

Renogy 2pcs 320W Solar Panels

Renogy 320W N-Type Monocrystalline Solar Panel Instruction Manual

Model: 2pcs 320W Solar Panels

1. INTRODUCTION

Thank you for choosing Renogy 320W N-Type Monocrystalline Solar Panels. These panels are designed for high efficiency and durability, suitable for various off-grid applications including RVs, rooftops, cabins, and boats. This manual provides essential information for the safe and effective installation, operation, and maintenance of your solar panels.

Key Features:

- **High Efficiency:** Up to 25% cell efficiency with N-Type 18BB technology for superior performance.
- **Durable Construction:** Advanced encapsulation material, multi-layered sheet laminations, and anti-corrosion coating ensure longevity.
- **Weather Resistant:** IP68 rated junction box and connectors provide protection against environmental elements.
- **Versatile Application:** Ideal for 12V and 24V systems, on-grid and off-grid setups.

Durable Structure

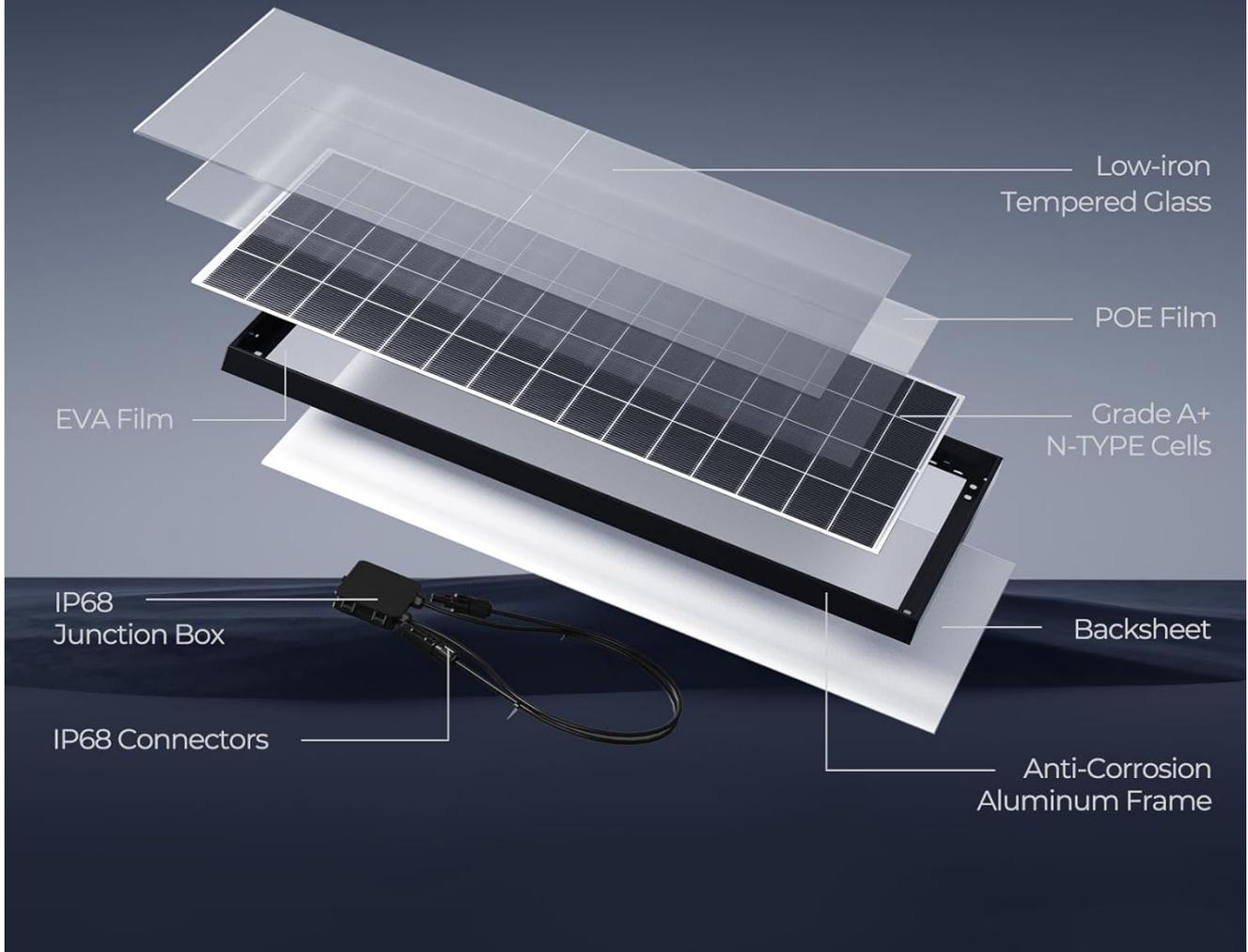


Image 1.1: Renogy 320W N-Type Monocrystalline Solar Panel.



Image 1.2: Durable Structure of Renogy Solar Panel, showing its multi-layered construction for enhanced protection and performance.

Efficient Power in Less Space

Two 320W panels use less space and require fewer connections than six 100W panels, creating a cleaner, more efficient setup for tight spaces.

3.2kWh/d 2X
320W Solar Panel



3kWh/d 6X
100W Solar Panel



Image 1.3: Upgraded Solar Cell Technology, illustrating the 25% cell efficiency and 18 busbar design of Renogy N-Type panels.

2. SAFETY INFORMATION

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

- Do not attempt to disassemble, repair, or modify the solar panel.
- Handle solar panels with care. Avoid dropping or striking the panel.
- Wear appropriate personal protective equipment (PPE) including insulated gloves and eye protection during installation.
- Ensure all electrical connections are secure and properly insulated to prevent short circuits.
- Do not touch the exposed ends of wires when the panel is exposed to sunlight, as it will generate electricity.
- Keep children and unauthorized personnel away from the installation area.
- Consult with a qualified electrician for complex installations or if you are unsure about any steps.

3. COMPONENTS INCLUDED

Your package includes:

- Renogy 320W N-Type Monocrystalline Solar Panel(s)

4. SETUP AND INSTALLATION

The Renogy 320W solar panels are designed for straightforward installation with pre-drilled holes for various mounting options. Proper installation is crucial for optimal performance and safety.

4.1 Mounting Options

The panels feature pre-drilled holes on the back, making them compatible with several mounting systems:

- Ground Mount
- Z Bracket
- Corner Bracket
- Pole Mount
- Tilt Mount



Image 4.1: Flexible Mounting Options, demonstrating various ways to install your solar panels.

4.2 Panel Dimensions and Weight

Ensure the chosen installation location can accommodate the panel's size and weight.

- **Dimensions:** 64.37"L x 34.65"W x 1.38"H
- **Item Weight:** 90.5 Pounds (per panel)

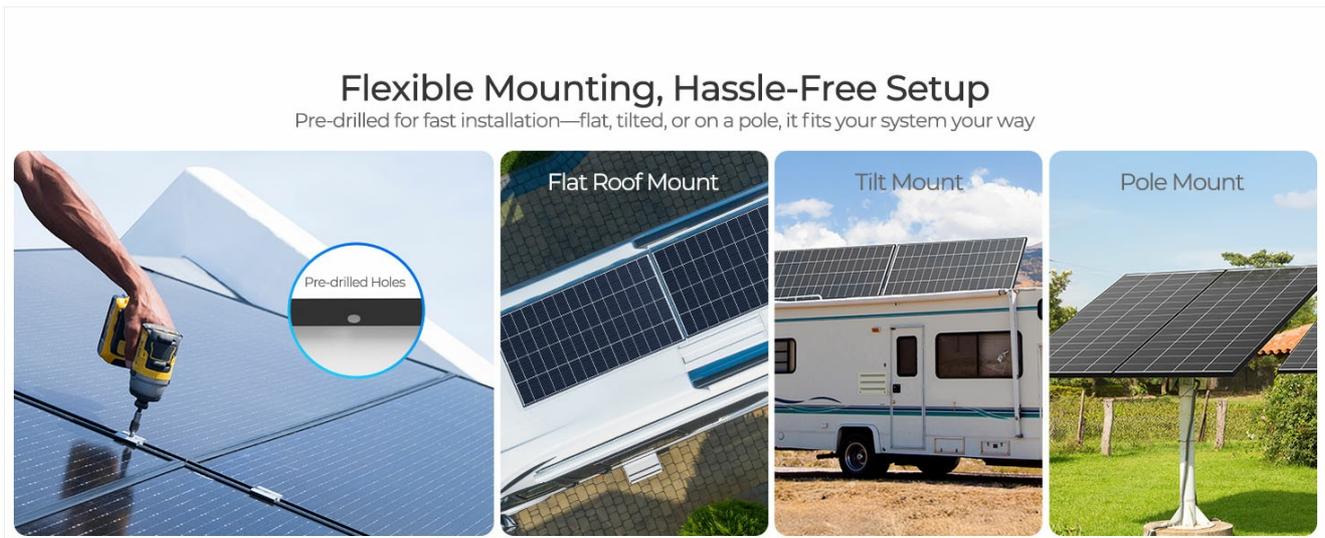


Image 4.2: Product Dimensions, providing a visual reference for the panel's size and weight.



Image 4.3: Real-World Size Comparison, showing the panel's size relative to a standard door.

4.3 Electrical Connections

Panels can be connected in series or parallel to achieve the desired voltage and current for your system. Always refer to your charge controller and inverter manuals for specific wiring diagrams and requirements.

- **Series Connection:** Increases voltage. Connect the positive terminal of one panel to the negative terminal of the next.
- **Parallel Connection:** Increases current. Connect positive terminals together and negative terminals together.



Image 4.4: Scalable Power System, demonstrating how to connect panels in series or parallel with other components.

5. OPERATING INSTRUCTIONS

Once installed, your Renogy solar panels will begin converting sunlight into electricity. For optimal performance, ensure the panels are clean and free from shading.

- **Sunlight Exposure:** Position panels to receive maximum direct sunlight throughout the day.
- **Energy Output:** Each 320W panel can generate approximately 3200Wh of electricity daily under ideal conditions (e.g., 5 hours of direct sunlight).
- **System Monitoring:** Use a compatible charge controller to monitor power generation and battery charging status.

Real-World Size Comparison

This solar panel is slightly smaller than a standard 80" x 36" entry door. Please double-check the dimensions to ensure a proper fit.

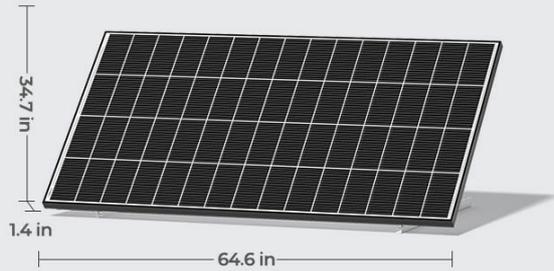


Image 5.1: Everyday Comfort Powered by Sunshine, illustrating typical power generation and usage scenarios.

6. MAINTENANCE

Regular maintenance ensures the longevity and efficiency of your solar panels.

- **Cleaning:** Clean the panel surface periodically with a soft cloth and water to remove dust, dirt, and debris. Avoid abrasive materials or harsh chemicals.
- **Inspection:** Regularly inspect the panels for any physical damage, loose connections, or corrosion. Check wiring for signs of wear or damage.
- **Shading:** Ensure no new obstructions (e.g., tree branches, accumulated snow) are casting shadows on the panels, as shading can significantly reduce output.
- **Weather Resistance:** The IP68 rating ensures the junction box and connectors are protected against dust and water ingress.

Come Rain, Snow or Wind— This Panel is Got Your Back

Life off the grid isn't always easy — but your power shouldn't flinch.



Rust-Proof
Aluminum Frame

Ready for Every Mile

Tough frame and upgraded materials to handle bumps, heat, and everyday wear



Snowload
5400pa/113psf

No Worries, Even Under a Blanket of Snow

Handles 5400Pa of pressure — about 550kg/m² or up to 15 meters of snow, so even heavy winter storms won't weigh you down



Windload
2400pa/50psf

Stays Steady Through Strong Winds

Withstands 2400Pa of wind load — tough enough to ride out 12-level gales or hurricane-force winds on the road or rooftop

Image 6.1: IP68 Waterproof Features, highlighting the panel's resistance to rain and splashes.

7. TROUBLESHOOTING

If your solar panel system is not performing as expected, consider the following common issues and solutions:

Problem	Possible Cause	Solution
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Problem	Possible Cause	Solution
Low or No Power Output	Shading on the panel surface	Remove any obstructions causing shade. Reposition panel if necessary.
Low or No Power Output	Dirty panel surface	Clean the panel surface with water and a soft cloth.
Low or No Power Output	Loose or faulty connections	Check all wiring and connections for tightness and proper insulation.
Low or No Power Output	Damaged panel	Inspect the panel for cracks or physical damage. Contact support if damaged.
Reduced output in high temperatures	Normal temperature effect (less pronounced with N-Type)	N-Type panels have superior temperature tolerance, minimizing power loss compared to P-Type panels. Ensure adequate ventilation around panels.



Image 7.1: N-Type Panel Performance in High Heat, demonstrating reduced power loss compared to P-Type panels.

8. SPECIFICATIONS

Below are the technical specifications for the Renogy 320W N-Type Monocrystalline Solar Panel:

Attribute	Value
Brand	Renogy
Material	Monocrystalline Silicon
Product Dimensions	64.37"L x 34.65"W x 1.38"H
Item Weight	90.5 Pounds
Efficiency	High Efficiency (Up to 25% cell efficiency)
Included Components	Solar Panel
AC Adapter Current	8.46 Amps

Attribute	Value
Maximum Voltage	24 Volts
Upper Temperature Rating	185 Degrees Fahrenheit
Maximum Power	320 Watts
Special Feature	12v solar panel, 24v solar panel, 320W Solar Power Output, Rigid N-type Solar Panel
UPC	810009715887
Manufacturer	Renogy
Item model number	2pcs 320W Solar Panels
Color	Black
Power Source	Solar Powered

9. WARRANTY INFORMATION

Renogy stands behind the quality and performance of its solar panels.

- **10-Year Quality Commitment:** Covers defects in materials and workmanship.
- **25-Year Power Output Commitment:** Guarantees at least 80% of the rated power output for 25 years.

For detailed warranty terms and conditions, please refer to the official Renogy website or contact customer support.

Power You Can Count on for 25 Years

Long-Term coverage you can trust. Renogy always delivers.

1%

First Year Degradation

0.4%

Annual Degradation

10-Year
Quality Commitment

25-Year
80% Power Output
Commitment

Image 9.1: Long-Term Performance and Warranty, detailing the degradation rates and commitment periods.

10. SUPPORT AND CONTACT INFORMATION

For any questions, technical assistance, or support regarding your Renogy solar panels, please utilize the following resources:

- **Online Resources:** Visit the official Renogy website for FAQs, product documentation, and community forums.
- **Customer Service:** Renogy offers prompt response and professional technical guidance. Refer to your product packaging or the Renogy website for contact details.