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Litime 12V/24V 30A

LiTime 30 Amp MPPT Solar Charge Controller User Manual

Model: 12V/24V 30A | Brand: Litime

INTRODUCTION

This manual provides essential information for the safe and efficient operation of your LiTime 30 Amp MPPT Solar Charge Controller. Please read it thoroughly before installation and use to ensure optimal performance and longevity of the product.



The LiTime 30 Amp MPPT Solar Charge Controller, designed for efficient solar power management.

KEY FEATURES

- **99% Tracking Technology:** Advanced Maximum Power Point Tracking (MPPT) technology for maximum power harvesting.
- **Built-in Bluetooth Module:** Enables remote control and monitoring via a dedicated mobile application.
- **LCD Screen & LED Indicators:** Provides real-time system operation information and status indications.
- **Excellent Heat Dissipation:** Constructed with die-cast aluminum to reduce power loss and ensure durability.
- **Multiple Protections:** Includes protection against Reverse Connection, Overpower, Overvoltage, Short-circuit, and Over-temperature.
- **Battery Compatibility:** Applicable to LiFePO4 and Lead-acid batteries with adjustable parameters.



Highlighted features including the LCD screen, LED indicators, built-in Bluetooth, and terminals.

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TYPES OF SAFETY PROTECTION



Reverse Connect Protection



Lowvoltage Protection



Overvoltage Protection



Overload Protection



Over-Temp. Protection



ALL-ROUND PROTECTION FROM SOLAR PANELS TO THE LOAD TERMINAL

Overview of the five types of safety protection: Reverse Connect, Lowvoltage, Overvoltage, Overload, and Over-Temp Protection.

Official video demonstrating the Maximum Power Point Tracking (MPPT) technology and various protection features of the controller.

SETUP & INSTALLATION

Package Contents

Before beginning installation, ensure all components are present:

- LiTime 30A MPPT Charge Controller
- Remote Temperature Sensor (for lead-acid battery)
- Mounting Brackets (x4)
- Mounting Screws (x8)
- Copper Wire Connector (x6)

- Heat Shrink Tubing for Cable (x6)
- Installation Guide
- User Manual

EASY TO INSTALL ALL YOU NEED IN ONE PACKAGE

- 1 LI TIME 30A MPPT CHARGE CONTROLLER*1
- 2 REMOTE TEMPERATURE SENSOR (FOR LEAD-ACID BATTERY)*1
- 3 MOUNTING BRACKETS*4
- 4 MOUNTING SCREWS*8
- 5 COPPER WIRE CONNECTOR*6
- 6 HEAT SHRINK TUBING FOR CABLE*6
- 7 INSTALLATION GUIDE*1
- 8 USER MANUAL*1



All components included in the package for easy installation.

Mounting the Controller

Choose a vertical surface protected from direct sunlight, high temperatures, and water. Ensure good ventilation. The controller can be installed using either mounting holes or mounting brackets.

- **Using Mounting Holes:** Mark holes with the provided installation position guide. Fix screws at the marked positions. Align and mount the controller with the 4 pre-fixed screws.
- **Using Mounting Brackets:** Install the provided brackets to the controller. Mark holes with the four mounting brackets. Drill holes and insert plastic anchors (for drywall mounting). Fix the screws to the mounting brackets.



Visual guide for both mounting methods: direct screw-in via mounting holes or using the provided brackets.

Wiring Connections

Ensure all connections are secure and properly insulated. The controller features terminals for PV (solar panel), BAT (battery), and LOAD connections. Use the provided copper wire connectors and heat shrink tubing for robust and safe connections.

Connection Order:

1. Connect the battery to the controller first.
2. Connect the solar panel array to the controller.
3. Connect the DC load to the controller (if applicable).

Always ensure correct polarity (+/-) to prevent damage to the controller or connected devices.

OPERATING INSTRUCTIONS

LCD Display and Indicators

The integrated LCD screen displays critical system information, including battery voltage, charging status, and load status. Multiple LED indicators provide quick visual cues for the state of the solar panel array, battery, loads, and controller faults.



The LCD screen provides detailed operational data, while LEDs indicate current charging mode, battery state, load status, and fault conditions.

Bluetooth Functionality

The built-in Bluetooth module allows for convenient remote monitoring and control via a smartphone app. Download the official LiTime app from your device's app store (Apple App Store or Google Play Store) to access detailed usage information and adjust parameters.



Note: The MPPT controller is equipped with a built-in bluetooth module that can be monitored and controlled via the app available on the apple store and google play store.

Monitor and control your MPPT controller remotely using the dedicated mobile application.

Battery Type Selection

The controller is pre-configured for LiFePO4 batteries, offering a plug-and-play experience for this battery type. For Sealed or Gel Lead-acid batteries, parameters can be adjusted through the controller's interface or the mobile app to ensure proper charging.



The controller is optimized for LiFePO4 batteries by default, but can be configured for other battery types.

MAINTENANCE

To ensure the long-term performance and safety of your LiTime MPPT Solar Charge Controller, regular maintenance is recommended:

- **Cleanliness:** Keep the controller clean and free from dust and debris. Use a dry, soft cloth for cleaning.
- **Ventilation:** Ensure the cooling fins are not obstructed to allow for proper heat dissipation.
- **Connections:** Periodically check all wiring connections for tightness and signs of corrosion. Loose connections can lead to overheating and poor performance.
- **Environmental Conditions:** Ensure the controller remains within its specified operating temperature range and is protected from moisture.

TROUBLESHOOTING

If you encounter issues with your LiTime MPPT Solar Charge Controller, refer to the following common troubleshooting steps:

- **No Display/Power:** Check battery connections and ensure the battery voltage is within the controller's operating range. Verify solar panel connections and ensure sufficient sunlight.
- **Low Charging Current:** Inspect solar panels for shading or damage. Check all wiring for proper connection and gauge. Ensure battery parameters are correctly set for the battery type.
- **Fault Indicators:** Refer to the user manual for specific fault codes displayed on the LCD or indicated by LEDs. Address the underlying issue as per the manual's guidance.
- **Bluetooth Connectivity Issues:** Ensure Bluetooth is enabled on your mobile device and the app has necessary permissions. Try restarting the app and the controller.

For persistent issues, please contact LiTime customer support.

SPECIFICATIONS

Specification	Value
Model Number	12V/24V 30A
Brand	Litime
Display Type	LCD
Operating Temperature	Up to 45 Degrees Celsius
Product Dimensions	7.09 x 3.25 x 9.65 inches
Item Weight	4.4 pounds
Voltage	24 Volts (Auto 12V/24V)
UPC	723884244499

DIMENSIONS

Product Size

L9.65*W7.09*H3.25 in



Detailed dimensions of the solar charge controller.

WARRANTY AND SUPPORT

LiTime products are designed for reliability and performance. For specific warranty details, please refer to the warranty card included in your product packaging or visit the official LiTime website. For technical support, troubleshooting assistance, or any inquiries, please contact LiTime customer service through their website or the contact information provided in your product manual.

Online Resources:

- Official Website: www.litime.com
- Customer Service Email: service@litime.com