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› [Bolisila](#) /

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Bolisila Bolisila

Bolisila 100A 150VDC 4880W MPPT Solar Charge Controller User Manual

Model: Bolisila | Brand: Bolisila

INTRODUCTION

This manual provides detailed instructions for the installation, operation, and maintenance of your Bolisila 100A 150VDC 4880W MPPT Solar Charge Controller. This high-performance controller features a built-in DSP controller and automatic voltage switching for 12V, 24V, 36V, 48V, and 96V battery banks, supporting solar panels up to 150V. It incorporates a 3-stage charging process to optimize battery performance and includes multiple protection functions to ensure safe and reliable operation. Please read this manual thoroughly before use to ensure proper setup and longevity of your device.



Figure 1: Front view of the Bolisila MPPT Solar Charge Controller, showcasing its multi-function LCD display and control buttons.

SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your solar charge controller. Follow these steps carefully:

1. **Mounting Location:** Choose a dry, well-ventilated area away from direct sunlight, high temperatures, and moisture. Ensure sufficient space around the controller for air circulation, especially for the cooling fan. The controller dimensions are approximately 219mm (length) x 110mm (width) x 260mm (height).



Figure 2: Side view illustrating the dimensions of the Bolisila MPPT Solar Charge Controller, important for mounting considerations.

2. **Wiring Sequence:** Always connect the battery first, then the solar panel, and finally the load. Disconnect in the reverse order.
3. **Battery Connection:** Connect the battery cables to the "BATTERY" terminals on the controller. The controller will automatically detect the battery voltage (12V, 24V, 36V, 48V, or 96V). Ensure correct polarity.
4. **Solar Panel Connection:** Connect the solar panel cables to the "PV INPUT" terminals. Ensure the solar panel's open-circuit voltage (Voc) does not exceed 150VDC. Observe correct polarity.
5. **Load Connection:** Connect your DC loads to the "LOAD" terminals. Ensure the total current of the loads does not exceed the controller's rated load current.
6. **Temperature Sensor:** Connect the external temperature sensor to the designated port. This helps the controller optimize charging based on battery temperature.



Figure 3: Detailed view of the controller's features, including connection points for PV input, battery, and load, along with the automatic fan cooling system and HD LCD screen.

The controller is designed for easy installation and setup. Once the batteries are connected, the controller will automatically determine the battery voltage, simplifying the initial configuration.

OPERATING INSTRUCTIONS

The Bolisila MPPT Solar Charge Controller features a multi-function LCD with a backlight display that dynamically shows operational data and working status.

- **LCD Display:** The LCD provides real-time information such as battery voltage, charging current, solar panel voltage, load status, and accumulated power generation. Use the "UP" and "DOWN" buttons to navigate through different display screens.
- **Charging Process:** The controller employs a 3-stage charging algorithm (Bulk, Absorption, Float) to optimize battery performance and extend battery life.
- **Battery Type Selection:** The controller is suitable for various battery types including sealed lead acid, vented gel,

and lithium batteries. Refer to the specific settings menu (accessed via the "FUNCTION" button) to select the correct battery type for optimal charging parameters.

- **Load Control:** The controller can manage DC loads connected to its output terminals. Depending on the model, it may offer programmable load control modes (e.g., dusk-to-dawn, timed control). Consult the on-screen menu for load settings.

For detailed menu navigation and parameter adjustments, refer to the on-screen prompts and the full digital manual available from the manufacturer's website.

MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Bolisila MPPT Solar Charge Controller:

- **Cleaning:** Periodically clean the controller's exterior with a dry, soft cloth. Do not use liquid cleaners or solvents. Ensure the ventilation openings are free from dust and debris.
- **Fan Inspection:** The controller features an automatic fan cooler at the bottom. Regularly check that the fan is not obstructed and is operating correctly to maintain a lower temperature and prevent overheating.
- **Connection Checks:** Annually inspect all wiring connections (battery, solar panel, load) to ensure they are secure and free from corrosion. Loose connections can lead to power loss or overheating.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges to prevent damage to the internal components.

TROUBLESHOOTING

The Bolisila MPPT Solar Charge Controller is equipped with multiple protection functions and a troubleshooting promotion function to help diagnose issues. Here are common problems and their potential solutions:

Problem	Possible Cause	Solution
No display/Controller off	Battery not connected or low voltage; Reverse polarity connection.	Check battery connections and voltage. Ensure correct polarity. Charge battery if voltage is too low.
No charging from PV	PV input reverse polarity; PV open circuit; Insufficient sunlight; PV voltage too low/high.	Check PV connections and polarity. Ensure PV array is not shaded. Verify PV voltage is within controller's operating range (max 150VDC).
Load not working	Load overcurrent; Short circuit; Load disconnected; Battery low voltage protection.	Reduce load current. Check for short circuits in load wiring. Reconnect load. Charge battery.
Over-temperature alarm	Poor ventilation; High ambient temperature; Fan malfunction.	Ensure adequate ventilation. Check fan for obstructions or malfunction. Relocate controller if ambient temperature is consistently too high.
Battery overcharge/overdischarge	Incorrect battery type setting; Faulty battery.	Verify battery type setting on the controller. Test battery health.

The controller's LCD display will often show error codes or indicators for specific issues. Consult the on-screen messages for more precise diagnostics.

SPECIFICATIONS

Feature	Specification
Model	Bolisila 100A MPPT Solar Charge Controller
Rated Charge Current	100A
Max PV Input Voltage	150VDC
Max PV Input Power	4880W
System Voltage	12V/24V/36V/48V/96V Auto Switch
Battery Types Supported	Sealed Lead Acid, Vented Gel, Lithium
Charging Algorithm	3-stage (Bulk, Absorption, Float)
Display	Multi-function LCD with backlight
Protection Features	Overcharge, Over-discharge, Overload, Short Circuit, Reverse Polarity, Over-temperature, Battery Under Voltage
Cooling	Automatic Fan Cooling
Item Weight	2.2 pounds (approx. 1 kg)
Package Dimensions	1.18 x 0.79 x 0.39 inches (Note: These are the listed package dimensions; actual product dimensions are shown in Figure 2)
Manufacturer	Bolisila
Country of Origin	China

WARRANTY AND SUPPORT

For information regarding the product warranty, please refer to the warranty card included with your purchase or visit the official Bolisila website. Warranty terms and conditions may vary.

If you encounter any issues that cannot be resolved using the troubleshooting guide, or require technical assistance, please contact the seller or the manufacturer's customer support. Have your product model number and purchase details ready when contacting support.

Manufacturer: Bolisila

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