

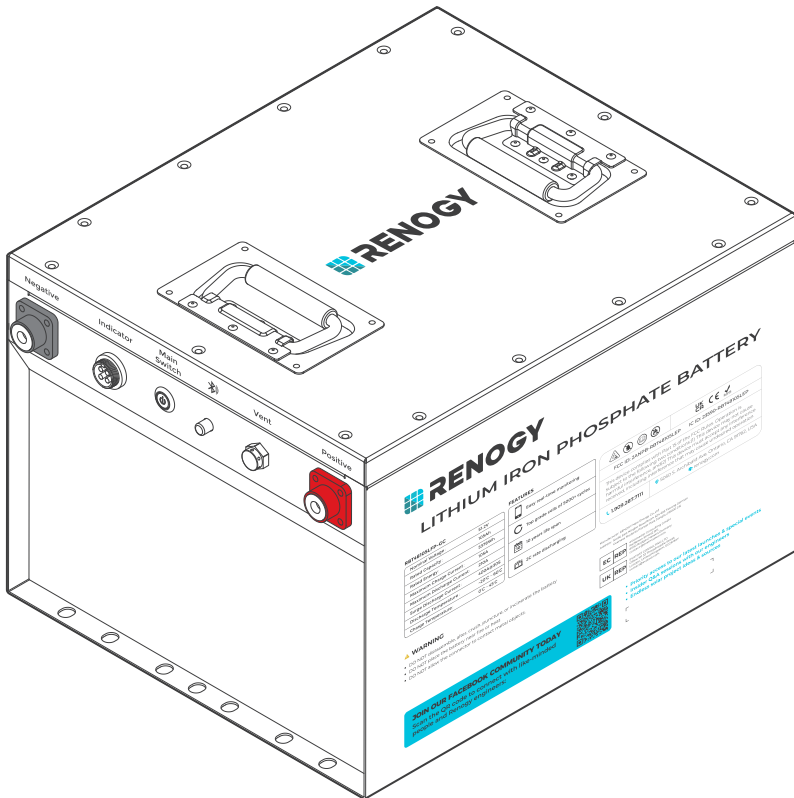
RENOGY

Lithium Iron Phosphate Battery

51.2V | 105 Ah

RBT48105LFP-GC-G1

VERSION A2
July 25, 2025



USER MANUAL

Before Getting Started

The user manual provides important operation and maintenance instructions for Renogy 51.2V 105Ah Lithium Iron Phosphate Battery (hereinafter referred to as battery).

Read the user manual carefully before operation and save it for future reference. Failure to observe the instructions or precautions in the user manual can result in electrical shock, serious injury, or death, or can damage the battery, potentially rendering it inoperable.

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- The illustrations in the user manual are for demonstration purposes only. Details may appear slightly different depending on product revision and market region.
- Renogy reserves the right to change the information in the user manual without notice. For the latest user manual, visit [renogy.com](https://www.renogy.com).

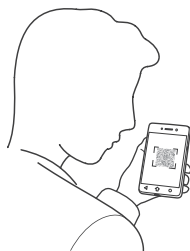
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Online Manual



User Manual



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Symbols Used

The following symbols are used throughout the user manual to highlight important information.

-  **WARNING:** Indicates a potentially dangerous condition which could result in injury or death.
-  **CAUTION:** Indicates a critical procedure for safe and proper installation and operation.
-  **NOTE:** Indicates an important step or tip for optimal performance.

Introduction

Renogy 51.2V 105Ah Lithium Iron Phosphate Battery is a large capacity lithium battery featuring unmatched performance, reliability, and convenience for modern electric vehicles such as golf carts and club carts. Designed to meet the rigorous demands of daily use on golf courses and other scenarios, it combines high power output, exceptional longevity (5,000 cycles), and a lightweight, compact form factor. Its advanced features, including a built-in Battery Management System (BMS), fast charging capabilities, and real-time monitoring, ensure seamless operation and ease of use.

Whether you need extended range, smooth acceleration, or dependable performance in challenging weather, the battery is engineered to elevate your golf cart experience.

Key Features

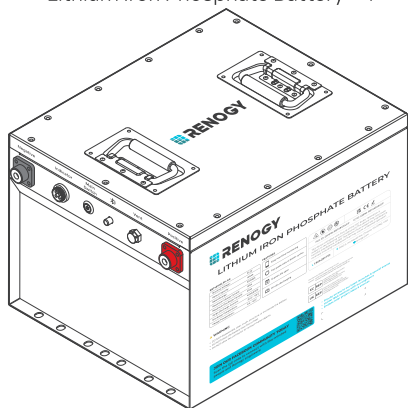
- **Superb Performance & Built-in BMS**
Delivers 5.376kWh of usable energy capacity. Equipped with a 220A built-in Battery Management System (BMS), allowing continuous 210A discharge, 400A peak discharge for up to 30 seconds. Enjoy exceptional acceleration and impressive surge power for an exhilarating golf cart experience.
- **Exceptional Longevity and Long Range**
Offers over 5,000 cycles (80% DOD) and high capacity on a single charge. Weighing 50% lighter than the lead-acid battery of the same capacity, the battery is easier to handle and install in locations where space is limited.
- **Fast Charging Capability**
Comes with a 58.4V 20A dedicated 48V battery charger, supporting fast charging from 0% to 100%.
- **Real-Time Monitoring**
Provides complete visibility and control of the battery, including voltage, current, temperature, and battery status on the included battery indicator. In addition, you can monitor the battery performance anytime when pairing it with the Renogy app (free of charge) via Bluetooth.
- **Low-Temperature Protection**
Features low-temperature charging and discharging protection in cold weathers, ensuring reliable performance and peace of mind.

SKU

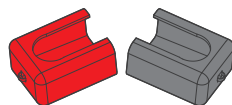
| | |
|---|-------------------|
| Renogy 51.2V 105Ah Lithium Iron Phosphate Battery | RBT48105LFP-GC-G1 |
|---|-------------------|

What's In the Box?

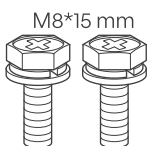
Renogy 51.2V 105Ah
Lithium Iron Phosphate Battery × 1



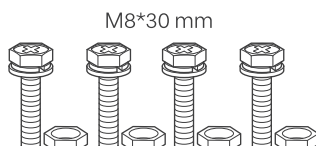
User Manual × 1



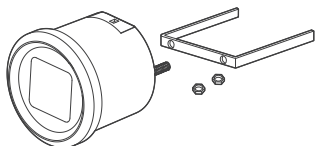
Insulation Sleeves × 2



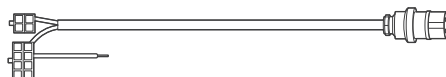
Terminal Bolts × 2



Battery Fixing
Bolts (with nuts) × 4



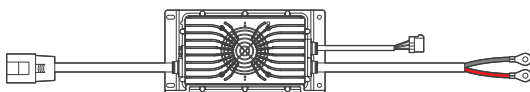
Battery Indicator
(with a support bracket and two fixing nuts) × 1



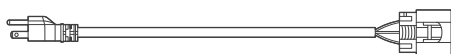
Battery Indicator Communication Cable (3m) × 1



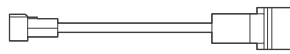
Battery Extension Cables (0.72m) × 2



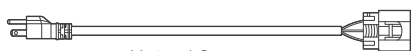
Battery Charger × 1



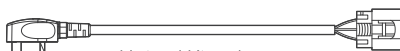
AC Input Cable (3m) × 1



Additional Charger Indicator
(with a 1.45m cable) × 1



United States



United Kingdom



Europe



South Africa



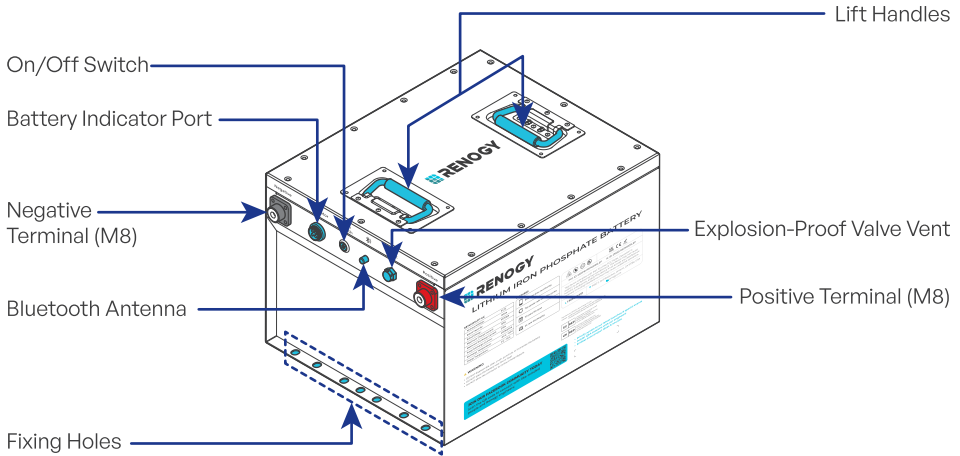
Australia



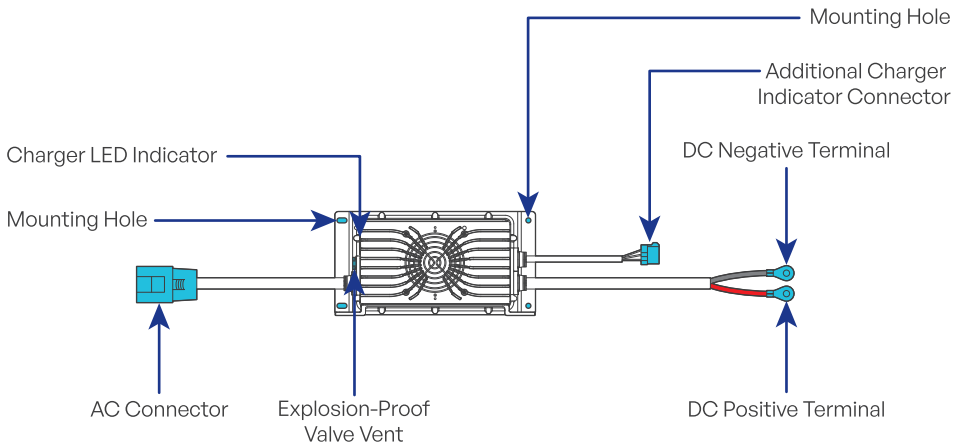
Make sure that all accessories are complete and free of any signs of damage.

Get to Know Lithium Iron Phosphate Battery and Charger

Battery Overview



Battery Charger Overview




Explosion-Proof Valve Vent

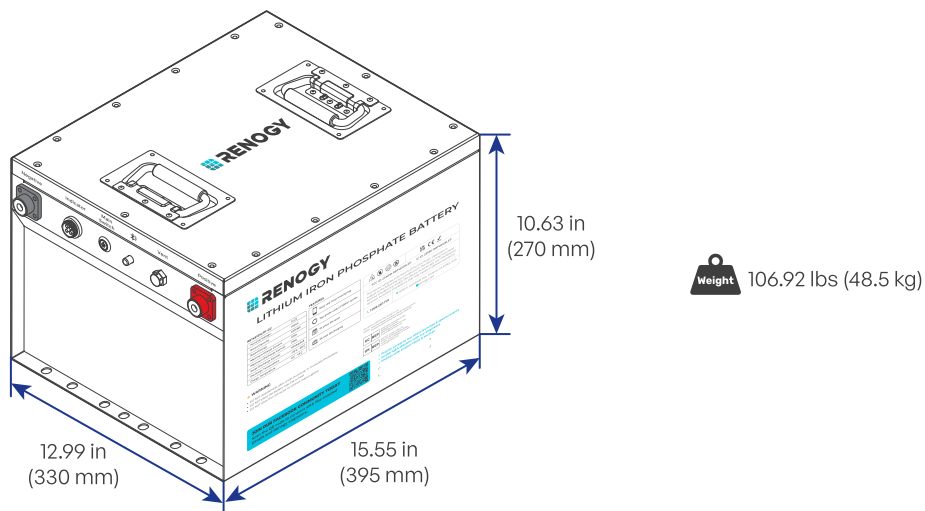
The battery includes an explosion-proof valve vent is a crucial component that ensures safety during operation. During battery operation, gas is released due to internal chemical reactions, causing the internal pressure to gradually rise.

- Opening Mechanism: When the internal pressure reaches the valve vent's opening threshold, the valve vent automatically opens to release the gas, preventing overpressure and potential damage.
- Closing Mechanism: Once the internal pressure drops to the valve vent's closing threshold, the valve vent automatically shuts, maintaining an optimal sealed state.

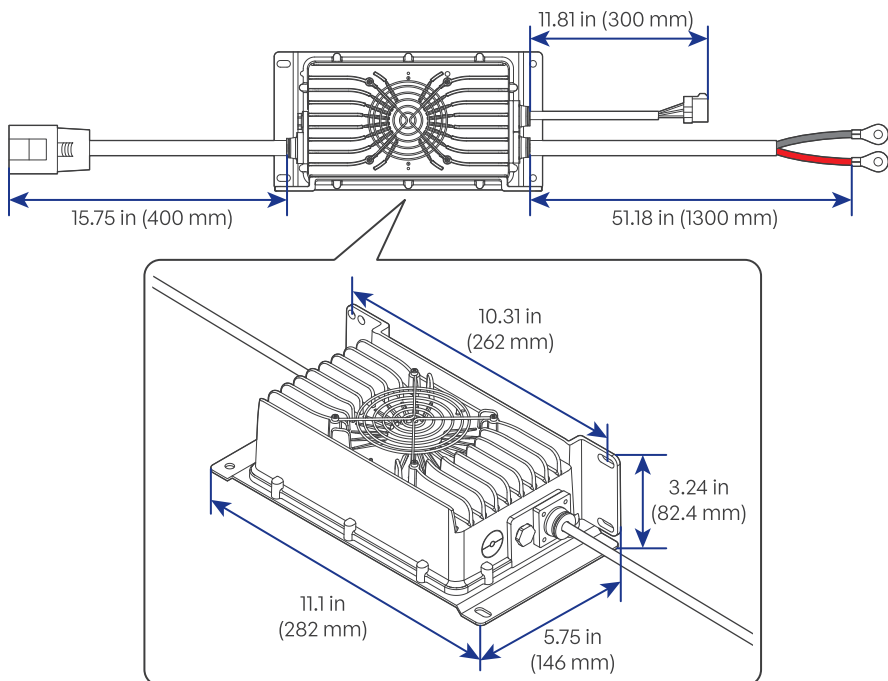
Dimensions

 Dimension tolerance: ± 0.2 in (0.5 mm)

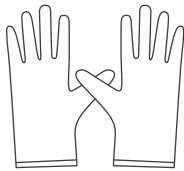
Battery



Battery Charger



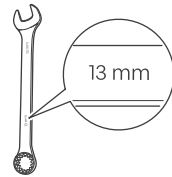
Required Tools & Accessories



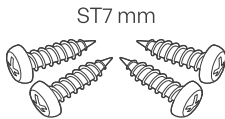
Insulating Gloves



Multimeter



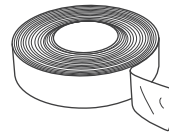
Wrench (17/32 in)



Self-tapping Screws x 4



Phillips Screwdriver (#2)



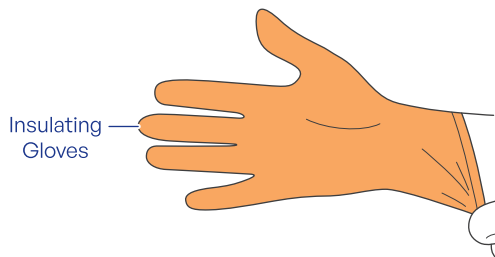
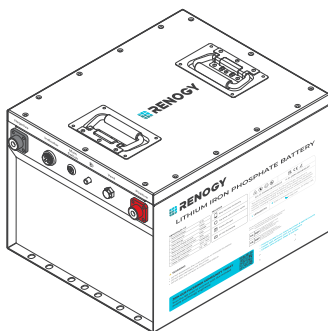
Insulation Tape

- i** Prior to installing and configuring the battery and battery charger, prepare the recommended tools, components, and accessories.
- i** Choose proper mounting screws specific to your installation site. This manual takes self-tapping screws for wooden walls as an example.

Installation

This manual focuses on golf cart applications, with installation steps specifically tailored for golf carts. Typically, the battery is installed in the dedicated compartment located under the seat or on the cart's chassis. Similar rules apply to other suitable scenarios, provided the installation meets safety and performance requirements.

Step 1. Wear Insulating Gloves



Insulating
Gloves

Step 2. Check the Battery and Battery Charger

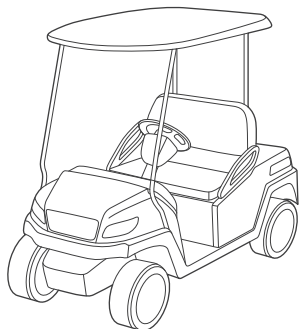
Inspect the battery and battery charger for any visible damage including cracks, dents, deformation, and other visible abnormalities. All connector contacts shall be clean, free of dirt and corrosion, and dry.

⚠ Do not touch the exposed electrolyte or powder if the battery is damaged.

- ⚠ If any uncovered electrolyte or powder comes into contact with your skin or eyes, flush the area immediately with plenty of clean water and seek medical attention.
- ⚠ Connecting the battery in series or parallel is NOT allowed.

Step 3. Remove Legacy Batteries

Check the user manual of your golf cart to ensure that its rated voltage is 48V that matches the voltage of the 51.2V 105Ah Lithium Iron Phosphate Battery. Follow the steps outlined in the user manual to remove the legacy battery or batteries from your golf cart.



48V Rated Voltage



Other Voltage Ratings

- ⚠ Installing this battery in a non-48V system is prohibited. Such improper installation may cause damage to both the golf cart and the battery, resulting in the voiding of the warranty.
- i If you are unsure of the voltage of legacy battery in your golf cart, use a multimeter to measure the battery voltage.
- i Do not dispose of the legacy battery or batteries as household waste. Comply with local, state, and federal laws and regulations and use recycling channels as required.

Step 4. Fix the Battery and Battery Charger

The battery must be installed only in a vertical orientation with the lift handles on top.

For optimal battery performance, it is recommended to install the battery, included charger, and battery indicator in a clean, cool, and dry location, free from any accumulation of water, oil, or dirt. Accumulation of such materials on the battery and charger can lead to current leakage, self-discharge, and even short-circuiting.

Ensure the battery is installed in a well-ventilated location to prevent the accumulation of explosive gases during battery charging.

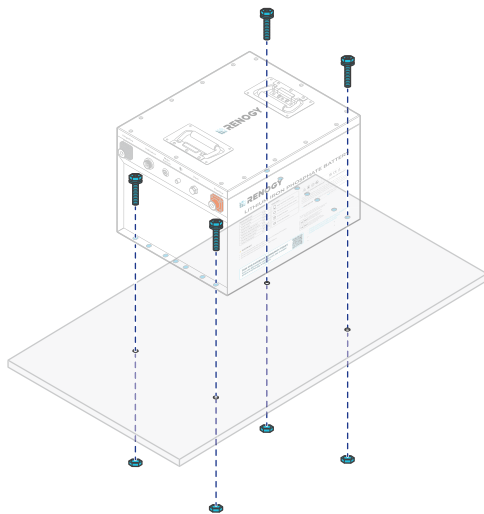
- ⚠ Risk of explosion! Do not install the battery and battery charger in a sealed space. Proper ventilation is essential to ensure safety.
- ⚠ Sufficient air flow must be provided to prevent excessive heat build-up and to minimize temperature variation between the connected batteries.

Since each of the DC cables on the battery charger is 1.3 meters long, check the distance between the charger and the battery when selecting their fixed positions. This will help avoid insufficient cable length, which could lead to improper connections.

■ Fix the Battery

There are seven fixing holes on each side of the battery. Use the included battery fixing bolts (with nuts) to secure the battery through any four of the fixing holes, based on the position of the legacy battery fixing holes on your golf cart.

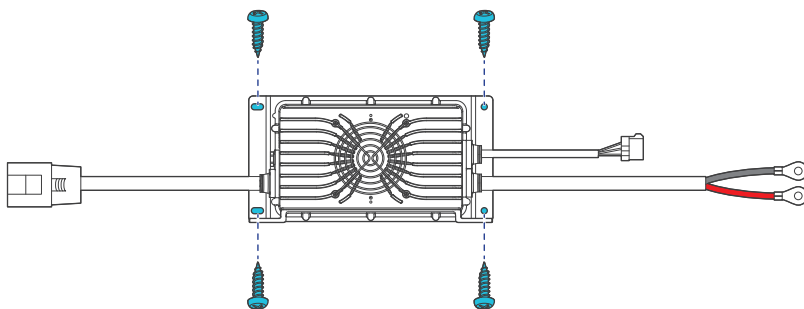
i If the legacy battery fixing holes on your golf cart do not align with those of the Renogy battery, you will need to drill 8mm holes.



⚠ Ensure that the battery is securely installed to prevent loosening or falling, which could lead to damage.

■ Fix the Battery Charger




Use self-tapping screws (not included) to secure the battery charger to a proper position.

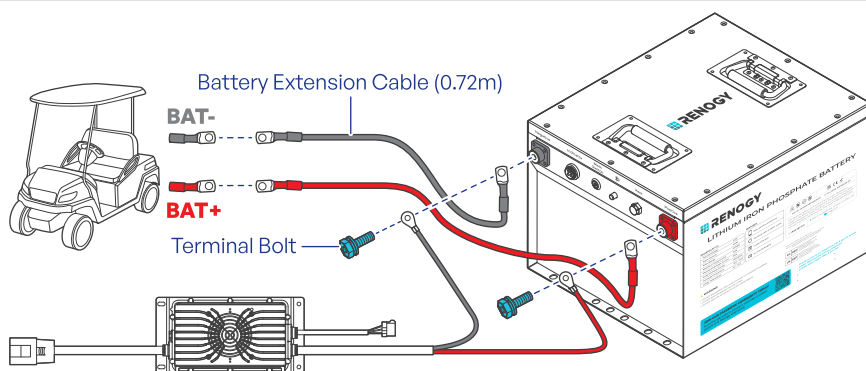


⚠ Ensure that the battery charger is securely installed to prevent loosening or falling, which could lead to damage.

Step 5. Battery Wiring

1. Connect the negative battery terminal on your golf cart and the DC negative terminal of the battery charger to the battery's negative terminal. Use one included terminal bolt to secure the connection.
2. Connect the positive battery terminal on your golf cart and the DC positive terminal of the battery charger to the battery's positive terminal. Use the other included terminal bolt to secure the connection.

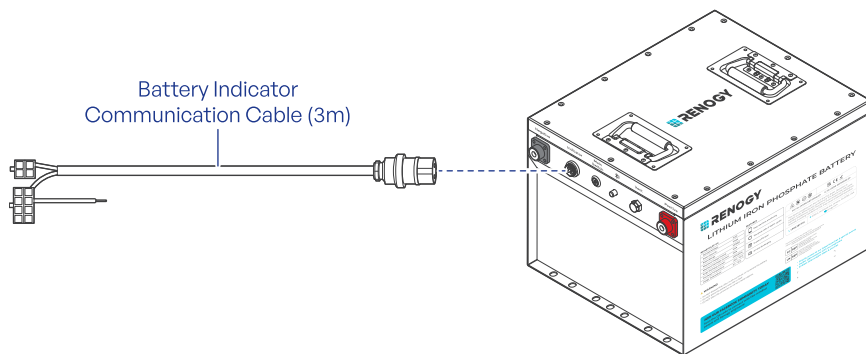
-  The battery terminals of your golf cart should make direct contact with the battery terminals, followed by the DC terminals of the battery charger.
-  If the length of the battery cables on your golf cart is insufficient to adapt to the wiring, you can use the included two battery extension cables (0.72m for each) to extend the wiring. Depending on your specific situation, connect them using bolts or welding. Wrap the connection points with insulation tape to prevent electric leakage.
-  Verify polarity before wiring to avoid irreversible battery damage due to polarity reversal.



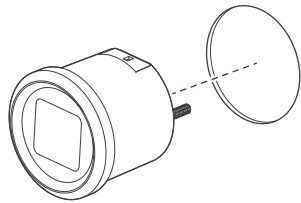
Step 6. Install the Battery Indicator (Optional)

You can check the operating status of your battery through the included battery indicator based on your needs.

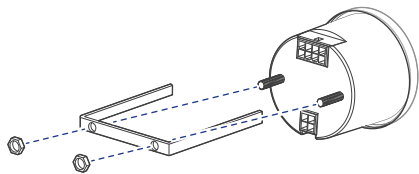
1. Connect the CAN connector of the included battery indicator communication cable (3m) to the battery indicator port on the battery.



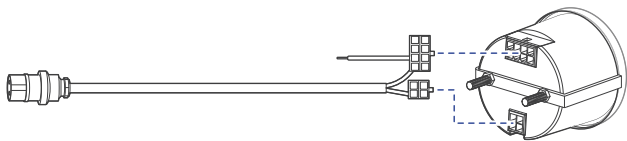
2. Choose a proper installation location for the battery indicator. Ensure the distance between the battery and the battery indicator is within 9.84 ft (3m). Use a hole saw to drill a hole with a diameter of 1.97 inches (50 mm) and insert the battery indicator into the installation hole.



3. Secure the battery indicator with the included support bracket and two fixing nuts.

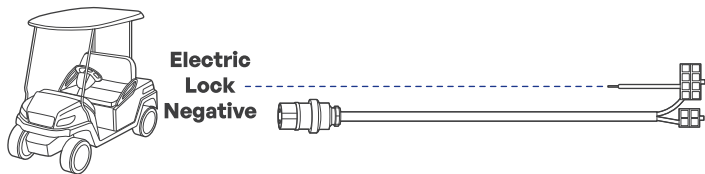


4. Connect the other end of the included battery indicator communication cable (3m) to the battery indicator, as shown in the illustration below.



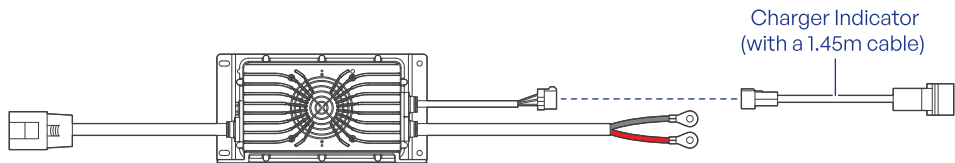
5. Connect the bare wire of the Battery Indicator Communication Cable to the negative end of the electric door lock on your golf cart. This ensures that the battery indicator will automatically turn on when the golf cart is powered on. You may refer to the golf cart user manual or consult the manufacturer for relevant information.

Note: You can connect the bare wire directly to the negative wire of the electric door lock, or to the related connector terminal. In direct wiring scenarios, ensure the connection point is completely wrapped with insulating tape for safety.



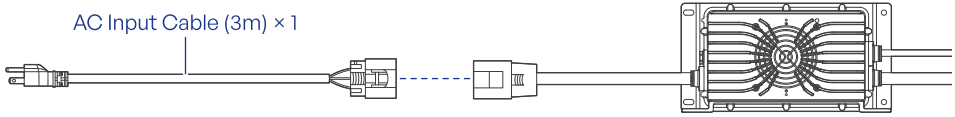
Step 7. Install the Additional Charger Indicator (Optional)

You can check the battery level via the included additional charger indictor on demand. As shown in the illustration below, connect the charger indicator to the charger indicator connector on the battery charger.

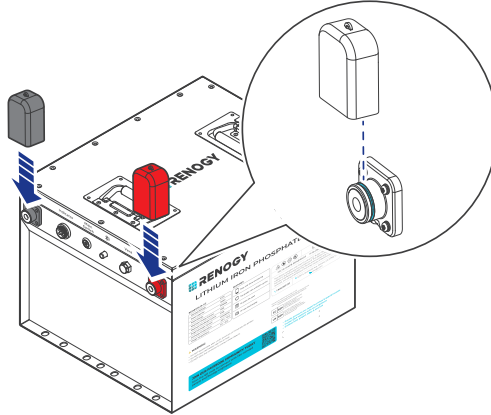


Step 8. AC Input Wiring

As shown in the illustration below, connect the AC input cable to the AC connector on the battery charger.

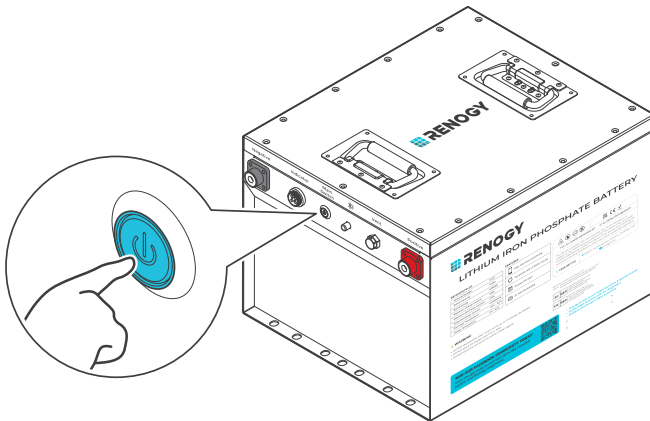


Step 9. Install Insulation Sleeves



Operation

Power On/Off



■ Power On

To power on the battery, press and hold the On/Off Switch for 1s and after 1s, the switch LED lights up with the battery turned on.

■ Power Off

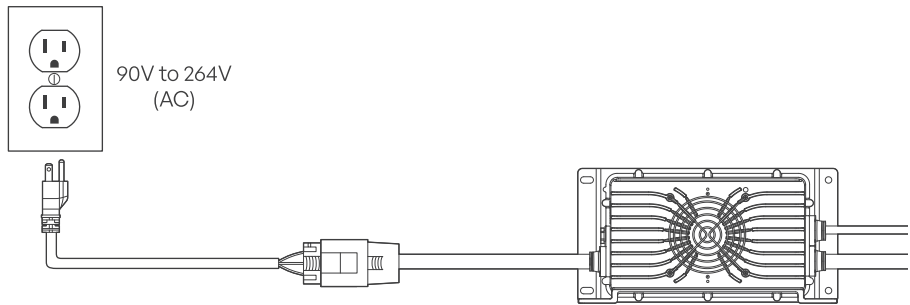
To power off the battery, press the On/Off Switch. After 1s, The switch LED will turn off, indicating the battery is powered off.

How to Charge the Battery?

Renogy 51.2V 105Ah Lithium Iron Phosphate Battery may be received at a partial state of charge (SOC) depending on the time between manufacturing and shipping. It is crucial to fully charge the battery before its initial use by using the included battery charger. For details, see “[Battery Charging/Discharging Logics](#)” in this manual.

Connect the AC input cable (3m) to a power outlet, and the battery charger will start charging the battery. You can check the charging status of the battery charger through the charger LED indicator on the charger.

Additionally, you can monitor the battery level through any or all of the following: the battery indicator, the additional charger indicator, and the Renogy app. For details, see “[Monitoring](#)” in this manual.



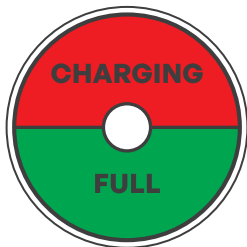
Monitoring

You can check the operating status of your battery and battery charger through any or all of the following:

- Charger LED indicator
- Included battery indicator
- Additional charger indicator
- Renogy app (free of charge)

These monitoring devices facilitate real-time monitoring of the battery and the battery charger, offering comprehensive control and enhanced flexibility.

Charger LED Indicator



Charging: Flickering red at an interval of 1s
Charge completed: Solid green

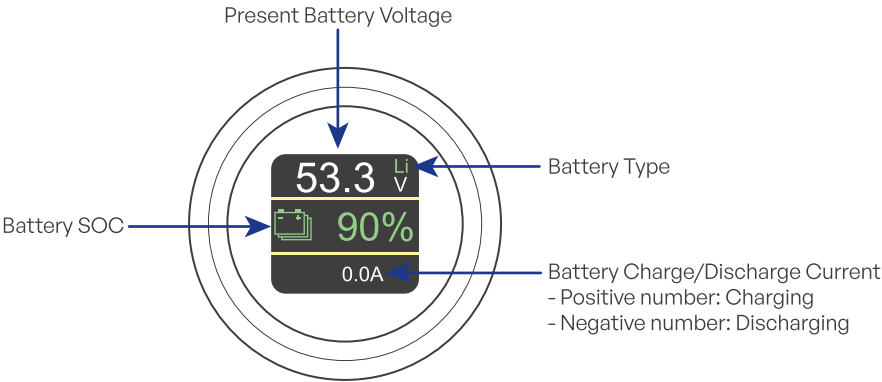
Additionally, the LED indicator provides alarms and visual alerts for various abnormalities. The LED illuminates in different patterns specific to faults on the battery charger or connected battery.

| Fault | Graphic Expression (One Cycle) |
|------------------|--------------------------------|
| Hardware Fault | Red/Green/Off/Off/Off/Off |
| AC Voltage Fault | Red/Green/Red/Green/Red/Off |

| Fault | Graphic Expression (One Cycle) |
|---------------------------------|--|
| Battery Not Connected | Red light blinks for about 20 seconds, then green light stays on |
| Battery Temperature Protection | Green/Red/Green/Off/Off/Off |
| Output Short Circuit Protection | Green/Red/Green/Red/Off/Off |

Battery Indicator

It is recommended to monitor the battery via the included battery indicator through CAN communication. After proper wiring, you can monitor the following data of the battery:



Renogy app

In addition to the included battery indicator, you can monitor the battery performance in the Renogy app remotely by pairing it with the app via Bluetooth.

Prior to monitoring via the app, please pay attention to the following:

- Ensure the Bluetooth of your phone is turned on.
- The version of the Renogy app might have been updated. Illustrations in the user manual are for reference only. Follow the instructions based on the current app version.
- To ensure optimal system performance, keep the phone within 10 feet (3 m) of the battery.

Step 1: Download and login to the latest Renogy app on your smart phone.



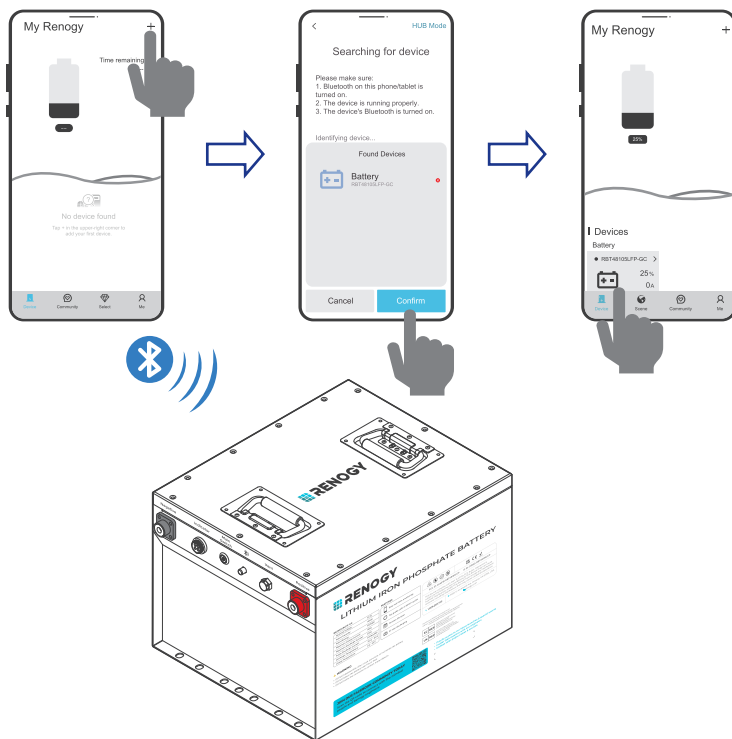
Renogy App



Step 2: Open the Renogy app. Tap + to search for new devices.

Step 3: Tap **Confirm** to add the newly found battery to the device list.

Step 4: Tap the battery icon to enter the device information interface.



Battery Charging/Discharging Logics

Charging Logic

Featuring high charging efficiency and long lifespan in a compact size, the battery charger charges the battery at up to 20A and 58.4V. The built-in temperature sensor allows the battery charger to work reliably at an extreme temperature range of -40°F to 122°F or -40°C to 50°C. Additionally, the IP66 design ensures its waterproof performance.

Charging Profile

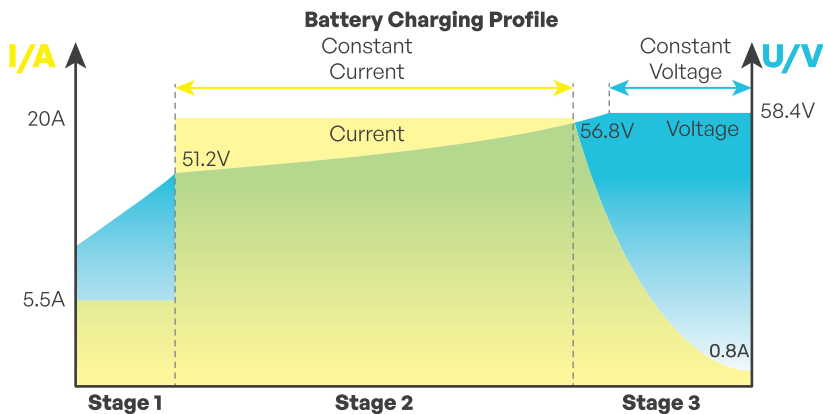
The battery charger follows a standard three-stage charging process:

Stage 1: Charge at a constant current of 5.5A with a voltage limit of 51.2V until the battery voltage reaches 51.2V.

Stage 2: Charge at a constant current of 20A with a voltage limit of 56.8V. If the battery voltage does not reach 56.8V, transit to Stage 3 after 10 hours.

Stage 3: Charge at a constant voltage of 58.4V with a current limit of 20A. Charging ends when the current drops to 0.8A, or the system shuts off after 5 hours if the current does not reach 0.8A.

The standard charging process requires battery temperatures to be between 32°F and 113°F (0°C and 45°C) for safe charging.



Status Indicators

You can get the charging status by checking the embedded LED on the battery charger.

| Battery/Charger Status | LED Status |
|------------------------|-------------------------------------|
| Charging | Flickering red at an interval of 1s |
| Charge completed | Solid green |

Protections

The battery charger offers multiple protection mechanisms listed in the table below:

| Protection Function | Description |
|-----------------------------|---|
| Reverse Polarity Protection | Prevents prevent damage in case of reverse connection of positive and negative terminals. |
| Short Circuit Protection | Automatically shuts down output during a short circuit. Charging resumes after the fault is resolved and the battery is reconnected. |
| Overcurrent Protection | The output current remains stable, avoiding overcurrent charging due to mains power or environmental fluctuations. |
| Temperature Protection | When the charger's internal temperature exceeds the preset limit, the charging current is reduced. If the battery temperature exceeds 60°C (140°F), charging stops. Charging resumes automatically when temperatures normalize. |

Discharging Logic

During standard discharging, the battery is discharged at a constant current of 105A until the voltage drops to 40V. To ensure safe discharging, the battery temperature should be between -4°F (-20°C) and 131°F (60°C).

- To ensure safe and optimal battery usage, it is recommended to pair the battery with discharge equipment that features a low voltage disconnect (LVD) function.
- Do not exceed the maximum continuous discharge current (105A) of the battery.

Battery Management System

The battery is equipped with a Battery Management System (BMS) that provides warnings and protections against overvoltage, undervoltage, overcurrent, short circuit, high temperature, and low temperature conditions. Refer to the table below for the triggering and recovery conditions of each warning and protection. The battery contains 16 cells in series.

Protection Mechanisms

| Battery Operating Status | | Condition (For Reference Only) | |
|----------------------------|------------|--------------------------------|---|
| Battery Cell Overvoltage | Protection | Trigger | Battery Cell Voltage $\geq 3.65\text{V}$ |
| | | Recover | Battery Cell Voltage $\leq 3.45\text{V}$ |
| Battery Cell Undervoltage | Protection | Trigger | Battery Cell Voltage $\leq 2.6\text{V}$ |
| | | Recover | Battery Voltage $\geq 2.8\text{V}$ |
| Charge High Temperature | Protection | Trigger | Battery Temperature $\geq 140^{\circ}\text{F}$ (60°C) |
| | | Recover | Battery Temperature $\leq 131^{\circ}\text{F}$ (55°C) |
| Discharge High Temperature | Protection | Trigger | Battery Temperature $\geq 140^{\circ}\text{F}$ (60°C) |
| | | Recover | Battery Temperature $\leq 131^{\circ}\text{F}$ (55°C) |
| Charge Low Temperature | Protection | Trigger | Battery Temperature $\leq 32^{\circ}\text{F}$ (0°C) |
| | | Recover | Battery Temperature $\geq 37.4^{\circ}\text{F}$ (3°C) |
| Discharge Low Temperature | Protection | Trigger | Battery Temperature $\leq -4^{\circ}\text{F}$ (-20°C) |
| | | Recover | Battery Temperature $\geq 5^{\circ}\text{F}$ (-15°C) |
| Charge Overcurrent | Protection | Trigger | Charge Current $\geq 180\text{A}$ (5s) |
| | | Recover | Discharge Current $\geq 1\text{A}$ or manual recovering by using the On/Off Switch |
| Discharge Overcurrent | Protection | Trigger | Discharge Current $\geq 400\text{A}$ (30s) |
| | | Recover | Charge Current $\geq 1\text{A}$ or manual recovering by using the On/Off Switch |
| Discharge Short Circuit | Protection | Trigger | There is short circuit on the load circuitry. |
| | | Recover | Remove the short circuit or manual recovering by using the On/Off Switch |

Warnings

| Warning | Condition (For Reference Only) | |
|--------------------------|--------------------------------|---|
| Battery Cell Overvoltage | Trigger | Battery Cell Voltage $\geq 3.6\text{V}$ |
| | Recover | Battery Cell Voltage $\leq 3.5\text{V}$ |


| Warning | Condition (For Reference Only) | |
|----------------------------|--------------------------------|---|
| Battery Overvoltage | Trigger | Battery Voltage $\geq 57.6\text{V}$ |
| | Recover | Battery Voltage $\leq 56.0\text{V}$ |
| Charge High Temperature | Trigger | Battery Temperature $\geq 131^{\circ}\text{F}$ (55°C) |
| | Recover | Battery Temperature $\leq 127.4^{\circ}\text{F}$ (53°C) |
| Charge Low Temperature | Trigger | Battery Temperature $\leq 32^{\circ}\text{F}$ (0°C) |
| | Recover | Battery Temperature $\geq 35.6^{\circ}\text{F}$ (2°C) |
| Charge Overcurrent | Trigger | Battery Current $\geq 120\text{A}$ |
| | Recover | Battery Current $\leq 70\text{A}$ |
| Primary Low SOC | Trigger | Battery SOC $\leq 15\%$ |
| Secondary Low SOC | Trigger | Battery SOC $\leq 5\%$ |
| Battery Cell Undervoltage | Trigger | Battery Cell Voltage $\leq 2.85\text{V}$ |
| | Recover | Battery Cell Voltage $\geq 2.90\text{V}$ |
| Battery Undervoltage | Trigger | Battery Voltage $\leq 43.0\text{V}$ |
| | Recover | Battery Voltage $\geq 45.0\text{V}$ |
| Discharge High Temperature | Trigger | Battery Temperature $\geq 131^{\circ}\text{F}$ (55°C) |
| | Recover | Battery Temperature $\leq 127.4^{\circ}\text{F}$ (53°C) |
| Discharge Low Temperature | Trigger | Battery Temperature $\leq 5^{\circ}\text{F}$ (-15°C) |
| | Recover | Battery Temperature $\geq 37.4^{\circ}\text{F}$ (-13°C) |
| Discharge Overcurrent | Trigger | Battery Current $\geq 400\text{A}$ |
| | Recover | Battery Current $\leq 350\text{A}$ |
| MOS High Temperature | Trigger | MOS Temperature $\geq 158^{\circ}\text{F}$ (70°C) |
| | Recover | MOS Temperature $\leq 152.6^{\circ}\text{F}$ (67°C) |

Troubleshooting

Check the table below for common problems and relative solutions of the battery.

| Problem | Possible Causes | Solution |
|--|---|--|
| <ul style="list-style-type: none"> The battery is unable to be activated with a charge/discharge current greater than 1A The battery is activated at resting voltage below 40V | Severe battery overdischarge due to self-discharge or parasitic loads | Revive the battery with a battery charger or charge controller featuring lithium battery activation or force charging. |

| Problem | Possible Causes | Solution |
|---|---|--|
| The battery shuts off due to undervoltage protection. | The battery voltage drops below the preset threshold | Disconnect the battery from loads, and charge the battery with a current greater than 1A as soon as possible. |
| The battery cuts off the charging current due to overvoltage protection. | The battery voltage exceeds the preset threshold during charging. | <ol style="list-style-type: none"> 1. Disconnect the battery from the charging source. 2. Reduce charge voltage by 0.2V to 0.4V for 6 hours. 3. Attempt to fully charge the battery again with the correct voltage setting. If the problem persists with a lithium iron phosphate compatible charging source and correct voltage setting, repeat the above steps. |
| The battery temperature gets too low during operation and the self-heating function doesn't work very well. | The charger connected to the battery has very little current. | Check the charging current of the charger for each battery more than 10A. |
| The battery is shorted and triggers short circuit protection. | Short circuit occurs in the battery. | <ol style="list-style-type: none"> 1. Remove the short circuit as soon as possible 2. Charge the battery with a current greater than 1A. |
| Charge/Discharge over-current protection is triggered due to too high current passing through the battery. | Excessive current flows through the battery during charging or discharging. | Disconnect the battery from the charging source or loads as soon as possible. |

 For further assistance, contact Renogy technical support service at <https://www.renogy.com/contact-us>.

Specifications

Battery Specifications

| | |
|--------------------------------------|-------------------------------|
| Rated Capacity (0.5C, 25°C) | 105Ah |
| Nominal Voltage | 51.2V |
| Charge Voltage Range | 40V to 58.4V |
| Recommended Charge Current | 15A to 105A |
| Recommended Discharge Current | 105A (210A, Max) |
| Peak Discharge Current | 400A @30s |
| Charge Temperature Range | 32°F to 113°F / 0°C to 45°C |
| Discharge Temperature Range | -4°F to 140°F / -20°C to 60°C |

| | |
|-----------------------------|---|
| Storage Temperature Range | 41°F to 113°F / -5°C to 45°C |
| Operation Relative Humidity | 10% to 95% |
| Cycle Life (0.5C, 25°C) | 5000 Cycles (80% DOD) |
| Communication | Bluetooth |
| Dimensions | 15.55 × 12.99 × 10.63 in / 395 × 330 × 270 mm |
| Weight | 106.92 lbs / 48.5 kg |
| Terminal Bolt Size | M8 × 15 mm |
| Protection Rating | IP65 |
| Certification | UKCA, RoHS, CE, UN38.3, MSDS, FCC, and IC |
| Warranty | 5 years |

Battery Charger Specifications

| | |
|-----------------------------------|---|
| Nominal Charge Voltage | 51.2V |
| Maximum Charge Voltage | 58.4V |
| Maximum Continuous Charge Current | 20A |
| AC Input Voltage Range | 90V to 264V |
| Operating Temperature | -40°F to 122°F / -40°C to 50°C |
| IP Rating | IP66 |
| Dimensions | 11.1 × 5.75 × 3.24 in / 282 × 146 × 82.4 mm |
| Operation Relative Humidity | 10% to 95% |

Maintenance & Storage

Inspection

Please perform regular inspections following the steps below:

- Examine the external appearance of the battery and battery charger. The housing and terminals of the battery and battery charger shall be clean, dry, and free of corrosion.
- Check battery and battery charger cables and connections. Replace any damaged cables and tighten any loose connections.

i In certain application scenarios, corrosion may occur around the terminals. Corrosion can cause increased resistance and poor contact. It is recommended to regularly apply insulation grease to each terminal. Insulation grease can form a moisture-resistant seal and protect the terminals from corrosion.

Cleaning

Please clean the battery and battery charger at regular intervals following the steps below:

- Disconnect the battery and battery charger from the system.
- Clear the leaves and debris from the battery and battery charger.

- Clean the battery and battery charger with a soft, lint-free cloth. The cloth can be dampened with water or mild soap and water if the battery and battery charger is extremely dirty.
- When cleaning the battery or battery charger with water, do not touch the device terminals. Do not let water flow into the cooling fan of the battery charger to prevent damage to the device.
- Dry the battery and battery charger with a soft, lint-free cloth.
- Keep the area around the battery and battery charger clean.
- Reconnect the battery and battery charger to the system.


Checking Voltage

Please check the battery voltage periodically to assess battery health. If the battery is unable to be activated with a charge/discharge current greater than 1A or the battery is activated with a resting voltage below 40V, the battery may have been severely overdischarged due to self-discharge or parasitic loads. Please stop using the battery until the fault can be corrected and the battery can be charged.

Storage

Please follow the steps below to ensure that the battery emerges from storage in a good condition:

- Charge the battery to 30% to 50% SOC.
- Disconnect the battery from the system.
- Store the battery in a well-ventilated, dry, clean area with temperatures between 41°F and 113°F (-5°C to 45°C).
- Do not expose the battery to direct sunlight, moisture, or precipitation.
- Handle the battery carefully to avoid sharp impacts or extreme pressure on the battery housing.
- Charge the battery at least once every 3 to 6 months to prevent it from overdischarge.
- Fully charge the battery when it is taken out of storage.

 Please follow the steps above to store the battery. Otherwise, the warranty will be void.

Important Safety Instructions

Renogy accepts no liability for any damage caused by:

- Force majeure including fire, typhoon, flood, earthquake, war, and terrorism.
- Intentional or accidental misuse, abuse, neglect or improper maintenance, and use under abnormal conditions.
- Improper installation, improper operation, and malfunction of a peripheral device.
- Contamination with hazardous substances or radiation.
- Alterations to the product without express written consent from Renogy.

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 battery and battery charger.
- Keep the battery and battery charger out of the reach of children.
- Do not dispose of the battery and battery charger 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.
- Do not expose the battery and battery charger to flammable or harsh chemicals or vapors.
- Clean the battery and battery charger regularly.
- Do not expose the battery and battery charger to strong electrostatic fields, strong magnetic fields, or radiation.

- Please keep the battery and battery charger away from water, heat sources, sparks, and hazardous chemicals.
- Do not place the battery and battery charger in areas exposed to rain or water.
- Do not puncture, drop, crush, burn, penetrate, shake, strike, or step on the battery and battery charger.
- Do not open, dismantle, repair, tamper with, or modify the battery and battery charger.
- Do not touch any terminals or connectors.
- Do not insert foreign objects into the positive and negative terminals of the battery and battery charger.

Battery Safety

- Do not open or damage batteries. Released electrolyte is harmful to the skin and eyes. It may be toxic.
- Before operating the battery, ensure that the battery charger is not connected to a power outlet.
- Do not place tools on top of the battery.
- Please use suitable handling equipment for safe transportation of the battery.
- Do not connect the battery in series or parallel.

Battery Charger Safety

- Ensure the charger is properly grounded to prevent electric shock from induced currents on the chassis and to guarantee personal safety.
- The charger contains high-voltage components. Do not attempt to disassemble or repair it without proper authorization.
- Do not block the cooling fans of the charger to ensure proper cooling.
- Always disconnect the power cable and charging plug before moving the charger to prevent damage or electrical hazards.
- The battery voltage must match the rated voltage of the charger.

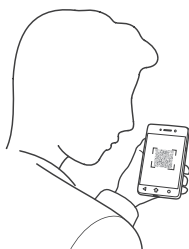
Renogy Support

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

 | renogy.com/support/downloads



→ contentservice@renogy.com



Questionnaire Investigation



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:

Canada |  | ca.renogy.com

China |  | www.renogy.cn

Australia |  | au.renogy.com

Japan |  | jp.renogy.com

Other Europe |  | eu.renogy.com

Germany |  | de.renogy.com

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- Priority access to our latest launches & special events
- Insider Q&A sessions with our engineers
- Endless solar project ideas & sources



FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference, and
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- (1) Reorient or relocate the receiving antenna.
- (2) Increase the separation between the equipment and receiver.
- (3) Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- (4) Consult the dealer or an experienced radio/TV technician for help.

FCC Radiation Exposure Statement

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.



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 1 kW 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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Renogy reserves the right to change the contents of this manual without notice.

Manufacturer: RENOGY New Energy Co.,Ltd

Address: No.66, East Ningbo Road Room 624-625 Taicang German
Overseas Students Pioneer Park JiangSu 215000 CN



eVatmaster Consulting GmbH
Raiffeisen Street2 B11,
63110 Rodgau, Hessen, Germany
contact@evatmaster.com



EVATOST CONSULTING LTD
Office 101 32 Threadneedle Street,
London, United Kingdom, EC2R 8AY
contact@evatost.com

RENOGY.COM



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