

LVYUAN BC-400PRO

LVYUAN 40A Automatic Pulse Battery Charger

MODEL: BC-400PRO

User Manual

1. Introduction

Thank you for purchasing the LVYUAN 40A Automatic Pulse Battery Charger. This manual provides essential information for the safe and efficient operation, maintenance, and troubleshooting of your charger. Please read this manual thoroughly before use and retain it for future reference.

This charger is designed for various 12V/24V lead-acid batteries (Open, Sealed, AGM, GEL, EFB, WET, MF) and 12V LiFePO4 (Lithium Iron Phosphate) batteries, with capacities ranging from 15Ah to 400Ah.

2. Safety Information

Important Safety Instructions:

- Always wear eye protection and protective clothing when working with batteries.
- Ensure adequate ventilation in the charging area.
- Do not charge frozen batteries.
- Keep the charger away from flammable materials.
- Do not expose the charger to rain or excessive moisture.
- Disconnect the AC power before making or breaking connections to the battery.
- **Do not use the pulse repair mode for LiFePO4 batteries.**
- **Do not use this charger for 24V LiFePO4 batteries.**
- This device is PSE certified for safety.

3. Product Overview and Features

The LVYUAN BC-400PRO is a multi-functional battery charger equipped with advanced features to ensure efficient and safe charging.

4段階スマート充電

直接急速充電モードに入ると、バッテリーが損傷します。
耐用年数に影響を与え、
安全上の問題を引き起こす可能性があります。

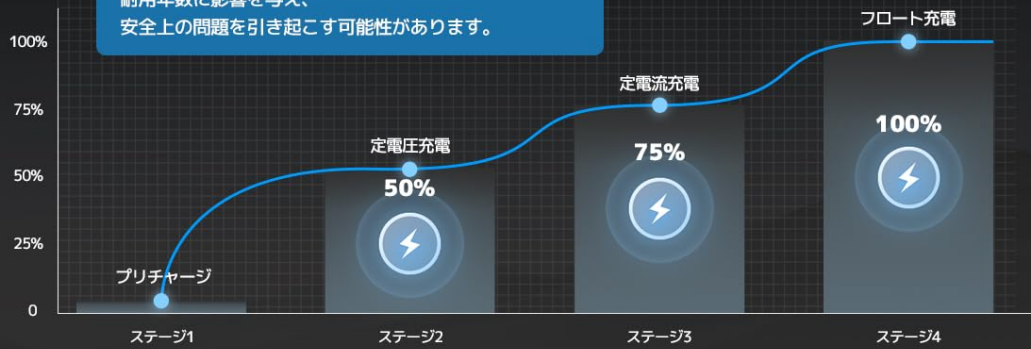


Image: Overview of the LYYUAN Multi-function charger, highlighting features such as 0V charge, float charge, 12V/24V auto recognition, smart chip, and temperature-controlled fan.

Key Features:

- **Fully Automatic Smart Charging:** Automatically adjusts charging current based on the battery's stage.
- **Battery Diagnosis:** Assesses battery condition before charging.
- **Rapid Charging:** Efficiently charges batteries.
- **0V Battery Activation:** Can initiate charging for deeply discharged batteries.
- **Pulse Repair Mode:** Helps revive old batteries by removing sulfide crystals (not for LiFePO4).
- **4-Stage Charging Process:** Includes Pre-charge, Constant Current Charge, Constant Voltage Charge, and Float Charge.
- **Float Charging:** Maintains batteries at full charge when continuously connected.
- **Multiple Protection Functions:** Overcurrent, overheating, short circuit, reverse polarity, and overcharge protection.

5つの保護機能



Image: Visual representation of the charger's five protection functions: overcurrent, overheating, short circuit, reverse polarity, and overcharge prevention.

充電器が一つだけでいい 幅広いモデルバッテリーに対応

15AH~400AHのバッテリーを充電可能

- 鉛バッテリー
- 開放型（液補充型）
- STD電池、
- GEL電池、
- AGM電池、
- EFB電池
- 12V LiFePO4
リン酸鉄リチウムバッテリー



※ 24Vリン酸鉄リチウム電池使用禁止

Image: The charger supports a wide range of battery types (lead-acid, GEL, AGM, EFB, 12V LiFePO4) and capacities from 15Ah to 400Ah.

4. Specifications

Feature	BC-400PRO
Input Voltage	AC100V-120V (50/60Hz Auto Recognition)
Compatible Battery Voltage	12V/24V Lead-Acid, 12V LiFePO4
Compatible Battery Capacity	15Ah - 400Ah
12V Output Current	10A / 20A / 40A (Selectable)
24V Output Current	5A / 10A / 20A (Selectable)
Max Output Power	400W

Charging Method	Automatic Charging / Pulse Charging
Operating Temperature	-20°C to 45°C
Dimensions (D x W x H)	15 x 20 x 25 cm
Product Weight	Approx. 1.3 kg
Included Accessories	1 unit (Charger, Clip Cord, Power Cord)
Clip Cord Length	90 cm
Power Cord Length	140 cm

LVIYUAN 鉛 / リチウム電池両用自動パルス充電器

製品モデル :	BC-300 PRO	BC-400 PRO
バッテリー電圧 :	12V/24V 鉛バッテリー、 12V (LiFePO 4) リチウムバッテリー	
適合バッテリー容量 :	15AH-300AH	15AH-400AH
入力電圧 / 周波数 :	AC100V~120V / 50/60Hz 自動認識	
12V 出力電流 :	12V:5A/10A/30A	12V:10A/20A/40A
24V 出力電流 :	24V:5A/10A/15A	24V:5A/10A/20A
最大出力 :	350W	400W
充電方法 :	自動充電 / パルス充電	
動作温度 :	-20°C-45°C	
対応バッテリーの種類 :	12V/24V 鉛バッテリー (WET/MF/EFB/GEL/AGM)、 12V LiFePO 4 リン酸鉄リチウムバッテリー	

Image: Detailed specifications table for the BC-400PRO, including input/output voltages, currents, compatible battery types, and capacities.



クリップコード
90cm



電源コード
140cm



製品重量
約 1.3kg

Image: Physical dimensions of the charger and lengths of the clip cord and power cord.

5. Setup

Follow these steps to set up your battery charger:

1. **Connect to Power:** Plug the charger's AC power cord into a standard AC100V-120V outlet.
2. **Connect to Battery:** Connect the red (+) clamp to the positive terminal of the battery and the black (-) clamp to the negative terminal. Ensure a secure connection.
3. **Automatic Voltage Detection:** The charger will automatically detect the battery voltage (12V or 24V).
4. **Select Battery Type:** Use the 'Battery Type' button to select the appropriate battery type (e.g., Lead-Acid, LiFePO4).
5. **Select Charging Current:** Use the 'Current Selection' button to choose the desired charging current (e.g., 10A, 20A, 40A for 12V; 5A, 10A, 20A for 24V). For smaller batteries (e.g., 15Ah), select a lower current (e.g., 5A). For larger batteries (e.g., 400Ah), a higher current (e.g., 40A) can be selected for faster charging.
6. **Start Charging:** Press the 'START/STOP' button to begin the charging process.

充電器が一つだけでいい

革新的な技術、1つの充電器でリン酸鉄リチウムと鉛バッテリーに対応可能



Image: A visual guide demonstrating the four simple steps for connecting and starting the charging process: plug in, connect to battery, select battery type, and select charging current.

高品質なアフターサービスを提供する



1年間メーカー保証



保証期間中に無償交換



迅速に問題を解決できる

電話やメールなどの手段で専門の
担当者が対応するサポートです。

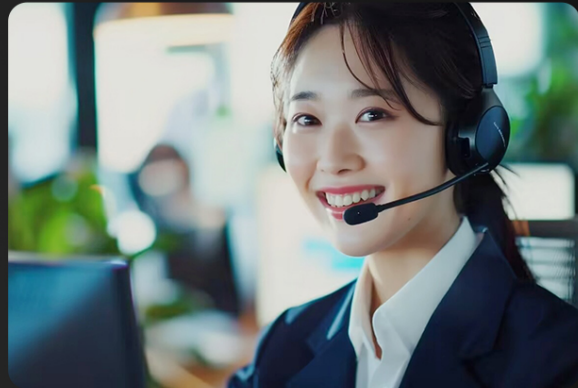


Image: Illustrates how to select the appropriate charging current (e.g., 40A for 400Ah battery, 5A for 15Ah battery) for safe and effective charging.

6. Operating Instructions

Once setup is complete, the charger will begin its automatic 4-stage charging process:

1. **Pre-charge:** Initial stage for deeply discharged batteries.
2. **Constant Current Charge:** Charges the battery at a constant current until it reaches a certain voltage.
3. **Constant Voltage Charge:** Charges the battery at a constant voltage, allowing the current to decrease as the battery approaches full charge.
4. **Float Charge:** Maintains the battery at full charge by providing a small, constant voltage. Charging automatically restarts if the battery naturally discharges to a certain voltage.

維持充電でバッテリー長持ち。
常に良好なバッテリー状態を持っています。

4段階パルス充電

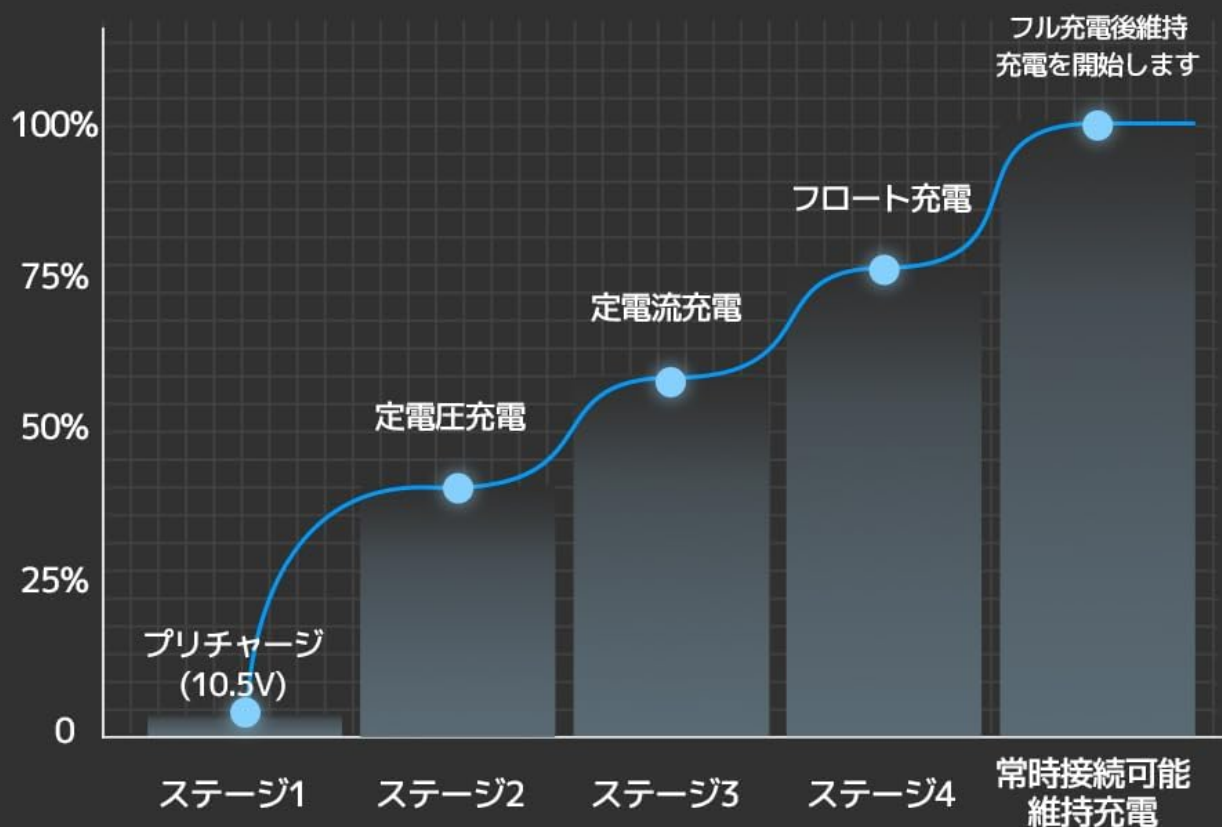


Image: A graph illustrating the four stages of pulse charging: Pre-charge, Constant Current, Constant Voltage, and Float Charge, ensuring optimal battery health.

Pulse Repair Mode (for Lead-Acid Batteries ONLY):

- This mode applies pulse currents to help remove sulfate crystals from lead-acid battery plates, potentially extending battery life.
- To activate, select the 'Repair Mode' option on the charger.
- **WARNING: Do NOT use this mode for LiFePO4 batteries or physically damaged batteries.**

LVYUAN 多機能充電器【2024 新登場】



Image: The charger's pulse function is shown reviving an old battery by sending 1000 pulses per second to remove sulfate crystals.

Charging Completion:

- When charging is complete, the display will indicate full charge, and the charger will switch to float charge mode.
- For LiFePO4 batteries, charging stops when the cutoff voltage is reached. The battery voltage will naturally discharge to a stable voltage (typically 13.3V-13.6V for LiFePO4).

4ステップで簡単充電



Image: The charger display shows a LiFePO4 battery at 13.6V, indicating charging completion and transition to a stable voltage state.

Image: Two graphs showing the voltage curve during LiFePO4 charging (up to 14.6V) and the subsequent natural discharge to a stable 13.6V, with a small power loss.

7. Maintenance

To ensure the longevity and optimal performance of your charger:

- Keep the charger clean and dry. Wipe with a soft, dry cloth.
- Store the charger in a cool, dry place when not in use.
- Regularly inspect the cables and clamps for any signs of damage. Replace if necessary.
- Ensure the ventilation openings are clear of dust and debris to prevent overheating.

8. Troubleshooting

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

Problem	Possible Cause	Solution
Charger does not power on.	No AC power, faulty power cord, internal fault.	Check AC outlet and power cord. Ensure the power switch (if any) is on. If problem persists, contact support.
Charging does not start.	Incorrect battery connection, battery type not selected, battery too damaged.	Verify correct polarity connection. Select the correct battery type. If battery is severely degraded, it may not accept charge.
Error message on display.	Specific error condition (e.g., reverse polarity, short circuit, overheating).	Refer to the display code for specific error. Disconnect and re-connect the battery. Allow charger to cool if overheating.
Pulse repair mode not working for LiFePO4.	Pulse repair mode is not compatible with LiFePO4 batteries.	This is normal. Do not attempt to use pulse repair mode on LiFePO4 batteries.

If the issue is not resolved by the above steps, please contact customer support.

9. Warranty and Support

This LVYUAN product comes with a **1-year manufacturer's warranty** from the date of purchase. During the warranty period, any defects due to manufacturing faults will be repaired or replaced free of charge.

The warranty does not cover damage caused by misuse, accident, unauthorized modification, or normal wear and tear.

For technical support, warranty claims, or any inquiries, please contact LVYUAN customer service. Our dedicated support team is available to assist you promptly via phone or email.



Image: A customer support representative ready to assist with product inquiries and issues.

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