

RAGGIE RG-PT30

RAGGIE RG-PT30 MPPT 30A 12-24V Solar Charge Controller User Manual

Model: RG-PT30 | Brand: RAGGIE

1. INTRODUCTION

This manual provides detailed instructions for the safe and efficient installation, operation, and maintenance of your RAGGIE RG-PT30 MPPT Solar Charge Controller. Please read this manual thoroughly before attempting any installation or operation to ensure optimal performance and longevity of the device.

2. SAFETY INSTRUCTIONS

- Ensure all connections are correct and secure before applying power. Incorrect wiring can damage the controller and connected devices.
- Always connect the battery first, then the solar panel, and finally the load. Disconnect in the reverse order: load, then solar panel, then battery.
- Do not disassemble or attempt to repair the controller yourself. Refer to qualified personnel for service.
- Install the controller in a well-ventilated area, away from direct sunlight, high temperatures, and moisture.
- Use appropriate circuit breakers or fuses for the battery and solar panel circuits.
- Wear protective eyewear when working with batteries.

3. PRODUCT OVERVIEW

The RAGGIE RG-PT30 is an advanced Maximum Power Point Tracking (MPPT) solar charge controller designed to optimize the power harvest from your solar panels and efficiently charge your battery bank. It supports 12V and 24V battery systems and features a 30A charging capacity, an intuitive LED display, and multiple USB output ports for charging external devices.

3.1 Key Features

- MPPT (Maximum Power Point Tracking) Technology for enhanced charging efficiency.
- Automatic 12V/24V system voltage recognition.
- 30A maximum charge current.
- LED screen display for real-time monitoring of input, battery, and output status.

- Four 5V 2A USB output ports for device charging.
- Comprehensive electronic protection functions.

3.2 Component Identification



Figure 1: Front View of the RAGGIE RG-PT30 Controller. This image shows the front panel of the solar charge controller, featuring the LED display at the top, two control buttons (MENU and POWER) below the display, and four 5V 2A USB output ports at the bottom right. The main terminals for solar input, battery, and load are located at the very bottom.



Figure 2: Back View of the RAGGIE RG-PT30 Controller. This image displays the rear side of the solar charge controller, characterized by its metallic heat sink fins. These fins are designed to dissipate heat generated during operation, ensuring the controller maintains optimal temperature and performance.

4. SETUP AND INSTALLATION

4.1 Mounting the Controller

- Choose a dry, well-ventilated location, protected from direct sunlight and moisture.
- Mount the controller vertically on a non-flammable surface to allow for proper heat dissipation.
- Ensure there is sufficient clearance around the controller for air circulation.

4.2 Wiring Connections

Follow the connection order strictly to prevent damage to the controller or system components. Use appropriate wire gauges for your system's current and distance.

1. **Connect the Battery:** Connect the positive and negative terminals of the battery to the corresponding battery terminals on the controller. The controller will automatically detect the system voltage (12V or 24V).
2. **Connect the Solar Panel:** Connect the positive and negative terminals of the solar panel(s) to the corresponding solar input terminals on the controller.
3. **Connect the DC Load (Optional):** Connect the positive and negative terminals of your DC load to the corresponding load terminals on the controller.

Important: Ensure correct polarity for all connections. Reverse polarity can cause permanent damage.

5. OPERATING INSTRUCTIONS

5.1 LED Display

The LED screen provides real-time information about your solar system:

- **INPUT:** Displays the voltage and current from the solar panel.
- **BATTERY:** Shows the battery voltage and charging current.
- **OUTPUT:** Indicates the load voltage and current.

5.2 Button Functions

- **MENU Button:** Press to cycle through different display parameters or enter settings mode.
- **POWER Button:** Press to turn the DC load output ON/OFF. Long press may enter or exit certain settings.

5.3 USB Output

The four 5V 2A USB ports can be used to charge compatible electronic devices. These ports are active when the controller is powered and the battery has sufficient charge.

6. MAINTENANCE

- **Regular Inspection:** Periodically check all wiring connections for tightness and corrosion.
- **Cleaning:** Keep the controller clean and free from dust and debris. Use a dry cloth for cleaning.
- **Ventilation:** Ensure that the ventilation openings and heat sink fins are not obstructed.
- **Battery Check:** Regularly check the battery's state of charge and electrolyte level (for flooded batteries).

7. TROUBLESHOOTING

Problem	Possible Cause	Solution
No display/Controller not powering on	Battery not connected or low voltage; reverse polarity.	Check battery connections and voltage. Ensure correct polarity.
Battery not charging	Solar panel not connected; low solar input; faulty panel/wiring.	Check solar panel connections. Verify solar panel output voltage. Ensure sufficient sunlight.
Load not working	Load output turned off; overload; faulty load.	Press POWER button to turn on load. Reduce load. Check load device.
USB ports not working	Battery voltage too low; controller fault.	Ensure battery is adequately charged. If problem persists, contact support.

8. SPECIFICATIONS

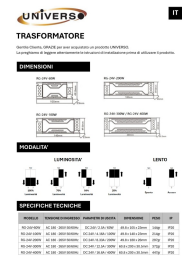

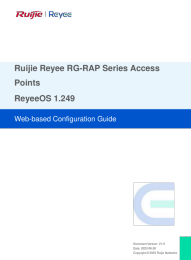
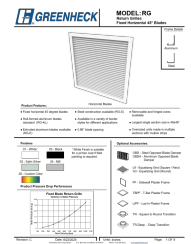

Parameter	Value
Model	RG-PT30
Brand	RAGGIE
Charge Mode	MPPT (Maximum Power Point Tracking)
System Voltage	12V / 24V Auto Recognition
Max Charge Current	30A
Display Type	LED Screen
USB Output	4 x 5V / 2A
ASIN	B07PC3TNCB
Date First Available	3 March 2019

9. WARRANTY AND SUPPORT

For warranty information or technical support, please refer to the documentation provided with your purchase or contact your retailer. Keep your purchase receipt as proof of purchase.

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Related Documents - RG-PT30

	<p>UNIVERSO RG-24V Series Transformers - Technical Specifications and Installation Guide</p> <p>Detailed technical specifications, dimensions, and operational modes for UNIVERSO RG-24V series transformers (60W to 400W). Includes input voltage, output parameters, weight, and IP rating.</p>
	<p>Ruijie RG-ES Series Switches ESW_1.0(1)B1P20 Release Notes</p> <p>This document provides release notes for the Ruijie RG-ES Series Switches, specifically for firmware version ESW_1.0(1)B1P20. It details version information, new features, resolved and open issues, supported platforms, software upgrading procedures, and related documentation.</p>
	<p>Ruijie Reyee RG-RAP Series Access Points Web-based Configuration Guide</p> <p>Comprehensive guide for configuring Ruijie Reyee RG-RAP Series Access Points with ReyeeOS. Covers network setup, Wi-Fi optimization, system settings, and troubleshooting for network professionals.</p>
	<p>Greenheck RG Series Return Grilles: Fixed 45 Degree Blade Specifications and Features</p> <p>Detailed specifications, features, dimensions, finishes, and accessories for Greenheck's RG Series fixed 45 degree blade return grilles, including surface mount, T-bar lay-in, tegular module, and bolt slot/Donn Fineline models.</p>
	<p>HALLDE Spare Parts 2024: Food Preparation Machines Catalog</p> <p>Comprehensive spare parts catalog for HALLDE food preparation machines, including blenders, vertical cutters, combi cutters, and vegetable preparation machines. Features part numbers, diagrams, and model information for 2024.</p>

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