irreversible damage to the battery.

Series and Parallel Connection

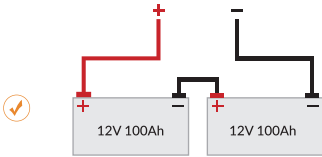
1. The following diagram is a reference on how to connect batteries in series and parallel using 12V100Ah battery. Before connecting, each battery must be independently fully charged. Please make sure that the voltage of each battery is within 0-0.3V after subtraction before connecting in series or parallel.

This model can be connected with up to 2 units 12V100Ah batteries in series, 4 units 12V100Ah batteries in parallel.

For Example

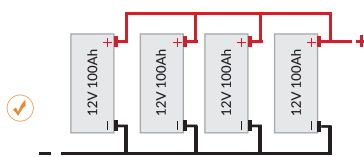
① Series Connection

Total voltage and capacity : 24V 100Ah



② Parallel Connection

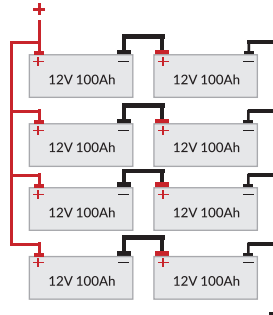
Total voltage and capacity : 12V 400Ah



③ Both Series and Parallel Connection

Total voltage and capacity:
24V 400Ah;

* Please Connect in Series First and
Then in Parallel.



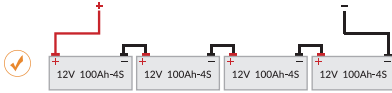
2. The following diagram is a reference on how to connect batteries in series and parallel using 12V100Ah-4S battery. Before connecting, each battery must be independently fully charged. Please make sure that the voltage of each battery is within 0-0.3V after subtraction before connecting in series or parallel.

This model can be connected with up to 4 units 12V100Ah batteries in series, 4 units 12V100Ah batteries in parallel.

For Example

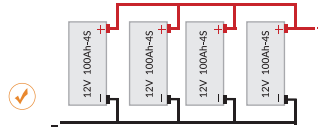
① Series Connection

Total voltage and capacity : 48V 100Ah



② Parallel Connection

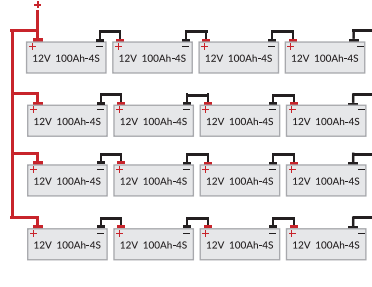
Total voltage and capacity : 12V 400Ah



③ Both Series and Parallel Connection

Total voltage and capacity:
48V 400Ah;

* Please Connect in Series First and
Then in Parallel.



3.If you need more batteries in series and parallel, Please contact our customer service and we will give you professional guidance.

4.Dos

*Before making any connections, make sure to charge each battery up to 14.6V with a proper lithium charger. **All batteries should be at the same state of charge prior to connecting**, otherwise you will encounter balance issues within your system.

*All cables and connections must be able to accommodate the high currents that can be delivered by the battery. Appropriate fuses and circuit breakers are highly recommended to protect downstream components from current spikes and short circuits.

*In parallel battery banks, the cables between each battery should be of equal length to ensure that all batteries in the system can work equally together.

*To string multiple batteries in parallel, first connect the positive terminals of batteries to each other. Then do the same with the negative terminals. Finally, connect the positive and negative terminals of the first battery to the system. This type of arrangement is used to increase the overall battery capacity while keeping the voltage the same.

5.Don'ts.

***DO NOT** string batteries with different chemistries, models, rated capacity in series or parallel.

***DO NOT** connect batteries more than recommend numbers in series or parallel.

Maintain and Store 

Maintain

Our Batteries require very little maintenance. If your batteries are in series and not being charged by a multi-bank charger it is recommended that you fully charge the

batteries individually once every three months if the system is used frequently. This will internally balance your batteries to ensure that they will reach their expected life span and allow you to get the full power out of them with each use. If your batteries are in parallel this is not necessary, just make sure the batteries are charged to 14.2V -14.6V for internal balance. Our BMS has a built-in passive balancing system that will take care of this for you.

Store

We recommend bringing the batteries to a 100% state of charge. Then, disconnect the battery from any loads by removing the negative cable from one battery. On average, the batteries lose approximately 2-3% capacity per month. This is subject to increase if stored in extreme environmental conditions. The battery stored for a long time (more than 2 months) should be kept in a dry and cool place.

Warranty and Warranty Exclusions



We're dedicated to making the most reliable batteries on the planet. But we understand that things happen, so if anything is wrong with your product, we'll work to make it right.

8-Year Limited Warranty.

This warranty applies to only the original owner and is void if the product is used commercially, structurally altered, or subjected to stress beyond the physical limits of the materials used in the body or components, or is damaged as a result of abnormal use. Punctures and normal wear and tear are not warranted.

Non-Transferable

This Limited Warranty is to the original purchaser of the Product and is not transferable to any other person or entity. Please contact the place of purchase regarding any warranty claim.

Warranty Exclusions

The Manufacturer has no obligation under this Limited Warranty for Product subjected to the following conditions(including but not limited to):

- Damage due to improper installation; loose terminal connections, under-sized cabling, incorrect connections (series and parallel) for desired voltage and AH requirements, or reverse polarity connections.
- Environmental damage: inappropriate storage conditions as defined by the Manufacturer; exposure to extreme hot or cold temperatures, fire or freezing, or water damage.
- Damage caused by collision.
- Damage due to improper maintenance, under or over-charging the Product, dirty terminal connections.
- Product that has been opened, modified, or tampered with.
- Product that was used for applications other than which it was designed and intended for, including repeated engine starting.
- Product that was used on an over-sized inverter/charger without the use of a Manufacturer-approved current surge limiting device.
- Product that was under-sized for the application, including an Air Conditioner or similar device having a locked rotor start up current that is not used in conjunction with a Manufacturer-approved surge-limiting device.

- Product not stored in adherence to the Manufacturer's storage guidelines, including storage of the product at low state-of-charge.

This Limited Warranty does not cover a product that has reached its normal end of life due to usage which may occur prior to the Warranty Period. A battery can deliver only a fixed amount of energy over its life which will occur over different periods of time depending on the application. The Manufacturer reserves the right to deny a warranty claim if the Product is determined, upon inspection, to be at its normal end of life even if within the Warranty Period.

Return & Refund

Aolithium works hard to ensure a positive shopping experience with us. We're bummed if you're not 100% satisfied with the items you received, and we gladly accept returns within 30 days of receipt for most items in new condition.

If an item is new, unused, and in the original packaging, we are happy to accept a return up to 30 days from the original invoice date with no restocking fee. If the item has been installed, used, or no longer has the original packaging, we will assess a restocking fee that will be shared when the return merchandise authorization (RMA) is issued.

Please note that Aolithium will not accept returns with product modifications as it voids our warranty policy. Any modified products received will be returned to you at your expense.

All returns must include the following:

Copy of receipt or invoice

Video or photo of the faulty product (if applicable)

Mailing address

Contact telephone number

Return Shipping Method

1. Please send email to us to get your RMA number.
2. We will email you with your RMA number as soon as we can. After receiving return instructions from us, please package up the item(s) to be returned with the original packing.
3. Drop off your package at the local post office.
4. Most returns are processed within 5 business days after we receive your package. An email will be sent when your return is processed.

If you have any questions about our battery, please feel free to let us know .

Email: support@aolithium.com

Shipping

We've partnered with FedEx to offer free ground shipping on any order that is delivered to the continental U.S. We ask for a direct signature on orders with FedEx ground to ensure your product has safely reached your final destination.

Shipping to Alaska and Hawaii is available and shipping quotes can be provided upon request.

International shipments are available via a US-based freight forwarder, but all additional charges are the responsibility of the customer, including duties, taxes, freight, and any potential warranty return.

FCC WARNING



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any changes or modifications not expressly approved by the party responsible for compliance

could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

FCC ID: 2A2RR-12V100AH

Warning: Changes or modifications to this unit not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment



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Manufacturer: Wuxi Hongsheng New Energy Co.,Ltd

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