

POWERGPT

USER MANUAL

Waterproof Battery Charger for
LiFePO₄ Battery



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PRODUCT INFORMATION

1. Product Specifications

Specifications	24V Battery Charger	36V Battery Charger	48V Battery Charger
Power Output	1250W	1250W	1250W
Input Voltage	90-140V	90-140V	90-140V
Max Output Voltage	29.2V	43.8V	58.4V
Output Current	40A	30A	20A
Cable Length	4M/13Ft	4M/13Ft	4M/13Ft
Ambient temperature	-31 ℉ to 170 ℉	-31 ℉ to 170 ℉	-31 ℉ to 170 ℉
Warranty	1 Year	1 Year	1 Year

2. Protection Features



Reverse Polarity
Protection



Short Circuit
Protection



High-temp
Protection



Over-current
Protection



Over-voltage
Protection



IP65 Rate
Waterproof

IMPORTANT SAFETY INSTRUCTIONS

WARNING



LiFePO₄

**BEFORE USING YOUR BATTERY CHARGER,
PLEASE READ ALL SAFETY INSTRUCTIONS FIRST.**

- Always use the charger in well-ventilated environments.
- This charger is designed to charge LiFePO₄ battery.
- Due to the high current, sparking is normal when connecting the charger to the battery.
- Avoid charging the wrong type of battery.
- DO NOT cover the aluminum case, this can cause your charger to overheat while charging.
- DO NOT disassemble the charger.
- Batteries produce hydrogen gas, which can explode if ignited, never smoke, use an open flame, or create sparks near the battery. Proper ventilation is required when charging.
- Risk of electrical shock. DO NOT touch the uninsulated portion of AC or DC connectors or the uninsulated battery terminal.
- To prevent electrical shock, make sure all electrical connectors are in good working condition. DO NOT use connectors that are cracked, corroded, or do not make adequate electrical contact. Use of a damaged or defective connector may result in a risk of overheating or electrical shock.

DANGER



1. DANGER – Never alter AC cord or plug provided if it will not fit the outlet installed by a qualified electrician. Improper connection can result in risk of an electric shock.



2. DANGER – Do no attempt to repair or service the charger yourself. Opening the charger may expose you to high voltages, the risk of electric shock, and other hazards.



3. DANGER – Do not splice the AC power cord.



4. DANGER – Damaged cords and plugs can cause electric shock or electrocution.

CAUTION



1. CAUTION – Even though this PowerGpt LiFePO₄ battery charger is capable of operating in a high ambient temperature environment, a minimum of six inches of unobstructed area should be allowed on all sides of the unit for proper air circulation and cooling. Adequate cooling and circulation will allow the charger to operate at peak efficiency.



2. CAUTION – Do not put wrenches or other metal objects across the battery terminal or battery top. Arcing or explosion of the battery can result.



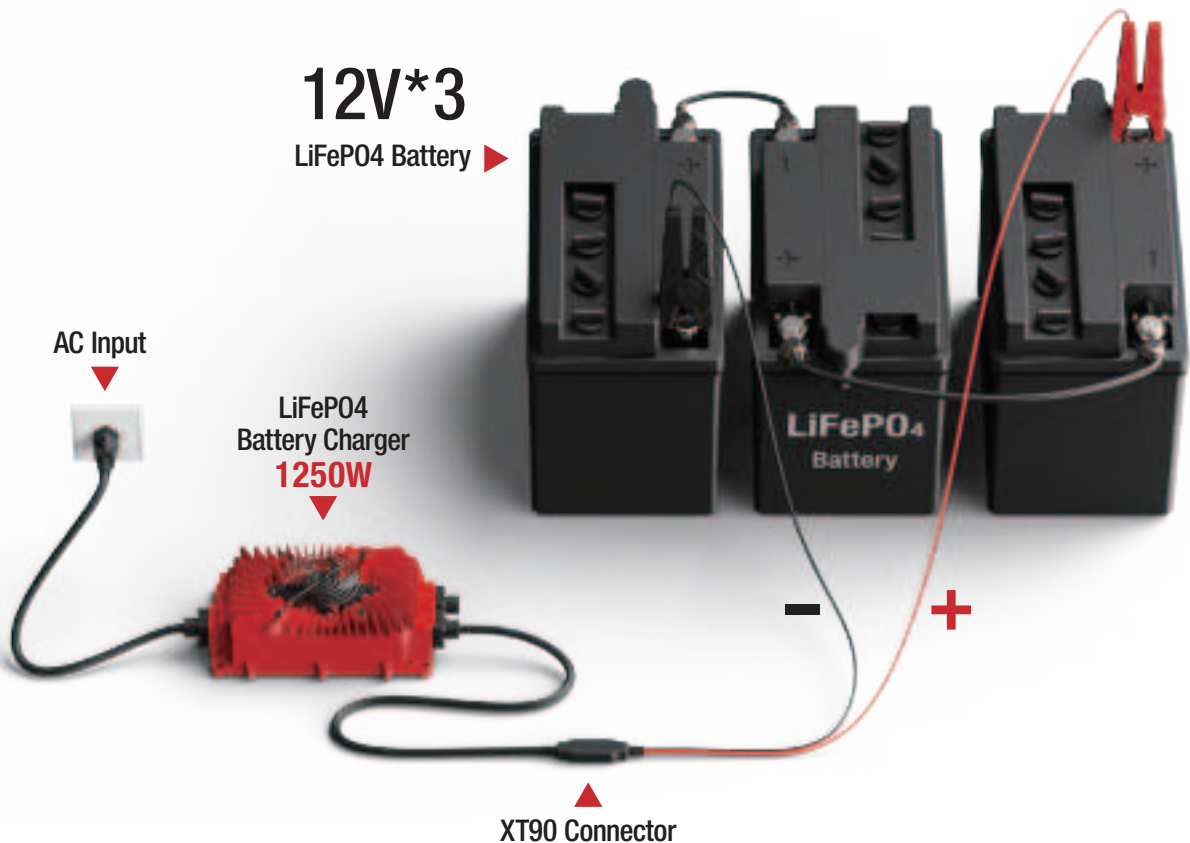
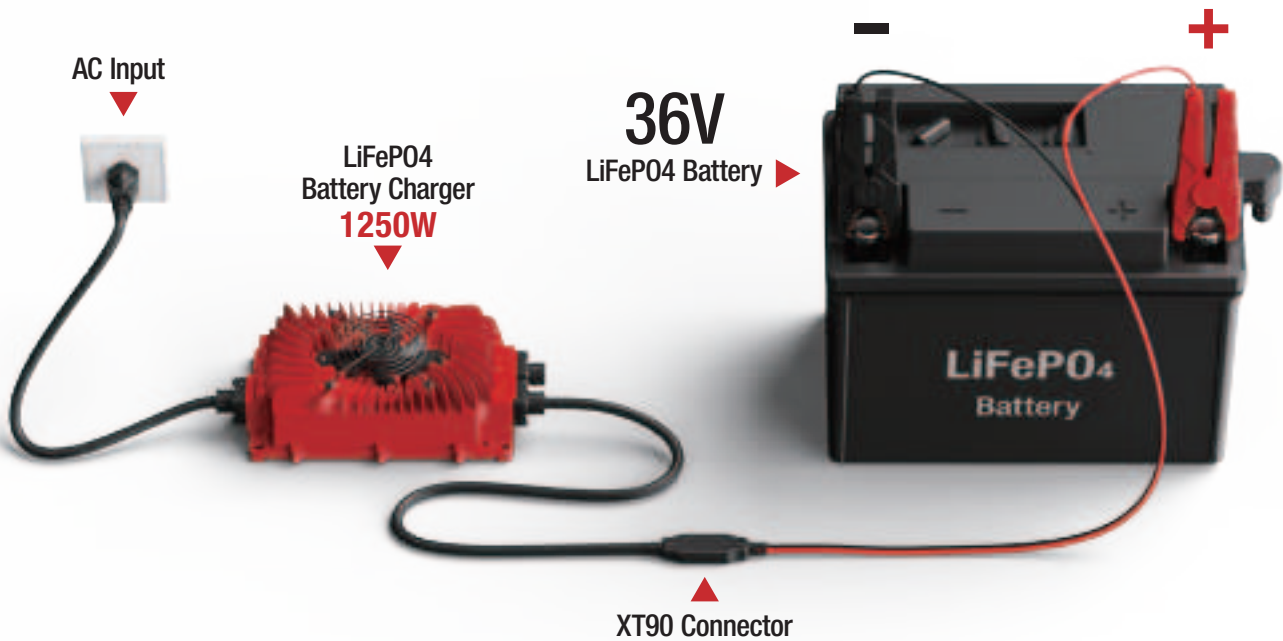
3. CAUTION – Always use a GFCI-protected outlet when using a charger in wet / moist environments to prevent electrical shock.

PRODUCT DISPLAY



HOW TO CONNECT?

Tips: The correct sequence is to first connect the battery connector, then connect into the power plug.



HOW TO CONNECT?

Steps 1: Connect the XT90 connector of the DC output cable to the XT90 plug of the M8 Eyelet Terminal/Alligator Clamps/Anderson SB50 extension cable, and then connect the positive terminal of the output plug(M8 Eyelet Terminal/Alligator Clamps/Anderson SB50) to the positive terminal of the first LifePO4 battery, connect the negative terminal of the output plug(M8 Eyelet Terminal/Alligator Clamps/Anderson SB50) to the negative terminal of the last LifePO4 battery.

Steps 2: Connect the battery charger's AC input power plug to a suitable electrical outlet. Do not face the battery when making this connection.



Note: When power is applied, the charger will establish communication with the battery pack. The red and fan may cycle. This process can take up to 1 minute.

Steps 3: After charging is complete(CHARGE STATUS light turns green), disconnect the AC input power plug from the electrical outlet.

Color	Description	Battery Level
	Flashing Red	Charging (Below 80%)
	Flashing Yellow	Charging (80%-90%)
	Flashing Green	Charging (90%-99%)
	Solid Green	Fully charge/Maintenance (100%)

TROUBLESHOOTING GUIDE

1. CHARGE STATUS Light is Green / Red flashing, and nothing is happening.

- Verify the DC Terminals are correctly connected to the LiFePO4 battery
- Unplug the charger for 10 seconds from the wall outlet.
- Plug the charger back into the wall outlet.
- If the charger status light is still flashing Green / Red, verify the BMS (Battery Management System) is functioning correctly.

2. Your cart has been charging for multiple hours, but the CHARGE STATUS LED has not turned green.

- A 24V/36V/48V cart that has depleted LiFePO4 batteries can take several hours to charge. To figure out the average charge time, take the Amp-Hour of your battery pack and divide it by the Amperage of the charger. Example 100AH battery /15 A Charger = 6.6 Hours of charge time.

3. The golf cart battery meter is not reading the correct battery meter status.

- Standard voltage meters that work with lead-acid batteries will not work for LiFePO4 batteries. LiFePO4 battery meters measure battery life based on the actual power consumed.

LED Fault Diagnostics

The LED will Flash a pattern of Green and Red to notify of a fault. The dashes represent a 1-second pause with no LED.

To Reset the charger or any LED faults, Unplug the AC wall Plug for 10 seconds, and plug it in again. Temperature faults will automatically start charging operations once the temperature has returned to a normal operating temperature.

Description	Status Light	
No Battery Detected	 / 	Green / Red Flashing
Abnormal AC Voltage	 /  /  /  /  —	Red, Green, Red, Green, Red, 1 second off
Over Voltage and Current	 /  /  — — — —	Red, Green, Red, 3 seconds off
Charger Over Temperature	 /  — — — —	Red, Green, 4 seconds off
After these codes have registered 5 times, they will become:  /  /  — — — — (Red, Green, Red, 4 seconds off)		

FAQ

- **Q1: How loud should the charger be?**

A1: The noticeable sound of rushing air from the fan is a normal part of the cooling process on your PowerGPT rapid charger.

- **Q2: How warm do PowerGPT chargers get?**

A2: The PowerGPT battery chargers can reach 140°F. They may get warm in an enclosed area. The maximum recommended air temperature for charging batteries is 105°F. When the charger is hot, the output current will drop to protect the charger and the battery.

- **Q3: Do I need to leave my charger plugged in if leaving for a month?**

A3: No. The charger does not need to remain plugged in over a several-month period as LiFePO4 batteries have little loss of charge over time.

- **Q4: Why does the LED on my PowerGPT charger stay illuminated for a period of time after unplugged from AC power?**

A4: This is normal and does not affect your batteries. It is simply a function of the precision charging, ensuring the charger is disconnected prior to terminating the charge cycle.

- **Q5: What is the warranty?**

A5: The manufacturer's warranty is 12 months. You may return the charger up to 30 days after the date of delivery.

FAQ

- **Q6: When to Charge your LiFePO4 Battery?**

A6: If LiFePO4 batteries are not fully discharged, they do not need to be charged after each use. LiFePO4 batteries are not damaged when left in a partial state of charge(PSOC). You can charge your LiFePO4 batteries after each use or when they have been discharged up to 80% DOD (Depth of Discharge). Remove the load and charge immediately if the Battery Management System (BMS) disconnects the battery due to low voltage. We recommend storing batteries at a minimum 50% state of charge(SOC) to minimize irreversible capacity loss.

- **Q7: Can I charge my LiFePO4 battery in the winter?**

A7: Avoid charging a LiFePO4 battery in temperatures below 32°.

POWERGPT

THANK YOU

Thank you very much for your order!

We hope you enjoy this purchase.

**If there are any issues such as damage,
please contact us immediately so that we
can solve it for you.**

PowerGPT After-sales Service: powergpt-service@hotmail.com