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E-FAST B0DR8DGDV3

E-FAST 12V 10A LiFePO4 Battery Charger Instruction Manual

Model: B0DR8DGDV3

PRODUCT OVERVIEW

The E-FAST 12V 10A Lithium Battery Charger is specifically designed for 12V (12.8V) LiFePO4 lithium batteries. It features a 0V charging function to reactivate deeply discharged batteries, extending their lifespan through intelligent 3-stage charging. This smart charger provides a fast and safe charging solution for LiFePO4 deep cycle rechargeable batteries commonly used in boats and RVs.



Image: The E-FAST 12V 10A LiFePO4 Battery Charger, showcasing its compact design, Anderson connector, and standard power plug.

KEY FEATURES

- **Dedicated LiFePO4 Charging:** Optimized for 12V (12.8V) LiFePO4 lithium batteries, including a 0V charging function to reactivate depleted batteries.
- **Intelligent 3-Stage Charging:** Utilizes CC (Constant Current), CV (Constant Voltage), and float/cut-off stages for efficient and safe charging, prolonging battery life.
- **Fast Charging Capability:** Delivers 10A charging current at 14.6V, capable of quickly charging 12V 100Ah LiFePO4 batteries.
- **Multiple Safety Protections:** Incorporates overvoltage, short circuit, overheat, and reverse polarity protection to ensure the safety of both the battery and the charger.
- **Durable Design:** Constructed from high-quality aluminum alloy with a built-in cooling fan to prevent overheating and ensure stable charging output.
- **Upgraded Connectivity:** Features M8 terminals and a 50A Anderson connector for convenient and secure battery connections.

SETUP INSTRUCTIONS

Follow these steps to properly set up your E-FAST LiFePO4 battery charger:

1. **Prepare the Battery:** Ensure your 12V (12.8V) LiFePO4 battery is accessible and its terminals are clean.
2. **Connect to Battery:** Use the provided M8 terminals and 50A Anderson connector to securely connect the charger to your battery. The Anderson connector ensures a robust and easy connection.

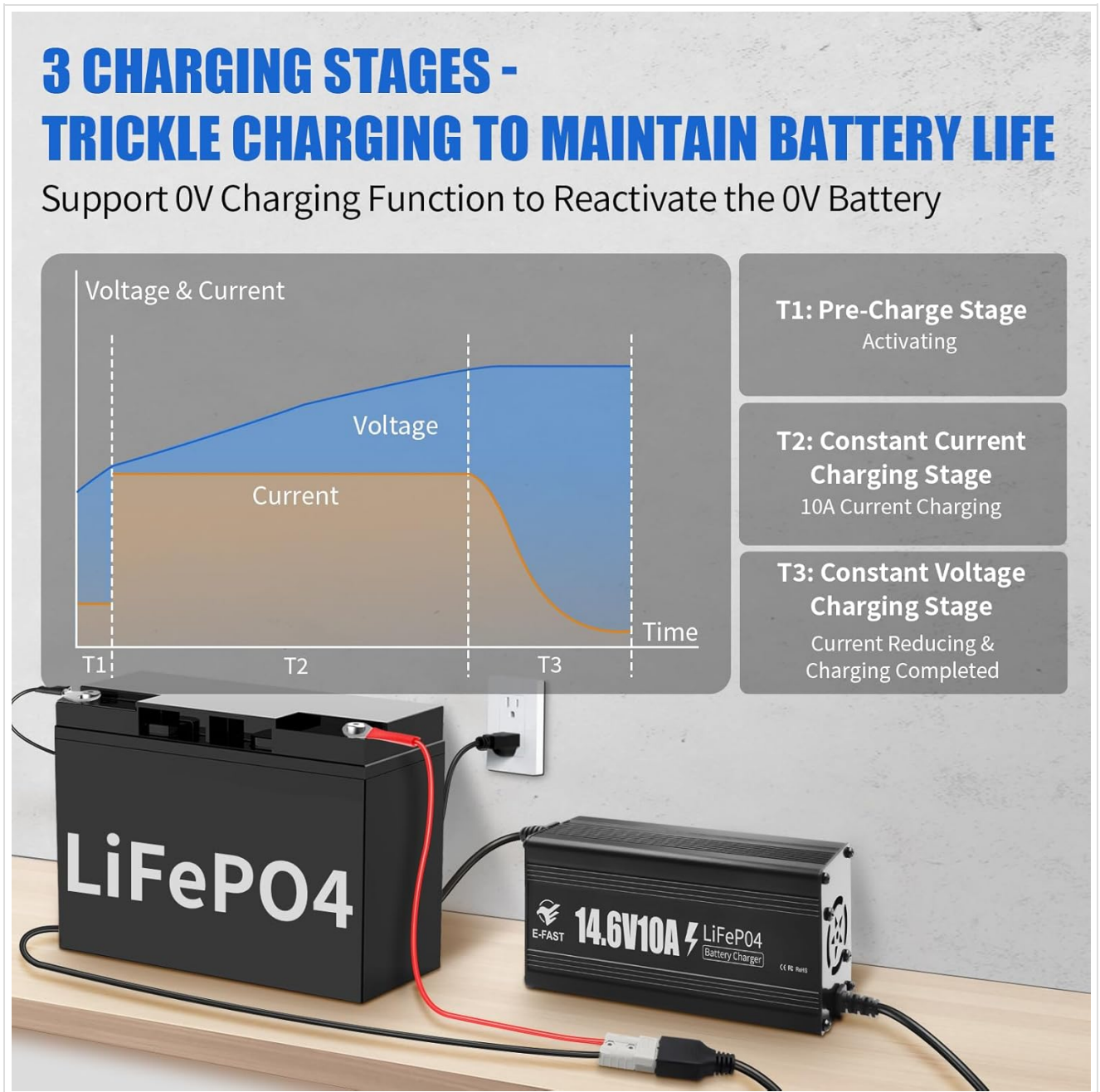


Image: Diagram illustrating the upgraded connections of the charger, including the DC cable, AC cable, M8 terminals, and Anderson connector for easy setup.

3. **Connect to Power:** Plug the AC power cord of the charger into a standard 100V-240V AC outlet (50Hz to 60Hz).

SPECIALLY DEVELOPED FOR LiFePO4 12V BATTERIES

Fully charges the LiFePO4 battery and protection against life of LiFePO4 battery



Image: The E-FAST charger connected to a LiFePO4 battery and a power outlet, demonstrating its primary function.

4. **Verify Connection:** The charger's LED indicator will illuminate to show the charging status. A red light typically indicates charging, while a green light indicates a full charge.

OPERATING INSTRUCTIONS

The E-FAST charger operates automatically once connected. Here's what to expect:

- **Automatic Charging:** The charger will automatically begin the 3-stage charging process.

UPGRADED THE CONNECTION BETWEEN CHARGER AND BATTERY



Image: A graph detailing the 3-stage charging process (Pre-Charge, Constant Current, Constant Voltage) designed to maintain battery life.

- **Charging Stages:**



- **Pre-Charge Stage (T1):** Activates deeply discharged batteries (0V charging function).
- **Constant Current Charging Stage (T2):** Charges at a steady 10A current.
- **Constant Voltage Charging Stage (T3):** Current reduces as the battery approaches full charge, then charging is completed.

- **LED Indicator:**

- **Red Light:** Battery is charging.
- **Green Light:** Battery is fully charged.

CHARGER DISPLAY

DC SIDE ▶ LED Indicator

-  Battery is fully charged
-  Battery is charging

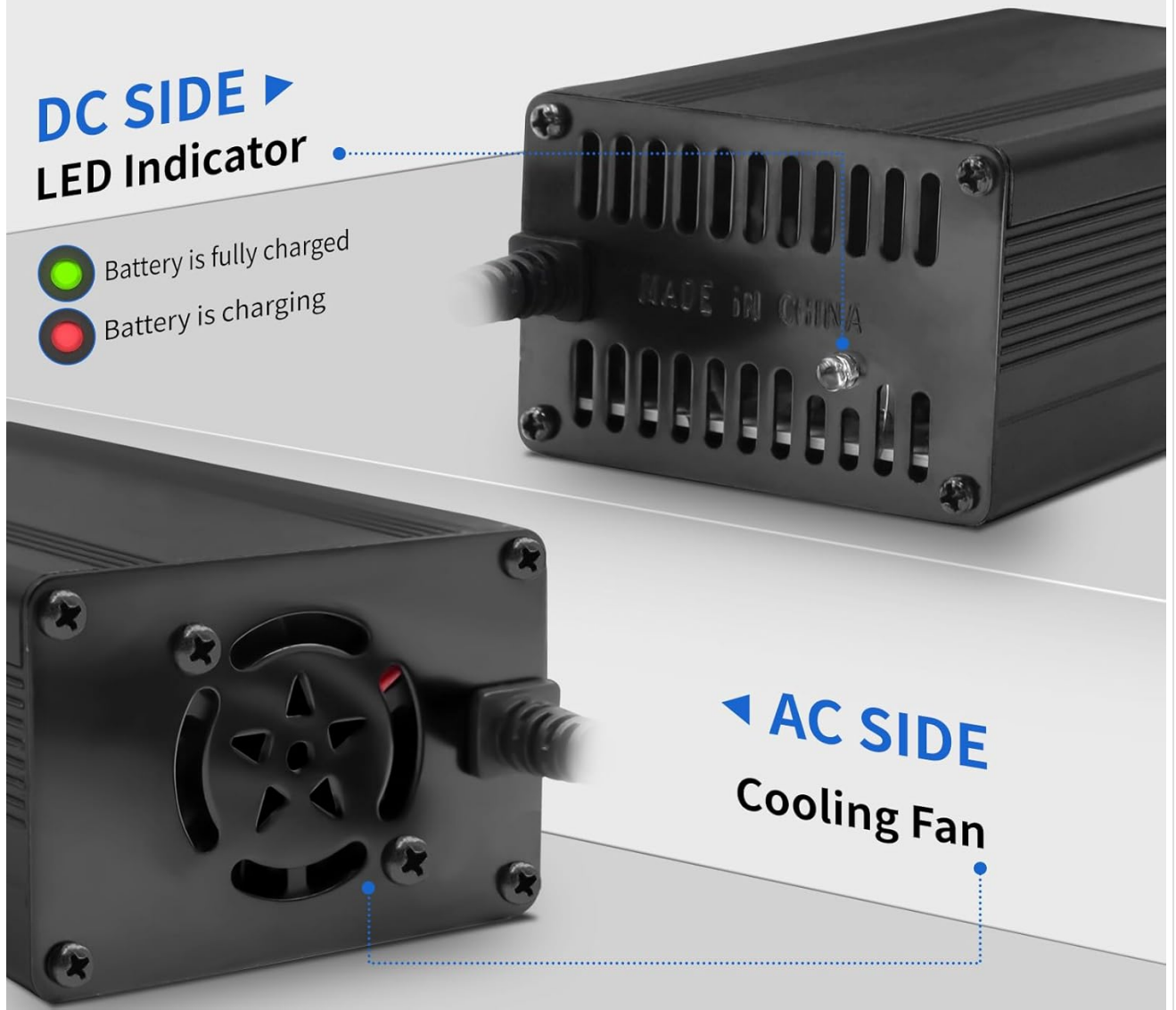


Image: Detailed view of the charger's display, highlighting the DC side LED indicator for charging status and the AC side cooling fan.

- **Charging Time:** The charging time depends on the battery capacity. For example:

BATTERY'S CHARGING TIME



Image: An infographic illustrating typical charging times for various LiFePO4 battery capacities (20Ah, 50Ah, 100Ah).

- 20Ah LiFePO4 battery: Approximately 2 hours
- 50Ah LiFePO4 battery: Approximately 5 hours
- 100Ah LiFePO4 battery: Approximately 10 hours

SAFETY AND PROTECTIONS

Your E-FAST charger is equipped with multiple safety features to ensure secure operation:

MULTIPLE PROTECTIONS



Over Temperature Protection



Output Over-Voltage Protection



Over Current Protection



Reverse Polarity Connection Protection



Output Short-circuit Protection



Over-Rate Protection



Image: A visual representation of the comprehensive multi-protection features built into the charger.

- **Overvoltage Protection:** Prevents charging at excessively high voltages.
- **Short Circuit Protection:** Automatically shuts off in case of a short circuit.
- **Overheat Protection:** Built-in cooling fan and aluminum alloy casing dissipate heat to prevent overheating.
- **Reverse Polarity Protection:** Protects against damage if the battery connections are reversed.
- **Over Current Protection:** Safeguards against excessive current draw.
- **Float/Cut-off Automatic Conversion:** Ensures the battery is not overcharged once full.

MAINTENANCE

To ensure optimal performance and longevity of your E-FAST battery charger:

- Keep the charger clean and free from dust and debris.
- Store the charger in a dry, cool place when not in use.
- Avoid exposing the charger to extreme temperatures or direct sunlight.

- Regularly check the cables and connectors for any signs of wear or damage. Replace if necessary.
- Do not attempt to open or modify the charger. Refer to qualified personnel for repairs.

TROUBLESHOOTING

If you encounter issues with your E-FAST battery charger, consider the following:

- **Charger not turning on:**
 - Ensure the AC power cord is securely plugged into a live outlet.
 - Check if the outlet is functioning correctly by plugging in another device.
- **Battery not charging (Red LED not on):**
 - Verify that the Anderson connector and M8 terminals are securely connected to the battery.
 - Check for reverse polarity connection; the charger has protection, but ensure correct positive and negative connections.
 - Confirm the battery is a 12V (12.8V) LiFePO4 type. This charger is specifically designed for this chemistry.
- **Charger overheating:**
 - Ensure the charger is placed in a well-ventilated area and its cooling fan is not obstructed.
 - If overheating persists, disconnect immediately and contact customer service.
- **Green LED on, but battery not fully charged:**
 - This is unlikely due to the intelligent charging system. Verify battery voltage with a multimeter if unsure.
 - Ensure the battery capacity is within the expected range for the charger's performance.

SPECIFICATIONS

Feature	Specification
Brand	E-FAST
Product Dimensions	2.1"D x 5.6"W x 2.9"H (5.3cm D x 14.2cm W x 7.4cm H)
Item Weight	1.96 pounds (0.89 kg)
Input Voltage	100V-240V AC
Input Frequency	50Hz to 60Hz
Output Voltage	14.6V DC
Charging Current	10A
Battery Type Supported	12V (12.8V) LiFePO4 Lithium Batteries
Color	Black
Manufacturer	E-FAST

WARRANTY AND CUSTOMER SUPPORT

Your E-FAST battery charger comes with a **1-year quality warranty**. If you have any questions, concerns, or require technical support, please do not hesitate to contact us. We are committed to meeting your needs and providing professional assistance.

For support, please refer to the contact information provided with your purchase or visit the official E-FAST website.