RENOGY
SUPERIOR OFF-GRID SOLUTIONS

RENOGY ONE Core

RSHGWSN-W02W-G1/RSHGWSN-W02W-G2

VERSION A2
August 30, 2024

USER MANUAL

Before Getting Started

The user manual provides important operation and maintenance instructions for Renogy ONE Core (hereinafter referred to as Core).

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 Renogy ONE Core, potentially rendering it inoperable.

- Renogy ensures the accuracy, sufficiency, and the applicability of information in the quick guide at the time of printing due to continual product improvements that may occur.
- Renogy assumes no responsibility or liability for personal and property losses, whether directly and indirectly, caused by the user's failure to install and use the product in compliance with the user manual.
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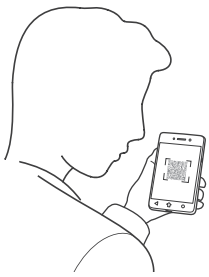
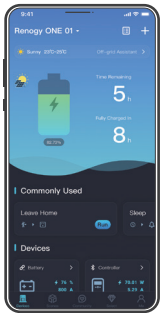
Online Manual



Quick Guide

User Manual

DC Home App



DC Home App

GTE IT ON Google Play

Download on the App Store

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1. General Information

1.1. 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.

1.2. Introduction

Renogy ONE Core provides a comprehensive solution for energy monitoring and analysis, enabling users to monitor and analyze energy data at any time.

Thanks to the ONE Connect 2.0 technology, Renogy ONE Core allows energy monitoring both locally through the built-in screen and remotely via Renogy ONE Portal and DC Home app.

Additionally, the ONE Core features an RV leveling system for optimal stability and can function as a smart home hub, seamlessly connecting with other smart home appliances.

1.3. Key Features

- **24/7 Energy Analysis**
  Monitor and analyze energy data anytime.
- **Worldwide Monitoring**
  Remote energy monitoring anywhere through ONE Connect 2.0
- **Built-in RV Leveling**
  Effortlessly adjust your RV's position to achieve optimal stability and comfort.
- **Smart Home Integration**
  Function as a central hub for your smart home, seamlessly connecting and controlling all your smart home appliances.
- **Easy Installation**
  Simple setup process that ensures the device is perfectly level, eliminating the need for repeated adjustments.
- **Over-the-Air (OTA) Updates**
  Stay up to date with the latest features and improvements through continuous over-the-air updates.

1.4. SKU

RENOGY ONE Core	RSHGWSN-W02W-G1
RENOGY ONE Core (CAN)	RSHGWSN-W02W-G2

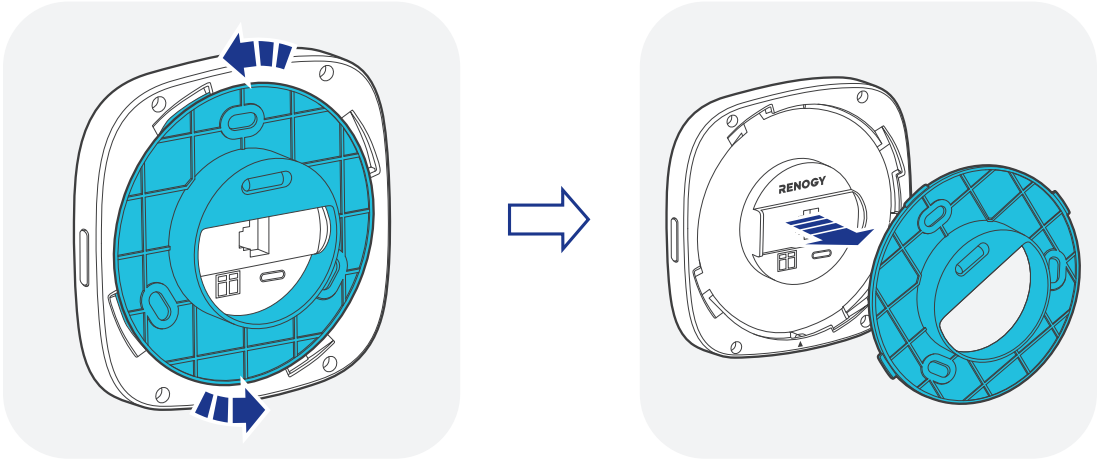
Renogy ONE Core comes in two models:

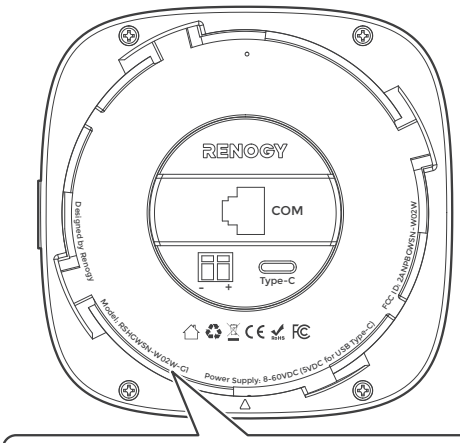
1. RSHGWSN-W02W-G1 model that does NOT support CAN communication
2. RSHGWSN-W02W-G2 model that supports CAN communication

The generation number is identified in the silkscreen on the back of the Renogy ONE Core.

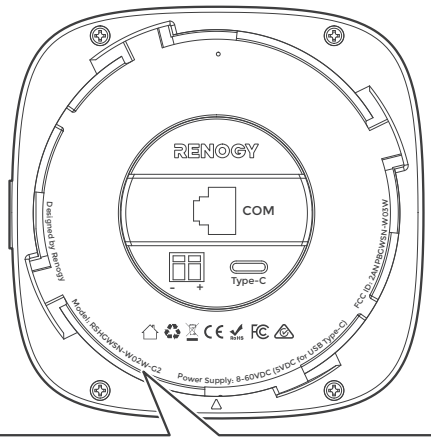
1.5. How to Check the Core Model?

Remove the mounting base and check the silkscreen on the back of the Core.





Model: RSHGWSN-W02W-G1



Model: RSHGWSN-W02W-G2

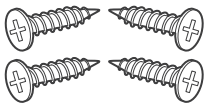
2. Get to Know RENOGY ONE Core

2.1. What's In the Box?

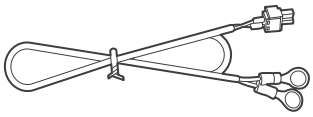
RENOGY ONE Core × 1

Quick Guide × 1

M3.5*14 mm



Mounting Screws × 4
(1 extra)

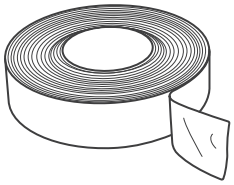


Power Cable (5 m) × 1

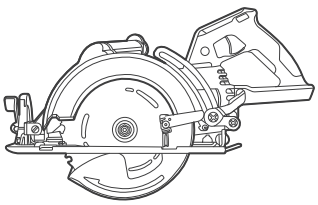
Make sure that all accessories are complete and free of any signs of damage.

2.2. Required Tools

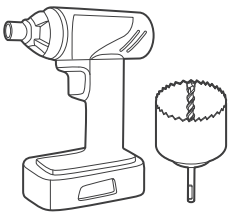
Phillips Screwdriver (#1)



Insulation Tape



Skill Saw



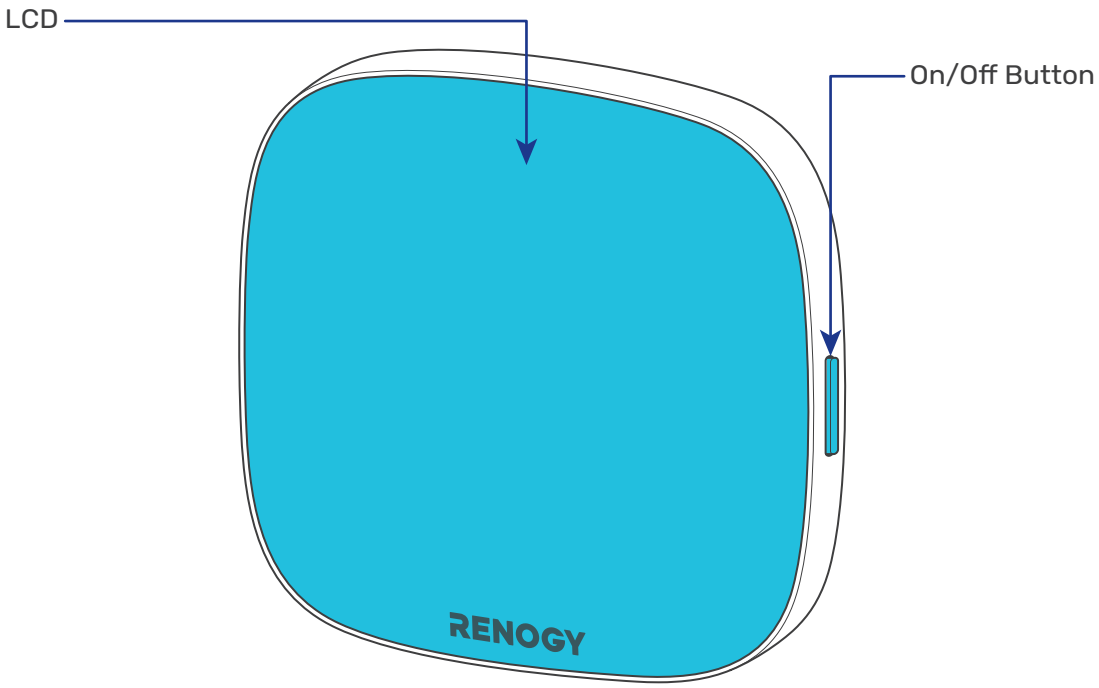
Impact Drill with Hole Saw, 2.17 in/55 mm

Tools are required only when the Core is flush mounted on a wall.

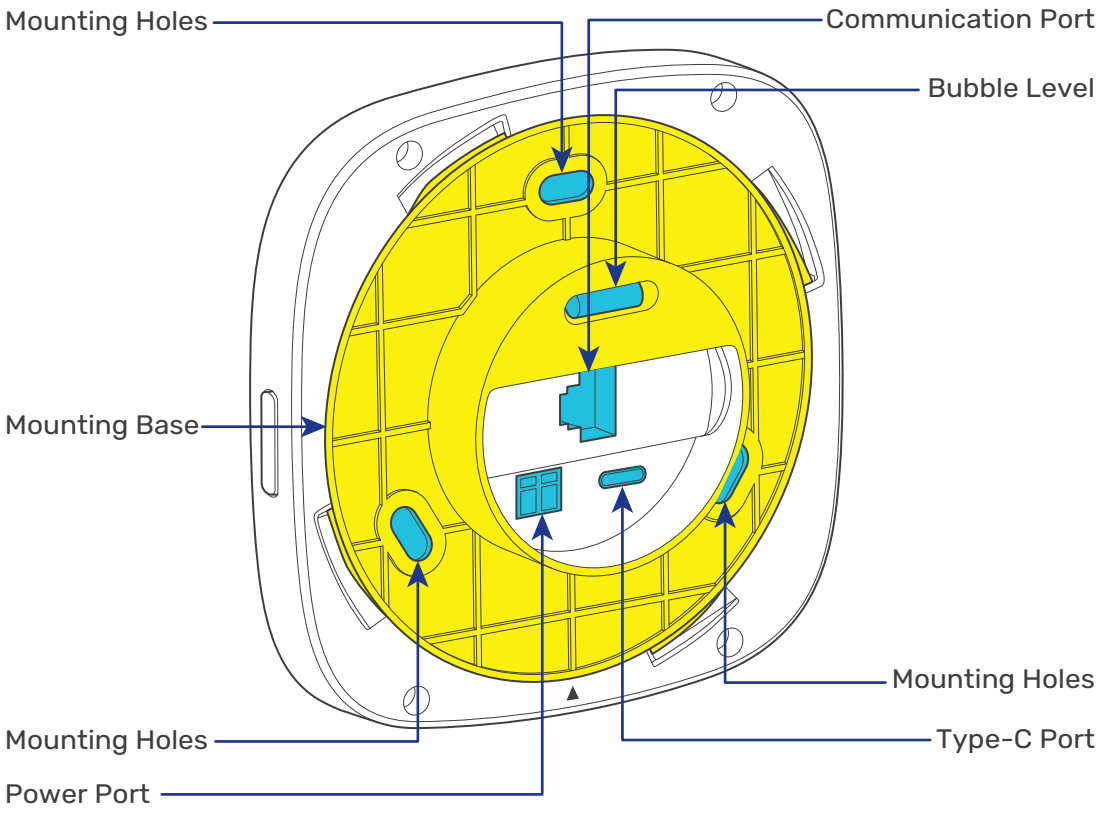
You can use either a skill saw or an electric drill with a hole saw.

2.3. Product Overview

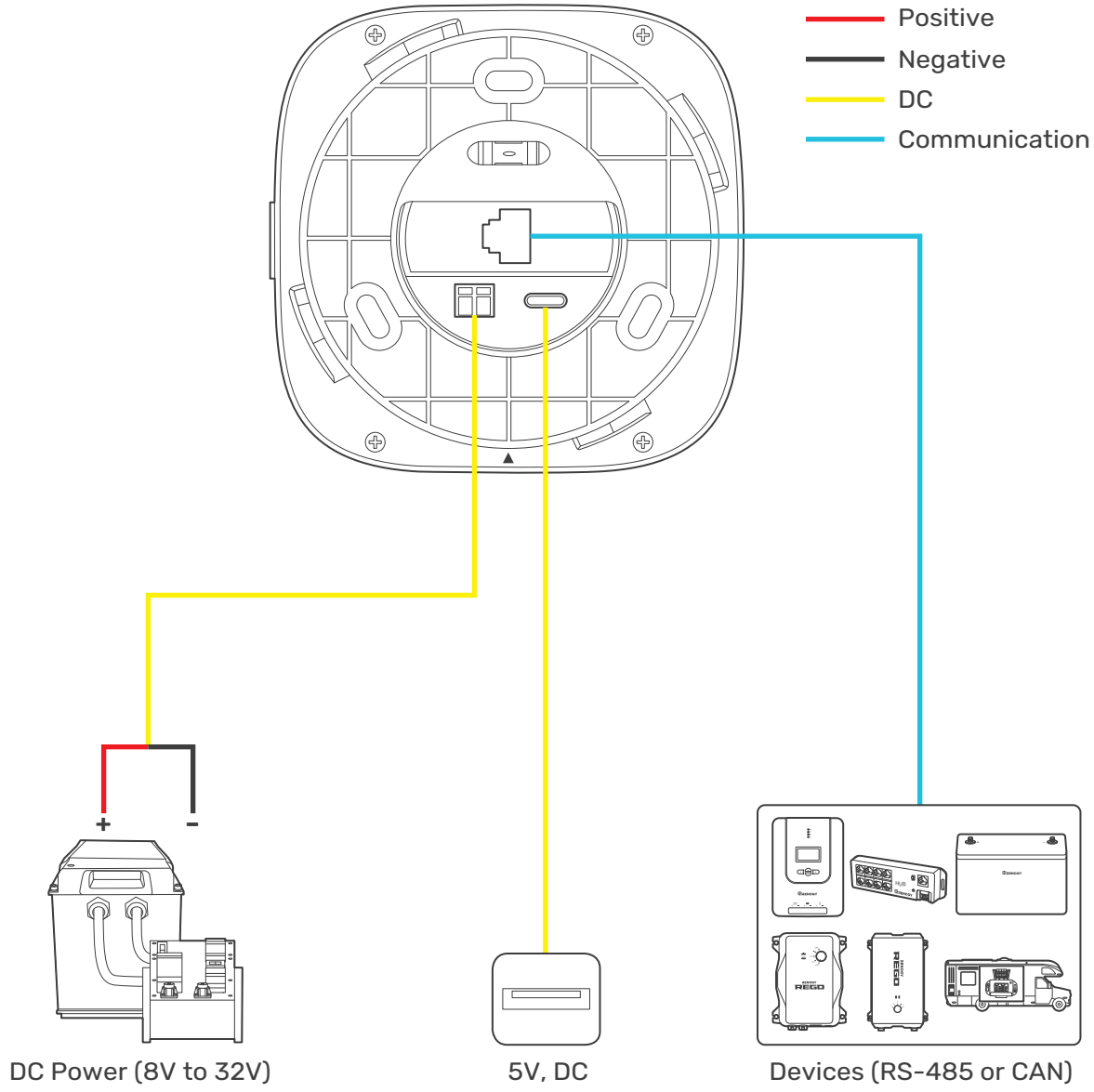
Front



Rear



2.4. System Setup



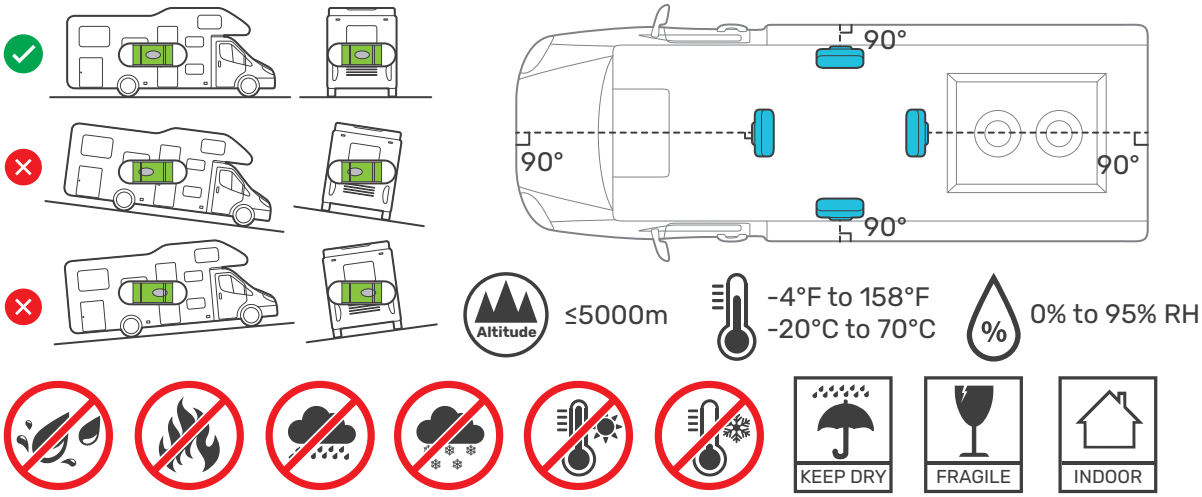
You can choose either the Power Port or the Type-C port to supply Renogy ONE Core.

CAN devices are applicable to the RSHGWSN-W02W-G2 model.

3. Preparation

3.1. Installation Site and Environment

To ensure proper running of the RV leveling function on Renogy ONE Core, ensure it is installed in a spot with the screen pointing to the front, rear, left, or right side of the RV, vertically to the RV floor. It is recommended that RV leveling blocks should be used during the leveling process.



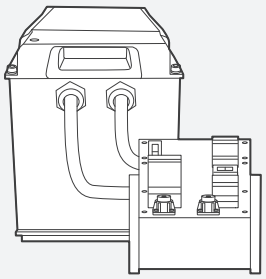
- Install the Renogy ONE Core indoors and prevent its components from being exposed to direct sunlight.
- Do not expose Renogy ONE Core to flammable or harsh chemicals or vapors.
- Keep Renogy ONE Core out of the reach of children.
- Make sure that the Renogy ONE Core is installed with ambient temperature range from -4°F to 158°F or -20°C to 70°C.
- Make sure that the Renogy ONE Core is installed in an environment with relative humidity between 0% and 95% and no condensation.
- To ensure quality wireless communication for Renogy ONE, keep it away from metal objects at a minimum distance of 200 mm or 7.9 inches.

3.2. Checking Renogy ONE Core

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

- Do not use Renogy ONE Core if it appears to be damaged.
- There are no serviceable parts in Renogy ONE Core. Do not open, dismantle, repair, tamper with, or modify it.
- Wear proper protective equipment and use insulated tools during installation.
- Do not dispose of Renogy ONE Core as household waste. Comply with local, state, and federal laws and regulations and use recycling channels as required.

3.3. Checking DC Power



8V to 32V

Ensure that the connected DC power supply rates at 8V to 32V. Connecting the Core to a power source beyond the range results in a power-on failure or permanent damage to the Core.

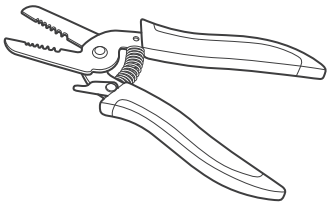
Confirm the polarities of the devices before connecting Renogy ONE Core to a power supply. A reverse polarity contact can result in damage to the Core, thus voiding the warranty.

Risk of electrical shock! Ensure the connected DC power is turned off before connecting it to the Renogy ONE Core.

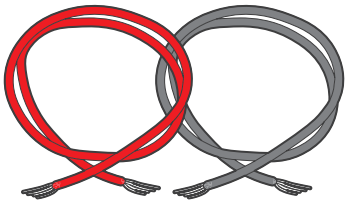
3.4. Extend the Power Cable

If the included power cable is not long enough for connecting Renogy ONE Core to your DC power supply, re-select a mounting position or use an extension cable (≥ 22 AWG).

Recommended Tools & Accessories

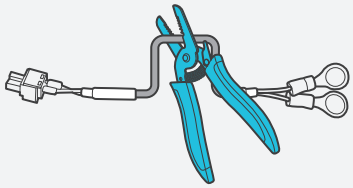


Wire stripper

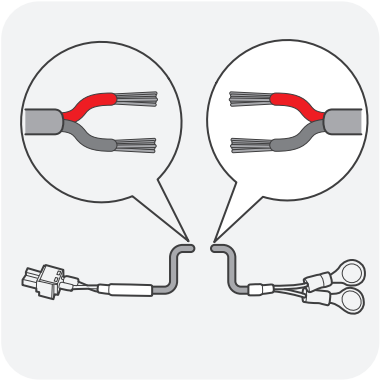


Bare Wires (≥ 22 AWG) × 2

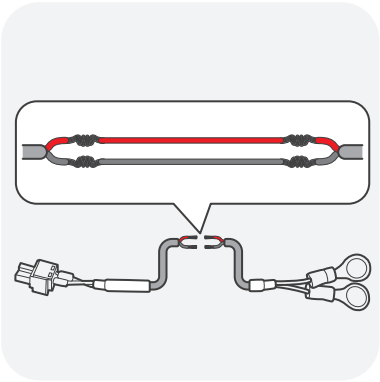
Confirm the polarities of the included cable and the extension one before connecting them. A reverse polarity contact will result in abnormal operations. The extension cable should not exceed 10 meters (32.8 feet).



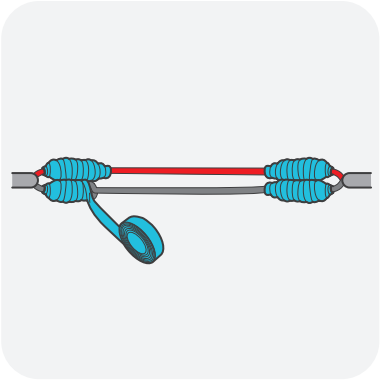
1. Cut the included power cable.



2. Strip off some of the insulation.



3. Strip some insulation off the extension cable, and connect the cable to the included power supply cable.



4. Tape over the cutoff areas.

3.5. How to Connect RS-485 Communication Devices (Optional)

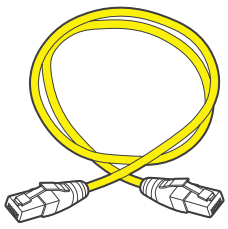
Renogy ONE Core can communicate with Renogy energy devices in several ways:

1. Bluetooth wireless communication;
2. Wired communication based on RS-485 protocol;

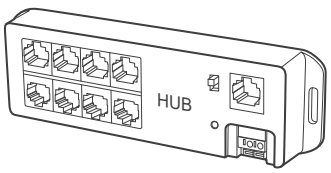
You can choose an appropriate communication method according to the actual situation.

- For Bluetooth wireless communication, communication wiring is not required.
- For RS-485 communication, you need to wire Renogy ONE Core with energy devices.

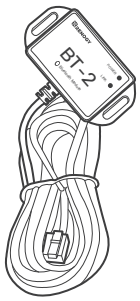
Recommended Components & Accessories



RJ45 Ethernet Cable(s)
(CAT5 or above)



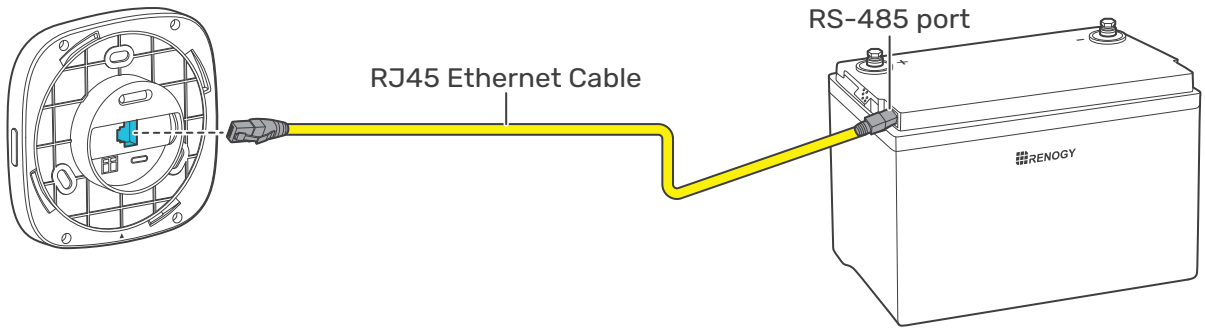
Renogy Communication Hub
(For Multiple RS-485 Devices)



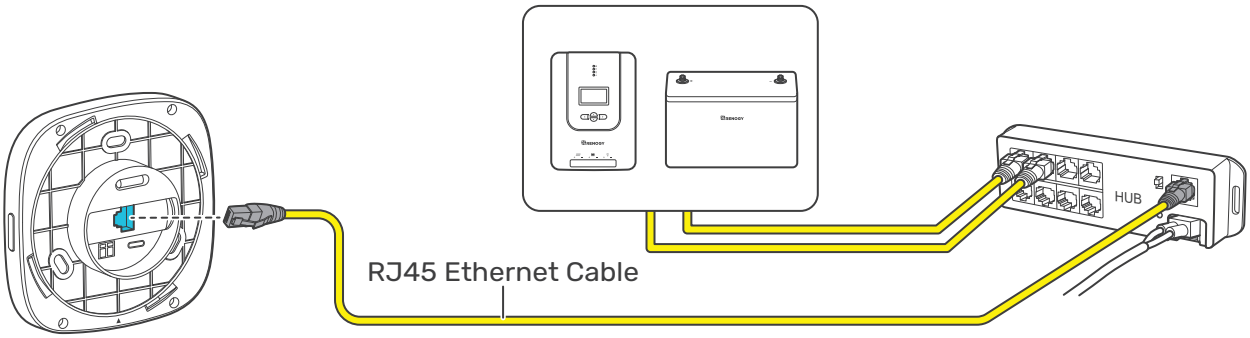
Renogy BT-2 Bluetooth Module
(For Multiple Devices)

Select the appropriate communication cable (sold separately) according to the distance between devices. The communication cable should be less than 6 meters (19.6 feet).

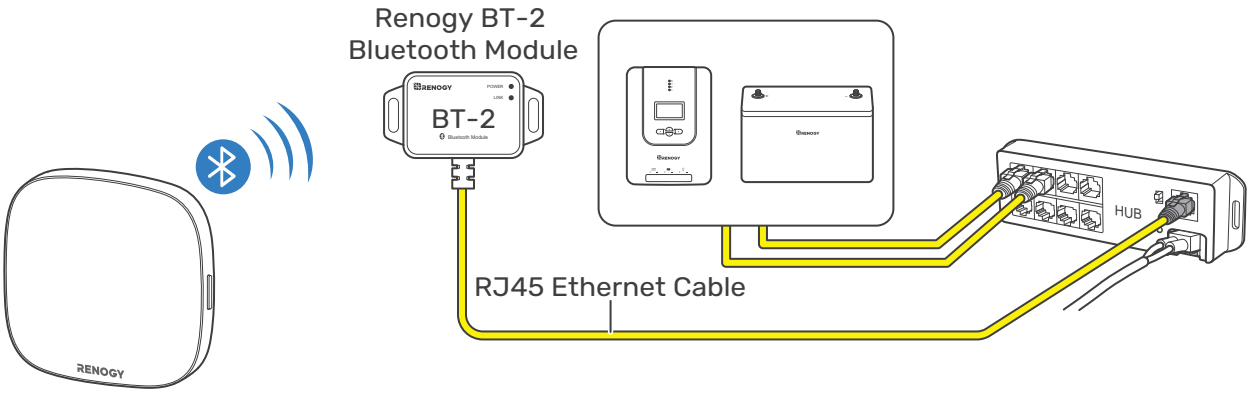
Only One Device



Multiple Devices (Wired Connection)



Multiple Devices (Wireless Connection)



When adding multiple devices to Renogy ONE Core through the Communication Hub via only ONE BT-2 Bluetooth module, connect every single device to Renogy ONE Core individually through the hub first, and then reconnect all devices to the hub. Turn to the hub's manual for more details.

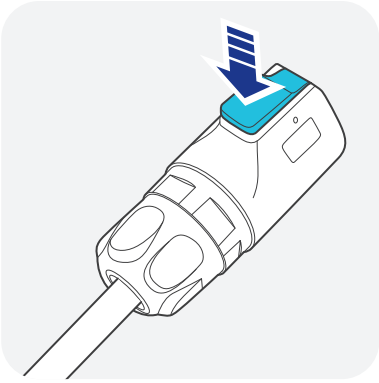
3.6. How to Connect to CAN Communication Devices (Optional)

This section applies to RSHGWSN-W02W-G2 and later users only.

The second-generation and later Renogy ONE Core (RSHGWSN-W02W-G2 and later) can communicate with other Renogy devices supporting CAN communication, enabling safe operation, smart control, remote monitoring, and programmable settings.

How to wire RV-C communication cables varies depending on the connection network topology. Both backbone and daisy chain topologies are supported.

For technical support from Renogy, please contact us through renogy.com/contact-us/.



To properly connect or disconnect the LP16 Terminal Plug to or from the Renogy devices supporting CAN communication, you should

1. Ensure that the plug is oriented vertically toward the CAN1 Communication Port.
2. Press and hold the snap until the process is complete.

Shaking while plugging or unplugging is not allowed.

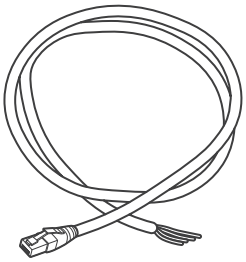
Backbone Network

Ensure 120Ω terminating resistors are installed at both ends of the RV-C bus for successful communication with Renogy devices supporting CAN communication. If the RV user manual does not determine if the RV-C bus has a built-in 120Ω termination resistor, call the RV manufacturer to confirm.

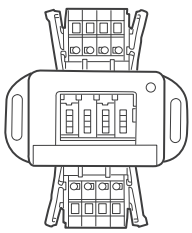
If the RV-C bus does not have a built-in 120Ω termination resistor, the Renogy ONE Core will not communicate properly with other Renogy devices supporting CAN communication. Please use the Daisy Chain Network for communication connections.

Connect devices to Renogy ONE Core according to the wiring diagram provided by the RV manufacturer. Choose proper communication cables according to your specific demands.

Recommended Accessories



Communication Cable
(RJ45 Plug to Bare Drop Cable)



Common Drop Tap

The drop cable shall not exceed 19.6 feet (6 m), and the RV-C bus shall not exceed 98.4 feet (30 m).

Different drop taps are used on the RV-C bus by different RV manufacturers. This user manual takes the pinout of the MCS MIDI Classic terminal block plug (4-Pin) as an example.

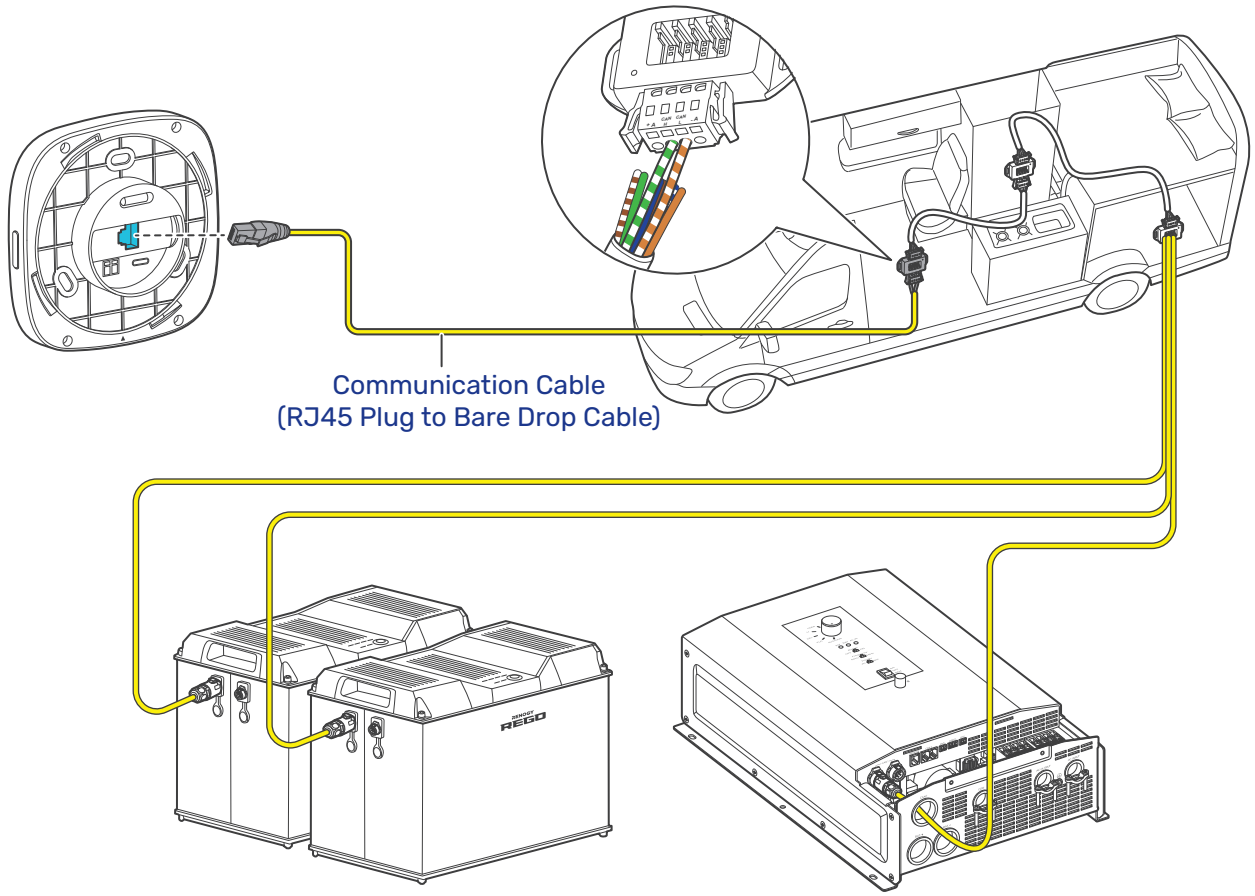
Step 1: Locate the drop tap (not included) on the RV-C bus that is the closest to the Renogy ONE Core installation location. The drop taps are usually located above the entry door, in the bathroom, or under the bed in the RV.

Step 2: Replace the terminated drop tap at either end of the RV-C bus with the Common Drop Tap (not included). Secure the bare wires of the Drop Cable (not included) onto the terminal block plug of the Common Drop Tap following the terminal block plug pinout.

Step 3: Connect the preembedded RJ45 connector to the RJ45 communication port of Renogy ONE Core.

If the drop taps cannot be located, please contact the RV manufacturer for help.

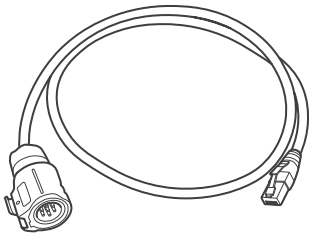
Different terminal block plugs are used on different Common Drop Taps and follow different pinouts. If you are unsure about the pinout of the terminal block plug, contact the RV manufacturer.



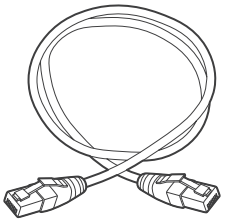
Daisy Chain Network

The daisy chain network applies to RVs that are not integrated with RV-C buses.

Recommended Accessories



Communication Cable
(LP16 Plug (7-Pin) to RJ45 Communication Adapter Cable)



RJ45 Ethernet Cable
(CAT5 or above)

The communication cable should be less than 19.6 feet (6 m).

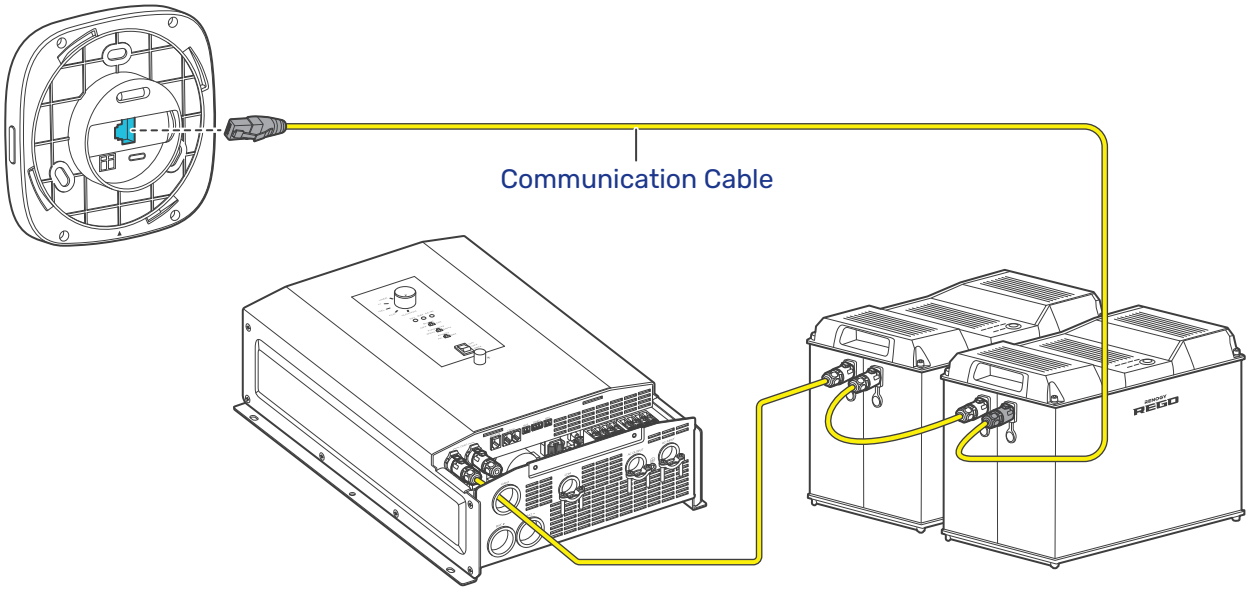
Please select the appropriate communication cable based on the device communication port type. This manual uses the LP16 Plug (7-Pin) to RJ45 Communication Adapter Cable as an example.

Step 1: Connect Renogy devices supporting CAN communication in series through either of the CAN Communication Ports with the LP16 Plug (7-Pin) Communication Cable(s) (sold separately).

Step 2: Plug the Terminator Plugs (sold separately) into the free CAN Communication Ports on the first and last Renogy devices supporting CAN communication.

Step 3: Unplug the LP16 Terminator Plug (7-Pin) from the first or last Renogy device supporting CAN communication in the communication network. Insert the LP16 Plug (7-Pin) to RJ45 Communication Adapter Cables into the communication ports of other Renogy devices supporting CAN communication.

Step 4: Connect the preembedded RJ45 connector to the RJ45 port of Renogy ONE Core.



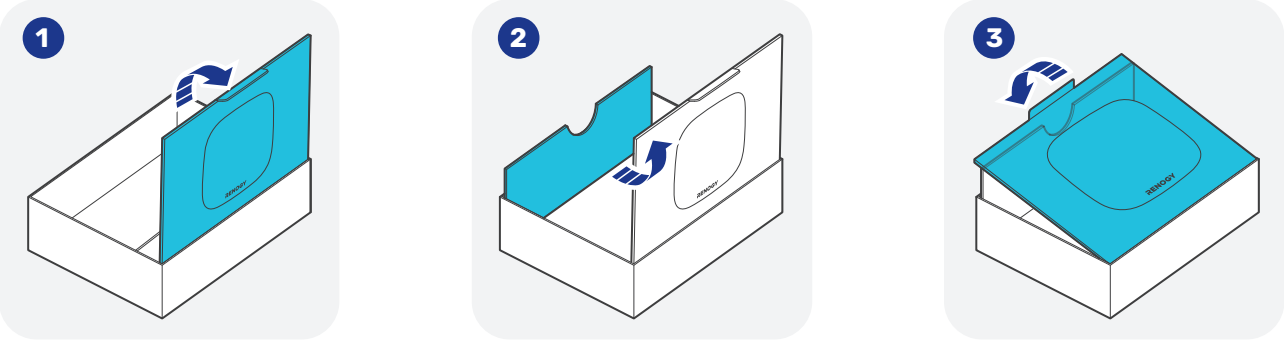
4. Installation

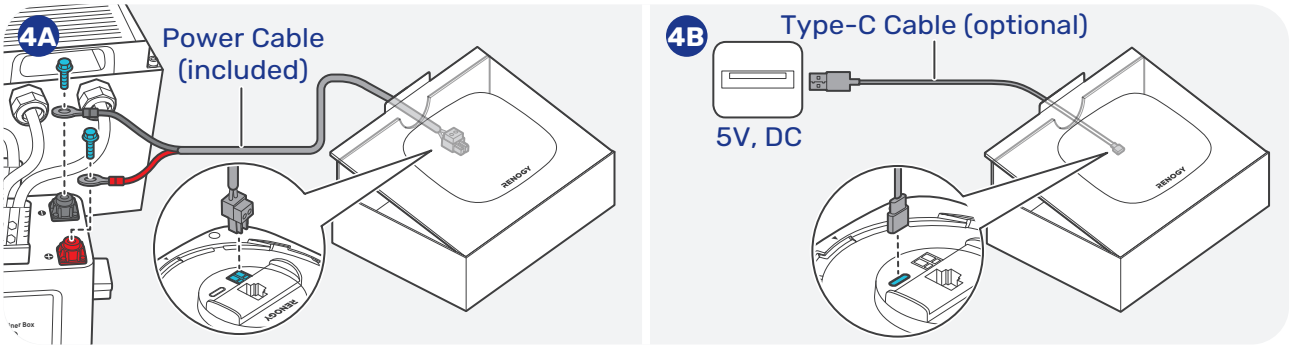
You can place Renogy ONE Core on a table or mount it on a wall.

4.1. Place Renogy ONE Core on a Table

The package box is environmentally friendly. You can use it as a bracket to hold the Core when installing it on the wall is not required.

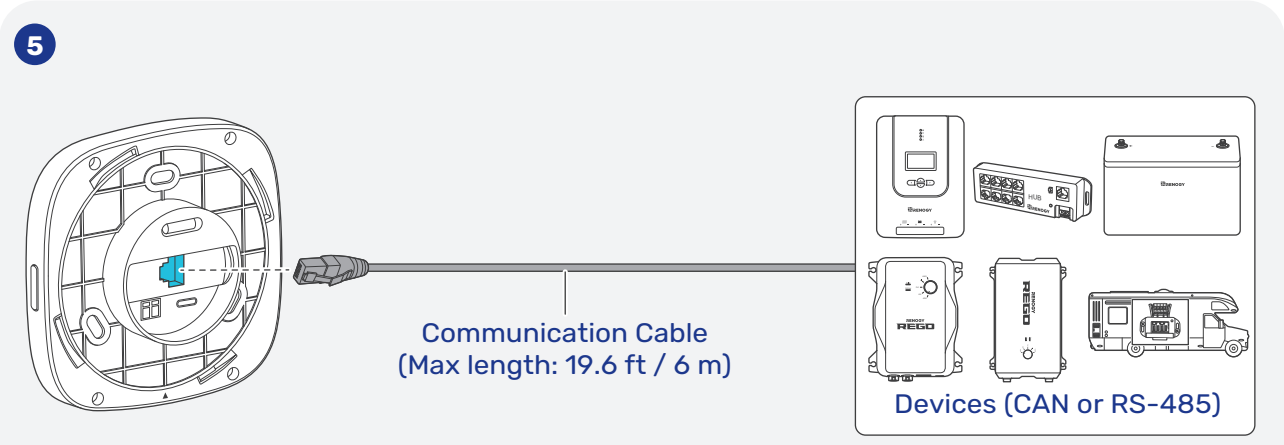
The RV leveling function is unavailable on Core when it is placed on a table.





When installing the power cable, always connect the negative first, and then the positive.

You can connect Renogy ONE Core to a power supply through the included power cable or a Type-C cable (not included).

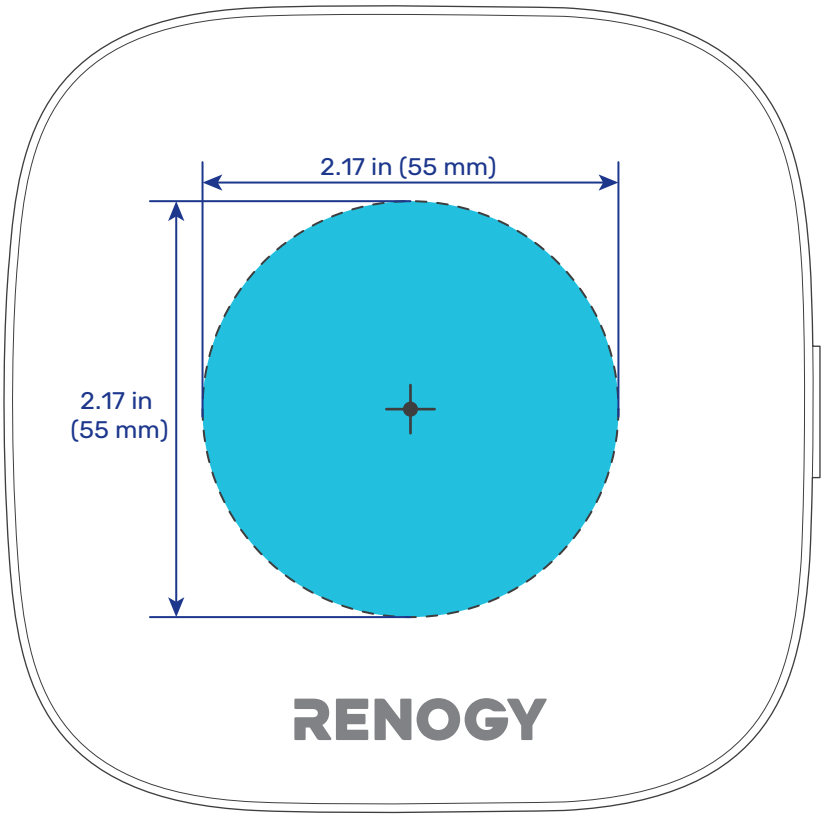


For details, see "3.5. How to connect RS-485 Communication Devices (Optional)" and "3.6. How to connect CAN Communication Devices (Optional)".

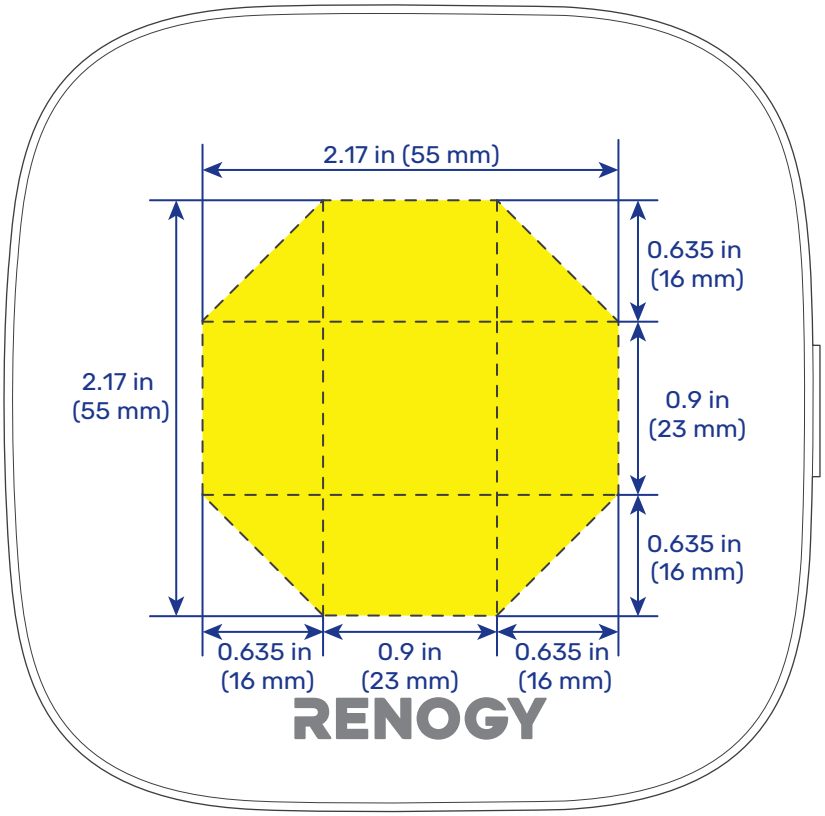
4.2. Mount Renogy ONE Core on a Wall

Please tear off quick guide mounting template or print this piece of paper, and paste it to the mounting location for drilling holes. You can also draw your own Mounting Template based on the dimensions indicated in the following image.

Mounting Template #1 (Use an Impact Drill with a Hole Saw, 2.17 in/55 mm)



Mounting Template #2 (Use a Skill Saw)



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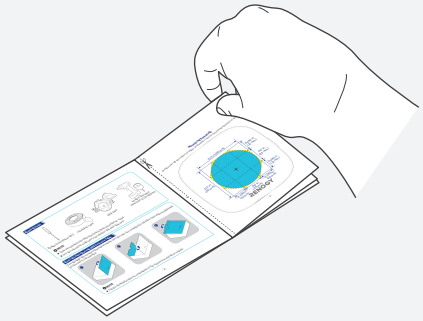

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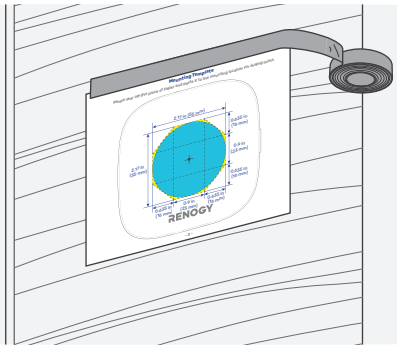

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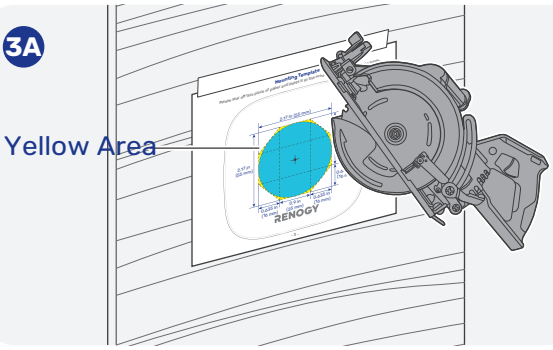

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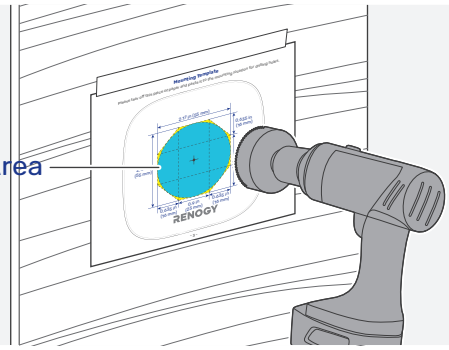

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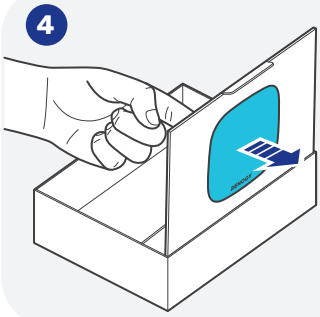

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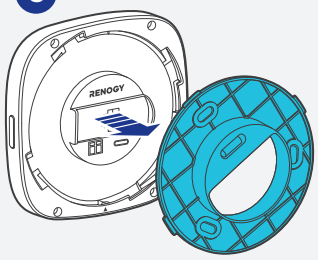

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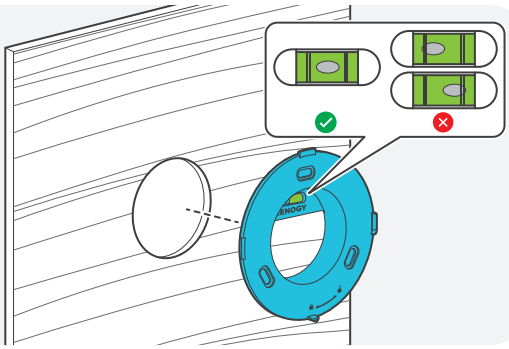

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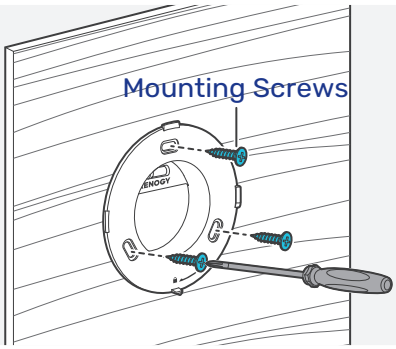

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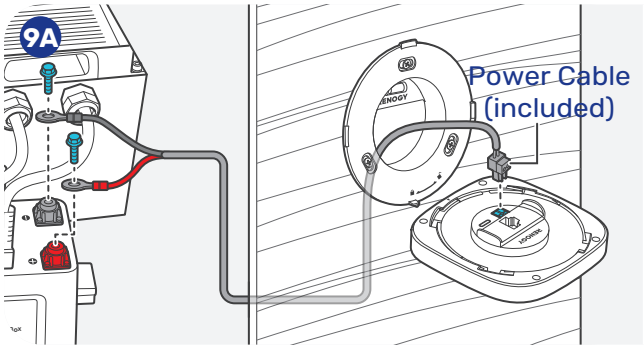

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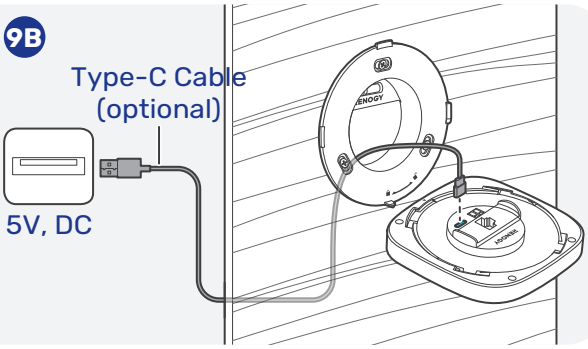
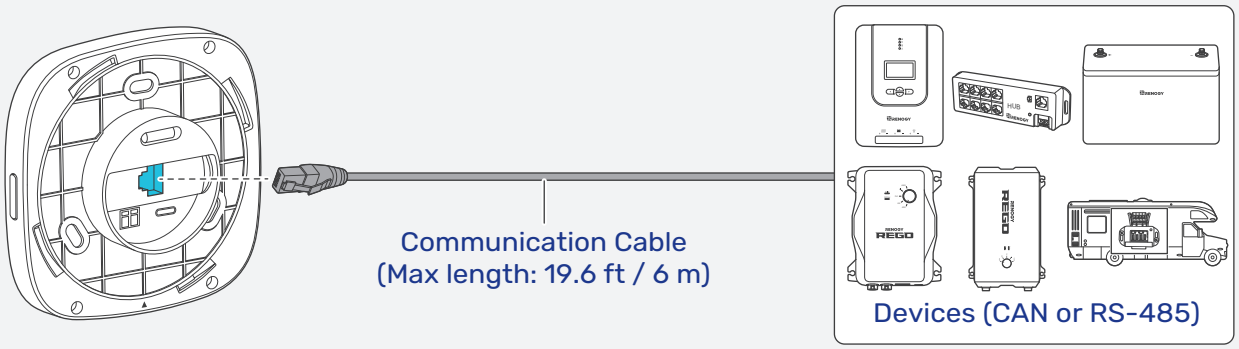


When installing the power cable, always connect the negative first, and then the positive.

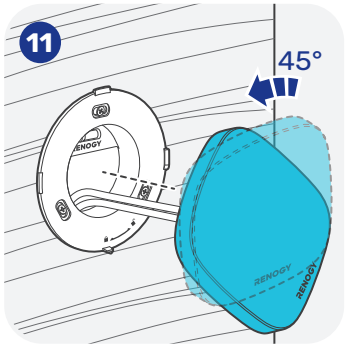
You can connect Renogy ONE Core to a power supply through the included power cable or a Type-C cable (not included).

10



For details, see "3.5. How to connect RS-485 Communication Devices (Optional)" and "3.6. How to connect CAN Communication Devices (Optional)".

11



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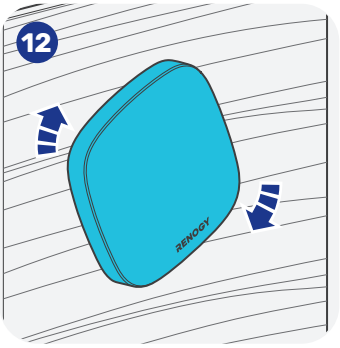

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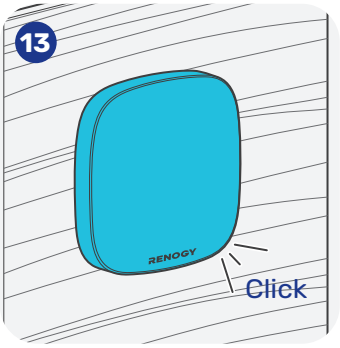


5. Configure RENOGY ONE Core

5.1. Power On/Off

Long press the On/Off Button for 5s to power the Core on or off.

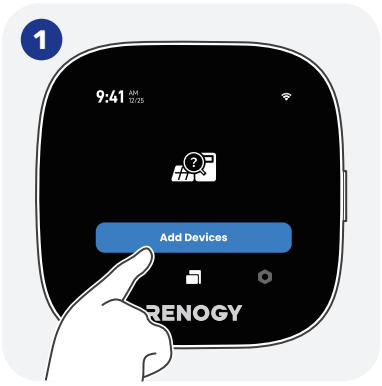
5.2. Pairing with DC Home

For initial startup, follow the startup wizard on the Core to pair it with the DC Home app. Alternatively, go to ⬡ > **System** > **Pair with App**.

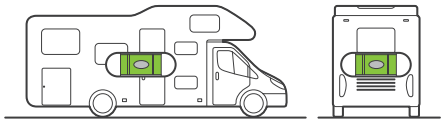
5.3. Add Devices

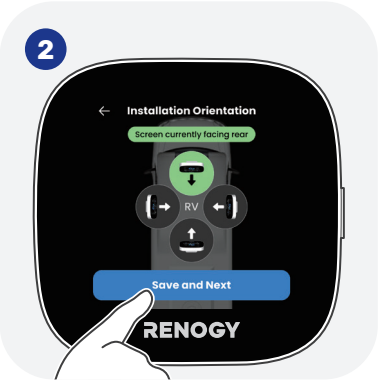
Renogy ONE Core can wirelessly connect to Renogy Bluetooth, Bluetooth mesh, and Zigbee devices concurrently.

Before adding the device to Renogy ONE Core, please make sure that the firmware version of Renogy ONE Core has been updated to the latest version.



5.4. RV Leveling





RV leveling calibration on Renogy ONE Core is required each time the installation site for the Core is changed.

6. Troubleshooting

Issue	Possible Cause	Solution
Power on failure	Reverse polarity contact	Check whether the positive and negative polarities of the power terminals are normally connected.
	Renogy ONE Core damaged	Contact our customer service through renogy.com/contact-us/.
Failure to add devices or smart accessories	The device is too far away from Renogy ONE Core.	Move the device closer to Renogy ONE Core. ● Bluetooth: within 10 m in an open environment. ● Zigbee: within 50 m in an open environment.
	The smart accessories have been connected to other devices.	Reset the smart accessories, and redo adding. For details, see the user manuals of specific accessories at renogy.com/support/downloads.
	The device or smart accessory is incompatible with Renogy ONE Core.	Use Renogy devices and smart accessories.
Wi-Fi connection failure	Unsupported Wi-Fi frequency band	Ensure the Wi-Fi router is working on the 2.4 GHz band.
	WPA3 encryption	Disable WPA3 encryption on the Wi-Fi router.
	Wrong password	Enter the correct Wi-Fi SSID and password.
	Signal shielding	Ensure that there is no metal object around Renogy ONE Core and the Wi-Fi router because it may undermine the wireless communication.
BT-1 or BT-2 communication failure	Unstable communication quality	Unplug the BT-1 or BT-2 Bluetooth module from the devices, and then plug it to the devices again. Redo device scanning on Renogy ONE Core if necessary.
Laggy and unresponsive operations on the LCD	Improper power supply	Check the voltage of the power supply. Make sure the voltage is 8V to 32V DC for the Power Port or 5V DC for the Type-C port, and the voltage should be stable.
Failure to find Bluetooth devices	1. The Bluetooth device is powered off. 2. The Bluetooth device has been paired with DC Home app. 3. Bluetooth on the device is turned off.	1. Power on the Bluetooth device. 2. Unpair the device from the app first and then redo on Renogy ONE Core. 3. Turn on Bluetooth on the device.

Issue	Possible Cause	Solution
Inaccurate or delayed RV level data on both the Core and DC Home	The RV is not parked on a level surface during initial installation of Renogy ONE Core.	Park the RV on a level surface, and redo RV leveling on Renogy ONE Core.
	The bubble is not centered in the bubble level when you install the base.	Park the vehicle on a level surface, rotate and remove the Core from its base. Readjust the base to ensure the bubble is centered before redoing RV leveling on the Core.
	The performance of the built-in 6-axis sensor is affected by environmental factors such as temperature.	Install the Renogy ONE Core in a well-ventilated location to prevent RV leveling data discrepancies due to extreme temperatures.
Inaccurate or delayed RV leveling data on DC Home	Renogy ONE Core is placed too far away from your phone or there are obstacles around Renogy ONE Core to affect normal Bluetooth communication between the Core and your DC Home app.	● Ensure there is no metal object around Renogy ONE Core. ● Reinstall Renogy ONE Core at a site which is within a range of 10 meters of the driver's cabin.

7. Interoperability Matrix

Product	SKU
With a Built-in Bluetooth Module	
REGO 12V 400Ah Lithium Iron Phosphate Battery	RBT12400LFPL-SHBT
REGO 12V 60A MPPT Solar Charge Controller	RCC60REGO
REGO 12V 60A DC-DC Battery Charger	RCB1260DO-100506PR
REGO 12V 3000W Pure Sine Wave Inverter Charger w/ LCD Display	RIV1230RCL-1SS
12V 100Ah Lithium Iron Phosphate Battery w/ Bluetooth	RBT100LFP12-BT
12V 200Ah Lithium Iron Phosphate Battery w/ Bluetooth	RBT200LFP12-BT
Renogy Battery Shunt 300	RSHST-B02P300-G1
CAN (RSHGWSN-W02W-G2 and later)	
REGO 12V 400Ah Lithium Iron Phosphate Battery	RBT12400LFPL-SHBT
REGO 12V 60A MPPT Solar Charge Controller	RCC60REGO
REGO 12V 60A DC-DC Battery Charger	RCB1260DO-100506PR
REGO 12V 3000W Pure Sine Wave Inverter Charger w/ LCD Display	RIV1230RCL-1SS
When Connected to a BT-1 Module	
Adventurer Li- 30A PWM Flush Mount Charge Controller w/ LCD Display	RNG-CTRL-ADV30-LI
Wanderer 10A PWM Charge Controller	RNG-CTRL-WND10
Wanderer Li 30A PWM Charge Controller	RNG-CTRL-WND30-LI
Rover Li 20 Amp MPPT Solar Charge Controller	RNG-CTRL-RVR20
Rover Li 30 Amp MPPT Solar Charge Controller	RNG-CTRL-RVR30
Rover Li 40 Amp MPPT Solar Charge Controller	RNG-CTRL-RVR40
400 Watt 12 Volt Solar RV Kit	RNG-KIT-RV400D-ADV30
600W 12V/24V Monocrystalline Solar Premium Kit w/Rover 60A Charger Controller	RKIT600DPM-RVR60
800W 12V/24V Monocrystalline Solar Premium Kit w/Rover 60A Charger Controller	RKIT800DPM-RVR60
New 400 Watt 12 Volt Solar Premium Kit	RNG-KIT-PREMIUM400D-RVR40
When Connected to a BT-2 Module	
Rover Elite 20A MPPT Solar Charge Controller	RCC20RVRE
Rover Elite 40A MPPT Solar Charge Controller	RCC40RVRE
36V/48V Rover Boost 10A MPPT Solar Charge Controller	RCC10RVRB
48V 3500W Solar Inverter Charger	RIV4835CSH1S
DCC30S 12V 30A Dual Input DC-DC On-Board Battery Charger with MPPT	RBC30D1S

Product	SKU
DCC30S 12V 50A Dual Input DC-DC On-Board Battery Charger with MPPT	RBC50D1S
1000W 12V Pure Sine Wave Inverter with Power Saving Mode (New Edition)	R-INVT-PGH1-10111S
2000W 12V Pure Sine Wave Inverter with Power Saving Mode (New Edition)	R-INVT-PGH1-20111S
48V 50Ah Smart Lithium Iron Phosphate Battery	RBT50LFP48S
12V 100Ah Smart Lithium Iron Phosphate Battery w/ Self-Heating Function	RBT100LFP12SH
12V 100Ah Smart Lithium Iron Phosphate Battery (back-order)	RBT100LFP12S
LYCAN 5000 Power Box	RPB48350A-48LFPA12S
When Connected to a BT-1 or BT-2 Module	
Rover 60 Amp MPPT Solar Charge Controller	RNG-CTRL-RVR60
Rover 100 Amp MPPT Solar Charge Controller	RNG-CTRL-RVR100
RS-485	
12V 30A Dual Battery Charging 100W Solar Flex Bundle	RKIT100DB-30D1S
12V 50A Dual Battery Charging 200W Solar Flex Bundle	RKIT200DB-50D1S
350 Watt Solar Flexible Kit	RKIT350DB-RVRE40
Zigbee	
Motion Sensor	RSHMSZ03P-US
Door & Window Sensor	RSHDWZ03P-US
Smart Plug	RSHPGZ01P-US
Smart Relay	RSHSRZ02P-US

For the latest products that are compatible with Renogy ONE Core, visit https://www.renogy.com/renogy-one-core/.

8. FAQ

What are the differences between Renogy ONE Core and Renogy ONE M1?

Item	Renogy ONE M1	Renogy ONE Core
Picture		
Power supply	**8-16** VDC	**8-60** VDC
Touch screen	Size: 4-inch Resolution: 480* 480p	Size: 4-inch Resolution: 480* 480p
Built-in relay	**3** relays	-
Mechanical switch	**6** switches	-
Sensor	-	**built-in 6-axis sensor**
Communication	2.4GHz WiFi Bluetooth LE Zigbee 3.0 RS485 CAN	2.4GHz WiFi Bluetooth LE Zigbee 3.0 RS485 CAN **BLE Mesh**
Operating temperature	**-4**°F**~122**°F (**-20~50**℃)	**-4**°F**~158**°F (**-20~70**℃)
All-in-one energy monitor	✓	✓
RV leveling	-	✓
Smart automation	✓	✓
Dimensions	**7.2 x 3.4 x 1.7 inches** (181.8 x 86.8 x 42.2 mm)	**4.17 x 4.17 x 1.05 inches** (106 x 106 x 26.6 mm)
Easy Installation	★★★	★★★★★

How to connect Renogy ONE Core with different types of batteries to set up a battery monitoring system?

The Renogy ONE Core can function as a power monitor when it is connected to Renogy batteries that support Bluetooth (built-in or with external BT-1/BT-2 modules) and RS-485.

Does Renogy ONE Core support RV-C communication?

Renogy ONE Core comes in two models: RSHGWSN-W02W-G1 (no CAN communication) and RSHGWSN-W02W-G2 (supports CAN communication).

How can I check the RV leveling status?

You can check it locally on Renogy ONE Core or remotely on the DC Home app when the app is paired with the Core via Bluetooth.

What is the operational altitude range for the Renogy ONE Core?

It can work normally at altitudes below 5000 meters.

Does Renogy ONE Core come with a shunt?

No, it does not come with a shunt. Visit renogy.com for further updates.

Does Renogy ONE Core support 5 GHz Wi-Fi network?

No. It supports 2.4 GHz Wi-Fi only.

Does Renogy ONE Core support WPA3 encrypted Wi-Fi networks?

No. It does not support WPA3.

Is Renogy ONE Core compatible with third-party Zigbee 3.0 devices?

We cannot guarantee the compatibility between Renogy ONE Core and third-party Zigbee 3.0 smart home devices. Therefore, it is recommended to use smart accessories that have been authorized by Renogy with your Renogy ONE Core, such as Smart Plug, Motion Sensor, Door & Window Sensor, and Smart Relay.

Do the configured smart scenes in Renogy ONE Core still work when it is offline?

Yes, the configured smart scenes in Renogy ONE Core will still work when it is offline. Renogy ONE Core utilizes the Zigbee 3.0 protocol to establish wireless connections with smart accessories. When you set up a smart scene for home automation, the configuration is saved within the system of Renogy ONE Core. This means that even if the Wi-Fi network is unavailable, Renogy ONE Core can still communicate with and control smart accessories through Zigbee 3.0.

What kind of power systems can Renogy ONE Core work with?

Renogy ONE Core can be supplied by a 5V DC source via Type-C or an 8V to 32V DC source via the power cable.

As for energy monitoring, Renogy ONE Core allows you to monitor power devices rated at 12V DC or 24V DC.

How long will Renogy ONE Core store the data locally?

Renogy ONE Core can store data locally for 30 days

How to install Renogy ONE Core on a table?

It is recommended to install Renogy ONE Core on a table when it is supplied by a Type-C cable. You can just put it in the package box.

What are the leveling requirements for the initial installation of Renogy ONE Core in an RV?

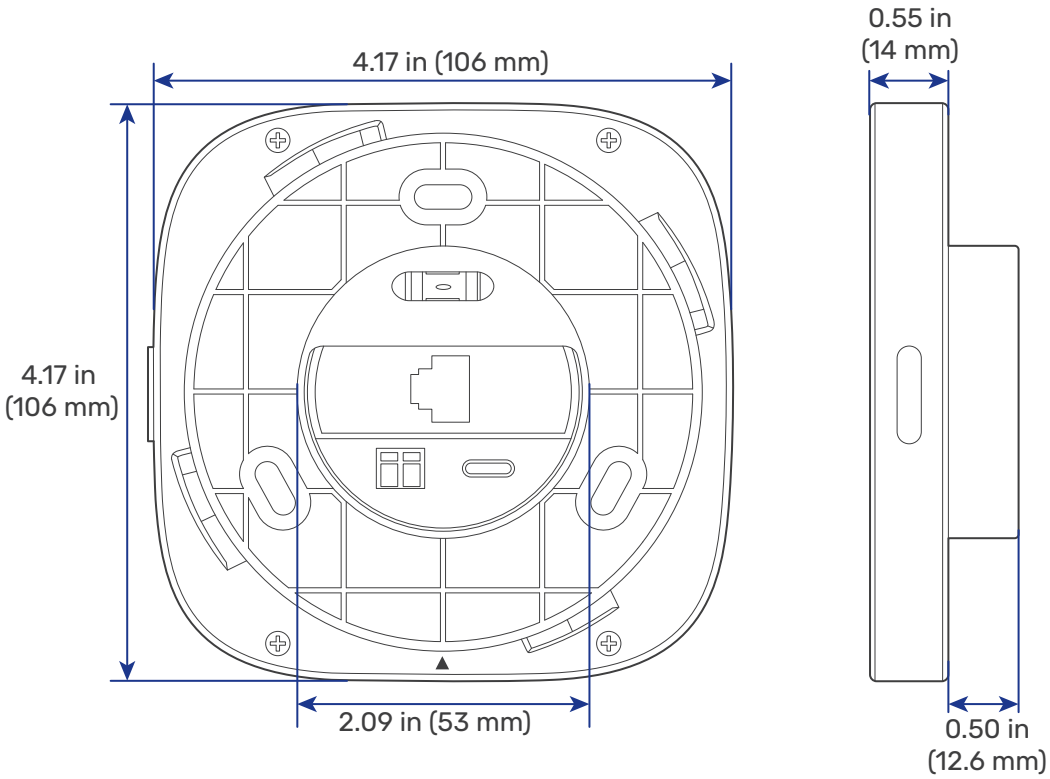
During the initial installation, it is important to park your RV on a level surface. Ensure that the Renogy ONE Core's bubble level is positioned in the center during the installation process. This will help to achieve proper leveling and ensure optimal performance.

Is it normal for the RV leveling data in Renogy ONE Core to have minor fluctuations when the vehicle's engine is running but the vehicle is not moving?

Yes. This is because the built-in 6-axis sensor in the Core is capable of detecting vibrations caused by the vehicle's engine. Therefore, slight variations in the RV leveling data can occur under such conditions. As long as the fluctuations are small and do not affect the overall accuracy of the leveling calibration, it is considered normal operation.

9. Dimensions and Specifications

9.1. Dimensions



Dimension tolerance: ±0.5 mm (0.2 in)

9.2. Technical Specifications

Product Name	Renogy ONE Core
Model Name	RSHGWSN-W02W-G1/RSHGWSN-W02W-G2
Operating Voltage	• Power Port: 8V to 32V DC (Typical 12V) • USB Type-C: 5V DC
Power Consumption at 12 V	• Operating, Wi-Fi On, 100% illumination: 3.2 W • Operating, Wi-Fi On, 50% illumination: 2.4 W • Operating, Wi-Fi On, 0% illumination: 1.9 W • Screen off, Wi-Fi Off, logs still active: 1.5 W
Power Consumption at 5 V	• Operating, Wi-Fi On, 100% illumination: 2.9 W • Operating, Wi-Fi On, 50% illumination: 2.3 W • Operating, Wi-Fi On, 0% illumination: 1.7 W • Screen off, Wi-Fi Off, logs still active: 1.3 W
Communication	• Wi-Fi (IEEE 802.11b/g/n 2.4 GHz) • Bluetooth LE and Bluetooth Mesh • Zigbee 3.0 (IEEE 802.15.4) • RS-485 • CAN (for RSHGWSN-W02W-G2 only)
Touch Screen	4 in (480 x 480p)
Leveling Range and Accuracy	±89°, 0.1°

Operating Temperature	-4°F to 158°F(-20°C to 70°C)
Operating Humidity	0% to 95% RH
Operating Altitude	Less than 16,404 ft (5000m)
Installation	Flush mount or place on a table
Dimensions	4.17 x 4.17 x 1.05 in (106 x 106 x 26.6 mm)
Weight	0.28 lb (128g)
Certifications	CE, FCC, RoHS, TSCA, BQB, RCM, and IC-ID
Warranty	2 years

Maintenance

Inspection

For optimum performance, it is recommended to perform these tasks regularly.

- Check the appearance of the Renogy ONE Core to make sure it is clean and dry.
- Ensure the Renogy ONE Core is installed in a clean, dry and ventilated area.
- Ensure there is no damage or wear on the cables.
- Ensure the firmness of the connectors and check if there are any loose, damaged or burnt connections.
- Ensure that the Battery indicator and Fault indicator are in normal state.
- Ensure there is no any corrosion, insulation damage, or discoloration marks of overheating or burning.

Risk of electric shock! Make sure that all power is turned off before touching the terminals on the Renogy ONE Core.

In some applications, corrosion may exist around the contacts inside the connector. Corrosion can loosen springs and increase resistance, leading to premature connection failure. Please apply dielectric grease to each connector contact periodically. Dielectric grease repels moisture and protects the connector contacts from corrosion.

Cleaning

Follow the steps below to clean the Renogy ONE Core regularly.

- Shut down Renogy ONE Core. If you clean the inside of the device, you need to disconnect the power supply.
- Wipe the charger housing and connector contacts with a damp cloth or non-metallic brush. If it is not clean after wiping, use a household cleaner.
- Dry the Renogy ONE Core with a clean cloth and keep the area around the Renogy ONE Core clean and dry.
- Make sure the Renogy ONE Core is completely dry before reconnecting the connector to the Renogy ONE Core.

Storage

Follow the tips below to ensure that the Renogy ONE Core is stored well.

- Disconnect all connectors that are connected to the Renogy ONE Core.
- By applying dielectric grease to each connector contact, the dielectric grease repels moisture and protects the connector contacts from corrosion.

Emergency Responses

In the event of any threat to health or safety, always begin with the steps below before addressing other suggestions.

- Immediately contact the fire department or other relevant emergency response team.
- Notify all people who might be affected and ensure that they can evacuate the area.

⚠ Only perform the suggested actions below if it is safe to do so.

Fire

1. Disconnect all cables connected to the Renogy ONE Core.
2. Put out the fire with a fire extinguisher. Preferable fire extinguishers include CO_2 and ABC. Altervatively, you can use water to put out the fire if there is no preferable fire extinguishers.

⚠ Do not use type D (flammable metal) fire extinguishers.

Flooding

1. If the Renogy ONE Core is submerged in water, stay away from the water.
2. Disconnect all cables connected to the Renogy ONE Core.

Smell

1. Disconnect all cables connected to the Renogy ONE Core.
2. Make sure nothing is in contact with the Renogy ONE Core.
3. Ventilate the room.

Noise

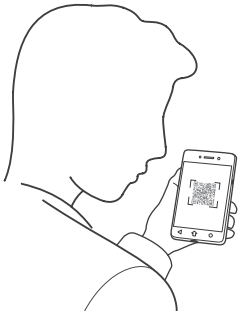
1. Disconnect all cables connected to the Renogy ONE Core.
2. Make sure no foreign objects are stuck in the Renogy ONE Core connector.

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
South Korea	kr.renogy.com	Germany	de.renogy.com
United Kingdom	uk.renogy.com	Other Europe	eu.renogy.com

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.

Warning: 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.

RSS Standard

This device complies with Industry Canada license exempt RSS standard(s). Operation is subject to the following two conditions:

(1) This device may not cause interference, and

(2) This device must accept any interference, including interference that may cause undesired operation of the device.

The device is compliance with RF exposure guidelines, users can obtain Canadian information on RF exposure and compliance. The minimum distance from body to use the device is 20cm.

Privacy Policy

RENOGY (“us”, “we”, or “our”) operates on RENOGY ONE device (hereinafter referred to as the “Service”).

This page informs you of our policies regarding the collection, use and disclosure of personal data when you use our Service and the choices you have associated with that data.

We use your data to provide and improve the Service. By using the Service, you agree to the collection and use of information in accordance with this policy. Unless otherwise defined in this Privacy Policy, the terms used in this Privacy Policy have the same meanings as in our Terms and Conditions, accessible from www.renogy.com.

Definitions

Service

Service includes but not limited to, serving as a central control panel for your RENOGY ONE system, enabling you to control your entire system from one single touchscreen, connecting energy devices and smart accessories, and synchronizing this data to your RENOGY server and mobile App.

Personal Data

Personal Data means data about a living individual who can be identified from those data (or from those and other information either in our possession or likely to come into our possession).

Usage Data

Usage Data is data collected automatically, either generated by the use of the Service or from the Service infrastructure itself (for example, your IP address and user log).

Data Controller

Data Controller means the natural or legal person who (either alone or jointly or in common with other persons) determines the purposes for which and the manner in which any personal information are, or are to be, processed.

For the purpose of this Privacy Policy, we are a Data Controller of your Personal Data.

Data Processors (or Service Providers)

Data Processor (or Service Provider) means any natural or legal person who processes the data on behalf of the Data Controller.

We may use the services of various Service Providers in order to process your data more effectively.

Data Subject (or User)

Data Subject is any living individual who is using our Service and whose Personal Data is collected by us.

Information Collection and Use

We collect several different types of information for various purposes to provide and improve our Service to you.

Types of Data Collected

Personal Data

While using our Service, we may ask you to provide us with certain personally identifiable information that can be used to contact or identify you (“Personal Data”). Personally identifiable information may include, but is not limited to:

- Email address
- First name and last name
- Address, State, Province, ZIP/Postal code, City

We may use your Personal Data to contact you with newsletters, marketing or promotional materials and other information that may be of interest to you. You may opt out of receiving any, or all, of these communications from us by following the unsubscribe link or the instructions provided in any email we send.

Usage Data

We may also collect information on how the Service is accessed and used ("Usage Data"). This Usage Data may include information such as your Renogy ONE Internet Protocol address (e.g. IP address), 4G/5G and Wi-Fi access information, power usage, sensor history, user log, unique device identifiers and other diagnostic data.

Location Data

We may use and store information about your location if you give us permission to do so ("Location Data"). We use this data to provide features of our Service, to improve and customise our Service.

You can enable or disable location services when you use our Service at any time by way of your device settings.

Use of Data

RENOGY uses the collected data for various purposes:

- To provide and maintain our Service
- To notify you about changes to our Service
- To allow you to participate in interactive features of our Service when you choose to do so
- To provide customer support
- To gather analysis or valuable information so that we can improve our Service
- To monitor the usage of our Service
- To detect, prevent and address technical issues
- To provide you with news, special offers and general information about other goods, services and events which we offer that are similar to those that you have already purchased or enquired about unless you have opted not to receive such information

Legal Basis for Processing Personal Data under the General Data Protection Regulation (GDPR)

If you are from the European Economic Area (EEA), UK or Switzerland, RENOGY's legal basis for collecting and using the personal information described in this Privacy Policy depends on the Personal Data we collect and the specific context in which we collect it.

RENOGY may process your Personal Data because:

- We need to perform a contract with you
- You have given us permission to do so
- The processing is in our legitimate interests and it is not overridden by your rights
- To comply with the law

Retention of Data

RENOGY will retain your Personal Data only for as long as is necessary for the purposes set out in this Privacy Policy. We will retain and use your Personal Data to the extent necessary to comply with our legal obligations (for example, if we are required to retain your data to comply with applicable laws), resolve disputes and enforce our legal agreements and policies.

RENOGY will also retain Usage Data for internal analysis purposes. Usage Data is generally retained for a shorter period of time, except when this data is used to strengthen the security or to improve the functionality of our Service, or we are legally obligated to retain this data for longer periods.

Transfer of Data

Your information, including Personal Data, may be transferred to - and maintained on - computers located outside of your state, province, country or other governmental jurisdiction where the data protection laws may differ from those of your jurisdiction.

If you are located outside the United States and choose to provide information to us, please note that we transfer the data, including Personal Data, to the United States and process it there.

RENOGY will take all the steps reasonably necessary to ensure that your data is treated securely and in accordance with this Privacy Policy and no transfer of your Personal Data will take place to an organization or a country unless there are adequate controls in place including the security of your data and other personal information.

Disclosure of Data

Disclosure for Law Enforcement

Under certain circumstances, RENOGY may be required to disclose your Personal Data if required to do so by law or in response to valid requests by public authorities (e.g. a court or a government agency).

Legal Requirements

RENOGY may disclose your Personal Data in the good faith belief that such action is necessary to:

- To comply with a legal obligation
- To protect and defend the rights or property of RENOGY
- To prevent or investigate possible wrongdoing in connection with the Service
- To protect the personal safety of users of the Service or the public
- To protect against legal liability

Security of Data

The security of your data is important to us but remember that no method of transmission over the Internet or method of electronic storage is 100% secure. While we strive to use commercially acceptable means to protect your Personal Data, we cannot guarantee its absolute security.

Your Data Protection Rights under the General Data Protection Regulation (GDPR)

If you are a resident of the European Economic Area (EEA), the UK or Switzerland, you have certain data protection rights. RENOGY aims to take reasonable steps to allow you to correct, amend, delete or limit the use of your Personal Data.

If you wish to be informed about what Personal Data we hold about you and if you want it to be removed from our systems, please contact us.

In certain circumstances, you have the following data protection rights:

- The right to access, update or delete the information we have on you. Whenever made possible, you can access, update or request deletion of your Personal Data directly within your account settings section. If you are unable to perform these actions yourself, please contact us to assist you.
- The right of rectification. You have the right to have your information rectified if that information is inaccurate or incomplete.
- The right to object. You have the right to object to our processing of your Personal Data, in certain circumstances including where we are processing your Personal Data on the basis of our legitimate interests.
- The right of restriction. You have the right to request that we restrict the processing of your personal information.
- The right to data portability. You have the right to be provided with a copy of the information we have on you in a structured, machine-readable and commonly used format.
- The right to erasure. You have the right to request that your Personal Data be deleted in its entirety from our systems. We will comply with your request unless we are required to retain your Personal Data due to legal or regulatory requirements, as stated in this policy.
- The right to withdraw consent. You also have the right to withdraw your consent at any time where RENOGY relied on your consent to process your personal information.

Please note that we may ask you to verify your identity before responding to such requests.

You have the right to complain to a Data Protection Authority about our collection and use of your Personal Data. For more information, please contact your local data protection authority in the European Economic Area (EEA), the ICO in the UK or the Federal Data Protection and Information Commissioner in Switzerland.

Your Privacy Rights under the California Consumer Privacy Act (CCPA)

If you are a California resident, you have certain privacy rights as specified under California law, including the CCPA. These include:

- The right to know what personal information we collect
- The right to know who we share your data with. We do not sell your data, but we do share your information with others for legitimate business purposes, as described above.
- The right to request deletion of your data, unless an exception applies. Examples of exceptions include when we need to keep data to meet legal obligations or fix security issues. Upon your verified request, we will delete your personal information unless an exception applies, and will direct our service providers to do the same.
- Get a timely response. You have the right to make two free requests in any 12 month period. We will respond to your request within 45 days, and in more difficult cases we may extend our response time by another 45 days.
- Non-discrimination. We will not hold it against you when you exercise any of your rights, and we encourage you to review your privacy settings closely and reach out to us with your questions.

Under the CCPA, we are required to inform you of the data we may collected in the last 12 months:

- Identifiers, such as your name, email address and IP address
- Internet or other electronic network activity information

We may share your personal information with a third party for business purposes or at your direction. We enter into agreements with our service providers in which they can only use your information for specific purposes and are required to ensure its confidentiality. In the past 12 months, we have disclosed the above categories of personal information for a business purpose or at your direction with our affiliates, services providers and third parties. For more details on third parties we share data with, please see the Service Providers section below.

Please contact us at support@renogy.com if you have any questions about data protection or if you wish to exercise any of your rights described above.

Service Providers

We may employ third party companies and individuals to facilitate our Service ("Service Providers"), provide the Service on our behalf, perform Service-related services or assist us in analyzing how our Service is used.

These third parties have access to your Personal Data only to perform these tasks on our behalf and are obligated not to disclose or use it for any other purpose.

Analytics

We may use third-party Service Providers to monitor and analyze the use of our Service.

Changes to This Privacy Policy

We may update our Privacy Policy from time to time. We will notify you of any changes by posting the new Privacy Policy on this page.

We will let you know via email and/or a prominent notice on our Service, prior to the change becoming effective and update the "effective date" at the top of this Privacy Policy.

You are advised to review this Privacy Policy periodically for any changes. Changes to this Privacy Policy are effective when they are posted on this page.

Contact Us

If you have any questions about this Privacy Policy, please contact us via renogy.com/contact-us.

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 CO_2 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.

YouTube @Renogy Solar

@renogyofficial

@Renogy

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

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