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› ECO-WORTHY 12V/24V 20A Lithium Battery Charger Instruction Manual

ECO-WORTHY 12V/24V 20A

ECO-WORTHY 12V/24V 20A Lithium Battery Charger Instruction Manual

Model: 12V/24V 20A

INTRODUCTION

This manual provides essential instructions for the safe and efficient operation of your ECO-WORTHY 12V/24V 20A Lithium Battery Charger. Please read this manual thoroughly before use and retain it for future reference. This charger is designed for charging LiFePO4 and Lead Acid batteries, featuring automatic voltage recognition, multiple charging modes, and comprehensive protection functions.



The ECO-WORTHY 12V/24V 20A Lithium Battery Charger, designed for various battery types.

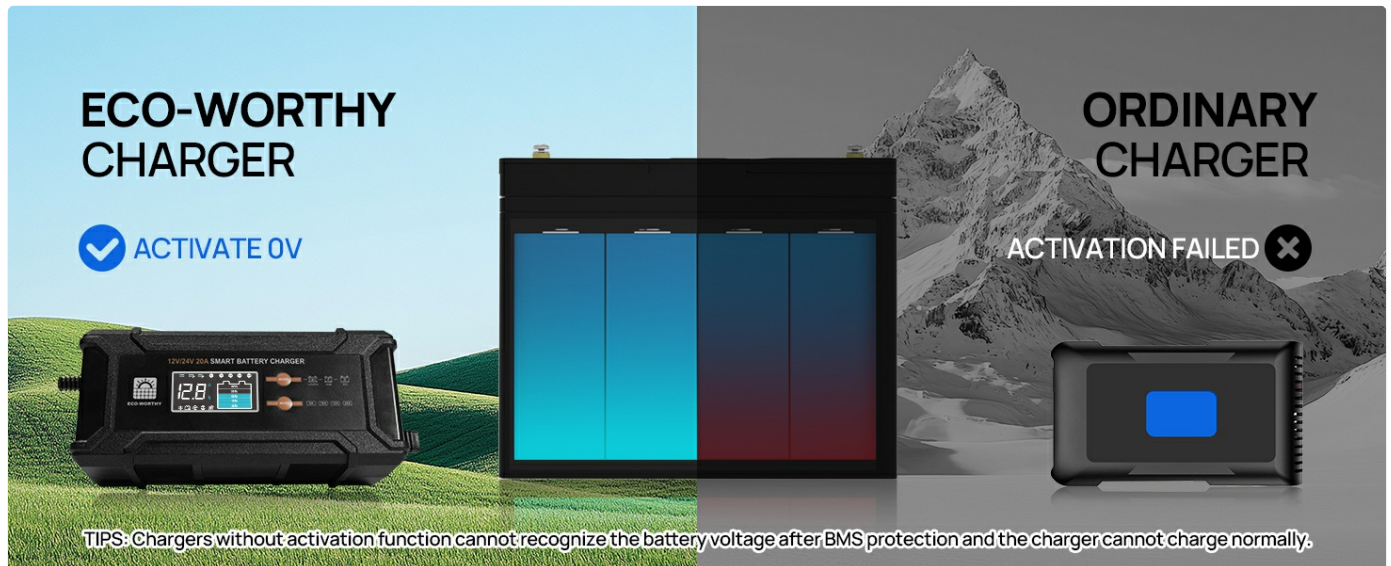
SAFETY INFORMATION

- Ensure the charger is connected to a grounded power outlet.
- Do not expose the charger to rain or moisture.
- Avoid charging damaged or frozen batteries.
- Ensure proper ventilation during charging to prevent overheating.
- Keep out of reach of children.
- Disconnect the charger from the power source before making or breaking connections to the battery.

SETUP

Follow these steps to set up your ECO-WORTHY battery charger:

1. **Connect to Mains:** Plug the AC power cord into a standard wall outlet. The charger's LCD display will illuminate.
2. **Set Battery Mode:** Before connecting to the battery, press the 'MODE' button on the charger to select the appropriate battery type (LiFePO4, STD, AGM) and charging current. The battery type cannot be changed after the battery is connected.
3. **Connect the Battery:** Connect the charger's output cables to your battery. Ensure correct polarity: red to positive (+), black to negative (-). The charger features an Anderson connector for secure and easy connection.



Visual guide for connecting the charger to the mains and battery, including setting the battery mode.

Anderson Connection

The charger is equipped with an Anderson connector for reliable and secure connections. It also includes M8 terminals for alternative connection methods.

UPGRADE ANDERSON CONNECTION

M8 Terminals

Reliable Conductivity;
Tight & Secure Connection



Anderson Connector

Easy Connection &
Disconnection; Safe for Use



The charger features an Anderson connector for easy use and M8 terminals for secure connections.

OPERATING INSTRUCTIONS

Intelligent Voltage Recognition

The charger automatically detects whether a 12V or 24V battery is connected. You can manually select the charging current based on your battery's capacity.

Charging Current Levels

The charger offers 6 selectable current levels to optimize charging for various battery capacities:

- **5A:** Suitable for 12V/24V batteries with 8-50Ah capacity.
- **10A:** Suitable for 12V/24V batteries with 20-100Ah capacity.
- **15A-20A:** Suitable for 12V batteries with 50-300Ah capacity.

CHARGING EFFICIENCY



12V 100Ah Fully charged with
12V 20A current in about **5 hours**



12V 280Ah Fully charged with
12V 20A current in about **14 hours**



24V 100Ah Fully charged with
24V 10A current in about **10 hours**



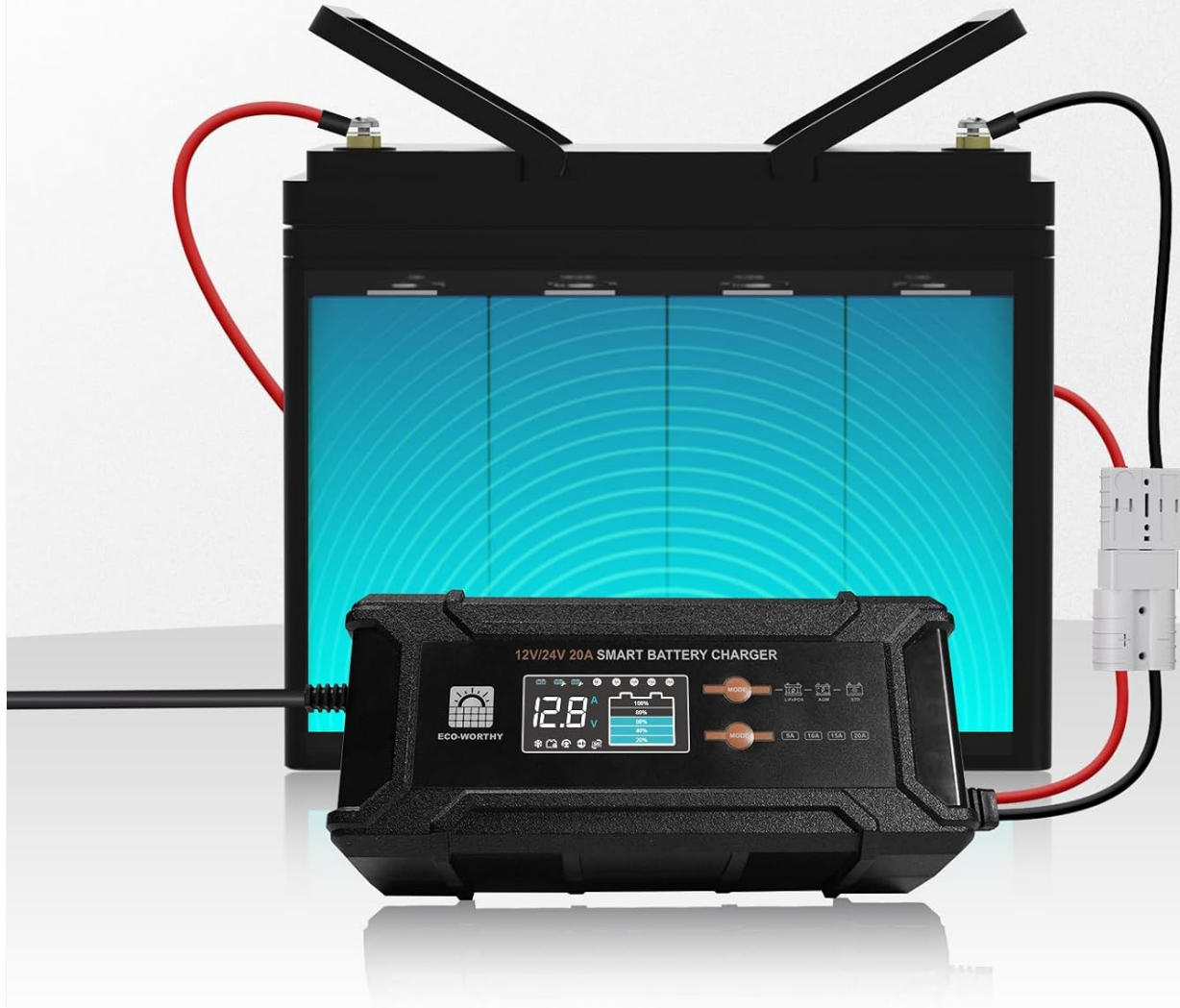
Selectable charging current levels for 12V and 24V batteries.

LiFePO4 Battery Activation Function

This charger can activate LiFePO4 batteries that have entered BMS protection due to over-discharge or prolonged inactivity. This feature helps extend the battery's lifespan and restore performance.

ACTIVATE 0V

Design for LiFePO4 Battery



The charger's ability to activate 0V LiFePO4 batteries.

LCD Smart Display

The integrated LCD screen provides real-time information about the charging process, including:

- Battery power level (SOC)
- Voltage and Current
- Fault indicators (e.g., short circuit, reverse connection)
- Low-temperature mode indicator

LCD SMART DISPLAY



Detailed view of the LCD Smart Display and its indicators.

Supported Battery Types

The charger supports various battery chemistries and charging modes:

- **LiFePO4:** Lithium Iron Phosphate batteries.
- **STD:** Standard Lead-Acid batteries.
- **AGM:** Absorbed Glass Mat batteries.
- **Low-Temperature Charging:** Optimized charging for cold environments.

Important: Always set the correct battery type on the charger before connecting the battery.

CHARGING MULTIPLE BATTERIES

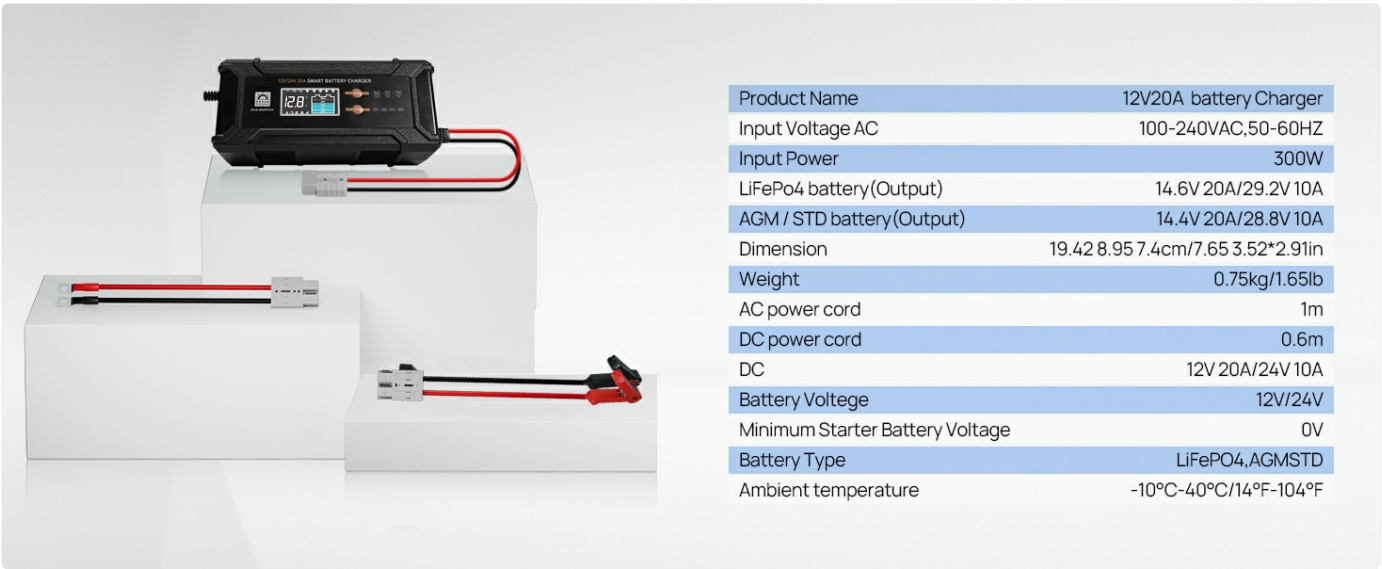


Tips: Please set the battery type on the charger before connecting the battery

The charger supports LiFePO4 (LFP), AGM, and Standard (STD) lead-acid batteries.

AGM Recovery Mode

The charger includes a lead-acid battery repair function, utilizing a 15V pulse to help recover and maintain lead-acid batteries.



Product Name	12V20A battery Charger
Input Voltage AC	100-240VAC,50-60HZ
Input Power	300W
LiFePo4 battery(Output)	14.6V 20A/29.2V 10A
AGM / STD battery(Output)	14.4V 20A/28.8V 10A
Dimension	19.42 8.95 7.4cm/7.65 3.52*2.9in
Weight	0.75kg/1.65lb
AC power cord	1m
DC power cord	0.6m
DC	12V 20A/24V 10A
Battery Voltage	12V/24V
Minimum Starter Battery Voltage	0V
Battery Type	LiFePO4,AGMSTD
Ambient temperature	-10°C-40°C/14°F-104°F

The AGM Recovery Mode uses a 15V pulse to repair lead-acid batteries.

MAINTENANCE

To ensure optimal performance and longevity of your charger:

- Keep the charger clean and free from dust and debris.
- Store in a dry, well-ventilated area when not in use.
- Regularly check cables and connectors for any signs of damage.
- The built-in cooling fan helps dissipate heat during operation. Ensure the fan vents are not obstructed.

MAXIMIZE CHARGING EFFICIENCY WITH COOLING FAN



Silent Charging at 5A Mode

The internal cooling fan ensures stable and efficient charging performance by dissipating heat.

TROUBLESHOOTING

The ECO-WORTHY charger incorporates multiple protection functions to ensure safe operation. If you encounter an issue, refer to the LCD display for fault indicators and consider the following:

- **No Display/No Power:** Ensure the AC power cord is securely plugged into a live outlet.
- **Charging Not Starting:**
 - Verify battery connections are correct (red to positive, black to negative).
 - Check if the correct battery type is selected on the charger.
 - For LiFePO4 batteries, if the battery is deeply discharged (0V) and has triggered BMS protection, the charger's activation function should attempt to revive it. If activation fails, the battery may be permanently damaged or require specialized recovery.
- **Error Codes/Fault Indicators on LCD:** The LCD displays icons for reverse polarity, short circuit, and high

temperature. Address the indicated issue:

- **Reverse Connection:** Disconnect immediately and re-connect with correct polarity.
 - **Short Circuit:** Disconnect the charger and inspect cables and battery terminals for any short circuits.
 - **High Temperature:** Ensure the charger is in a well-ventilated area and not covered. Allow it to cool down before resuming operation.
- **Slow Charging:** Ensure the selected charging current matches the battery's capacity for optimal speed.

MULTIPLE PROTECTION FUNCTIONS



The charger includes multiple protection functions for safe operation.

SPECIFICATIONS

Feature	Specification
Product Name	12V/24V 20A Battery Charger

Feature	Specification
Input Voltage AC	100-240V, 50-60Hz
Input Power	300W
LiFePO4 Battery Output	14.6V 20A / 29.2V 10A
AGM / STD Battery Output	14.4V 20A / 28.8V 10A
Dimensions (D x W x H)	9D x 19.4W x 7.4H cm (8.95 x 19.42 x 7.4 cm)
Weight	0.75 kg
AC Power Cord Length	1m
DC Power Cord Length	0.6m
Battery Voltage	12V/24V (Automatic Recognition)
Minimum Starter Battery Voltage	0V (for LiFePO4 activation)
Battery Type Compatibility	LiFePO4, AGM, STD
Ambient Temperature Range	-10°C to 40°C (14°F to 104°F)
Connector Type	Anderson Connector
Number of Ports	1

WARRANTY

The ECO-WORTHY 12V/24V 20A Lithium Battery Charger comes with a **1 Year Warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims.

Price Protection Policy

ECO-WORTHY offers a price protection policy. If the actual price of the item is lower than the price you paid within 30 days from the time of purchase, you may contact customer service for a refund of the price difference. To claim, provide your original order number and a screenshot of the order, along with a screenshot of the item's detail page showing the reduced price. The refund will be processed within 72 hours. This policy is limited to purchases made on this platform and does not apply to cross-platform price differences.

ECO-WORTHY PRICE PROTECTION POLICY

Customer satisfaction is vital to ECO-WORTHY! ECO-WORTHY will provide price protection for the order, if the actual price on hand is lower than the price you paid within 30 days from the time you purchased the item, you can contact us via AMZ with the following information:

1. Original order number and order screenshot.
2. Price screenshot of the item's detail page after the price reduction. We will refund the price difference within 72 hours.

Tips: This policy is limited to within this platform and does not apply to cross-platform price differences.

Details of the ECO-WORTHY Price Protection Policy.

SUPPORT

For technical assistance, warranty claims, or any questions regarding your ECO-WORTHY 12V/24V 20A Lithium Battery Charger, please contact ECO-WORTHY customer support through the platform where you made your purchase or visit the official ECO-WORTHY website for contact information.

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