

SERIAL CABLE

RS485 to USB

Version 1.3



Important Safety Instructions

Please save these instructions.

This manual contains important operation instructions for the RS485 to USB Serial Cable. Please observe these instructions and keep them located near the serial cable for further reference. The following symbols are used throughout the manual to indicate potentially dangerous conditions or important safety information.

WARNING Indicates a potentially dangerous condition. Use extreme caution when performing this task.

CAUTION Indicates a critical procedure for the safe and proper operation of the serial cable.

NOTE Indicates a procedure or function that is important to the safe and proper operation of the serial cable.

Disclaimer

The manufacturer 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, diseases, vermin, or radiation.
- Alterations to the product without express written consent from the manufacturer.

General Safety Information

WARNING

- Please disconnect the battery from the system before connecting it to the PC using a serial cable.
- Please keep the battery away from water, heat sources, sparks, and hazardous chemicals.
- DO NOT place tools on top of the battery.
- DO NOT touch battery terminals.

CAUTION

- The serial cable is designed for Renogy Smart Lithium Iron Phosphate Batteries. DO NOT attempt to connect other devices to the PC using the serial cable.

- Please ensure the stability of the firmware update environment. Unexpected situations such as a power outage of the PC, triggering of the battery protection modes, disconnection of the serial cable, and shutdown of the firmware update tool may cause update failure and battery management system (BMS) lockout. It is highly recommended to turn off the antivirus software, lock screen, screensaver, automatic sleep, and automatic system update on your PC. Please ensure that the battery has a static voltage higher than 13.2V and is placed in a room temperature environment before updating the firmware. DO NOT disconnect the serial cable or operate the PC while the firmware update is in progress. If a laptop is used for firmware update, please make sure that it has been plugged in or that its battery level is over 50%.
- DO NOT download the firmware update tool or battery firmware from unknown sources.
- DO NOT puncture, drop, crush, burn, penetrate, or strike the serial cable.

TABLE OF CONTENTS

GENERAL INFORMATION	03
PRODUCT OVERVIEW.....	04
PREPARATION	05
OPERATIONS	06

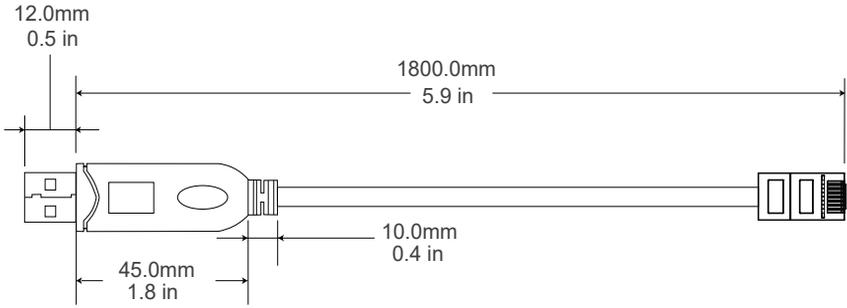
GENERAL INFORMATION

The Renogy RS485 to USB Serial Cable is designed to connect Renogy Smart Lithium Iron Phosphate Battery to a PC for firmware updates. With the help of the Renogy Firmware Update Tool, you can keep the firmware of your Smart Lithium Iron Phosphate Battery up to date, enabling smarter charge/discharge process management and state of charge estimation algorithm.

■ Key Features

- Flat wire design helps to avoid tangles
- Low operating and USB suspended current
- Low USB bandwidth consumption
- USB 2.0 full speed compatible

PRODUCT OVERVIEW



PREPARATION

Before updating the battery firmware, please have the following software available on your PC:

Virtual COM Port (VCP) Driver

Available on <https://www.ftdichip.com/Drivers/VCP.htm>. Please download the appropriate driver based on your PC's operating system version and processor architecture. Once downloaded, install the driver according to the corresponding installation guide.

Renogy Firmware Update Tool Installer

Available on our website in the Download section of the RS485 to USB Serial Cable product page (<https://www.renogy.com/rs485-to-usb-serial-cable/>) or your region's corresponding website. Please download the appropriate installer based on your PC's processor architecture and install the firmware update tool according to the installation instructions in the OPERATIONS section.

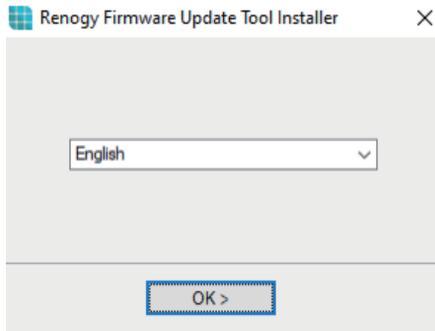
Latest Firmware for Renogy Smart Lithium Iron Phosphate Battery

Available on our website in the Download section of the Renogy Smart Lithium Iron Phosphate Battery product page or your region's corresponding website. Please see OPERATIONS section for firmware update instructions.

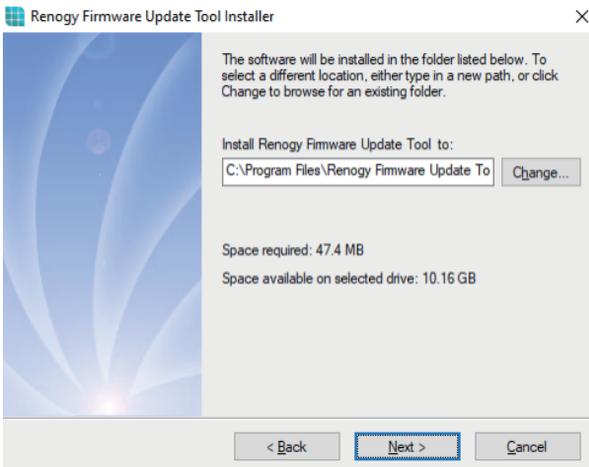
OPERATIONS

■ Installing Renogy Firmware Update Tool

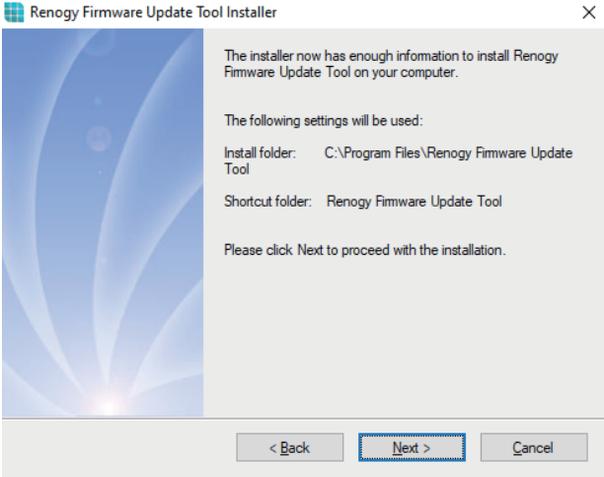
1. Open the Renogy Firmware Update Tool Installer.
2. Choose a preferred language and click [OK].



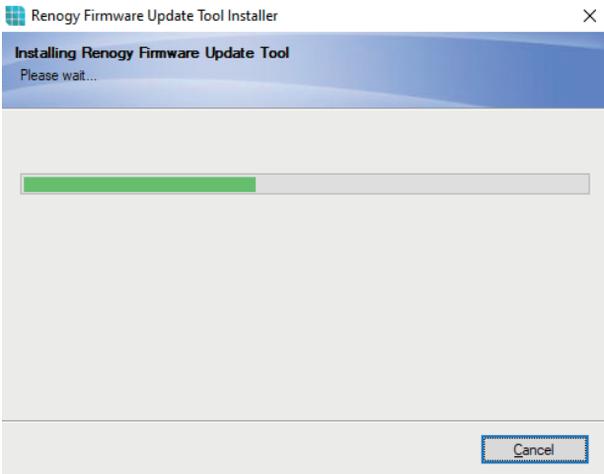
3. Specify the installation directory and click [Next].



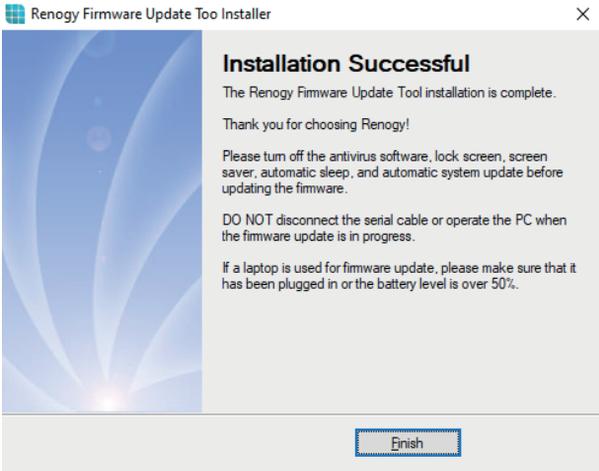
4. Confirm the installation setting and click [Next].



5. Installation starts. Wait until finished.

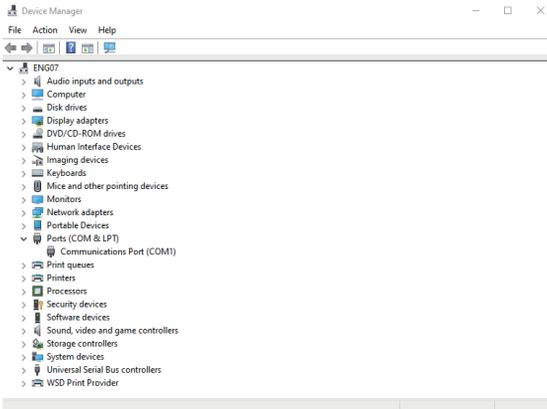


6.Installation finished. Read the firmware update instructions carefully and click [Finish].

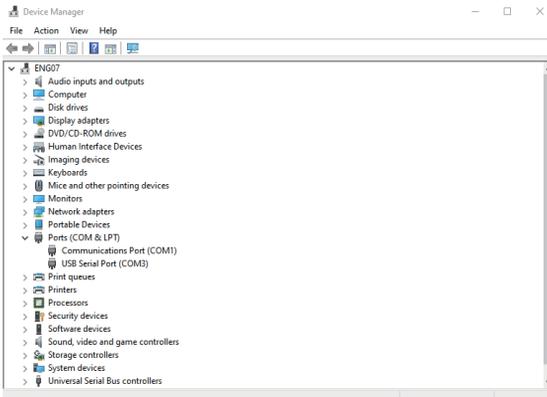


Identifying Serial Port Name

1. Open the Device Manager in the Control Panel of your PC before connecting the battery to the PC using a serial cable. Depending on your Windows operating system, the Device Manager may be under Hardware & Sound.
2. Expand the Ports (COM & LPT).

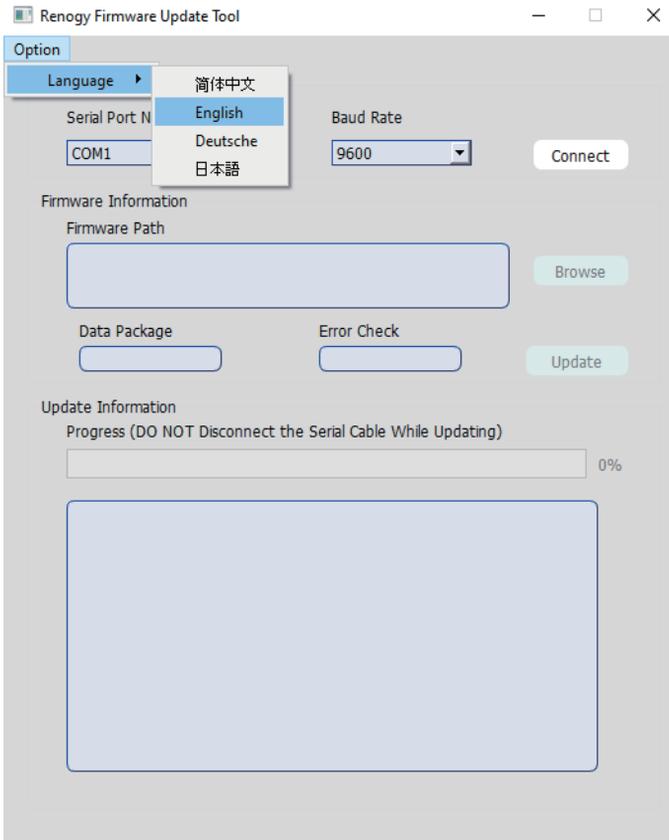


3. Connect the battery to your PC using a serial cable and a new serial port will appear under Ports (COM & LPT), followed by its serial port name.

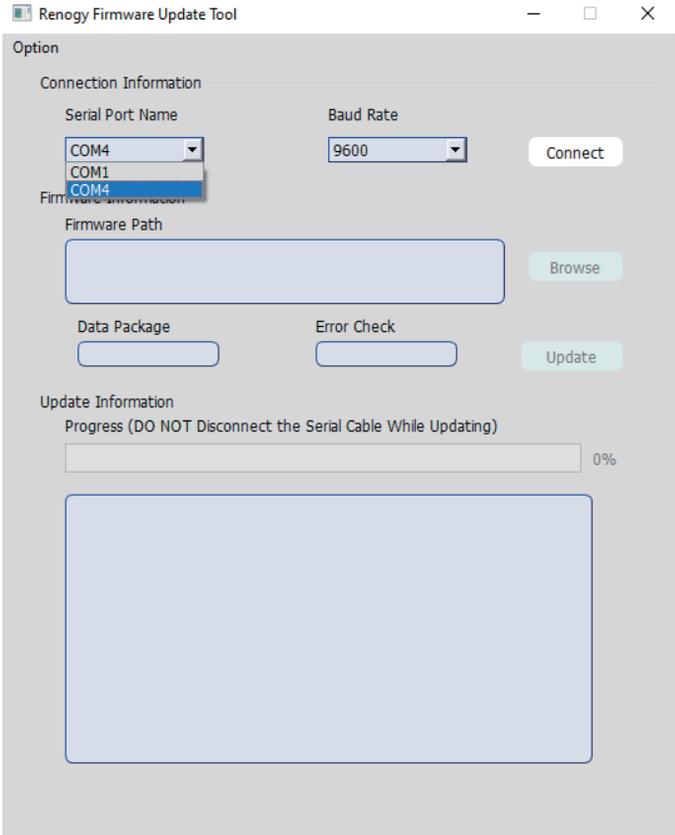


■ Updating Battery Firmware

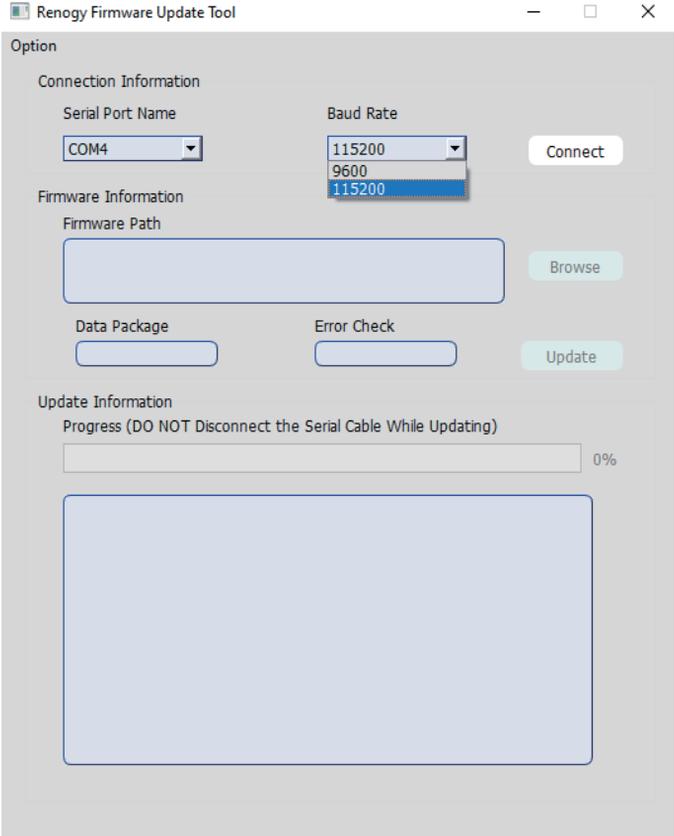
1. Connect the UP communication port of the battery to your PC's USB port with the serial cable.
2. Open the Renogy Firmware Update Tool.
3. Go to [Option] > [Language] to choose a preferred language.



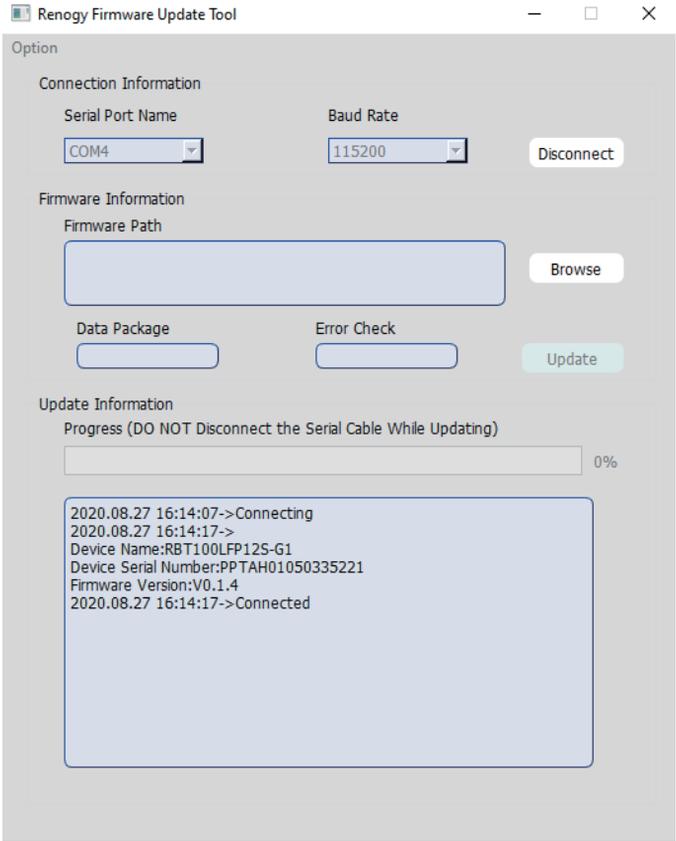
4. Click on the Serial Port Name drop-down menu to select the name of the serial port that the battery is connected to.



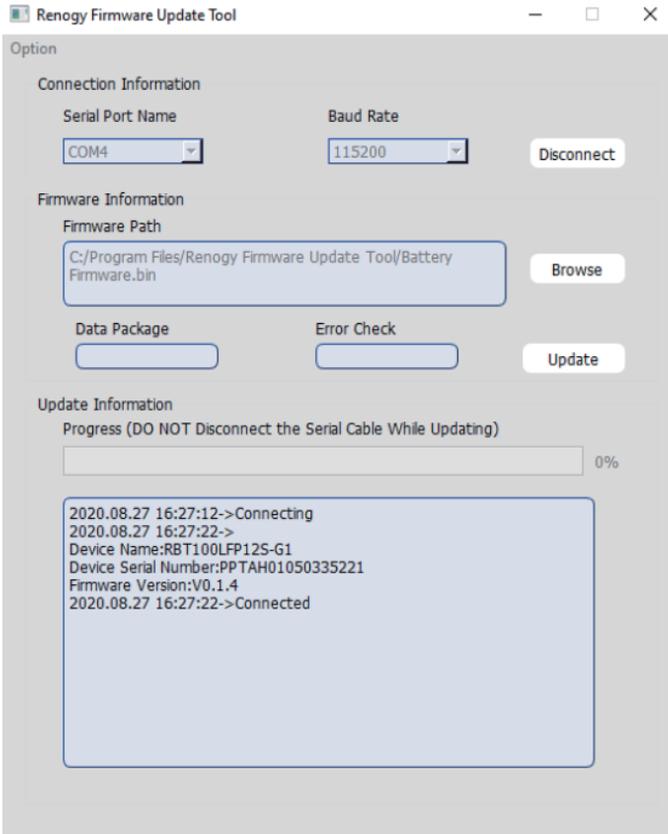
5. Click on the Baud Rate drop-down menu to change the baud rate to 115200.



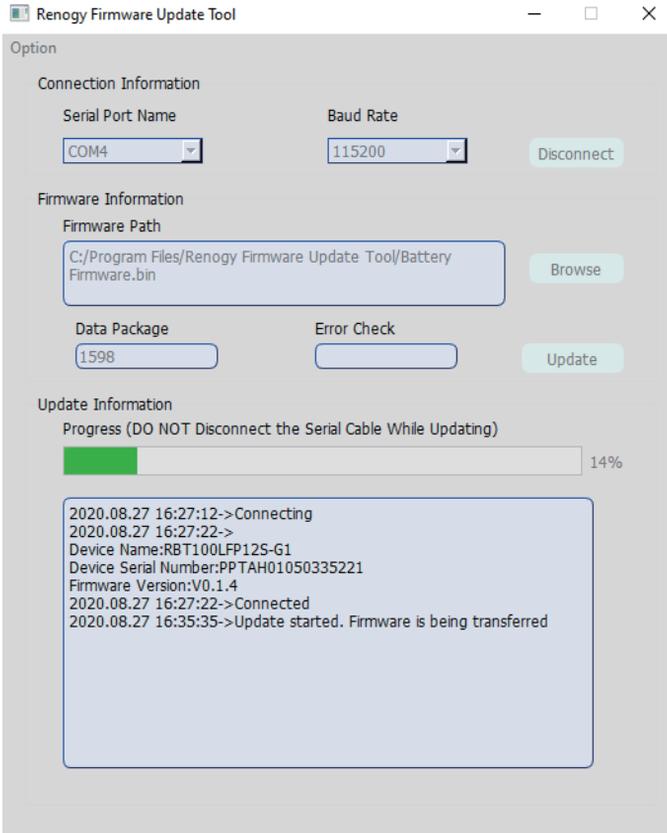
6. Click [Connect] to connect the battery to the Renogy Firmware Update Tool. Once the connection is successful, the current battery firmware version will be displayed in the text box at the bottom of the window.



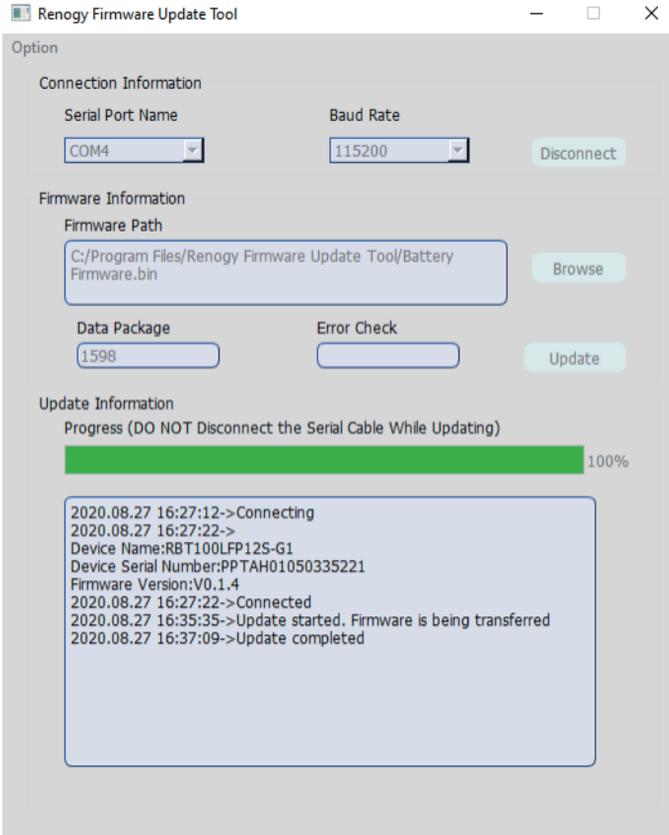
7. Click [Browse] to select the Latest Firmware for the Renogy Smart Lithium Iron Phosphate Battery and Click [Update] to begin the firmware update.



8. Firmware update starts. Wait until finished.



9. Firmware update finished. Exit the Renogy Firmware Update Tool.



CAUTION

- DO NOT exit the Renogy Firmware Update Tool while connecting the battery. Doing so may cause a background process conflict.
- DO NOT disconnect the serial cable or operate the PC when the firmware update is in progress. Doing so may cause update failure and battery management system (BMS) lockout.
- DO NOT hot-unplug the battery except after the firmware update is complete. Please click [Disconnect] before disconnecting the battery from the PC.

NOTE

- Please make sure that the battery has been activated before connecting to the PC using the activation switch that comes with the battery.
- If the firmware update involves the improvement of the state of charge estimation algorithm, please fully discharge and charge the battery to calibrate the state of charge.

TROUBLESHOOTING

If any problems occur during the firmware update, please refer to the following instructions or contact Renogy for help:

- If the battery fails to connect to the Renogy Firmware Update Tool, please check the battery and PC connections. If all the connections are solid, please check the serial port name and baud rate settings. If the serial port name and baud rate are set correctly, please check if the battery has been activated. If the battery cannot be activated, it may have entered protection mode and will need special attention. Refer to the user manual of the battery for more details.
- If the Renogy Firmware Update Tool prompts that "Failed to open the serial port" while connecting the battery, it may have encountered a background process conflict. Please restart the PC and reconnect the battery to the Renogy Firmware Update Tool.
- If the Renogy Firmware Update Tool prompts that "Device no response", "Data package parsing failed", or "Update failed" when the firmware update is in progress, the serial cable connection may be loose. Please check the battery and PC connections, reconnect the battery to the Renogy Firmware Update Tool, and update the firmware again. The reconnection may take 1-3 minutes.
- If the Renogy Monitoring Screen connected to the battery resets frequently after the firmware update, please reactivate the battery using the Renogy Monitoring Screen or the activation switch that comes with the battery.

TECHNICAL SPECIFICATIONS

Length	5.9 ft / 1.8 m
Outside Diameter	0.10 x 0.38 inch / 2.6 x 8.8 mm
Weight	1.8 oz / 51.5 g
Conductor Material	Bare Copper
Number of Conductors	8
Insulation Material	Polyvinyl Chloride (PVC)
Connector	RJ45, USB-A
Chip	FT232RL

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

US |  2775 E Philadelphia St, Ontario, CA 91761, USA
 909-287-7111
 www.renogy.com
 support@renogy.com

CN |  苏州高新区科技城培源路1号5号楼-4
 400-6636-695
 <https://www.renogy.cn>
 support@renogy.cn

JP |  <https://www.renogy.jp>
 supportjp@renogy.com

CA |  <https://ca.renogy.com>
 supportca@renogy.com

AU |  <https://au.renogy.com>
 supportau@renogy.com

UK |  <https://uk.renogy.com>
 supportuk@renogy.com

DE |  <https://de.renogy.com>
 supportde@renogy.com