

RoyPow C45C

RoyPow 12V LiFePO4 3A Battery Charger User Manual

Model: C45C

1. INTRODUCTION

Thank you for choosing the RoyPow 12V LiFePO4 3A Battery Charger. This manual provides essential information for the safe and efficient operation of your charger. Please read it thoroughly before use and retain it for future reference. This charger is designed to provide a full charge to 12V LiFePO4 batteries and is also compatible with 12V lead-acid, AGM, Gel, and deep cycle batteries, helping to maximize performance and extend battery lifespan.

2. SAFETY INFORMATION

Always prioritize safety when operating electrical equipment. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- **Read all instructions:** Before using the charger, read all instructions and cautionary markings on the charger, the battery, and the product using the battery.
- **Ventilation:** Ensure adequate ventilation during charging. Do not operate the charger in a confined area or restrict ventilation.
- **Avoid sparks:** Do not connect or disconnect the battery clamps near the battery terminals while the charger is powered on, as this may cause sparks.
- **Proper battery type:** This charger is designed for 12V LiFePO4, lead-acid, AGM, and Gel batteries. Do not attempt to charge other battery types.
- **Protection features:** The charger includes built-in protections against short circuits, overloads, overcurrents, overvoltages, over-temperatures, and reverse connections. These features protect both the charger and the battery from damage during charging.



Image: Premium Multi-Protection features of the RoyPow C45C charger.

3. PACKAGE CONTENTS

Verify that all items are present in your package:

- RoyPow C45C 12V 3A Battery Charger
- Power Cord (AC input)
- Battery Connection Cables with Alligator Clamps
- Battery Connection Cables with Ring Terminals
- Welcome Guide / User Manual



Image: RoyPow C45C Battery Charger Package Contents.

Charge Battery Back to Life

14.4V 3Amp Output



Image: Two types of battery connectors: Ring Terminal and Alligator Clamp.

4. PRODUCT FEATURES

- **Dedicated LiFePO4 Charging:** Optimized 14.4V charge voltage and 3A charge current specifically for 12V LiFePO4 batteries.
- **Wide Compatibility:** Also suitable for 12V lead-acid, AGM, Gel cell, and deep cycle batteries.
- **Battery Wake-up Function:** Capable of waking up deeply discharged batteries (as low as 1 volt).
- **Multi-Protection System:** Integrated safeguards against short circuits, overloads, overcurrents, overvoltages, over-temperatures, and reverse polarity.
- **LED Indicators:** Clear lights to indicate power status and charging progress.
- **Compact and Portable Design:** Features a total 2-meter long cord and a compact form factor for easy carrying and storage.



Image: Easy to carry and store due to compact design and long cord.

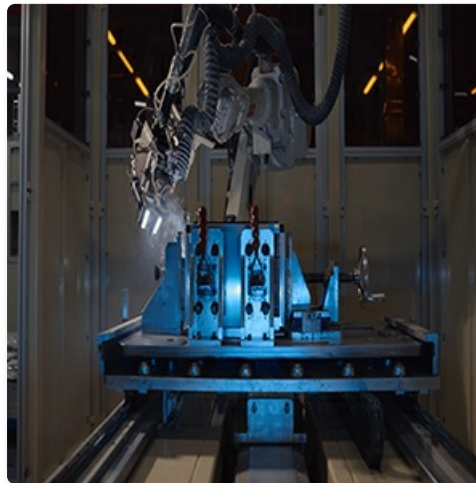


Image: LED Light Indicators for clear charge status.

5. SETUP

Follow these steps to set up your RoyPow C45C battery charger:

1. **Identify Battery Type:** Ensure your battery is a 12V LiFePO4, lead-acid, AGM, or Gel type.
2. **Choose Connectors:** Select either the alligator clips or ring terminals based on your battery's connection points.
3. **Connect to Battery:**
 - Connect the **RED (+)** connector to the battery's **POSITIVE (+)** terminal.
 - Connect the **BLACK (-)** connector to the battery's **NEGATIVE (-)** terminal.

Ensure a secure connection. Do not allow the positive and negative connectors to touch each other.

4. **Connect to Power:** Plug the charger's AC power cord into a standard wall outlet (100-240V AC).

The charger will automatically begin the charging process once connected correctly.

6. OPERATING INSTRUCTIONS

The RoyPow C45C charger operates automatically once connected. Observe the LED indicators for status.

LED Indicator Status:

- **Power LED (Green):** Illuminates when the charger is connected to AC power.
- **Charging LED (Red):** Illuminates when the battery is actively charging.
- **Charged LED (Green):** Illuminates when the battery is fully charged. The charger will then switch to maintenance mode.

Charging Process:

1. After connecting the charger to the battery and power, the Power LED will light up.
2. The Charging LED will turn red, indicating that charging is in progress. The charger delivers a 3A current at 14.4V for optimal LiFePO4 charging.
3. Once the battery reaches full capacity, the Charged LED will turn green. The charger will automatically stop charging and enter a maintenance float mode to prevent overcharging.

Deeply Discharged Battery Wake-up:

This charger features a special function to revive deeply discharged 12V LiFePO4 batteries that have fallen below 1 volt. When connected to such a battery, the charger will attempt to bring it back to a recoverable voltage level before initiating the standard charging cycle.

POWERFUL AND LONG LIFESPAN



Image: Charging a battery back to life with 14.4V 3Amp output.



Image: Activating a deeply discharged battery (below 1 volt).

7. MAINTENANCE

Proper maintenance ensures the longevity of your charger:

- **Cleaning:** Disconnect the charger from power and battery before cleaning. Use a dry, soft cloth to wipe the exterior. Do not use harsh chemicals or abrasives.
- **Storage:** Store the charger in a cool, dry place when not in use. Keep it away from direct sunlight, moisture, and extreme temperatures.
- **Cable Inspection:** Regularly inspect the power cord and battery cables for any signs of damage, cuts, or frayed insulation. Do not use the charger if cables are damaged.

8. TROUBLESHOOTING

If you encounter issues with your charger, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Charger not turning on (Power LED off)	No AC power; Faulty outlet; Damaged power cord.	Check wall outlet with another device; Ensure power cord is securely plugged in; Inspect power cord for damage.
Charging LED not illuminating (no charging)	Incorrect battery connection; Battery fully charged; Battery fault; Reverse polarity.	Verify correct positive (+) and negative (-) connections; Check if Charged LED is on; Test battery condition; Reconnect with correct polarity.
Charger gets excessively hot	Poor ventilation; Overload condition.	Ensure charger is in a well-ventilated area; Disconnect and allow to cool, then re-evaluate battery condition. If problem persists, discontinue use.
Battery not holding charge after charging	Battery is old or damaged.	The charger cannot repair a physically damaged or worn-out battery. Consider replacing the battery.

If troubleshooting steps do not resolve the issue, please contact RoyPow customer support.

9. SPECIFICATIONS

Specification	Value
Brand	RoyPow
Model Number	C45C
Input Voltage	100-240V AC (Standard Mains)
Output Voltage	12 Volts DC
Output Current	3 Amperes
Compatible Battery Types	12V LiFePO4, Lead-Acid, AGM, Gel Cell, Deep Cycle
Weight	150 Grams
Certifications	CE
UPC	708191971986

10. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation included with your product or visit the official RoyPow website. Keep your purchase receipt as proof of purchase for warranty claims.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page’s manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question