We know you care.

Choosing to go solar is a huge step toward being sustainable. Go green with Renogy without compromising on a comfortable lifestyle.

GO SOLAR

Solar 400W 2.56kWh Extension Solution

QUICK GUIDE
VERSION A0

Find Your Energy Freedom
Before Getting Started

The quick guide provides important installation instructions for Renogy Solar 400W 2.56kWh Extension Solution. For detailed operation and maintenance tips, refer to the user manual of the specific product at renogy.com/support/downloads.

Read the quick guide carefully before installation. Failure to observe the instructions or precautions in the quick guide can result in electrical shock, serious injury, or death, or can damage the included products, potentially rendering them inoperable.

- Renogy ensures the accuracy, sufficiency, and the applicability of information in the quick guide or user manual at the time of printing due to continual product improvements that may occur.
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Statutes and Regulations

The mechanical and electrical installation of solar panels should refer to the appropriate regulations, including electrical code, building code and electrical connection requirements. These regulations vary depending on the location of the installation, e.g., building rooftop installation, vehicle-mounted applications, etc. Requirements may also vary with the voltage of the installation system, the nature of the current (DC or AC). Please contact your local authority for specific terms.

DC Home App

Download on the

DC Home App

Google Play

App Store
1. System Wiring

2. Get to Know Renogy Solar 400W 2.56kWh Extension Solution

**Battery**

- 100Ah Lithium Battery × 2
- 4 AWG 1 ft Battery Interconnect Cable × 2

**Charge Controller**

- 40A MPPT Charge Controller × 1
- 12 AWG 8 ft Tray Cables (Charge Controller to Battery) × 1
- Renogy BT-1 Bluetooth Module (New Version) × 1
- 10 AWG 2 ft ANL Fuse Cable × 1
- 40A ANL Fuse × 1
**Solar Panels**
- 200W Rigid Solar Panel × 2
- 15A Solar Connector Fuse × 2
- Solar Panel Mounting Z Bracket × 2
- Solar Branch Connector (MMF + FFM Pair) × 1
- 12 AWG 10 ft Adapter Kit (Solar Panel to Charge Controller) × 1

**Inverter**
- 200A ANL Fuse × 1
- 2000W Inverter × 1
- 2/0 AWG 5 ft Battery Inverter Cables (Inverter to Battery) × 1
- 2/0 AWG 1 ft ANL Fuse Cable × 1

**Battery Monitor**
- Monitoring Screen for Smart Lithium Battery × 1
- RJ45 Communication Cable × 1
3. Required Tools & Accessories

- Phillips Screwdriver (#2)
- Wrench (7/16 in)
- Wrench (9/16 in)
- Impact Drill
- Phillips Driver Bit (#2)
- Masonry Drill Bit (21/64 in)
- Wire Stripper
- Ground Fault Circuit Interrupter (GFCI) (≥20A)
- MS Adhesive and MS Applicator Gun
- Insulating Gloves
4. How to Install the Solar Panel Mounting Z Bracket

1. Place the Z bracket on the mounting surface.
2. Align the bracket with the solar panel's mounting holes.
3. Secure the bracket with screws.
4. Connect the solar panel to the Z bracket.
5. Adjust the panel to the desired angle.
6. Tighten the screws to 70.8-106.2 in-lbs (8-12 N·m) to ensure secure attachment.

Solar Panel

![Diagram showing solar panel installation process]
5. How to Install the Solar Entry Gland

1. Drill a hole in the RV roof.

2. Apply MS adhesive to the entry gland.

3. Do not move the entry gland before the MS adhesive is fully dry.

4. Run the Adapter Kit through the hole.

5. 12 AWG 10 ft Solar Panel to Charge Controller Adapter Kit

6. Solar Entry Gland

7. 12 AWG 10 ft Solar Panel to Charge Controller Adapter Kit

8. Do not move the entry gland before the MS adhesive is fully dry.
Step 1. Connect the Batteries in Parallel

Step-1 Ensure that all batteries are in shelf mode.

Step-2 Connect the batteries in parallel.

100Ah Lithium Batteries

4 AWG 1 ft Battery Interconnect Cables

RS485 UP

88.5 in·lbs (10 N·m)

88.5 in·lbs (10 N·m)
Step 2. Connect the Charge Controller to the Batteries

**Note:** Connect the batteries first and then the solar panels to avoid irreversible damage to the charge controller.

**STEP-1 Install the cables on the charge controller.**

**STEP-2 Install a 40A ANL fuse**

**STEP-3 Install the cables on the batteries.**
Step 3. Connect the Bluetooth Module to the Charge Controller
Step 4. Connect the Solar Panels to the Charge Controller

**Note:** Connect the batteries first and then the solar panels to avoid irreversible damage to the charge controller.

**STEP-1 Install 15A Solar Connector Fuses**

**STEP-2 Connect the solar panels in parallel.**

**STEP-3 Install the adapter kit on the charge controller.**
Step 5. Install the Inverter and Loads

**STEP-1 Install the cables on the batteries.**

1. Connect the cables to the batteries.
2. Secure the connections with 88.5 in·lbs (10 N·m)

**STEP-2 Install a 200A ANL fuse**

1. Install the 200A ANL fuse in the circuit breaker box.
2. Use 2/0 AWG cable for the fuse cable.

**STEP-3 Install the cables on the inverter.**

1. Connect the battery cables to the inverter.
2. Use 2/0 AWG cable for the inverter cables.

**STEP-4 Install the GFCI on the inverter.**

1. Connect the GFCI to the inverter.
2. Use 2/0 AWG cable for the GFCI.

**AC Loads**

(120V Single Phase, 2000W Max.)

**2000W Inverter**

200A ANL Fuse

88.5 in·lbs (10 N·m)

70.8 in·lbs (8 N·m)

100Ah Lithium Batteries
Step 1. Ensure that all batteries are in active mode.

Step 2. Install the monitoring screen on the first battery.

Step 3. Install the communication cable on the batteries.
Renogy Support

To discuss inaccuracies or omissions in this quick guide or user manual, visit or contact us at:

renogy.com/support/downloads
contentservice@renogy.com

To explore more possibilities of solar systems, visit Renogy Learning Center at:
renogy.com/learning-center

For technical questions about your product in the U.S., contact the Renogy technical support team through:
renogy.com/contact-us
1(909)2877111

For technical support outside the U.S., visit the local website below:

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United Kingdom |  uk.renogy.com
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Japan |  renogy.jp
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Safety Information

General
- Wear proper protective equipment and use insulated tools during installation and operation. Do not wear jewelry or other metal objects when working on or around the devices.
- Keep the devices out of the reach of children.
- Do not dispose of the devices as household waste. Comply with local, state, and federal laws and regulations and use recycling channels as required.
- In case of fire, put out the fire with a FM-200 or CO₂ fire extinguisher.
- Installing the devices improperly on a boat may cause damage to components of the boat. Have the devices installed by a qualified electrician.
- Do not expose the devices to flammable or harsh chemicals or vapors.
- Clean the devices regularly.
- Do not puncture, drop, crush, penetrate, shake, strike, or step on the devices.
- Do not open, disassemble, repair, tamper with, or modify the devices.
- Connect the negative prior to the positive terminal when connecting any device.

Battery Safety
- Do not use batteries if there is any damage.
- Do not touch the exposed electrolyte or powder if the battery is damaged.
- Risk of explosion! Never install the charge controller and inverter in a sealed enclosure with flooded batteries! Do not install the charge controller, and inverter in a confined area where battery gases can accumulate.
- Prior to installing the devices, ensure all battery groups are installed properly.

Charge Controller, and Inverter Safety
- Install the devices indoors on a vertical surface - protected from direct sunlight, high temperatures, and water. Make sure there is good ventilation.
- Keep the devices away from heating equipment.
- Do not insert foreign objects into the devices.
- Confirm the polarities of the devices before connection. A reverse polarity contact can result in damage to the devices, thus voiding the warranty.
- Do not touch the connector contacts while the devices are in operation.
- Disconnect all connectors from the devices before maintenance or cleaning.
- Ensure the inverter is firmly grounded to a building, vehicle, or earth grounded. Keep the inverter away from EMI receptors such as TVs, radios, and other audio/visual electronics to prevent damage / interference to the equipment.

Solar Panel Safety
- Do not install the solar panel on a surface constructed from combustible material.
- Do not expose the solar panel to direct flame or heat sources.
- Keep the solar panel away from explosives and corrosive substances.
- Do not step, walk, stand, or jump on the solar panel. Localized heavy loads may cause damage to the solar cells, which will ultimately compromise the performance of the solar panel.
- Do not band the solar panel. Bending the solar panel will cause damage to the cells and affect panel performance.
- Do not immerse the solar panel in water.
Renogy aims to empower people around the world through education and distribution of DIY-friendly renewable energy solutions.

We intend to be a driving force for sustainable living and energy independence.

In support of this effort, our range of solar products makes it possible for you to minimize your carbon footprint by reducing the need for grid power.

Did you know? In a given month, a 1kW solar energy system will...

- Save 170 pounds of coal from being burned
- Save 300 pounds of CO_2_ from being released into the atmosphere
- Save 105 gallons of water from being consumed

Renogy Power Plus allows you to stay in the loop with upcoming solar energy innovations, share your experiences with your solar energy journey, and connect with like-minded people who are changing the world in the Renogy Power Plus community.

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