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› Renogy ONE Core: All-in-one Off-Grid Energy Monitoring Panel User Manual

Renogy RSHGWSN-W02W-G3

Renogy ONE Core User Manual

Model: RSHGWSN-W02W-G3 | Brand: Renogy

1. INTRODUCTION

The Renogy ONE Core is an advanced all-in-one off-grid energy monitoring panel designed for various applications including vans, cabins, boats, and tiny homes. It integrates energy monitoring, smart automation, and remote management capabilities to provide a comprehensive solution for your off-grid power system.

This manual provides detailed instructions for the setup, operation, maintenance, and troubleshooting of your Renogy ONE Core to ensure optimal performance and longevity.



Figure 1.1: The Renogy ONE Core display unit, showing real-time energy data.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure all power sources are disconnected before installation or maintenance.
- Do not expose the device to extreme temperatures, direct sunlight, or moisture.
- Use only specified voltage and current ratings for power supply.
- Keep the device away from flammable materials and explosive gases.
- Do not attempt to disassemble or repair the unit yourself. Contact Renogy support for assistance.
- Ensure proper ventilation around the device during operation.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- Renogy ONE Core Unit
- Mounting Bracket
- Power Cable
- User Manual (this document)

4. SETUP AND INSTALLATION

Follow these steps to properly install your Renogy ONE Core unit:

1. **Prepare Mounting Location:** Choose a flat, stable surface for installation. Ensure there is sufficient space for wiring and ventilation.
2. **Drill Hole:** Complete a hole using a 55mm diameter punch for the device stand.
3. **Mount the Bracket:** Secure the mounting bracket to the chosen surface using appropriate fasteners.
4. **Connect Wiring:** Connect the power cable to the Renogy ONE Core. The unit can be supplied by a 5V DC source via Type-C or an 8V to 35V DC source via the power cable. Connect other communication cables (RS485, CAN) as required for your system.
5. **Install the Unit:** With an embedded horizontal bubble, align the Renogy ONE Core with the bracket. Rotate the unit clockwise until it clicks into place, ensuring it is level.
6. **Initial Power On:** Once securely mounted and wired, apply power to the unit. The display should illuminate.
7. **Network Connection:** Connect the Renogy ONE Core to your Wi-Fi network. This is crucial for remote monitoring and updates.



Figure 4.1: Installation steps for the Renogy ONE Core.



Support multiple communication standards



BLE



RS485 & CAN



WIFI



Zigbee



BLE Mesh

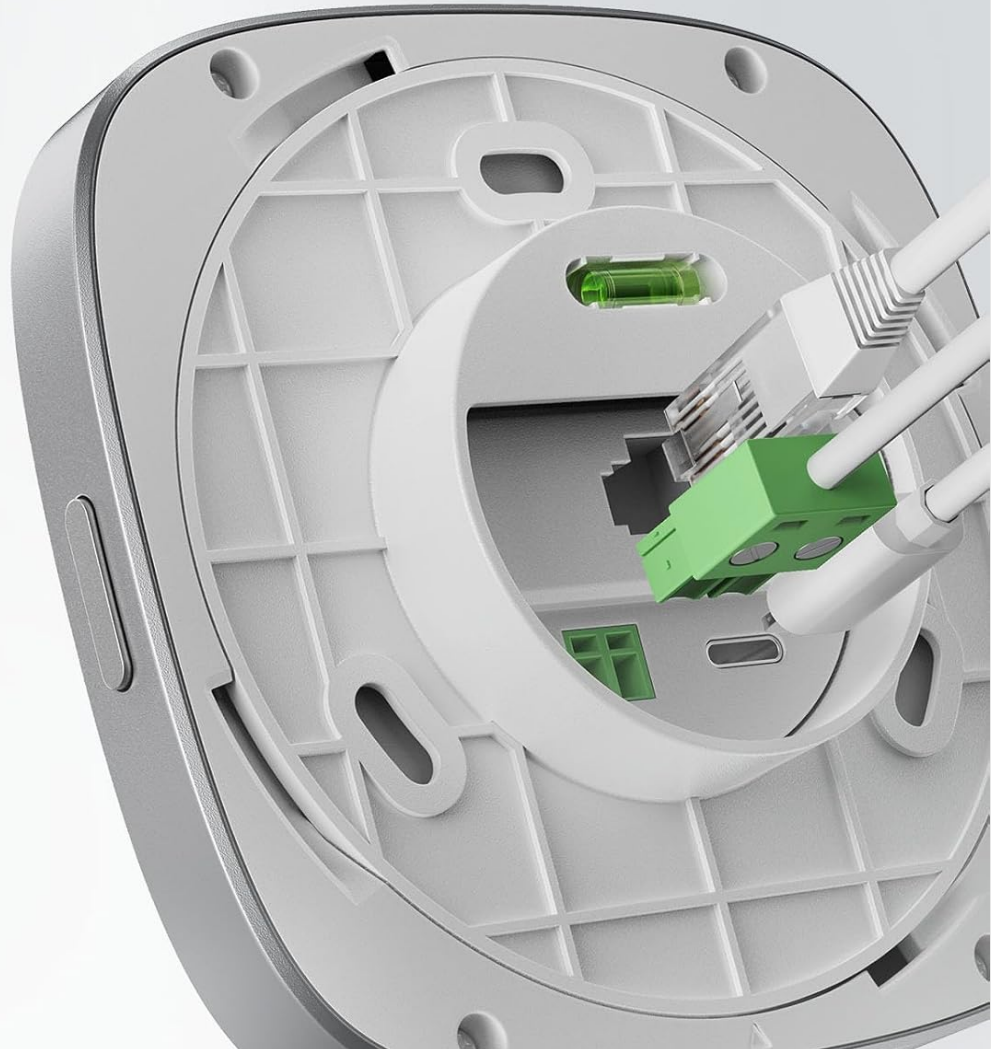


Figure 4.2: Communication ports and standards supported by Renogy ONE Core.

5. OPERATION

5.1. Energy Monitoring

The Renogy ONE Core provides 24/7 energy monitoring of your off-grid system. It connects via Bluetooth (BLE & Mesh) and RS485 connectivity to track energy usage, battery status, and controller performance.

- **Real-time Data:** View current battery percentage, charge/discharge current, and power output from connected devices directly on the 4-inch touch screen.
- **Historical Data:** Access historical energy data to analyze trends and optimize consumption.
- **Error Notifications:** Receive alerts for system anomalies or errors.

Data Analyse



Figure 5.1: Data analysis capabilities of the Renogy ONE Core.

5.2. Remote Monitoring with DC Home App

With the DC Home App and Renogy ONE Portal, you can remotely monitor your RV or off-grid systems from anywhere in the world, provided you have an internet connection.

- Download the DC Home App from your device's app store.
- Create an account and link your Renogy ONE Core unit.
- Access real-time data, historical logs, and control smart accessories remotely.

Worldwide Energy Monitoring

Keep your energy data in the cloud



Figure 5.2: Remote energy monitoring via the DC Home App.

5.3. Smart Automation

The Renogy ONE Core is compatible with a range of smart accessories, enabling automation of your off-grid life. This feature enhances convenience and provides peace of mind.

- Connect smart accessories like door/window sensors, motion sensors, smart plugs, and smart relays.
- Set up automated scenes and routines based on your preferences (e.g., turn on lights when motion is detected).
- Receive security notifications for unexpected motions or events.

Smart Automation

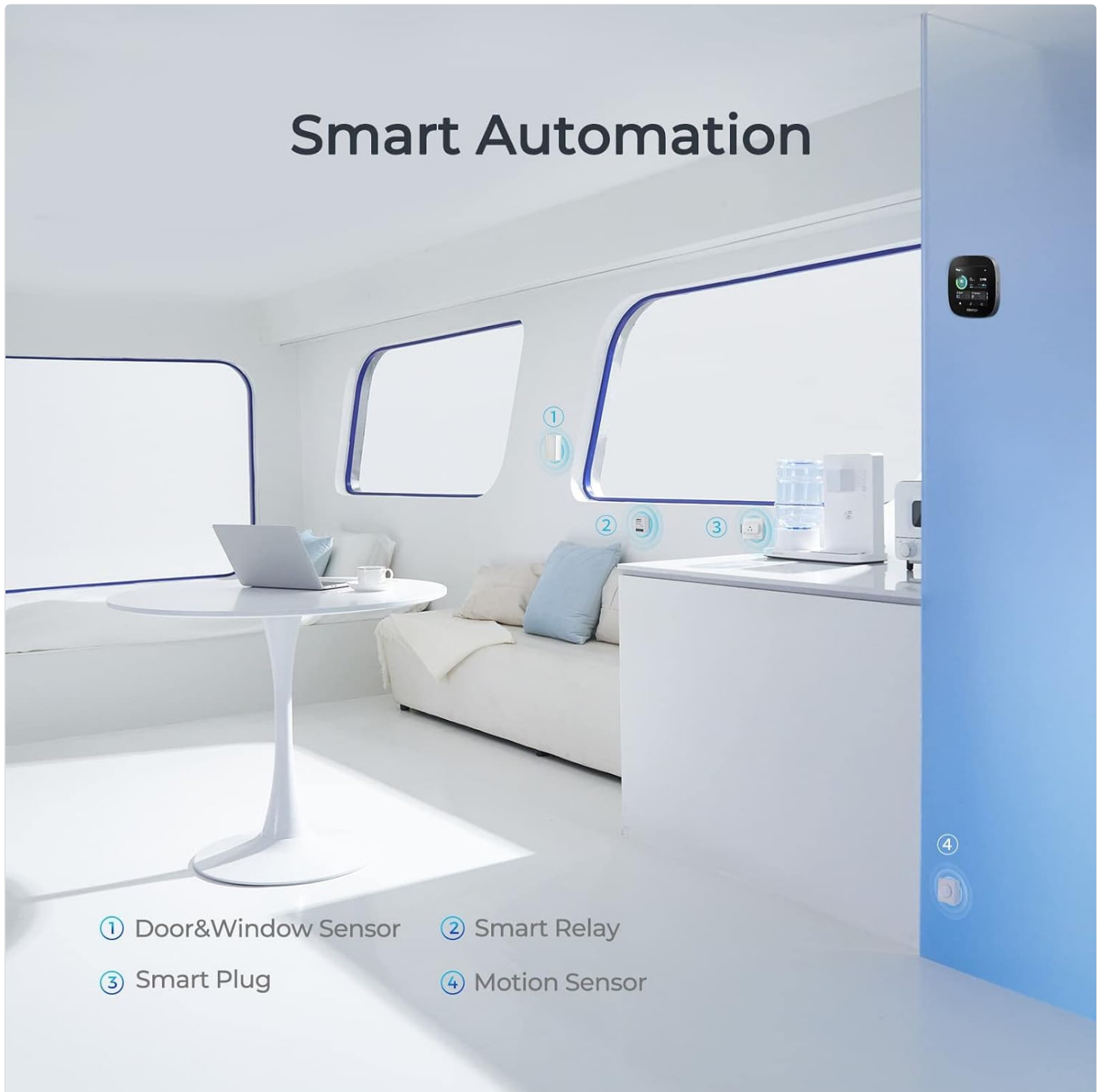


Figure 5.3: Smart automation capabilities with compatible accessories.

6. MAINTENANCE

To ensure the longevity and optimal performance of your Renogy ONE Core, follow these maintenance guidelines:

- **Cleaning:** Gently wipe the screen and exterior with a soft, dry, lint-free cloth. Do not use abrasive cleaners or solvents.
- **Firmware Updates:** Regularly check for and install firmware updates via the DC Home App or Renogy ONE Portal to ensure the latest features and bug fixes.
- **Connection Check:** Periodically inspect all wired connections to ensure they are secure and free from corrosion.
- **Environmental Conditions:** Ensure the operating environment remains within the specified temperature and humidity ranges.

7. TROUBLESHOOTING

If you encounter issues with your Renogy ONE Core, refer to the following common troubleshooting steps:

Problem	Possible Cause	Solution
Device does not power on.	No power supply or incorrect voltage.	Check power cable connection. Ensure input voltage is within 8-35V DC (or 5V DC via Type-C).
Cannot connect to Wi-Fi.	Incorrect Wi-Fi password, weak signal, or network issues.	Verify password. Move device closer to router. Restart router and Renogy ONE Core. Ensure 2.4GHz Wi-Fi is used.
No data displayed from connected devices.	Communication error (Bluetooth/RS485), devices not properly connected or powered.	Check physical connections. Ensure connected Renogy devices are powered on and have Bluetooth/RS485 enabled. Recalibrate if necessary.
App shows "offline" status.	No internet connection on Renogy ONE Core or app.	Verify Renogy ONE Core's Wi-Fi connection. Check your mobile device's internet connection.

If the problem persists after trying these steps, please contact Renogy Customer Support for further assistance.

8. SPECIFICATIONS

The following table outlines the key technical specifications for the Renogy ONE Core:

Feature	Specification
Model Number	RSHGWSN-W02W-G3
Power Source	Battery Powered
Min. Operating Voltage	8 Volts (DC) via power cable, 5V DC via Type-C
Upper Temperature Rating	60 Degrees Celsius (140°F)
Operating Temperature Range	-4°F to 158°F (-20°C to 70°C)
Display	4-inch Touch Screen, 480*480p Resolution
Connectivity	2.4GHz Wi-Fi, Bluetooth LE, BLE Mesh, Zigbee 3.0, RS485, CAN
Item Weight	14.4 ounces (approx. 408 grams)
Package Dimensions	6.77 x 5.83 x 2.52 inches
Battery	10,000mAh Lithium-ion Polymer battery (internal)

High Adaptability



Figure 8.1: Physical dimensions of the Renogy ONE Core.

9. WARRANTY AND SUPPORT

Renogy products are designed for reliability and performance. For warranty information, please refer to the warranty card included with your product or visit the official Renogy website.

For technical support, troubleshooting assistance, or to inquire about replacement parts, please contact Renogy Customer Service:

- **Website:** www.renogy.com
- **Email:** Refer to website for contact details.
- **Phone:** Refer to website for contact details.

Please have your model number (RSHGWSN-W02W-G3) and purchase date ready when contacting support.

ASK A QUESTION ABOUT THIS MANUAL

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

Anonymous

Email

you@example.com

After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. [Privacy details](#).

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question