

RoyPow C15

RoyPow C15 6V/12V 1A LiFePO4 Battery Charger Instruction Manual

Brand: RoyPow | Model: C15

1. INTRODUCTION

Thank you for choosing the RoyPow C15 6V/12V 1A LiFePO4 Battery Charger. This intelligent automatic battery maintainer is designed to efficiently charge and maintain a wide range of 6V and 12V batteries, including lead-acid (wet, gel, flooded, SLA, MF/maintenance-free, AGM, CA, VRLA, EFB) and lithium-ion (LiFePO4) batteries. Its advanced features ensure safe, optimal, and prolonged battery life for various vehicles and equipment.

2. KEY FEATURES

- **Activate Dead Batteries:** Features a 0V charging function capable of reactivating deeply discharged batteries as low as 1 volt, restoring performance and extending lifespan.
- **Wide Compatibility:** Suitable for 6V & 12V lead-acid batteries (wet, gel, flooded, SLA, MF, AGM, CA, VRLA, EFB) and lithium-ion (LiFePO4) batteries. Ideal for motorcycles, scooters, mopeds, quads, lawn mowers, and lawn tractors.
- **Safe Charging:** Equipped with multiple protection features including short circuit protection, overload protection, over-current protection, over-voltage protection, over-temperature protection, and reverse connection protection to ensure safety during charging.
- **Intelligent Adjustment & Auto Memory:** An integrated thermal sensor dynamically adjusts the charge based on ambient temperature, preventing overcharging in hot conditions and undercharging in cold. The auto memory function automatically returns to the last selected mode for convenience.
- **Easy to Use and Carry:** Designed for portability with input voltage 100-240V, dimensions of 11.66×5.36×3.1 cm, and a weight of 145g.

3. PACKAGE CONTENTS

The RoyPow C15 6V/12V 1A Battery Charger package includes:

- RoyPow 6V/12V 1A Battery Trickle Charger
- Fused M6 Ring Terminal Accessory Cable

- Alligator Clip Accessory Cable

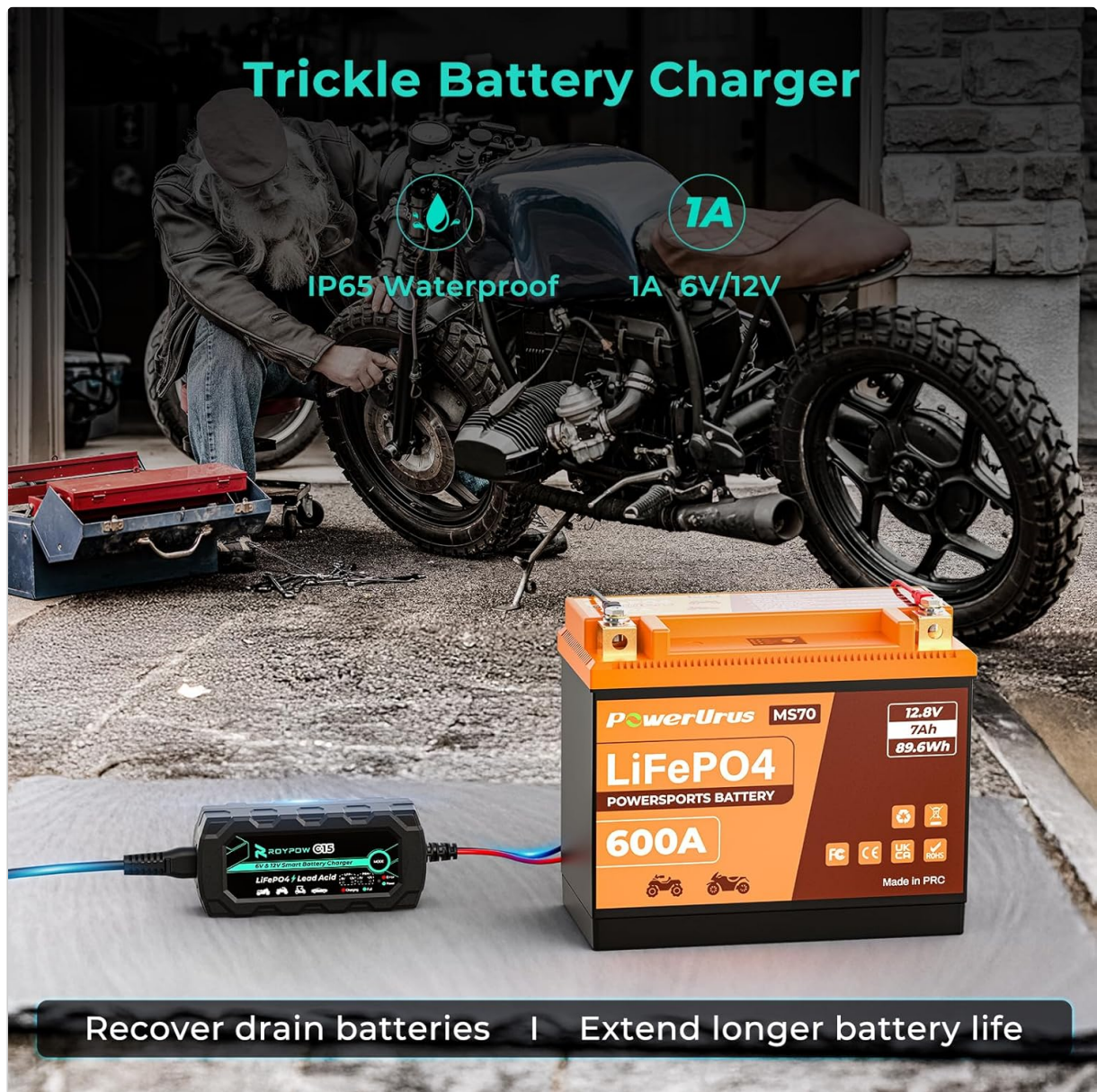


Image: RoyPow C15 charger with its included M6 ring terminal and alligator clip accessory cables, illustrating the complete package contents.

4. SAFETY INSTRUCTIONS

Always prioritize safety when operating the battery charger. Failure to follow these instructions may result in injury or damage to the charger or battery.

- Read the entire manual before use.
- Ensure the charger is compatible with your battery type and voltage before connecting.
- Connect the positive (red) clamp to the positive (+) battery terminal first, then the negative (black) clamp to the negative (-) battery terminal.
- Disconnect in reverse order: negative (black) first, then positive (red).
- Do not charge a frozen, damaged, or non-rechargeable battery.
- Use in a well-ventilated area. Batteries can emit explosive gases during charging.
- Avoid sparks, flames, or smoking near the battery during charging.
- Do not expose the charger to rain or excessive moisture. The charger is IP65 waterproof, but direct submersion is not recommended.
- Keep out of reach of children.
- If the charger or battery becomes excessively hot, disconnect immediately.

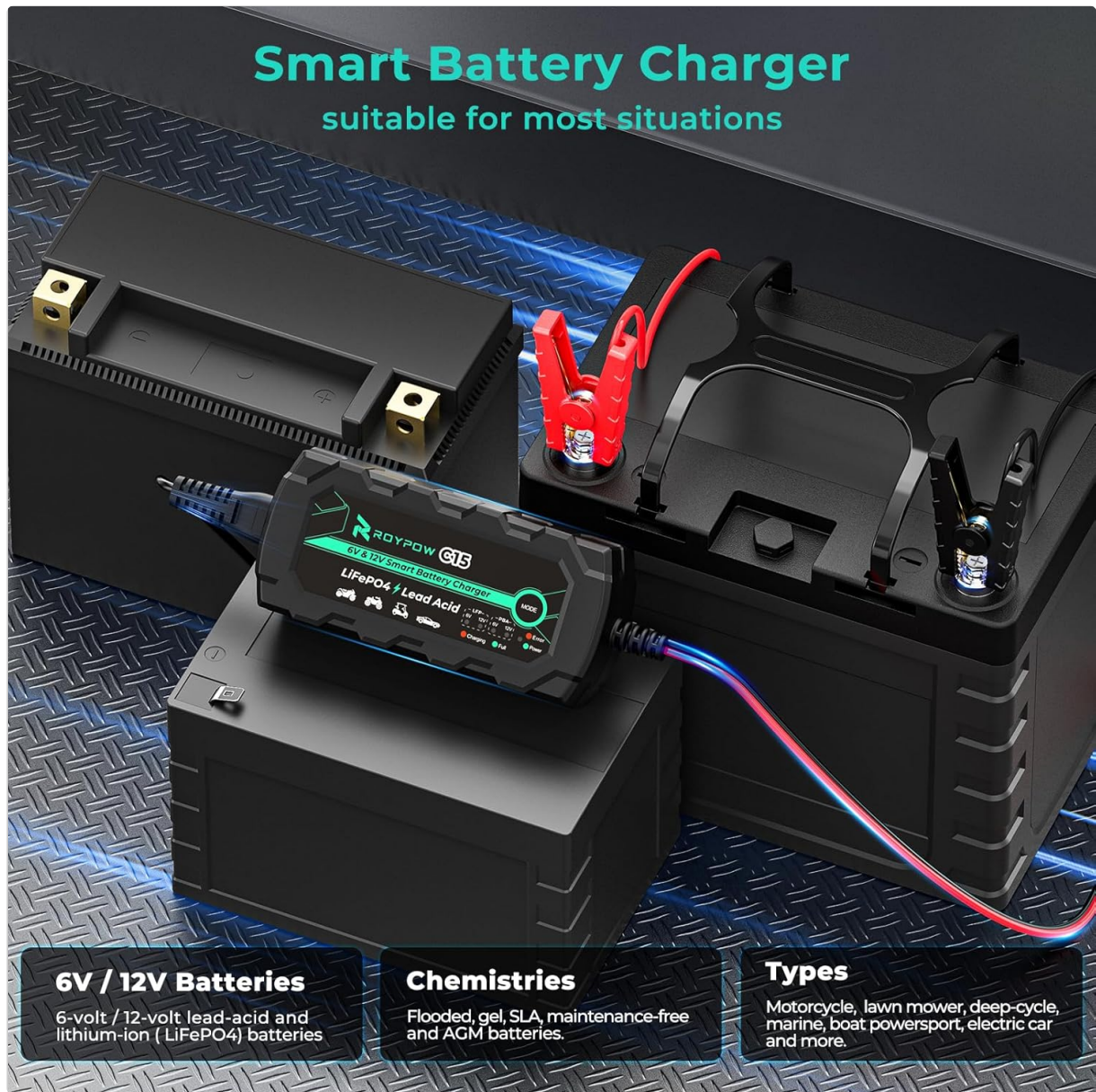


Image: The RoyPow C15 charger highlighting its premium multi-protection features, including short circuit, overload, over-current, over-voltage, over-temperature, and reverse connection protection.

5. SETUP

1. **Choose Connector:** Select either the M6 ring terminal cable for semi-permanent connection or the alligator clip cable for temporary connections. Connect the chosen cable to the charger's output port.
2. **Connect to Battery:** First, connect the positive (red) clamp/ring terminal to the positive (+) battery terminal. Then, connect the negative (black) clamp/ring terminal to the negative (-) battery terminal. Ensure a secure connection.
3. **Plug into Power:** Plug the charger's AC power cord into a standard 100-240V AC electrical outlet.
4. **Verify Connection:** The charger will automatically detect the battery voltage and type. The display will show the current status.

7.2V / 14.4V 1A Trickle Battery Charger

for Most 6V/12V Batteries



Image: The RoyPow C15 charger connected to a battery, demonstrating its ability to activate dead batteries with 0V charging, extend battery life, and perform auto repair.

6. OPERATING INSTRUCTIONS

6.1 Automatic Detection and Mode Selection

Upon connection to a battery and power outlet, the RoyPow C15 charger automatically detects the battery's voltage (6V or 12V) and type (Lead-Acid or LiFePO4). The charger will then enter the appropriate charging mode. The auto memory function ensures it defaults to the last used mode.



Image: Illustration of the two main charging voltage modes (6V and 12V) for both Lithium (LFP) and Lead Acid (PBA) battery types.

6.2 Charging Process

The charger employs an intelligent multi-stage charging process to optimize battery health and performance:

- **Diagnosis:** Checks battery status, voltage, and type.
- **Desulfation/0V Activation:** For deeply discharged or sulfated lead-acid batteries, it attempts to recover them. For LiFePO4, it can activate from 0V.
- **Soft Start:** Gradually introduces current to prevent damage.
- **Bulk Charge:** Charges the battery to approximately 80% capacity at maximum current.
- **Absorption:** Charges the battery to 100% at a decreasing current.
- **Float/Maintenance:** Maintains the battery at full charge without overcharging, ideal for long-term connection.



Image: A table outlining the charging details, including battery type, battery voltage (6V, 12V), and charging current (0.8-1.2A) for both Lead Acid and Lithium (LiFePO4, LFP) batteries.

6.3 Temperature Compensation

The built-in thermal sensor automatically adjusts the charging parameters based on the ambient temperature. This ensures optimal charging performance and prevents battery damage in extreme hot or cold conditions.

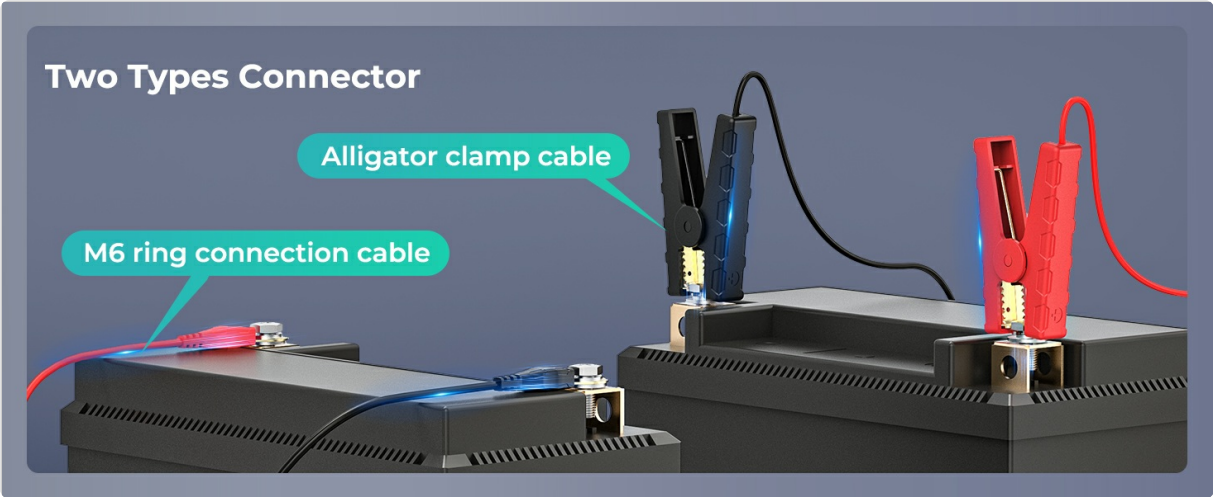


Image: Visual representation of the charger's intelligent temperature adjustment feature, ensuring proper charging across a wide working temperature range from -20°C to +40°C.

7. MAINTENANCE

- **Cleaning:** Keep the charger clean and dry. Wipe with a soft, damp cloth. Do not use harsh chemicals or abrasive cleaners.
- **Storage:** Store the charger in a cool, dry place when not in use.
- **Battery Health:** For vehicles or equipment stored for extended periods, connect the charger in maintenance mode to keep the battery optimally charged and prevent self-discharge.
- **Cable Inspection:** Regularly inspect the charging cables and connectors for any signs of damage. Replace if necessary.

8. TROUBLESHOOTING

- **Charger Not Turning On:** Ensure the AC power cord is securely plugged into a live outlet. Check for power outages or tripped circuit breakers.
- **No Charging Indication:** Verify that the battery clamps/ring terminals are correctly connected to the battery terminals (positive to positive, negative to negative). A reverse connection will trigger protection and prevent charging.
- **Error Light On:** This indicates a fault. Check for reverse polarity, short circuit, or an internal battery issue. Disconnect and re-connect the charger. If the error persists, the battery may be severely damaged or incompatible.
- **Battery Not Fully Charging:** Ensure the correct battery type and voltage are being detected. For very old or deeply sulfated batteries, the 0V activation function may take longer or might not fully restore the battery if it's beyond repair.
- **Charger Gets Warm:** It is normal for the charger to become warm during operation, especially during bulk charging. However, if it becomes excessively hot to the touch, disconnect it immediately and contact support.

9. SPECIFICATIONS

Brand	RoyPow
Model Number	C15
Input Voltage	100-240V AC
Input Frequency	50-60Hz
Output Voltage	6V / 12V DC
Current Rating	1 Amps
Battery Compatibility	6V & 12V Lead-Acid (Wet, Gel, Flooded, SLA, MF, AGM, CA, VRLA, EFB) & Lithium-ion (LiFePO4)
Charging Time	Approx. 6 Hours (for 35Ah battery)
Product Dimensions	11.66 x 5.36 x 3.1 cm
Weight	145g (charger unit) / 422g (package)
Connector Type	Ring Terminal, Alligator Clips
Country of Origin	China

10. WARRANTY & SUPPORT

The RoyPow C15 Battery Charger comes with a **2-Year Warranty**. For technical support or warranty claims, please

contact RoyPow customer service. Manufacturer contact information: +8618127418334.