

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

 **RENOGY**[®]

**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.

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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.

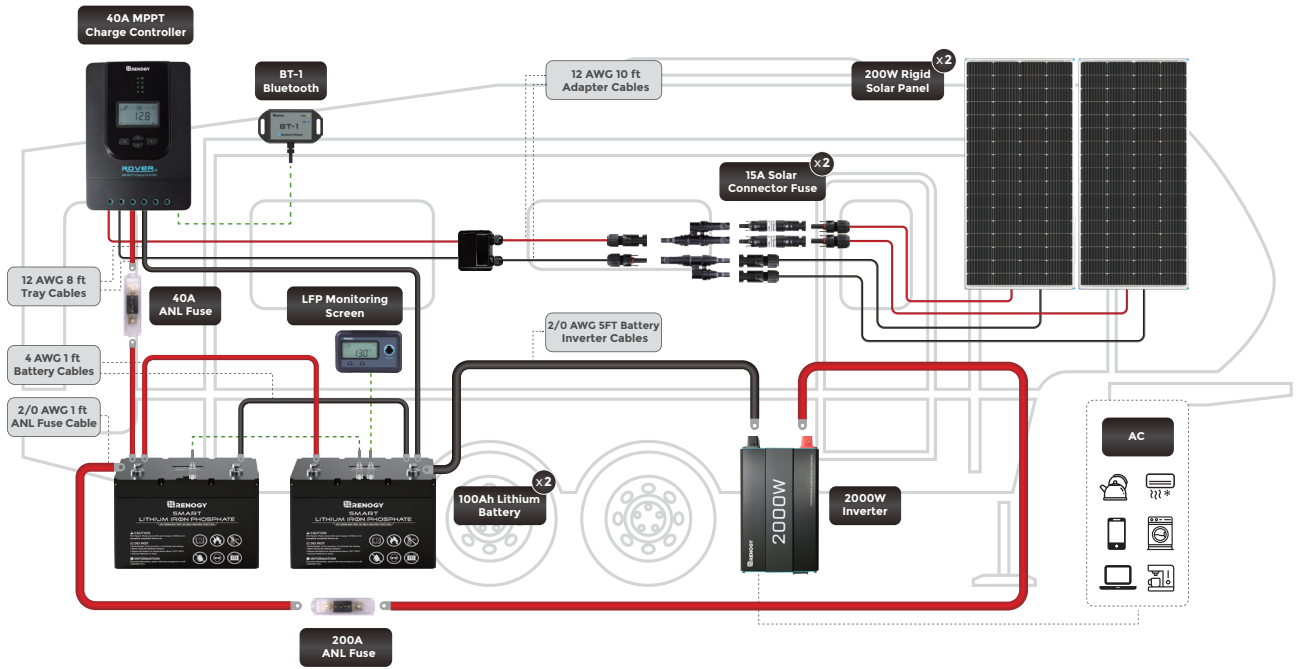
DC Home App



DC Home App

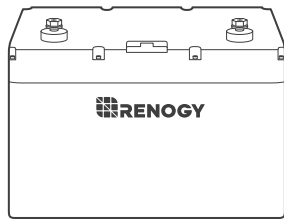


1. System Wiring

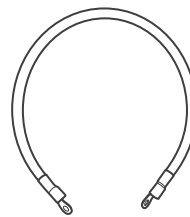


2. Get to Know Renogy Solar 400W 2.56kWh Extension Solution

Battery

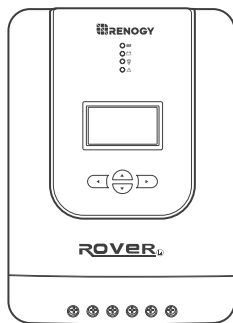


100Ah Lithium Battery x 2

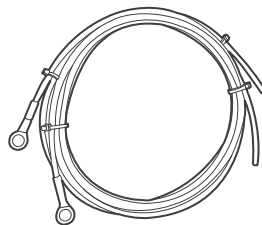


4 AWG 1 ft Battery Interconnect Cable x 2

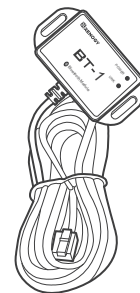
Charge Controller



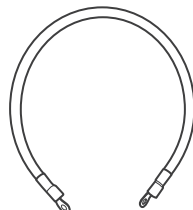
40A MPPT Charge Controller x 1



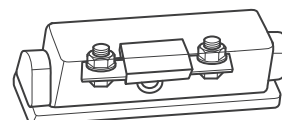
12 AWG 8 ft Tray Cables
(Charge Controller to Battery) x 1



Renogy BT-1 Bluetooth Module
(New Version) x 1

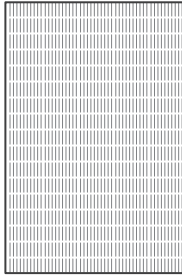


10 AWG 2 ft ANL Fuse Cable x 1

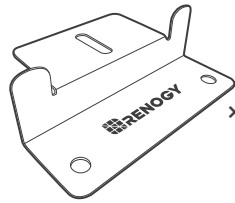


40A ANL Fuse x 1

■ Solar Panels

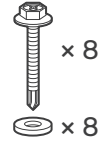


200W Rigid Solar Panel × 2



× 4

Solar Panel Mounting Z Bracket × 2



× 8



× 8



× 4



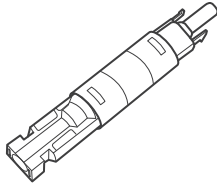
× 4



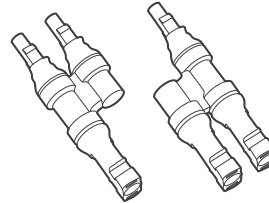
× 4



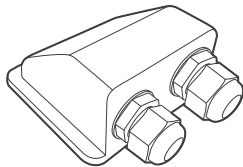
× 8



15A Solar Connector Fuse × 2



Solar Branch Connector (MMF + FFM Pair) × 1

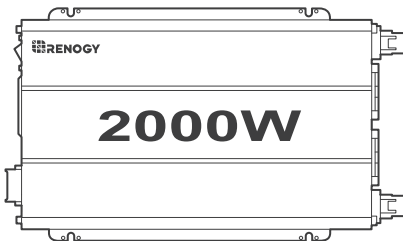


Solar Entry Gland × 1

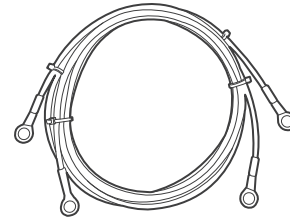


12 AWG 10 ft Adapter Kit
(Solar Panel to Charge Controller) × 1

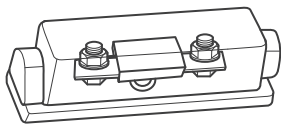
■ Inverter



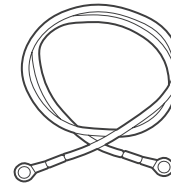
2000W Inverter × 1



2/0 AWG 5 ft Battery Inverter Cables
(Inverter to Battery) × 1

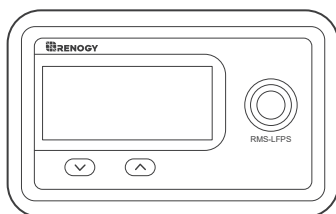


200A ANL Fuse × 1

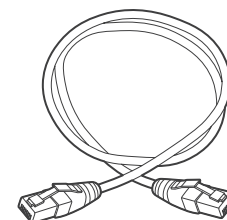


2/0 AWG 1 ft ANL Fuse Cable × 1

■ Battery Monitor



Monitoring Screen for Smart Lithium Battery × 1

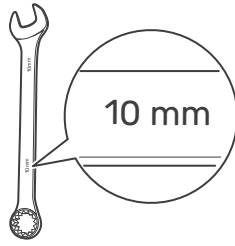


RJ45 Communication Cable × 1

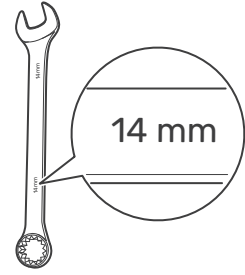
3. Required Tools & Accessories



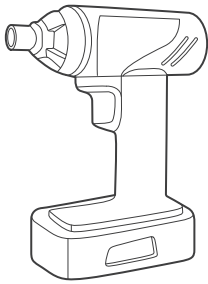
Phillips
Screwdriver (#2)



Wrench
(7/16 in)



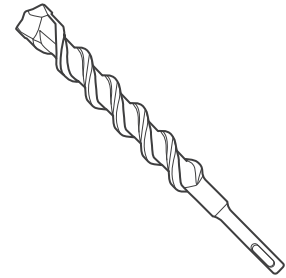
Wrench
(9/16 in)



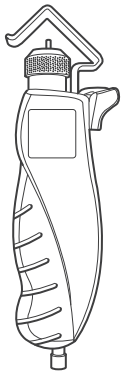
Impact Drill



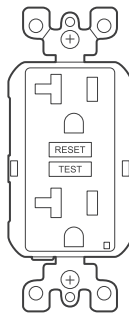
Phillips Driver Bit (#2)



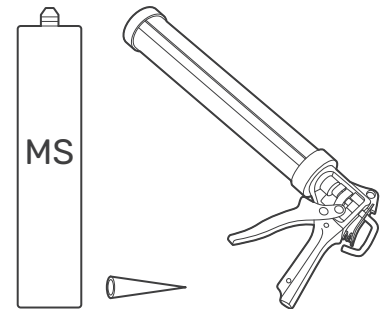
Masonry Drill Bit
(21/64 in)



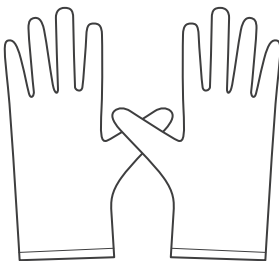
Wire Stripper



Ground Fault Circuit
Interrupter (GFCI) (≥20A)

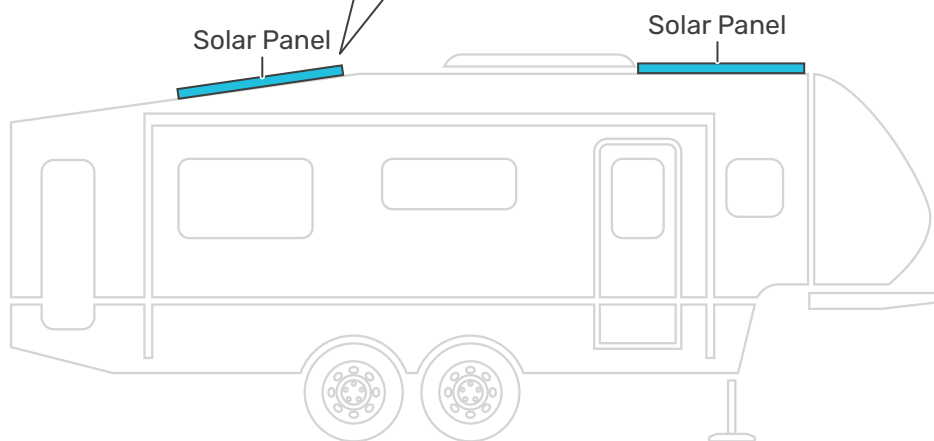
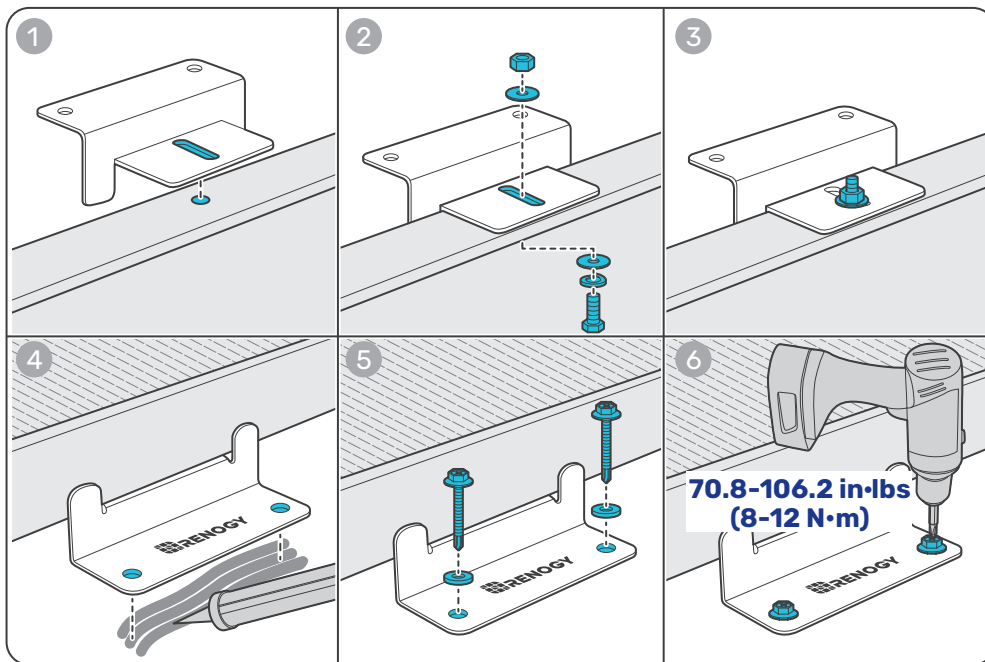


MS Adhesive and
MS Applicator Gun

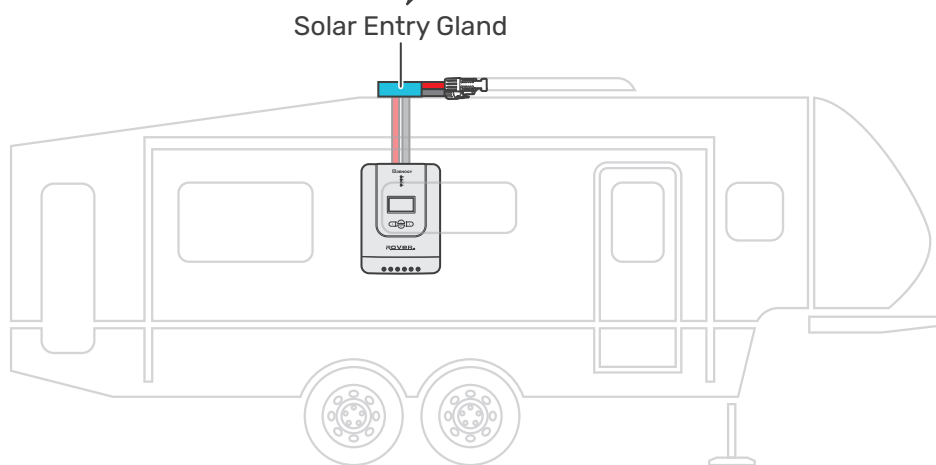
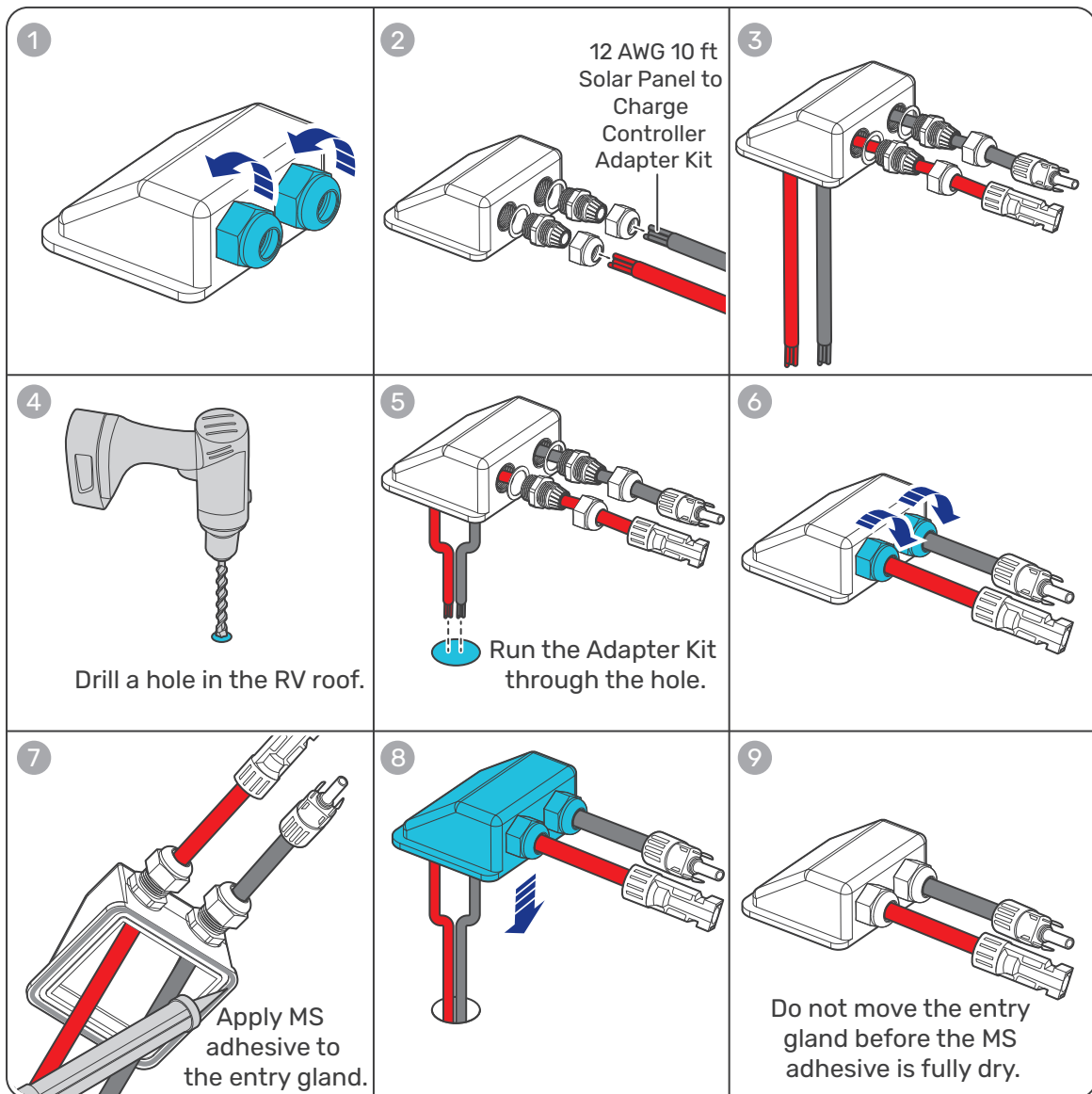


Insulating Gloves

4. How to Install the Solar Panel Mounting Z Bracket

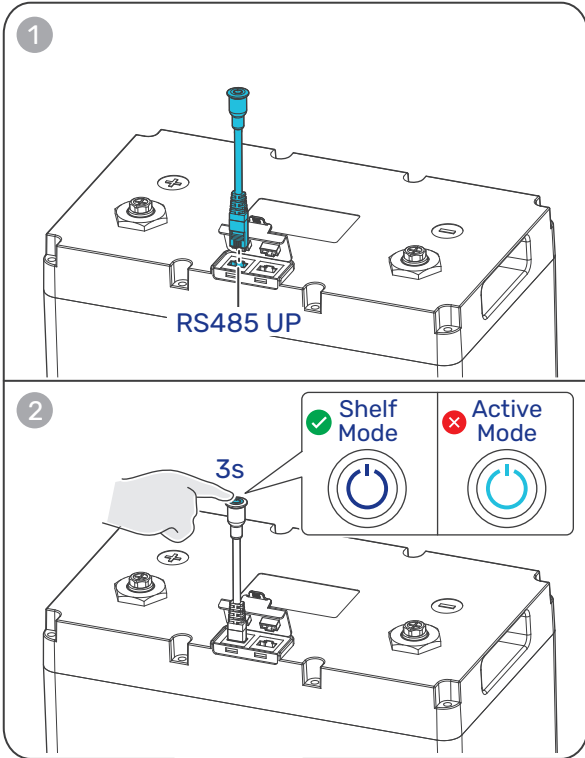


5. How to Install the Solar Entry Gland

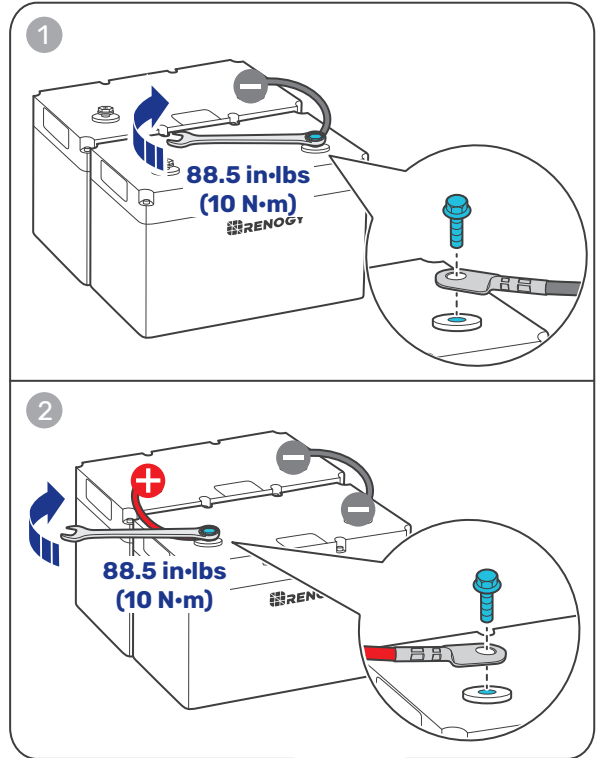


Step 1. Connect the Batteries in Parallel

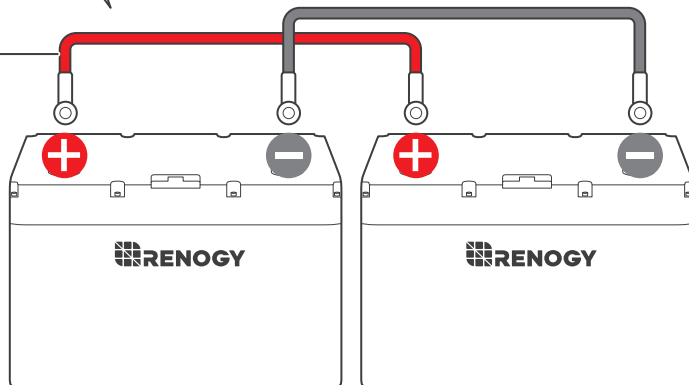
Step-1 Ensure that all batteries are in shelf mode.



Step-2 Connect the batteries in parallel.



4 AWG 1 ft Battery Interconnect Cables

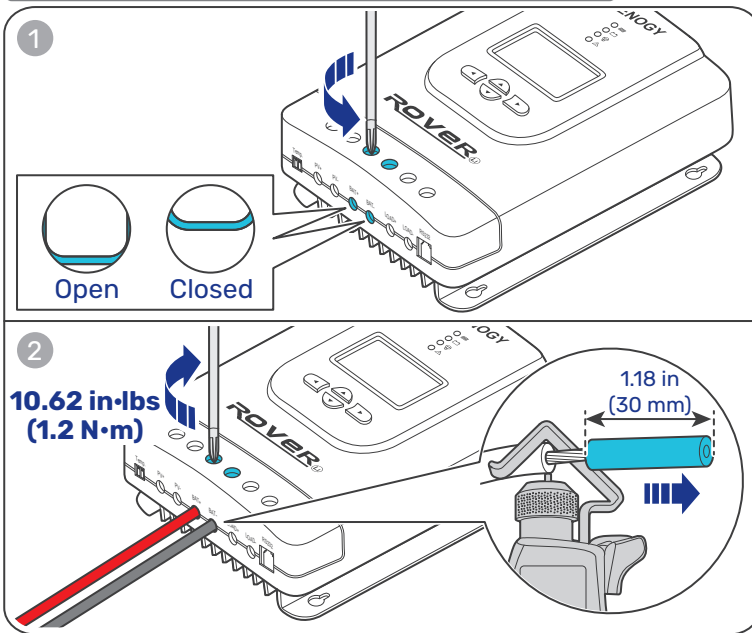


100Ah Lithium Batteries

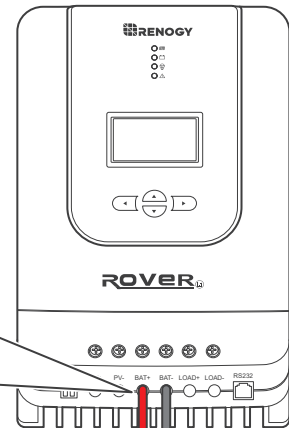
Step 2. Connect the Charge Controller to the Batteries

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.

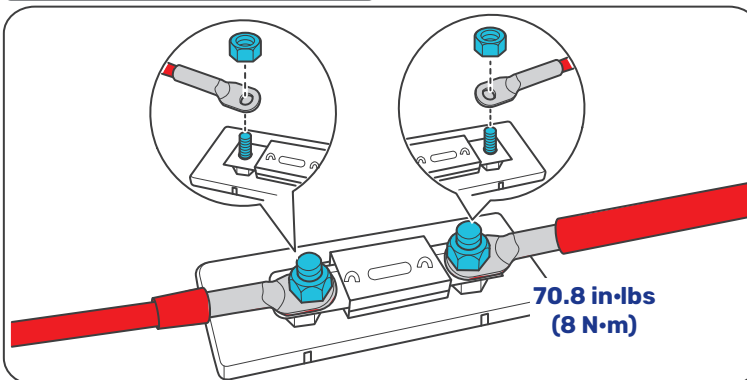


40A MPPT Charge Controller



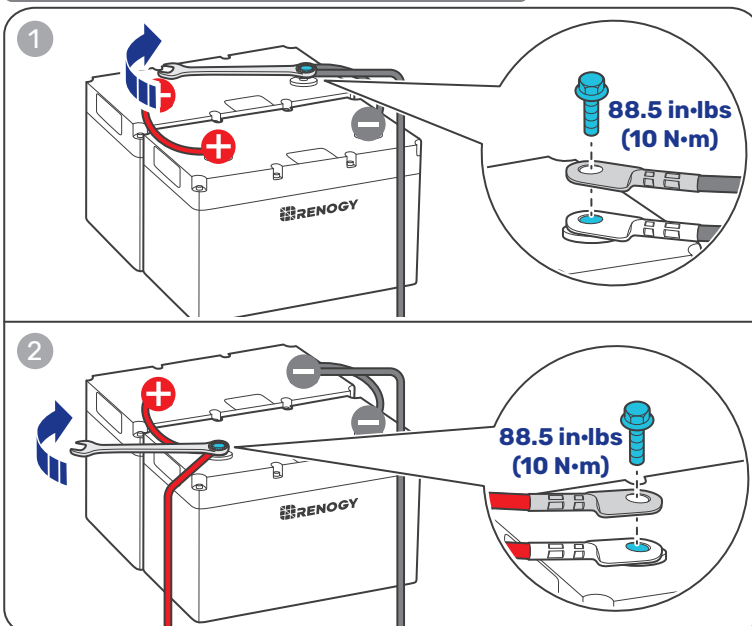
12 AWG 8 ft Tray Cables

STEP-2 Install a 40A ANL fuse

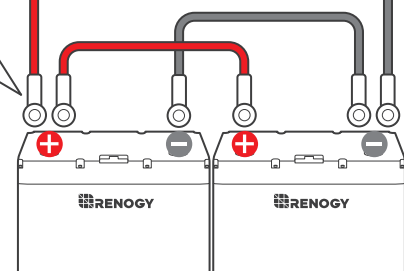


40A ANL Fuse

STEP-3 Install the cables on the batteries.

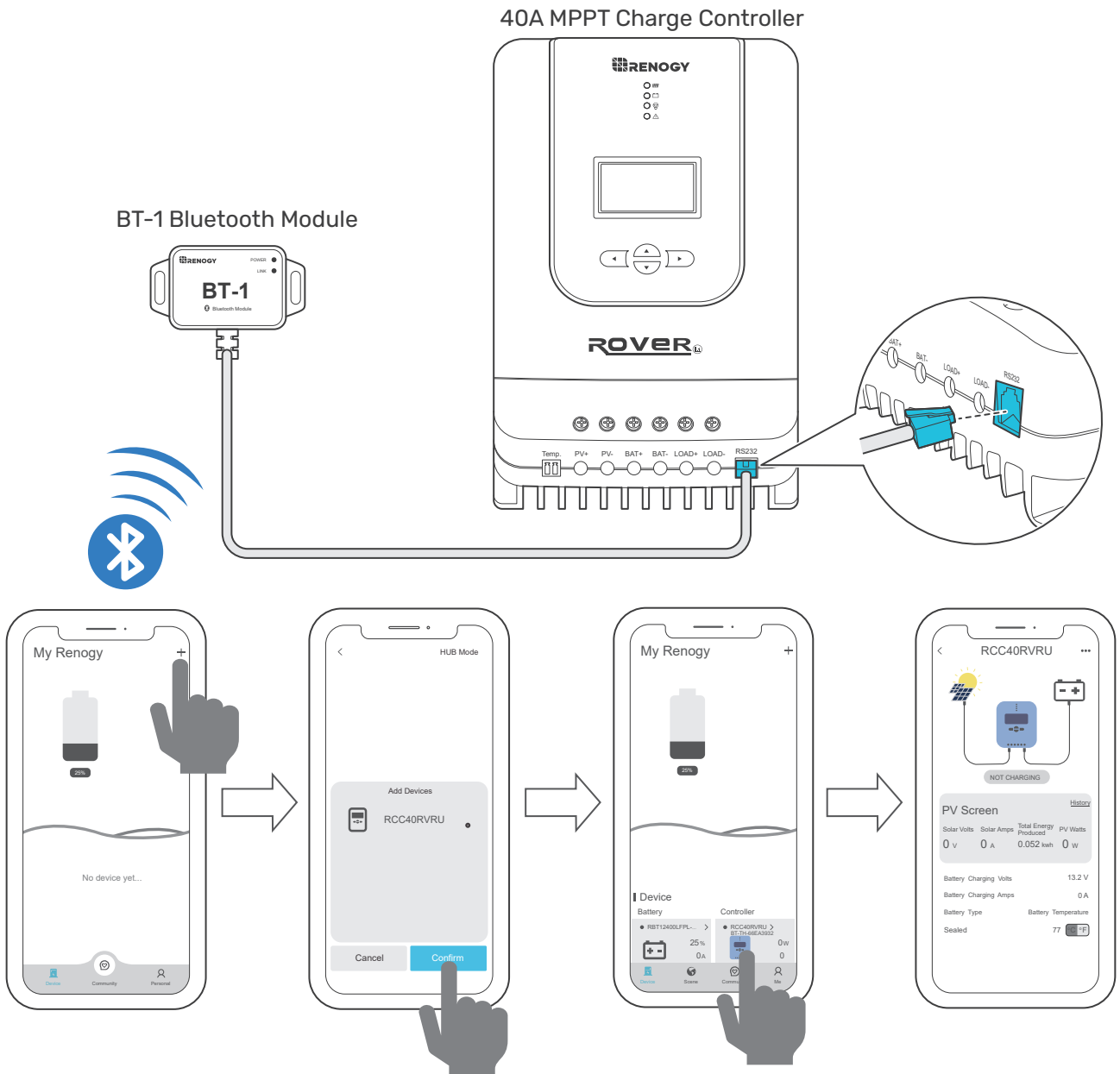


10 AWG 2 ft ANL Fuse Cable



100Ah Lithium Batteries

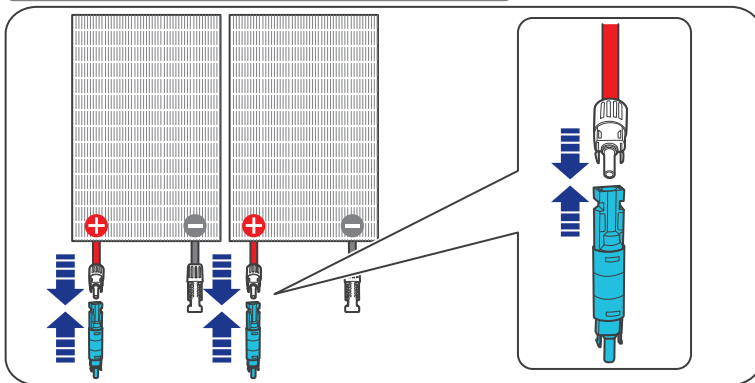
Step 3. Connect the Bluetooth Module to the Charge Controller



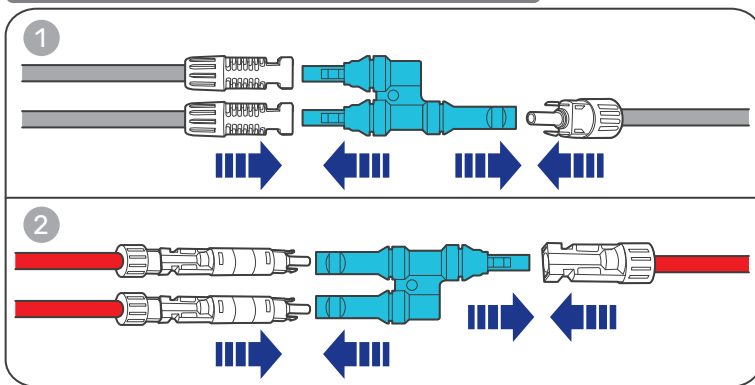
Step 4. Connect the Solar Panels to the Charge Controller

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

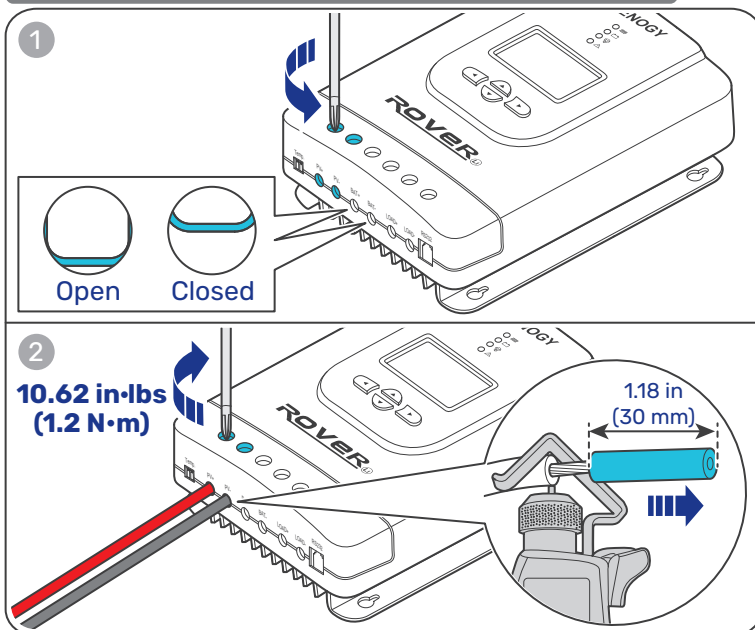
STEP-1 Install 15A Solar Connector Fuses



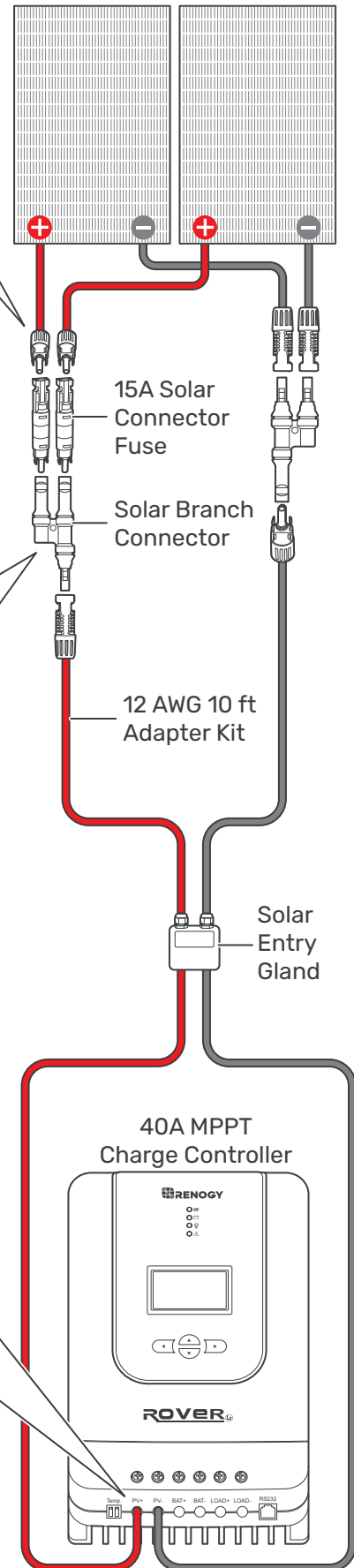
STEP-2 Connect the solar panels in parallel.



STEP-3 Install the adapter kit on the charge controller.

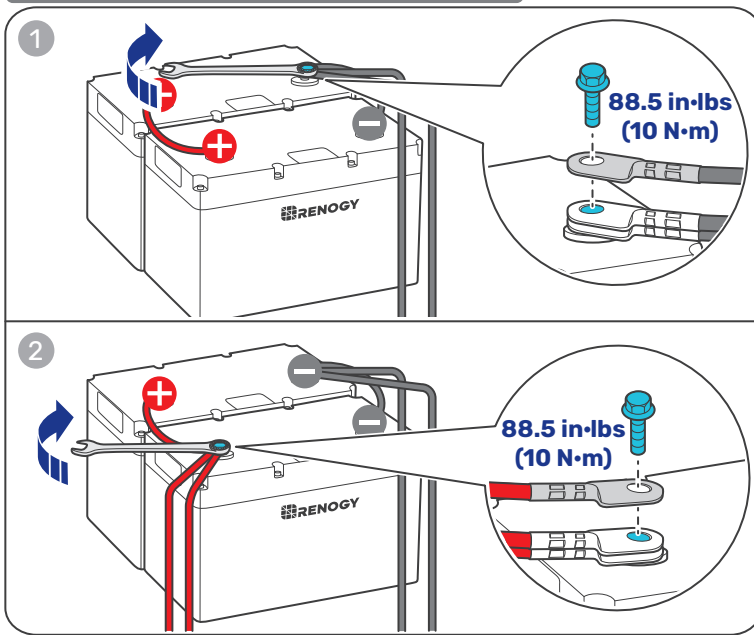


200W Rigid Solar Panels

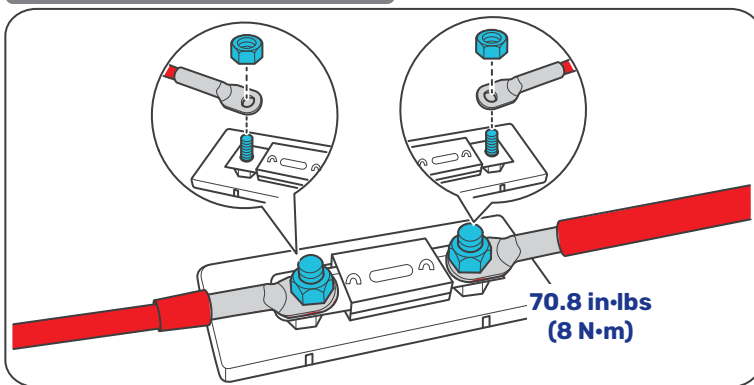


Step 5. Install the Inverter and Loads

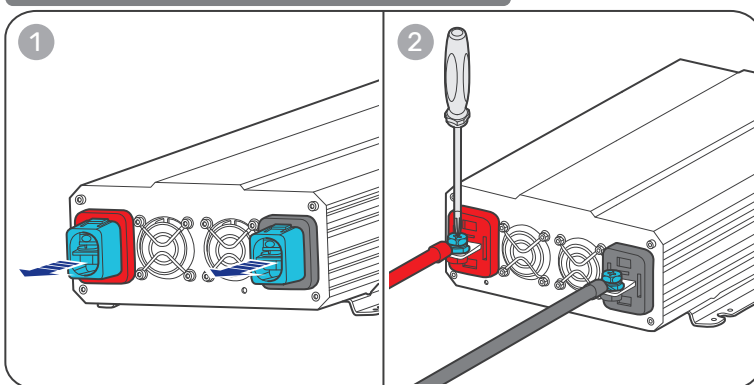
STEP-1 Install the cables on the batteries.



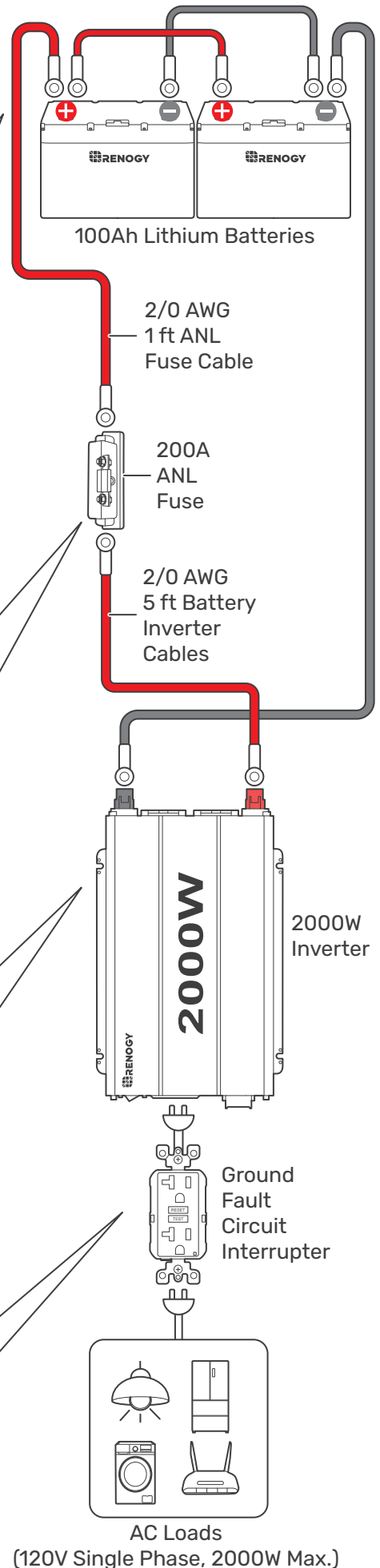
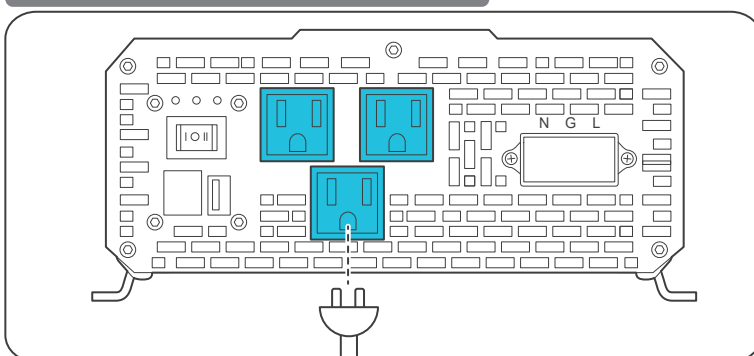
STEP-2 Install a 200A ANL fuse



STEP-3 Install the cables on the inverter.

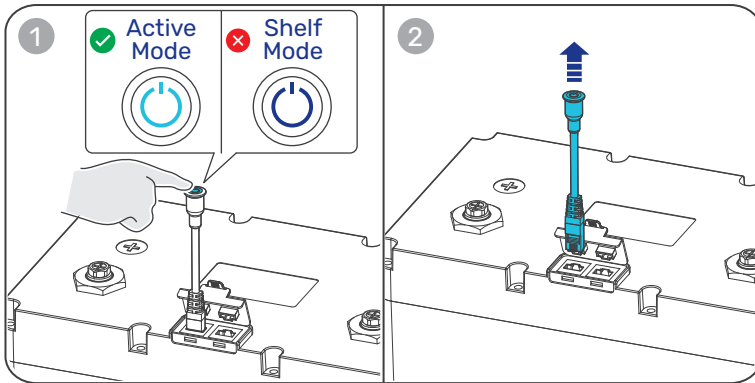


STEP-4 Install the GFCI on the inverter.

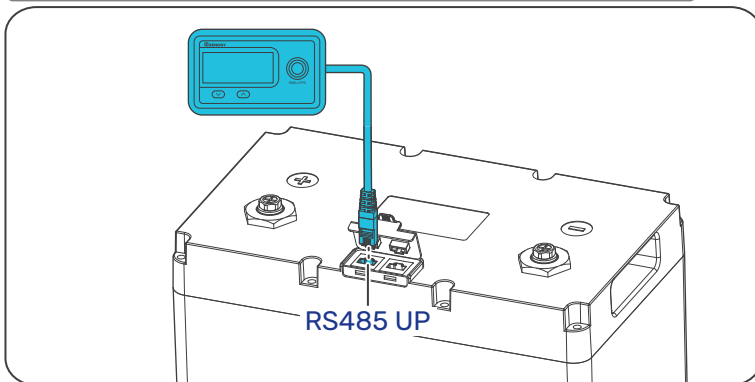


Step 6. Communication and Monitoring Wiring

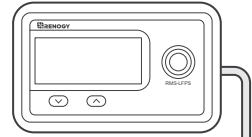
Step-1 Ensure that all batteries are in active mode.



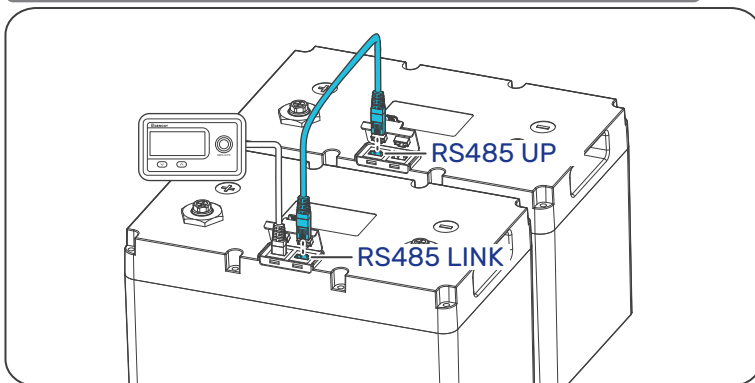
Step-2 Install the monitoring screen on the first battery.



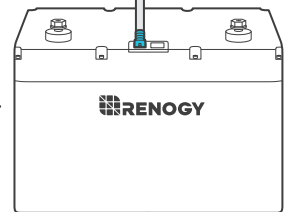
Monitoring Screen for Smart Lithium Battery



Step-3 Install the communication cable on the batteries.



RJ45 Communication Cable




100Ah Lithium Batteries

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For technical questions about your product in the U.S., contact the Renogy technical support team through:

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Japan |  | renogy.jp

South Korea |  | kr.renogy.com

Germany |  | de.renogy.com

United Kingdom |  | uk.renogy.com

Other Europe |  | eu.renogy.com

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 bend 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 Empowered

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.



Live Sustainably with Renogy

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 CO₂ from being released into the atmosphere



Save 105 gallons of water from being consumed



Renogy Power **PLUS**

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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