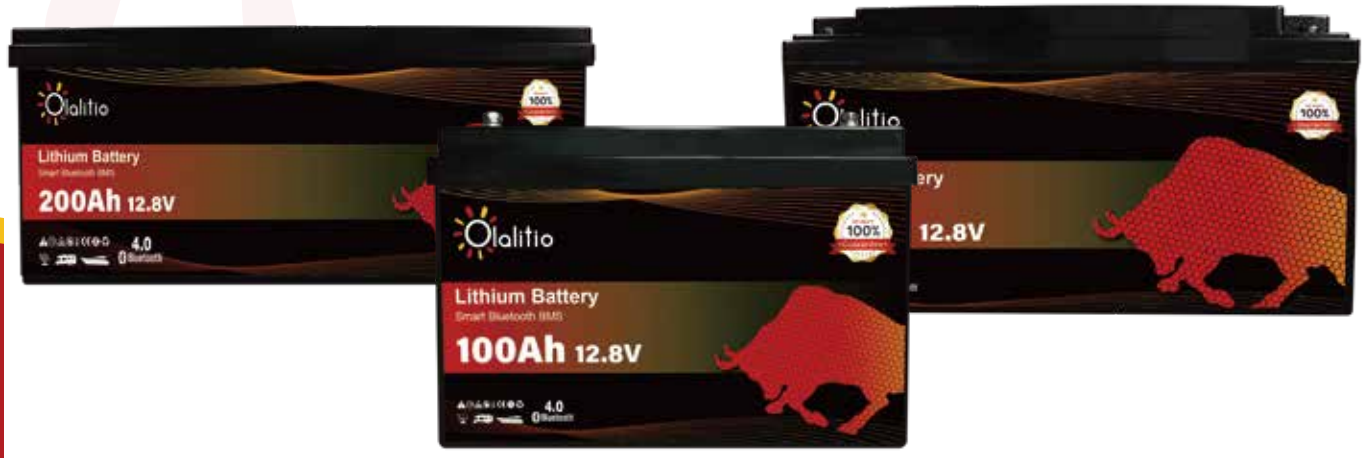
Olalitio

OLALITIO

INSTRUCTIONS FOR USE

LITHIUM BATTERY 12.8V SMART BMS SERIES

ENGLISH



Dear customer,

Congratulations on your purchase of the Olalitio battery. We invite you to carefully read the following instructions in the user manual to prevent and avoid possible damage during use. Any damage caused by non-compliance with the instructions and improper use is not covered by our warranty and we are not responsible for it.

INSTRUCTIONS FOR USE

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1.Product Description

1.1 General information

Lithium batteries are by far the best alternative to lead batteries, as that provide a stable voltage supply even with heavy loads. In addition to the advantage of being extremely light, it also offers enormous reser already marching Integrated BMS (battery management system) makes it suitable for all 12V DC Olalitio LiFePO4 battery applications. It can become easily follow an additional capacity. Lithium iron phosphate (LiFePO4) is the safer type of conventional lithium battery. LiFePO4 batteries have a voltage nominal 3.2V vs. 2V for lead-acid batteries, so a battery 12.8V LiFePO4 is equivalent to four batteries in series.

Performance and efficiency

Olalitio LiFePO4 batteries can store more than 96% of the energy supplied directly. The stored capacity will be fully utilized with the same output voltage.

Easy replacement of the existing battery

The dimensions of the case are the same as those of the most common batteries (for example, AGM, lead or gel batteries). Existing terminals can also be used with round posts. It is not necessary to replace the battery holder or change the charging structure.

Bluetooth monitoring

Thanks to the built-in bluetooth interface utility, you can check the battery status at any time using a smartphone or tablet (Android or iOs). You will have access to all important battery data without cable monitoring.

BMS (Battery Management System)

It is an electronic system that can control and charge different components of the battery. The built-in BMS in each battery ensures that the battery is protected against malfunction. In the event of undervoltage or overload, the battery will automatically disconnect and turn on immediately after the problem is resolved.

Battery Charged

There is no need to wait for the battery to be fully charged. Olalitio LiFePO4 batteries charge 10 times faster than conventional lead batteries. Charge controller or charger can also be installed.

Applications

The field of application of the lithium battery is diverse, especially for fixed or mobile use. They are most often equipped in private mobile homes, solar installations, electric boats, electric scooters, golf carts, and even mobile/wheelchair vehicles and cleaning machines.

1.2 Product characteristics

For high performance traction

Especially suitable for high demand fixed or mobile applications.

100Ah LiFePO4 lithium battery replaces a 200ah lead-acid battery

It has a long life cycle.

The safest lithium technology (LiFePO4)

Lithium ferric phosphate without gas, danger of explosion or fire and without maintenance.

Long useful life

Maximum lifespan exceeds 4,000 cycles, even with regular depth discharges

High discharge current

Provide high discharge performance without voltage drop for large consumers such as coffee machine and air conditioning system.

Light weight

Up to 70% less weight than lead-acid batteries.

Low auto download

Stocked/unused, only about 3% per month

Flex use

Mobile home

Photovoltaic, solar and renewable systems high performance traction fishing, motors and sonars of electric ships

Emergency power supply and uninterruptible power supply (UPS)

Mobile home and leisure.

1.3 BMS(Battery Management System)

It is an electronic system that can control and charge different battery components. The built-in BMS in each battery ensures that the battery is not mishandled. The battery will disconnect under stress or overload and will automatically turn on as soon as the problem is resolved.

The importance of a battery management system (BMS)

Important data:

1. If the battery voltage is less than 2.5V, the lifepo4 battery will be damaged. (Note: sometimes it can recover with low current load less than 0.1c).

A LiFePO4 cell will fail if the voltage across the cell exceeds 3.65V.
LiFePO4 battery cells do not automatically compensate each cycle at the end of charge.

The additional functions of the BMS are:

- Protect the battery from low voltage by cutting off the load in advance.
- Protect the battery from Overvoltage by reducing the charging current or stopping the charging process.
- System shutdown in case of overheating.
- Battery charging stops at low temperature.

Therefore, the BMS is essential to prevent damage to lithium batteries. Deep discharge damage can occur when the system is not in use and when small loads are slowly discharged (e.g. relay alarm systems, standby current for certain loads, reverse current from battery chargers or charge regulators) . If you are not sure if there is residual current draw, disconnect the battery when the system is not in use by opening the battery disconnect switch, removing the fuse, or disconnecting the positive battery terminal.

Discharge current is especially dangerous if the system is completely discharged and shuts down due to low battery voltage. After the battery low voltage cut-off, approximately 5Ah of ca- pacity remain,reserve capacity for every 100Ah of battery capacity. If the remaining reserve capacity of the battery is removed, the battery may be damaged. For example, a residual current of 10mA can damage a 200Ah battery if the system is left without charging for a long time.

2.Safety regulations

2.1 General rules

Pay attention to these instructions and keep them!

Make sure it is close to the LiFePO4 lithium battery.

The work of LiFePO4 lithium batteries can only be done by experts.

Lithium LiFePO4 batteries are a bit heavy. In the event of an accident, they are like bombs. Make sure they are securely fastened and always use safety equipment. correct transportation. Handle lithium batteries with care.

Risk of explosion or fire

The lithium battery connection is still valid. Therefore, do not place any object or tool on the battery. Avoid short circuits. Use insulated tools. Do not wear metallic objects such as watches, bracelets, etc. in your body. In case of fire, use a class D, foam or CO2 extinguisher.

2.2 lidentification

	1. Follow the battery instructions for safe operation.
	2. It is forbidden to light fire and smoke near the battery! Avoid sparks.
	3.Consider the temperature please.
	4.Not waterproof.
	5.This product or its parts should be recycled.
	6.Mark of conformity.

2.3 Disposal and recycling

Batteries marked with the recycling symbol must be returned to an authorized recycling center.
They can also be returned to the manufacturer after consultation.
Batteries must not be used in domestic or industrial waste.

2.4 Important notes

- Never expose it to direct sunlight. Protect from heat.
- The LiFePO4 battery should always be dry and clean if possible.
- Avoid any type of damage, such as falls, punctures or the like. (Risk of short circuit).
- Observe the positive(+) and negative(-) poles of the LiFePO4 battery and pay attention to the correct polarity.
- Pay attention to the correct assembly.
- Do not short-circuit the LiFePO4 battery.
- Do not open the LiFePO4 battery without consulting Olalitio.

3.Battery installation

It is absolutely certain that the LiFePO4 battery is connected with the opposite polarity. If the battery is connected correctly, the BMS will come up from the irreparable windows and be replaced with a new one. It did not go through a guarantee house.

3.1 Verification

Upon receipt of the LiFePO4 battery, check that the device has not been damaged in any way (for example, during transport). In this case, do not put the device into use and contact the seller.

3.2 Installation Conditions

As long as the battery holders are in normal condition, they will continue to work. Make sure the lifepo4 battery is installed and secured so that it does not move back and forth (tighten the strap) during use.

3.3 Debugging

Cycle capacity may differ from rated capacity due to variations in operating temperature and charge and discharge rates. Do not disassemble the battery without the supplier's authorization. Both parallel and serial connections are possible, in both cases up to 4 devices. Serial-parallel construction accepts up to 4S4P.

Operating temperature.

Discharge temperature:-20±60°C.

Storage temperature:-5±35°C Charging temperature:0±55°C.

3.4 Short circuit protection

Single battery installation

The battery must be protected by a fuse.

3.5 Battery charge

The battery is shipped from the factory with approximately 30% full charge. It is recommended that new batteries be fully discharged and charged before use.

3.6 Maintenance

Direct maintenance is not required. For battery maintenance, keep the electrodes and connection surfaces clean, tighten the clamps and apply a small amount of grease. Use at least once every three months to maintain the battery and calibrate the state of charge.

3.7 Storage

- Li-ion batteries should be stored in a cool, dry and well-ventilated place, away from fire and high temperature.
- The optimal storage voltage is 12.8V-13.6V.
- Batteries should be stored within the temperature range of the product specification. The optimum storage temperature is 0-40C and the optimum humidity is 60±25%.
- If it is stored for more than 2 months, it is recommended to additionally charge and discharge the battery.

3.8 Transportation

- Do not mix battery products with other types of cargo.
- Do not immerse the battery product in water or get it wet.
- The maximum temperature during transportation should be less than 50C.

4.Battery Usage

4.1 Loading and unloading

LiFeP04 batteries charge very quickly. The time is considerably reduced. There are no long waiting times. As this battery has no memory effect, it is not necessary to always charge it fully. If the battery is not always fully charged, the service life tends to increase. Adaptation of charging devices, such as solar charge controllers, etc., will not require charging of the battery. The recommended charging voltage is 14.6V.

Lead-acid battery chargers can be used, but specific lithium battery chargers are recommended.

- Do not exceed the maximum allowable charging voltage.
- Only use the battery within the specified temperature range.
- The final charge voltage of the battery measures 14.6V at the battery pole.
- Use only DC chargers suitable for regulated charging characteristics.
- Turn on the charger only after connecting the charger to the battery. After charging, first turn off the charger, and then disconnect the battery from the charger.
- If necessary, the battery management system (BMS) will automatically balance the battery charge. Due to high discharge current and short charging time, the battery may become unbalanced during a long service life. This can cause a loss of capacity and overload the unit. This battery balancing can be done in charging and sleep modes.

4.2 Load Voltage

- Recommended charging voltage: 14.6V.
- Constant voltage duration: 2 hours for a 100% charge or a few minutes for a 98% charge.
- Maximum charging voltage: 14.6V per battery.
- Recommended storage voltage: around 13V per battery.

4.3 Cell voltage to "allow discharge"

The threshold below which the battery discharge is not authorized is 2.5V as standard.

4.4 Minimum "permissible load" temperature

By default, the threshold at which a low temperature alarm is triggered is 0℃.

4.5 Connection conditions in series and in parallel.

- Batteries must be from the same batch and the same model.
- Before connecting batteries in series or parallel, please fully charge them.

5.Technical support

If you have any questions or concerns about the purchase or use of batteries, We will attend with many sincerities.

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