



Golf Cart Lithium Battery

User Manual



Warranty Info:

Serial number _____

Purchase date _____

Epoch Batteries

support@epochbatteries.com

www.epochbatteries.com

Thanks for purchasing EPOCH BATTERY Products

Epoch Batteries is a high-tech company committed to developing and manufacturing lithium batteries. Our lithium batteries are well designed with integrated battery management system which are safe and reliable in operation.

Please read the user manual carefully before installing and operating this product and always take care while using it.

Packing Lists



LFP Battery



Meter



Wiring Harness



Charger



Receptacle

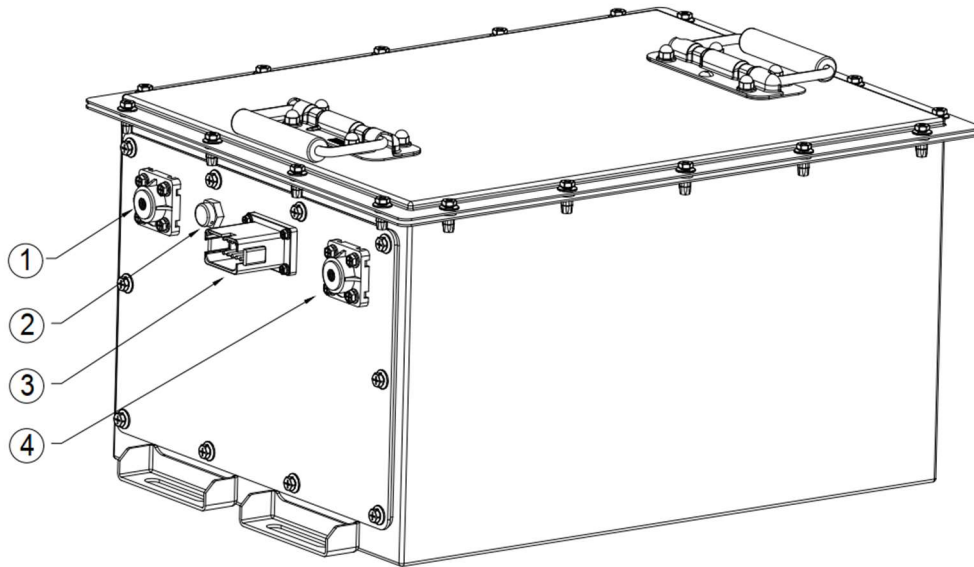


Plug

Overview

The batteries are equipped with an integrated battery management system which handles:

- Cell balancing
- Battery voltage monitoring
- Battery current monitoring
- Pre warning when battery capacity is less than 20% (Gauge will beep)
- Battery temperature monitoring (integrated temperature sensor)
- Multiple protection systems



① Positive Terminal ② Vent ③ Communication Port ④ Negative Terminal

Note: Press and hold the “External On/Off SWITCH” button to turn on/off the battery. Green light indicates power on.

Installation Steps

ATTENTION:

Before installing, make sure that all appliances are turned off.

1. Open the golf cart compartment, you will see your original lead-acid batteries. Disconnect all the wires safely, and pull out your old lead acid batteries.
2. Fasten the bracket we offer in the compartment as the base.
3. Install the charger into the compartment.
4. Replace your old receptacle with the new one we offer (for safety, this step is necessary).
5. Install the gauge and ON/OFF switch on dash board of your cart.
6. Install the wiring harness which will be used to connect battery communication port, charger, on/off switch and gauge.
7. Put the battery pack into compartment and fasten the pack to the bracket base.
8. Connect wiring harness with battery and charger, on/off switch and gauge.
9. Connect Battery Positive and Negative Terminal to Positive and Negative of the Charger.
10. Connect Battery Positive and Negative Terminal to Positive and Negative of your cart.
11. Connect the wiring harness to Battery Communication Port, ON/OFF Switch, Gauge and Charger.
12. Now you can turn on the ON/OFF Switch to check whether everything is well connected.
13. If the battery is low power, then you need to charge it at first (You can use the plug we offer).

All installation steps are complete, and your carts is ready to go.

Note: only authorized mechanics or technicians are allowed to install the battery.

Operation

Power ON

Press once the ON-OFF switch at the end of wiring harness, the LED indicator on the switch will light up. The gauge will light up also and displays the current SOC. Then the battery will be powered on and ready to work.

Power OFF

Press the ON-OFF switch again, the LED indicator on the switch and the gauge will turn off, and the battery will be powered off.

Disconnect wiring harness, the battery will power off as well.

Automatic Shutdown

1. If the SOC of the battery pack is higher than 20% and there is no discharging for 7 days, it will automatically shut down.
2. If the SOC of battery pack is equal or less than 20% and there is no discharging for 24 hours, it will automatically shut down as well.

In automatic shutdown state, press the ON-OFF switch twice to restart the battery. (One time for reset the switch and the second time for POWER ON)

Warning

Low Power Warning

When the SOC of the battery pack is lower than 20% or the gauge displays only two bars power left, the buzzer will ring and the gauge bars will flash. Please charge the battery immediately.

Other warnings

Other warnings like High Temperature, Low Voltage, Over-Discharge, Over-Current, the buzzer will ring and the gauge bars will flash as well.

If you hear a warning alarm from the buzzer, please slow down or stop to check immediately. Otherwise, the BMS protection may be triggered and cause a shutdown. After the warning alarm stops, the battery can work again.

Charging

This battery needs to be charged with the designated charger we sell, otherwise it may cause insufficient charging or battery damage. We are not responsible for any problems caused by this.

The battery can be charged no matter it is on or off. The gauge keeps rolling while charging.

When the battery is fully charged or triggered Overvoltage Protection, the SOC will be automatically corrected to 100% and the gauge will display 10 bars. We strongly recommend you fully charge the battery every 2 weeks for more accurate SOC display. After long-term storage, please fully charge the battery before use.

When the battery is fully charged, please disconnect the charger in time. Please do not plug the charger on the wall for a long time. You can refer to the charger' manual for its characteristics.

Power down

When single battery cell voltage is lower than 2.2V or the total voltage of the battery pack is about 38V, the battery is in power-down state.

In the power-down state, please press the ON-OFF switch to power on the battery and charge it with a charger immediately. In the power-down state, you can only charge it after you turn on the switch.

Bluetooth

Connect your phone to your battery with Bluetooth, you can monitor the battery' status or even troubleshoot if needed with the APP "EPOCH LI-ION". For example, you can monitor the battery' real-time SOC, SOH, Capacity, Voltage, Current, Temperature, Warning on this APP.

You can also upgrade battery' program by the OTA function on this APP.

After installed the "EPOCH LI-ION" APP, open it. It will search nearby connectable batteries and display its Bluetooth ID. **For the Bluetooth ID, please check on the label attached to your battery.**





Warnings

1. Keep batteries out of infants' reach.
2. Do not disassemble, resemble, or repair the battery by yourself. Incorrect reassembly may cause combustion or electric shock.
3. Do not insert nails or other objects into the battery, strike it, or weld directly on the battery.
4. Do not use batteries for unspecified purposes.
5. Do not use different types of batteries together and do not use new and used batteries together.
6. Do not charge with unspecified conditions.
7. Do not short-circuit the battery.
8. do not reverse batteries positive and negative terminal.
9. Do not apply strong pressure to the batteries nor handle roughly.
10. Do not solder directly on the battery.
11. Do not use it near heat or water, or allow it to become wet.
12. Do not use a badly damaged battery or operate it with damaged cables or charging adapters.
13. Do not use or charge the batteries near fire or flammable materials.
14. Do not operate this product in explosive atmospheres.
15. Do not permit the battery to freeze. Never charge a frozen battery.
16. In case of leakage or a strange smell, move the battery away from possible sources of fire immediately.
17. In case of skin or eye contact, rinse immediately with clean water and seek medical care immediately.
18. Do not keep using this product if it is damaged, waterlogged, distorted, or broke.
19. This product contains lithium-ion batteries. When it is worn out dispose it properly using local laws and regulations.
20. If the battery has any problem, please contact the place where you purchased it.

Handling and Maintenance Storage

- For storage over one month, place the battery in a dry and ventilated room that is 32°F~95°F.
- Do not store near corrosive material, fire, and heat sources.
- In order to avoid over discharge, for long-term storage, the power must be turned off and the SOC is kept above 60% to avoid over discharge. The battery must be fully charged and must be charged again every 8 months.

Warranty (Repairs/Replacements)

The battery your purchased from EPOCH BATTERIES has an 11 year warranty from date of purchase at retail against defective material or workmanship. We make no warranty other than this limited warranty and expressly exclude any implied warranty including any warranty for consequential damages. This limited warranty is not transferable.

Manufacturer warranties this product, if used in accordance with all applicable instructions, to be free from original defects in material and workmanship within the warranty period. If the product has any failure problem within the warranty period, Seller will repair or replace the product at its sole discretion according to the

failure situation.

Any Warranty claim should be addressed to the party from whom the Product was purchased. If a distributor or other intermediary is unwilling or unable to handle an end-user's claim then the end-user should approach the Manufacturer directly. See below for how to make a claim.

Limited Warranty

This Warranty is void if the Products in a Warranty claim have been:

1. Stored, installed, used or charged in any manner that is contrary to the Manufacturer's instructions or data sheets or generally accepted good industry practice.
2. Opened, modified or tampered with in any way, including the alteration or erasure of date codes etc.
3. Used for an application or in a manner for which they were not designed.
4. Stolen or at any time outside of the customer's control (except in the normal course of business).
5. Subjected either during storage or use to extreme environmental conditions, including heat, cold and moisture, or other limits defined in the Manufacturer's instructions and data sheets.
6. All consequential losses and/or damages arising from the malfunction of a product are expressly excluded.
7. The cost of transporting a Product that is the subject of a Warranty claim, or is being supplied by the Manufacturer in recompense for a Warranty claim, from the customer/distributor to the Manufacturer or from the Manufacturer to the customer/distributor is excluded and is the responsibility of the customer/distributor.