

Renogy SUNDCCB32MN1P

Renogy Suntime 32 Amp Single-Pole DC Circuit Breaker User Manual

Model: SUNDCCB32MN1P

- [Features](#)
- [Specifications](#)
- [Introduction](#)
- [Safety Instructions](#)
- [Product](#)
- [Installation](#)
- [Operation](#)
- [Maintenance](#)
- [Troubleshooting](#)
- [Warranty & Support](#)

1. INTRODUCTION

This manual provides instructions for the Renogy Suntime 32 Amp Single-Pole DC Circuit Breaker. This device is designed to protect DC electrical installations against overloads and short circuits. It incorporates both thermal and magnetic tripping mechanisms to ensure reliability and safety. The circuit breaker automatically disconnects the electrical circuit upon fault detection, preventing wire damage and fire hazards. It can also be manually operated for system maintenance. Its reversible connection design allows for wiring in either direction, supporting bidirectional current flow. A built-in indicator window provides immediate visual confirmation of the circuit breaker's contact position. The buckle design facilitates easy installation on standard DIN rails.



Figure 1: Renogy Suntime 32 Amp Single-Pole DC Circuit Breaker. This image shows the front and side view of the circuit breaker with its green toggle switch.

2. SAFETY INSTRUCTIONS

Please read and understand all safety instructions before installing or operating the circuit breaker. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Installation and maintenance should only be performed by qualified personnel.
- Always disconnect power to the circuit before installing, servicing, or removing the circuit breaker.
- Ensure the circuit breaker's current rating matches the circuit requirements.
- Do not use the circuit breaker in environments exceeding its specified operating conditions (temperature, humidity).
- Verify all connections are secure and properly insulated to prevent short circuits.
- Do not bypass or tamper with the circuit breaker's protective mechanisms.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection, during installation and maintenance.

3. PRODUCT FEATURES

- **Overload and Short Circuit Protection:** Equipped with both thermal and magnetic tripping mechanisms.
- **Manual Disconnection:** Can be manually opened under full rated load for maintenance.
- **Reversible Connection:** Allows wiring in either direction for bidirectional current flow.
- **Contact Position Indicator:** Built-in window clearly shows ON/OFF status.
- **DIN Rail Mount:** Buckle design for easy installation on standard DIN rails.
- **Durable Construction:** Designed for long mechanical and electrical life.



Figure 2: Internal components of the circuit breaker, illustrating the thermal and magnetic tripping mechanisms for reliable and safe operation.

AVAILABLE MODEL



Figure 3: Durability specifications for the circuit breaker, highlighting a mechanical life of 20,000 operations and an electrical life of 10,000 operations, along with high electrical conductivity.

4. SPECIFICATIONS

Attribute	Value
Brand	Renogy
Model Number	SUNDCCB32MN1P
Current Rating	32 Amps
Circuit Breaker Type	Standard
Mounting Type	DIN Rail Mount
Number Of Poles	1

Attribute	Value
Material	Copper
Item Weight	3.84 ounces
Product Dimensions	3.2 x 3 x 0.7 inches
UPC	810009719663

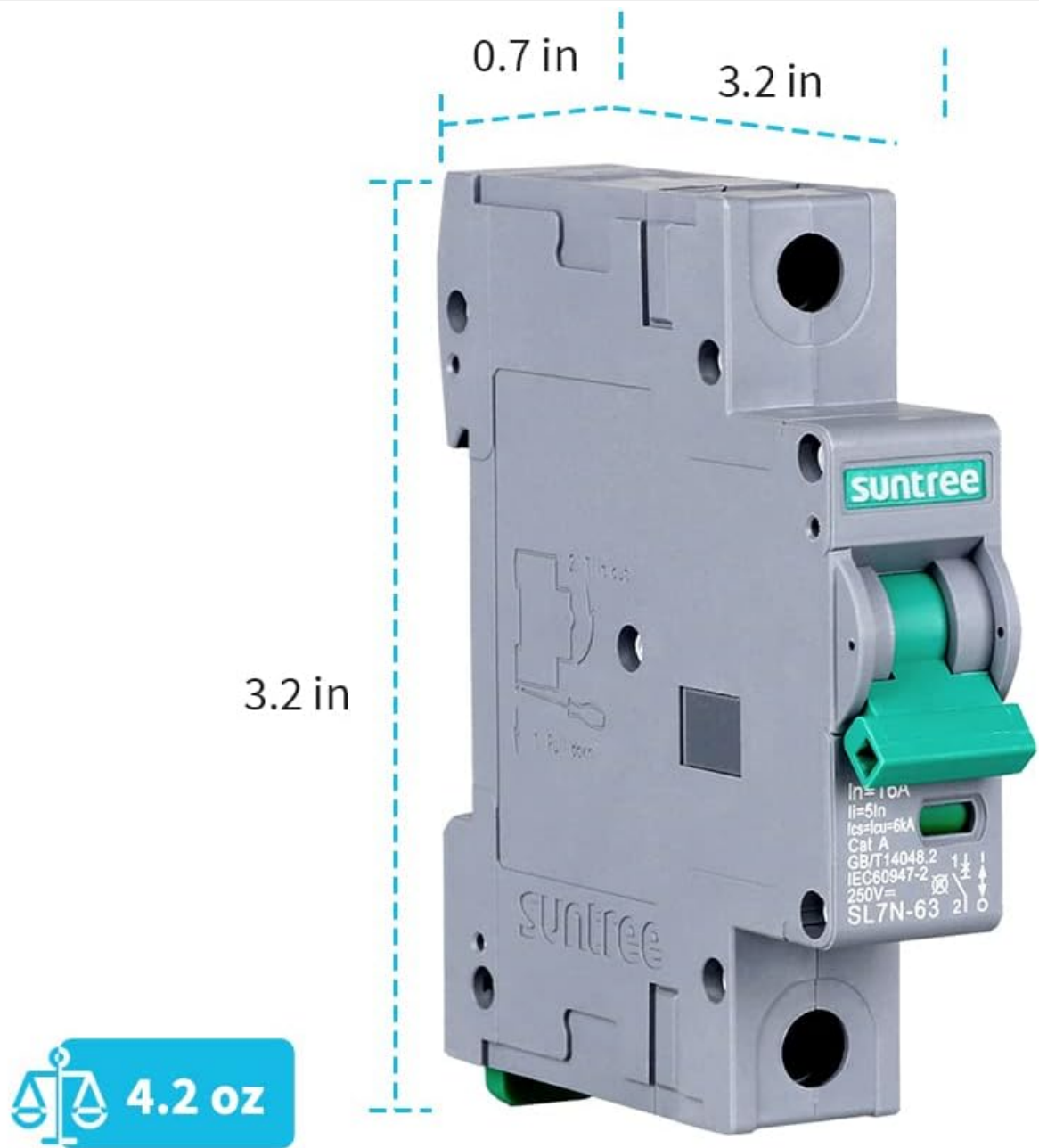


Figure 4: Physical dimensions of the Renogy Suntime 32 Amp Single-Pole DC Circuit Breaker, showing a length of 3.2 inches, a width of 0.7 inches, and a height of 3.2 inches, with a weight of 4.2 ounces.



Figure 5: Guidelines for selecting the correct circuit breaker size for controllers, inverters, DC devices, and solar panels. It outlines calculations based on continuous operating current and short-circuit current.

5. INSTALLATION

5.1 Mounting on DIN Rail

1. Ensure the DIN rail is securely mounted within the breaker box or enclosure.
2. Align the circuit breaker's top slot with the top edge of the DIN rail.
3. Press the circuit breaker firmly against the DIN rail until the buckle mechanism clicks into place, securing it.
4. Verify the circuit breaker is firmly attached and does not wobble.



Figure 6: Step-by-step diagram illustrating the quick installation process of the circuit breaker onto a standard DIN rail using its buckle design. The diagram shows aligning the slot, pressing, and securing with a click.

5.2 Wiring Connections

The Renogy Suntree DC Circuit Breaker is designed for reversible connection, meaning it can be wired in either direction. However, it is crucial to maintain correct polarity for DC systems.

- Identify the positive (+) and negative (-) terminals on the circuit breaker and your DC system components.
- Connect the positive wire from the power source (e.g., solar panel, battery) to one terminal of the circuit breaker.
- Connect the positive wire to the load (e.g., inverter, charge controller) from the other terminal of the circuit breaker.

- Ensure all wire connections are tight and secure to prevent loose contacts and potential arcing.
- Double-check all wiring for correct polarity before applying power.

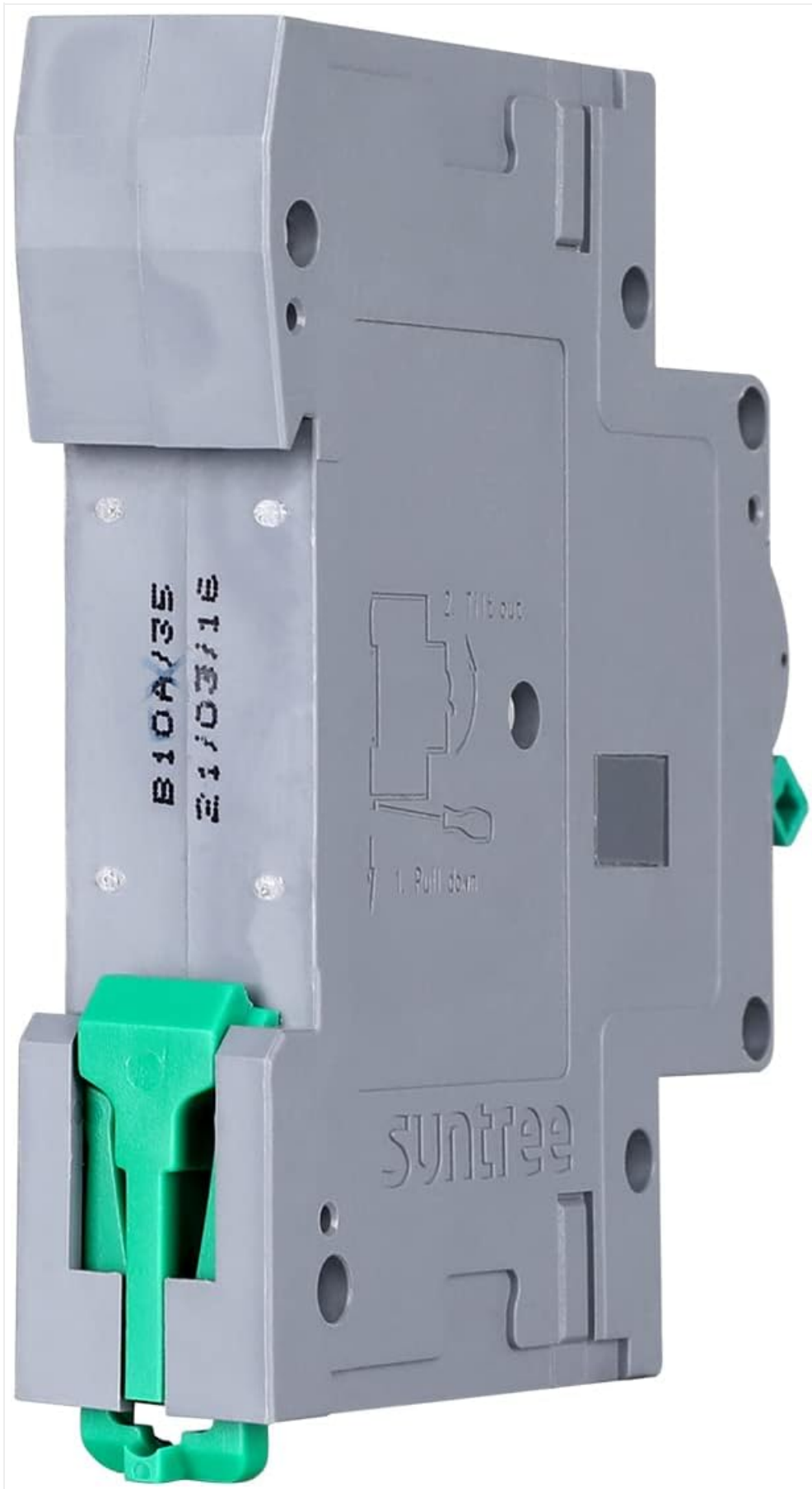


Figure 7: Diagram showing the connection points for the circuit breaker, indicating the positive terminal at the top and the corresponding connection at the bottom. This illustrates the reversible connection capability.

6. OPERATION

6.1 Switching On/Off

- To switch the circuit breaker **ON**, push the toggle switch upwards until it locks into the "ON" position. The indicator window will show green.
- To switch the circuit breaker **OFF**, pull the toggle switch downwards until it locks into the "OFF" position. The indicator window will show red.

6.2 Automatic Tripping

In the event of an overload or short circuit, the circuit breaker will automatically trip to the "OFF" position, interrupting the circuit and protecting connected equipment. The indicator window will show red.

6.3 Resetting the Circuit Breaker

After an automatic trip, identify and resolve the cause of the fault (e.g., remove overload, fix short circuit) before attempting to reset the breaker. Once the fault is cleared, push the toggle switch downwards to fully reset it, then push it upwards to the "ON" position.

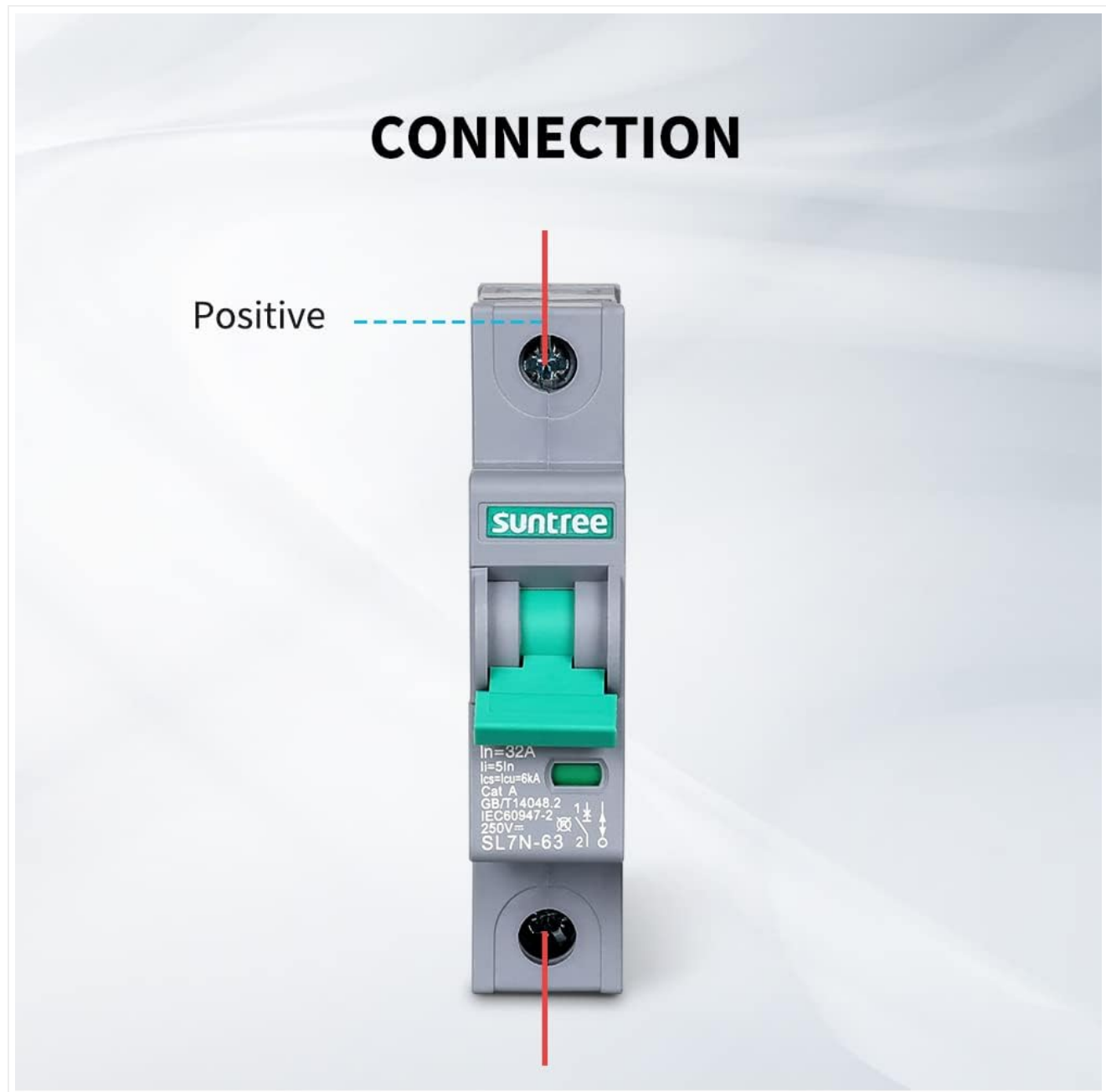


Figure 8: Visual representation of the circuit breaker's indicator window, showing green for "ON" status and red for "OFF" status, providing clear operational feedback.

7. MAINTENANCE

The Renogy Suntime DC Circuit Breaker requires minimal maintenance. Regular inspections are recommended to ensure optimal performance and safety.

- **Periodic Visual Inspection:** Regularly check the circuit breaker for any signs of physical damage, discoloration, or loose connections.
- **Cleaning:** If necessary, gently clean the exterior of the circuit breaker with a dry, soft cloth. Do not use abrasive cleaners or solvents.
- **Functionality Test:** Periodically test the manual switching mechanism by turning the breaker OFF and ON.
- **Connection Check:** Ensure all terminal connections remain tight. Loose connections can lead to overheating and potential hazards.

Note: Do not attempt to open or repair the circuit breaker. Refer to qualified personnel for any issues beyond basic inspection and cleaning.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Circuit breaker trips frequently.	Overload on the circuit, short circuit, or faulty appliance.	Reduce the load on the circuit. Inspect wiring and connected devices for short circuits. Disconnect faulty appliances.
Circuit breaker does not reset.	Persistent fault (overload/short circuit) or internal damage to the breaker.	Ensure the fault is completely cleared. If the fault is cleared and it still doesn't reset, the breaker may be damaged and require replacement.
Circuit breaker feels hot.	Overload, loose connections, or undersized wiring.	Check for overloads. Tighten all terminal connections. Verify wire gauge is appropriate for the current.
No power to the circuit, but breaker is ON.	Faulty wiring upstream/downstream, or internal breaker failure.	Check continuity of wiring. If wiring is intact, the breaker may be faulty and require replacement.



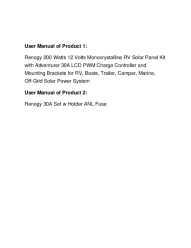


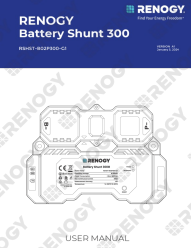
9. WARRANTY AND SUPPORT

Renogy products are manufactured with high-quality materials and craftsmanship. For specific warranty information, please refer to the warranty card included with your product or visit the official Renogy website. For technical support, product inquiries, or assistance with troubleshooting, please contact Renogy customer service through their official channels.

Renogy Official Website: www.renogy.com

Please have your model number (SUNDCCB32MN1P) and purchase date available when contacting support.

Related Documents - SUNDCCB32MN1P

	<p>Renogy 500A Combiner Box (Advanced Version) User Manual</p> <p>This user manual provides comprehensive instructions for the Renogy 500A Combiner Box (Advanced Version), covering its features, installation, wiring diagrams, specifications, maintenance, troubleshooting, and safety guidelines for solar power systems.</p>
	<p>Renogy Off-Grid Solar Kit General Manual: Installation and Operation Guide</p> <p>This manual provides comprehensive instructions for installing, wiring, and maintaining the Renogy Off-Grid Solar Kit. Learn about safety precautions, mounting systems, battery configurations, and system connections for reliable off-grid power.</p>
	<p>Renogy Off-Grid Solar Kit User Manual: Installation, Wiring, and Mounting Guide</p> <p>Comprehensive user manual for Renogy Off-Grid Solar Kits, covering installation, wiring, mounting systems (Z-Bracket, Rail, Pole), battery configurations, safety precautions, and ANL fuse usage for RVs, boats, and off-grid power systems.</p>
	<p>Renogy ONE Core Quick Guide Installation and Operation</p> <p>A quick guide for the Renogy ONE Core (RSHGWSN-W02W-G3), covering installation, connection, and basic operation. Learn how to set up your Renogy ONE Core for optimal performance.</p>
	<p>Renogy ONE Core User Manual: Comprehensive Guide to Energy Monitoring and Smart Home Integration</p> <p>This user manual provides detailed instructions for the Renogy ONE Core, covering installation, operation, features like RV leveling and smart home integration, troubleshooting, and technical specifications. Learn how to monitor and manage your energy systems effectively.</p>
	<p>Renogy Battery Shunt 300 (RSHST-B02P300-G1) User Manual</p> <p>User manual for the Renogy Battery Shunt 300 (RSHST-B02P300-G1). Provides detailed instructions on installation, system setup, configuration, energy monitoring, troubleshooting, and technical specifications for intelligent battery management in solar, RV, and off-grid systems.</p>



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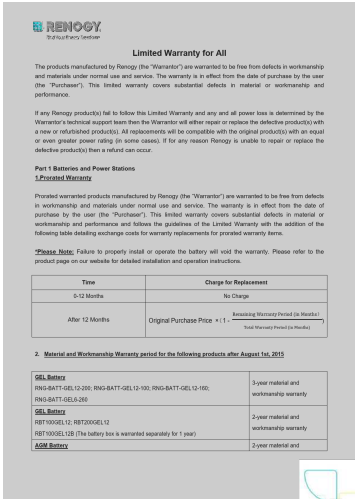
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Renogy Limited Warranty for All Products

This document outlines the limited warranty provided by Renogy for its products, covering defects in workmanship and materials. It details prorated warranties for batteries and power stations, material and workmanship warranties for solar panels and kits, and performance warranties for solar panels. The document also specifies exclusions, limitations, and the process for making a warranty claim.

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[\[pdf\]](#) Warranty

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Limited Warranty

Renogy is a visionary technology leader on a mission to dramatically broaden the accessibility and adoption of innovative clean energy around the globe. Every day, we actively work to broaden people's ability to choose, purchase, utilize and enjoy the benefits of renewable, clean energy products.

You're completely covered with Renogy industry leading products, and worry-free warranty. Renogy customer service team is located both locally and globally and works tirelessly to ensure your energy solution is operating at its peak performance, and any problem you may have can be resolved in a timely manner.

We want you to be confident that you're purchasing and installing the right solar energy solution. As a sign of confidence in our quality, we are pleased to grant you the following warranties for our products:

- Limited Warranty on Batteries and Power Stations
- Limited Warranty on Solar Panels and Solar Kits
- Limited Warranty on Charge Controller/Inverter/Battery Charger
- Limited Warranty on AC/DC Monitors and Accessories.

Part 1 Batteries and Power Stations

The products manufactured by Renogy (the "Warrantor") are warranted to be free from defects in workmanship and materials under normal use and service. The warranty is in effect from the date of purchase by the user (the "Purchaser"). This limited warranty covers substantial defects in material or workmanship and performance.

If any Renogy product(s) fail to follow this Limited Warranty and any and all power loss is determined by the Warrantor's technical support team then the Warrantor will either repair or replace the defective product(s) with a new or refurbished product(s). All replacements will be compatible with the original product(s) with an equal or even greater power rating (in some cases). If any equipment Renogy is unable to repair or replace the defective product(s) then a refund is provided.

2. Provided Warranty

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*******Please Refer******* Follow to properly install or operate the battery will void the warranty. Please refer to the product page on our website for detailed installation and operation instructions.

Time	Charge for Replacement
0-12 Months	No Charge

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