

**POWER[®]
QUEEN**

Product Manual

14.6V 20A

LiFePO4 BATTERY CHARGER

Power Queen



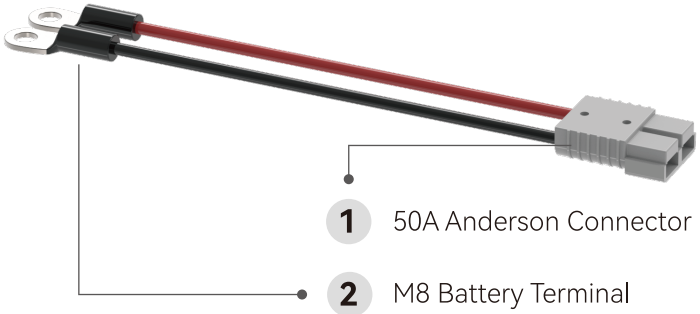
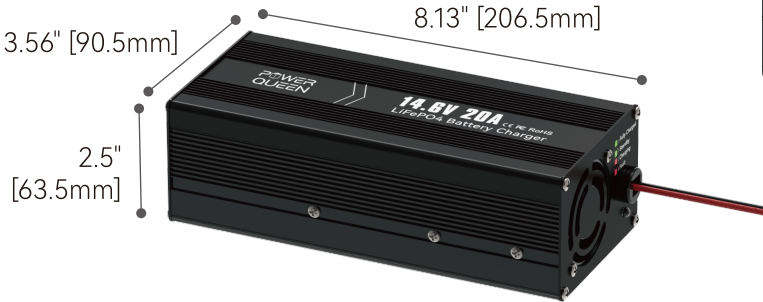
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 service@ipowerqueen.com

 technicalsupport@ipowerqueen.com

PRODUCT OVERVIEW

📦 14.6V 20A LiFePO4 Battery Charger





AC SIDE

100-240V AC Input

3 AC Port

DC SIDE

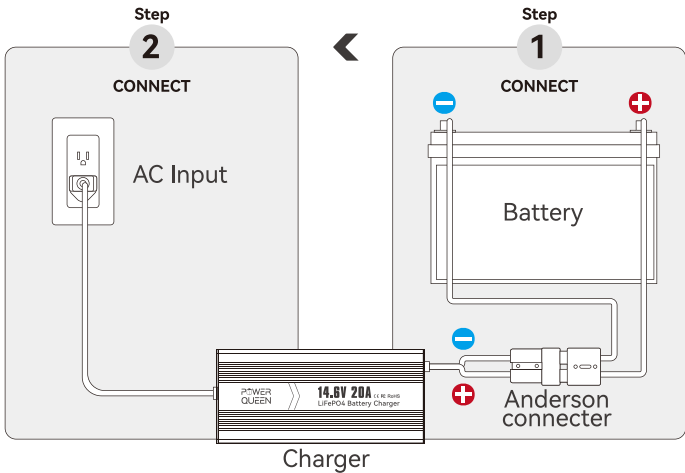
14.6V DC Output



LED Indicator

4

HOW TO CONNECT



➤ Step 1

Connect the DC output cable to the battery, **+** to **+**, **-** to **-**, then connect the Anderson connector.

➤ Step 2

Connect the AC input cable to the AC port and then to the grid power.

➤ Step 3

Disconnect the Anderson connector or the grid power after charging is complete.

CHARGING MODES

1) Pre-Charge Stage (T1)

When the battery voltage is lower than its normal standard and cannot withstand high-current charging, the charger will charge it at a limited current.

This charging mode will be able to activate and repair the battery and extend the battery's lifetime. When the output voltage reaches the normal value, the charger will automatically switch to the next stage.

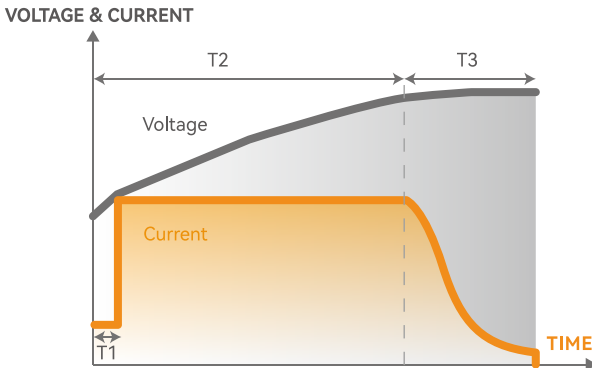
2) Constant Current Charging Stage (T2)

When the battery is in the main charging time, the charger will charge the battery with a 20A current. When the battery voltage rises above the set value, the charger will automatically switch to the next stage.

3) Constant Voltage Charging Stage (T3)

The charger switches to the Constant Voltage Charging Stage and the charging current gradually decreases. When the charging voltage or current reaches the set value, the charger automatically turns off the output voltage and the battery charging is completed.

The charging curves are as follows.









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LED INDICATOR

| LED Status | Charger Status |
|---|---|
|  LED Always on Red | Battery is charging. |
|  LED Always on Green | Battery is fully charged. |
|  LED Flashes Green | Charger is on standby. |
|  LED Flashes Red | Charger fault or under protection, reverse polarity |

TROUBLESHOOTING

If the charger does not work properly, the following methods can rule out the possibility of failure, please contact Power Queen at s

| Problem | Possible Cause |
|---|---|
| LED flashes red when charging. | Under Over Temperature Protection |
| LED flashes red after connected. | Under Reverse Polarity Connection / Output Short-Circuit Protection |
| | Under Output Over-Voltage Protection |
| The charger does not charge and the LED is off after being connected to grid power. | AC port is not tightly or correctly connected |
| | Charger Internal Damage |

MAINTENANCE & USE PRECAUTIONS

- 1) Check the battery specifications carefully before charging to ensure that the LiFePO₄ battery matches the charger technical data.
- 2) Make sure the charger is properly connected to the battery (+ to +, - to -) to avoid a short circuit.
- 3) The input/output connectors must be firmly connected during charging.
- 4) Unplug the input/output cable of the charger immediately once the charger or battery is found to be abnormal or damaged during charging.
- 5) Do not use other input cables or extend the output connection cable personally, or please contact Power Queen at service@ipowerqueen.com to get some advice if you need it.
- 6) Do not open, dismantle, or modify the charger.
- 7) Never use it in a thunderstorm.
- 8) Please keep the charger and battery away from water, heat sources, sparks, flames, flammable gas, and hazardous chemicals.
- 9) Do not place rods or other metal objects in vents or other openings.
- 10) Place the charge in a well-ventilated area with sufficient heat dissipation to prevent overheating and damage.
- 11) Do not puncture, drop, crush, burn, penetrate, shake, strike, or throw it with force.

SPECIFICATIONS

| | |
|-------------------|---|
| Input Voltage | 100V to 240V AC; 50Hz to 60Hz |
| Max Input Current | 7A |
| Output Voltage | 14.6V DC |
| Output Current | 20A |
| Temperature Range | Operating: -20°C to 40°C / -4°F to 104°F |
| | Storage: -40°C to 70°C / -40°F to 158°F |
| Dimensions | L8.13×W3.56×H2.5 inch |
| | L206.5*W90.5*H63.5 mm |
| Net Weight | 1.3kg / 2.87lbs |

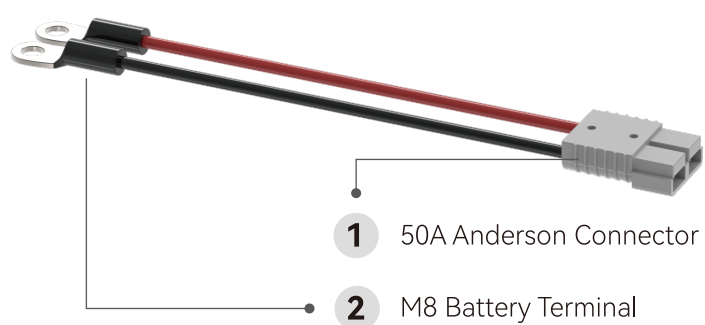
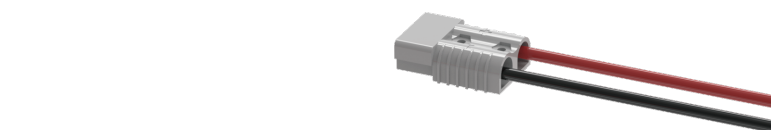
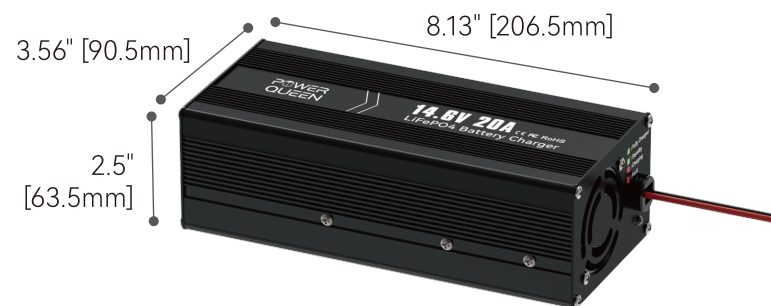


If you have any questions or need any help, please contact us at service@ipowerqueen.com.

14.6V 20A LiFePO4 BATTERY CHARGER

PRODUCT OVERVIEW

14.6V 20A LiFePO4 Battery Charger



1 50A Anderson Connector

2 M8 Battery Terminal

LED Indicator

DC SIDE

14.6V DC Output



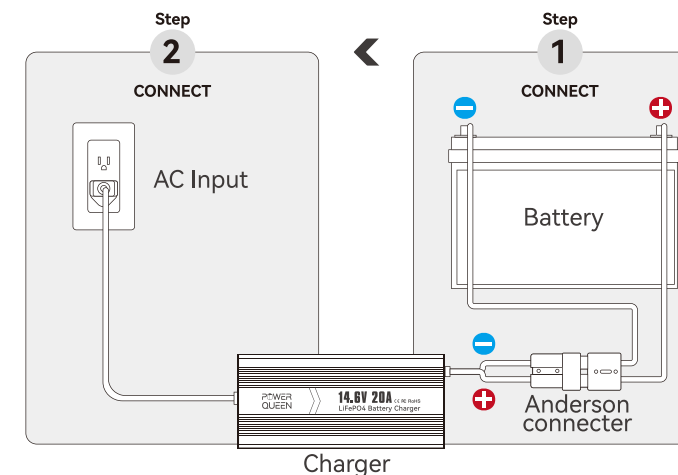
AC SIDE

100-240V AC Input

3 AC Port



HOW TO CONNECT



Step 1

Connect the DC output cable to the battery, **+** to **+**, **-** to **-**, then connect the Anderson connector.

Step 2

Connect the AC input cable to the AC port and then to the grid power.

Step 3

Disconnect the Anderson connector or the grid power after charging is complete.

CHARGING MODES

1) Pre-Charge Stage (T1)

When the battery voltage is lower than its normal standard and cannot withstand high-current charging, the charger will charge it at a limited current.

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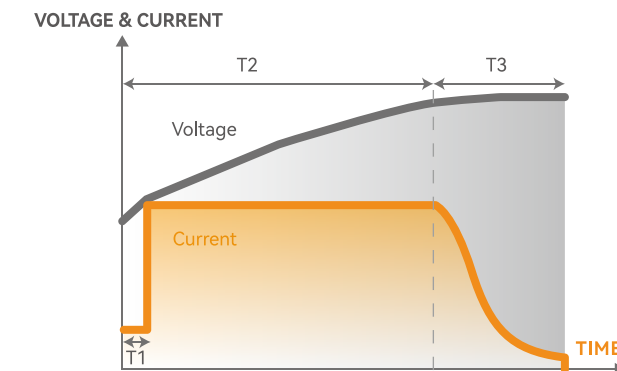
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The charging curves are as follows.





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|  LED Flashes Red | Charger fault or under protection (over temperature protection, output short-circuit protection, reverse polarity connection protection, output over-voltage protection). |

TROUBLESHOOTING

If the charger does not work properly, the following methods can help you solve the general problem quickly. If you still cannot rule out the possibility of failure, please contact Power Queen at service@ipowerqueen.com.

| Problem | Possible Cause | Solution |
|---|--|---|
| LED flashes red when charging. | Under Over Temperature Protection | Cool down the charger to normal temperature, and the charger will resume charging, |
| LED flashes red after connected. | Under Reverse Polarity Connection Protection / Output Short-Circuit Protection | Connect the charger to the battery correctly, + to +, - to -. |
| | Under Output Over-Voltage Protection | Make sure the connected battery is a 12.8V LiFePO4 battery. |
| The charger does not charge and the LED is off after being connected to grid power. | AC port is not tightly or correctly connected. | Reconnect the AC input cable to the AC input port tightly. |
| | Charger Internal Damage | Contact us at service@ipowerqueen.com for further solutions. |

MAINTENANCE & USE PRECAUTIONS

1) Check the battery specifications carefully before charging to ensure that the LiFePO4 battery matches the charger technical data.

2) Make sure the charger is properly connected to the battery (+ to +, - to -) to avoid a short circuit.

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