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> amiciSmart Solar Charge Controller 30A (PWM-30A) User Manual

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Model: PWM-30A

1. INTRODUCTION

This manual provides essential instructions for the installation, operation, and maintenance of your amiciSmart Solar Charge Controller 30A (PWM-30A). This device is designed to manage the power flow from your solar panel to your battery, ensuring efficient charging and protecting your battery from overcharge and deep discharge. It features an LCD display for monitoring and dual 3A USB ports for charging external devices.



Image: The amiciSmart Solar Charge Controller 30A, highlighting its 12V/24V compatibility.

The amiciSmart Solar Charge Controller 30A is an upgraded model with enhanced features for improved performance and compatibility with various battery types, including lead-acid, Li-ion, and LiFePO4.



Image: Comparison showing the updated model's improvements over the old model, including increased weight, improved PCB, better LCD screen, 30A output, strong terminal block, discharge/charge current monitoring, and improved heat management.

2. SAFETY INFORMATION

- Ensure the solar panel and battery voltages are compatible (e.g., 12V panel with 12V battery, 24V panel with 24V battery).
- Always connect the battery to the controller first, then the solar panel. Reverse this sequence can damage the controller.
- The controller provides multiple protection modes: overcurrent, short circuit, reverse connection, high-temperature, and overvoltage protection.
- Do not attempt to disassemble or repair the controller yourself. Contact qualified personnel for service.
- Install the controller in a well-ventilated area, away from flammable materials and direct sunlight.



Image: Visual representation of the multiple safety protection features including overcurrent, short circuit, reverse polarity, overtemperature, and overvoltage protection.

3. PRODUCT FEATURES

- **Enhanced Design:** Upgraded model with a heat sink and dual 3A USB charging ports.

- **Battery Protection:** Overload, short circuit, open-circuit, and reverse protection to extend battery life.
- **Universal Battery Compatibility:** Suitable for lead-acid (B1), Li-ion (B2), and LiFePO4 (B3) battery types.
- **LCD Display:** Clear screen with crisp icons and digits for real-time monitoring of power, voltage, temperature, and battery status.
- **Advanced Processing Chip:** High-speed chip for faster charging control, improved efficiency, and stability.
- **Advanced Cooling Design:** Optimized heat sink vents ensure efficient airflow and consistent performance.



Image: Overview of product features including greater compatibility with various battery types, high-speed chip, large heat sink dissipation, and a large screen display.



Image: Illustration of the dual USB ports providing 3A fast charging for mobile devices.

4. SETUP AND INSTALLATION

Follow these steps carefully to install your solar charge controller. Incorrect wiring can damage the device and connected components.

1. **Connect the Battery (Step 1):** Connect the positive and negative terminals of your battery to the corresponding battery terminals on the solar charge controller. Ensure a secure connection.
2. **Connect the Solar Panel (Step 2):** Connect the positive and negative terminals of your solar panel to the corresponding solar panel terminals on the controller.

3. **Connect the DC Load (Step 3):** If you have a DC load (e.g., 12V light), connect its positive and negative terminals to the load terminals on the controller.
4. **Connect USB Devices (Step 4):** Use the dual USB ports to charge compatible devices.

Important: Always connect the battery first, then the solar panel. Disconnect in the reverse order (solar panel first, then battery).



Image: Detailed wiring diagram showing connections for battery, solar panel, DC load, and USB output.

5. OPERATING INSTRUCTIONS

5.1 LCD Display Overview

The LCD displays real-time information about your solar system. It shows battery voltage, charging current, discharge current, battery state of charge, and various operational parameters. Use the buttons below the display to navigate menus and adjust settings.



Image: Close-up of the clear LCD display showing battery voltage, charging status, and other system parameters.

5.2 Battery Type Selection

It is crucial to select the correct battery type for optimal charging and battery longevity. The controller supports:

- **B1:** Lead-acid batteries
- **B2:** Li-ion batteries
- **B3:** LiFePO4 / Lithium Ferro Phosphate (LFP) batteries

Refer to the controller's menu to select the appropriate battery type. Incorrect selection can lead to improper charging and damage to the battery.

5.3 Adjustable Parameters

You can adjust several parameters through the controller's interface:

- **Float Voltage:** The maximum voltage at which the battery is maintained after full charge.
- **Discharge Reconnect Voltage:** The voltage at which the load will turn back on after being disconnected due to low battery.
- **Discharge Stop Voltage:** The voltage at which the load will be disconnected to protect the battery from deep discharge.
- **Work Mode:** Set the load operation mode, including timed settings for automatic load ON/OFF after sunset.

6. MAINTENANCE

- **Regular Inspection:** Periodically check all wiring connections for tightness and corrosion.
- **Cleanliness:** Keep the controller clean and free from dust and debris. Use a dry cloth for cleaning.
- **Ventilation:** Ensure the installation area has adequate ventilation to prevent overheating, especially around the heat sink.
- **Battery Health:** Monitor battery voltage and performance regularly.

7. TROUBLESHOOTING

Common Issues and Solutions:

- **Controller Not Working / No Display:**
 - Check battery connections. Ensure the battery is connected first and correctly polarized.
 - Verify battery voltage is within the operating range (12V or 24V).
- **Battery Not Charging:**
 - Ensure solar panel is connected after the battery and correctly polarized.
 - Check solar panel output voltage and current.
 - Verify the selected battery type (B1, B2, B3) matches your battery.
 - Inspect all wiring for loose connections or damage.
- **Load Not Working:**
 - Check load connections and ensure correct polarity.
 - Verify battery voltage is above the 'Discharge Stop Voltage' setting.
 - Check the 'Work Mode' settings to ensure the load is scheduled to be ON.

- **USB Ports Not Charging:**
 - Ensure the controller is powered on and the battery has sufficient charge.
 - Check the USB cable and the device being charged.

8. SPECIFICATIONS

Feature	Specification
Model Number	AS-SCC-A-30 (PWM-30A)
Rated Current	30A
System Voltage	12V/24V Auto Recognition
Display Type	LCD
USB Output	Dual USB, 5V/3A Max
Operating Temperature	Up to 60 Degrees Celsius
Product Dimensions (L x W x H)	13L x 2.5W x 6.7H Centimeters
Item Weight	580 Grams
Material	Plastic
Country of Origin	China

PRODUCT DIMENSIONS

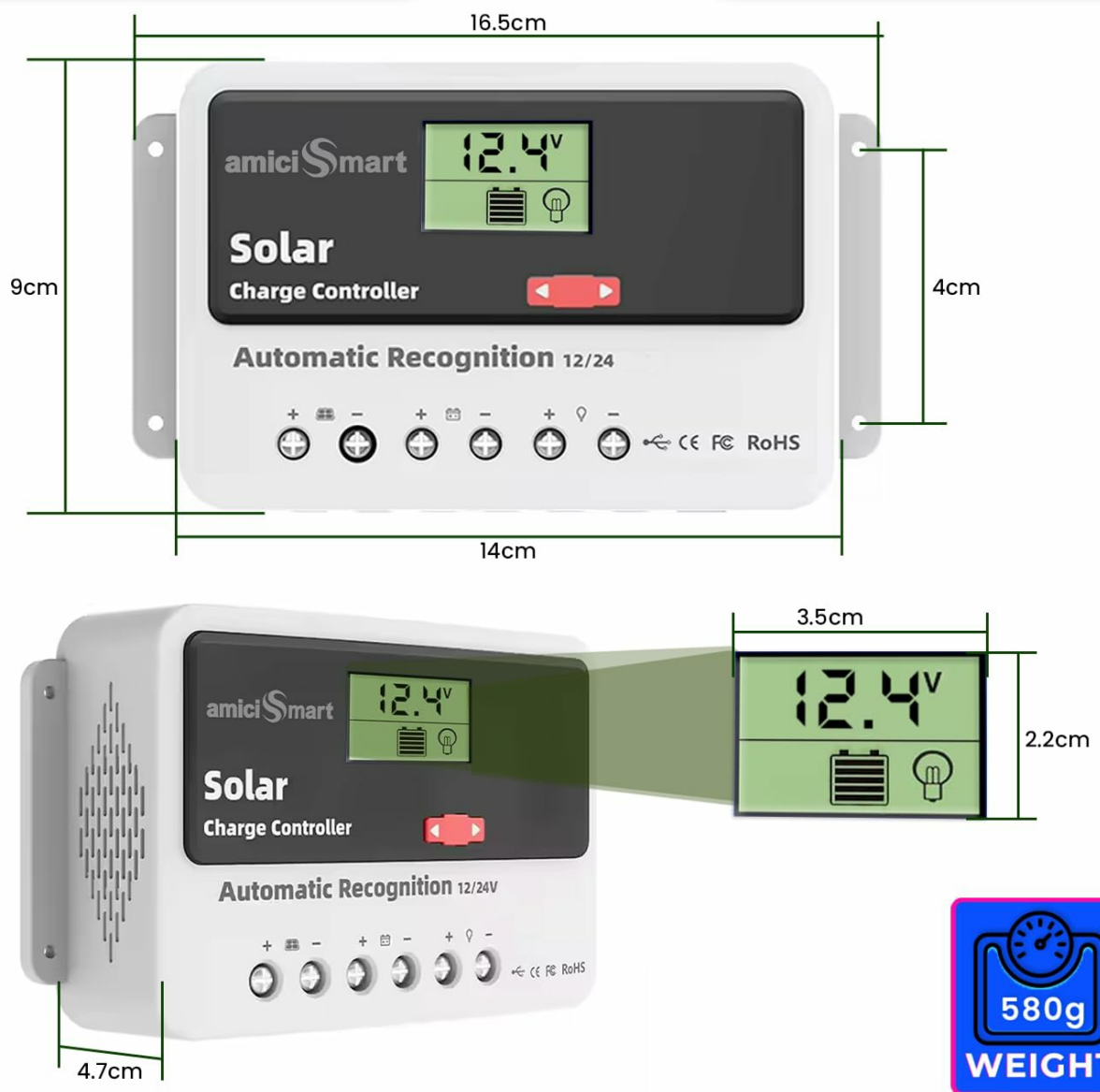


Image: Diagram illustrating the physical dimensions of the amiciSmart Solar Charge Controller.

9. WARRANTY AND SUPPORT

The amiciSmart Solar Charge Controller comes with a **1-Year Warranty** from the date of purchase.

For technical support, warranty claims, or any inquiries, please contact:

- **Importer Contact:** Amici Import Export, B-36, Basement, Sector-57, Noida-201301
- **Contact Number:** +91-980-970-9898
- **Email:** accounts@amici-impex.in
- **Packer Contact:** Amicikart Online Services Pvt Ltd, B-36, Sector 57, Noida-201301
- **Email:** care@amicikart.com

Please retain your purchase receipt for warranty purposes.

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