



E-LINTER grape pro 4G + BLE CC Data Logger

User Manual

V251030-R



Revision History

Date	Author	Version	Description
2025/10/30	Liu Jizhao	V251030R	Initial Version





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1. Brief Introduction

1.1. Overview

The Grape-Pro model is equipped with 4G + BLE communication functions. This manual provides instructions for using the product, enabling users to operate it quickly. This manual applies to the current software and hardware versions. We reserve the right to modify the content of this manual due to product upgrades. To prevent improper operation, please read this manual carefully before use.

1.2. Symbol Description

In this manual, different symbols are used to indicate product installation techniques, precautions, and potential hazards. Please pay special attention to these symbols when reading the manual and using the product. The following is an explanation of the symbols involved—please read them carefully.

Table 1-2-1 Symbol Description

Symbol	Meaning
	Instruction: Used to explain how to use the product better or provide usage tips.
	Caution: Indicates potential risks; if not avoided, the product may not work normally or cause losses.
	Danger: Indicates potential hazards; if not avoided, it may cause personal injury or property damage.



2. Product Features

- Supports 4G Cat.1 communication mode
- Supports Over-the-Air (OTA) remote firmware upgrade
- Supports automatic time synchronization via network
- Supports E-Touch function (compatible with Android and iOS devices)
- Bluetooth supports BLE 5.3
- Supports communication link diagnosis
- Large dual buffers (up to 3KB) for both receiving and transmitting data
- Flame retardant rating: UL94 V-0
- UV resistance rating: UL746C F1





3. Package Contents

After receiving the product, please check whether the package and accessories are complete. If any accessories are missing or obviously damaged, please contact the distributor.

Table 3-1 Package Contents

Item	Name	Quantity
	4G + BLE Data Logger	1



4. Product Indicators

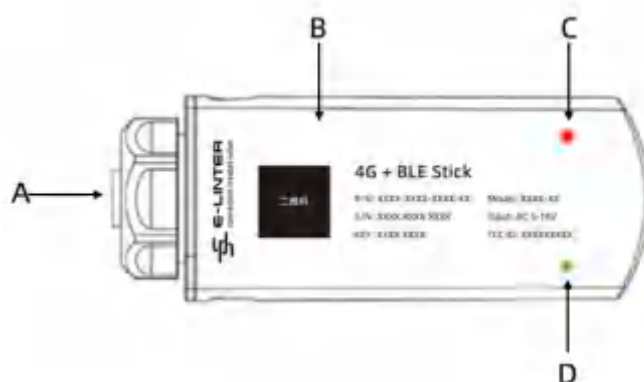


Figure 4-1 Product Indicators

- A. Interface: Used for connecting to devices
- B. Label: Displays product information
- C. Red LED: Device communication indicator light
- D. Green LED: Network communication indicator light



1. The red LED and green LED of the data logger will only light up after it is powered on.;
2. For detailed LED indication descriptions, please refer to Chapter 10 [LED Indication and Troubleshooting].



5. Installation and Dismantling

This chapter describes how to install the SIM card, as well as how to install and dismantle the data logger.

5.1. Installing the SIM Card



1. This product supports 4G communication. If the data logger you purchased is not pre-configured with a SIM card, please select a Nano-SIM card that supports the network frequency band specified in the data logger's specifications and install it yourself.

2. If the data logger you purchased comes with a pre-installed SIM card, skip this chapter.

Removing the shell: As shown in the figure below, use a flat-blade screwdriver to press the clips on the left and right sides of the data logger respectively, then pull out the shell.



Figure 5-1-2 Removing the Shell

Inserting the SIM card: As shown in the figure below, insert the SIM card into the SIM card slot of the data logger in the direction of the arrow.

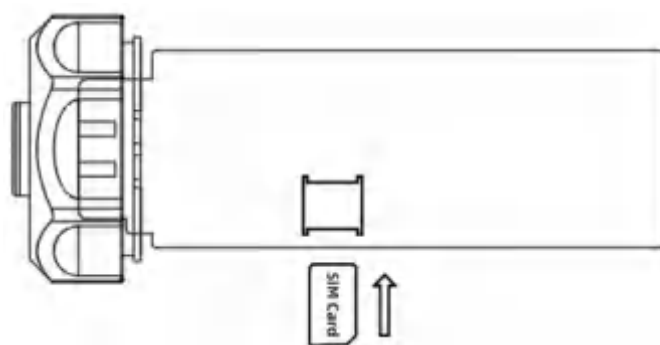


Figure 5-1-3 Inserting the SIM Card

Installing the shell: As shown in the figure below, align the foolproof notch of the shell with that of the connector on the same plane, insert them in the direction of the arrow, and ensure the clips on the left and right sides are locked to complete the shell assembly.

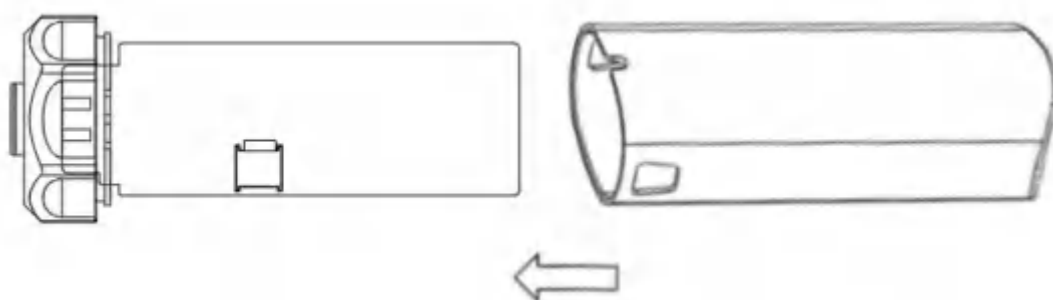


Figure 5-1-3 Installing the Shell

Inspection and confirmation: The effect after the SIM card is installed is shown in the figure below.

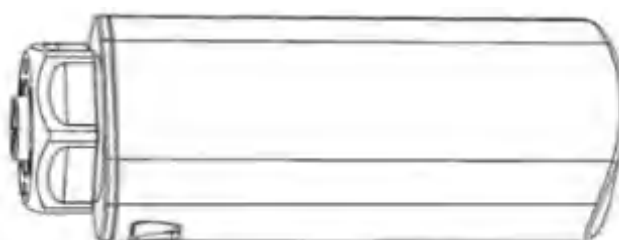


Figure 5-1-4 Installation Effect

5.2. Installing the Data Logger



When installing, align the foolproof notch of the data logger with that of the device connector before inserting to avoid damaging the data logger.



Foolproof notch of the data logger

Installing the data logger: As shown in the figure below, first confirm the direction of the CC interface of the inverter, then insert the data logger in the direction of the arrow and rotate it clockwise until it is tightened.

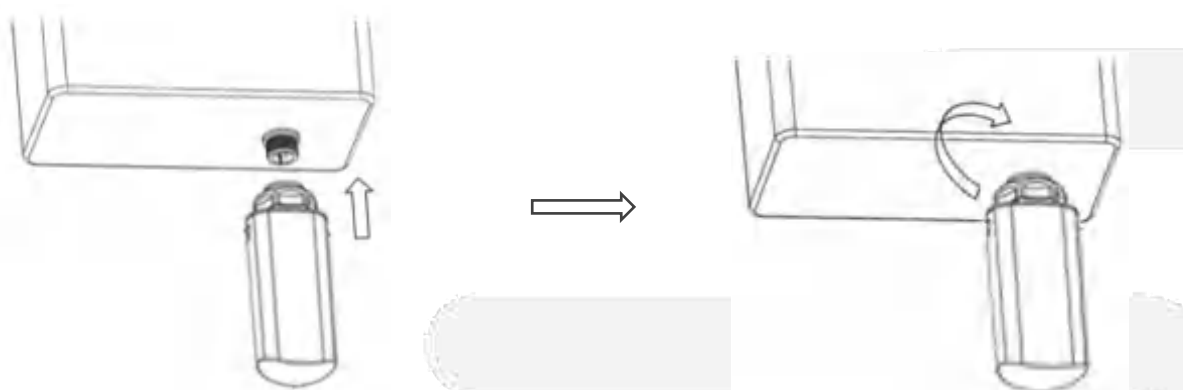


Figure 5-2-1 Inserting the Data Logger

The installation effect is shown in the figure below:

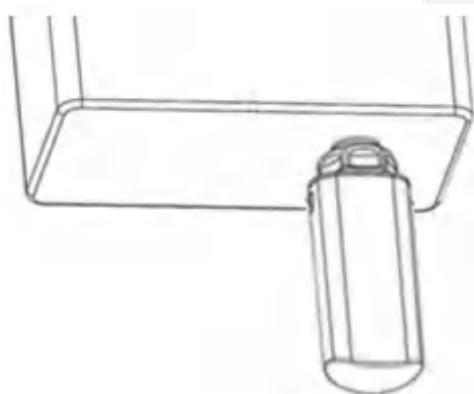


Figure 5-2-2 Installation Effect

5.3. Dismantling the Data Logger

Pulling out the data logger: As shown in the figure below, rotate the data logger counterclockwise in the direction of the arrow and pull it out to complete the dismantling.

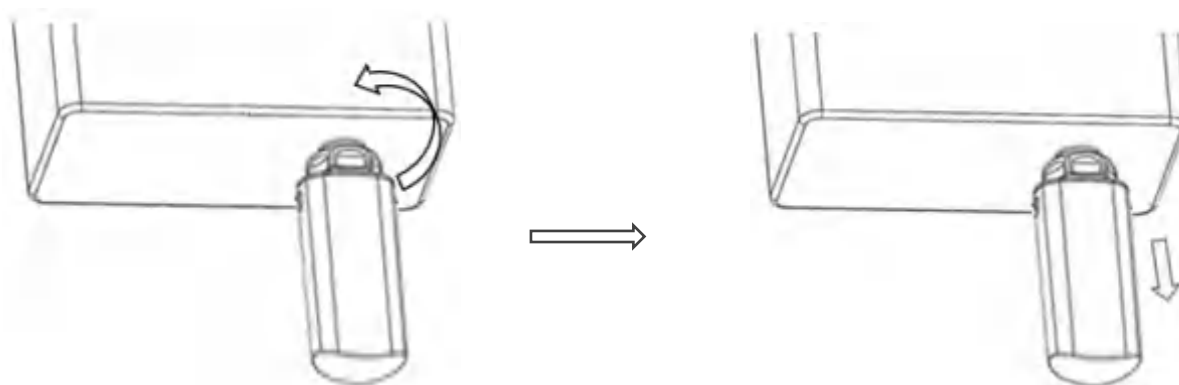


Figure 5-3-1 Pulling Out the Data Logger





6. Downloading the APP

For iPhones: Search for "PV Pro" or "PV Lite" in the App Store, or scan the QR code below to download.

For Android phones: Search for "PV Pro" or "PV Lite" in Google Play, or scan the QR code below to download.



Figure 6-1 QR Code



7. Bluetooth Connection

Bluetooth connection between the mobile phone and the data logger is required for configuring the local parameters of the data logger and setting the inverter parameters locally. This chapter describes how to establish a Bluetooth connection.

The figure below shows the BLE connection diagram of this product. Please download the corresponding APP with reference to Chapter 6 [Downloading the APP], then configure the data logger according to the APP operation guide. Ensure that the mobile phone is connected to the data logger via Bluetooth before configuring the data logger.



Figure 7-1 BLE Connection Diagram



The effective Bluetooth communication distance between the data logger and the mobile phone is 10 meters. Please keep the mobile phone as close to the data logger as possible.



8. Network Connection

This chapter describes the communication configuration methods for this product.



1. When configuring the network, ensure the data logger is powered on. If it is not powered on, check whether the connected device is turned on.

8.1. 4G Connection

The figure below shows the 4G network connection diagram of this product. After installation, the data logger will automatically connect to the network. If the SIM card you purchased requires APN settings, download the corresponding APP with reference to Chapter 6 [Downloading the APP], then configure the data logger according to the APP operation guide to ensure it connects to the network normally.

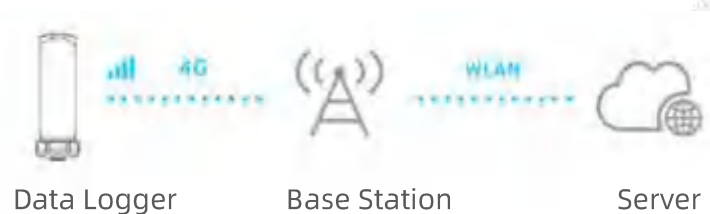


Figure 8-1-1 4G Connection Diagram

8.2. Local Parameter Settings

To configure local parameters, follow the APP operation guide. For specific operations, download the corresponding APP with reference to Chapter 6 [Downloading the APP], then set the parameters according to the APP operation guide. The following is an example of the operation steps for PV Pro or PV Lite:

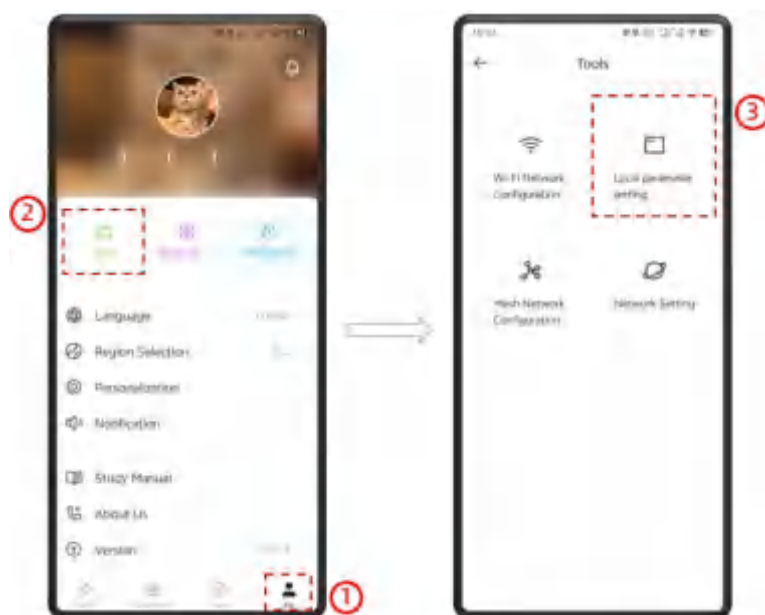


Figure 8-3-1 Schematic Diagram of Local Parameter Setting Process



9. Installation Confirmation

When both the red and green LEDs of the data logger are steadily on, it indicates that the data logger is in normal working condition. At this time, you can monitor the device status normally via the cloud or APP. If not, troubleshoot according to Chapter 10 [LED Indication and Troubleshooting].





10. LED Indication and Troubleshooting

LED colors are used to distinguish the status of the data logger: the red LED is the device communication indicator, and the green LED is the network communication indicator. When both the red and green LEDs of the product are steadily on, the product is working normally. The display logic of the LEDs in other states is as follows:



Red LED: Device communication indicator light



Green LED: Network communication indicator light

Table 10-1 LED Status Table

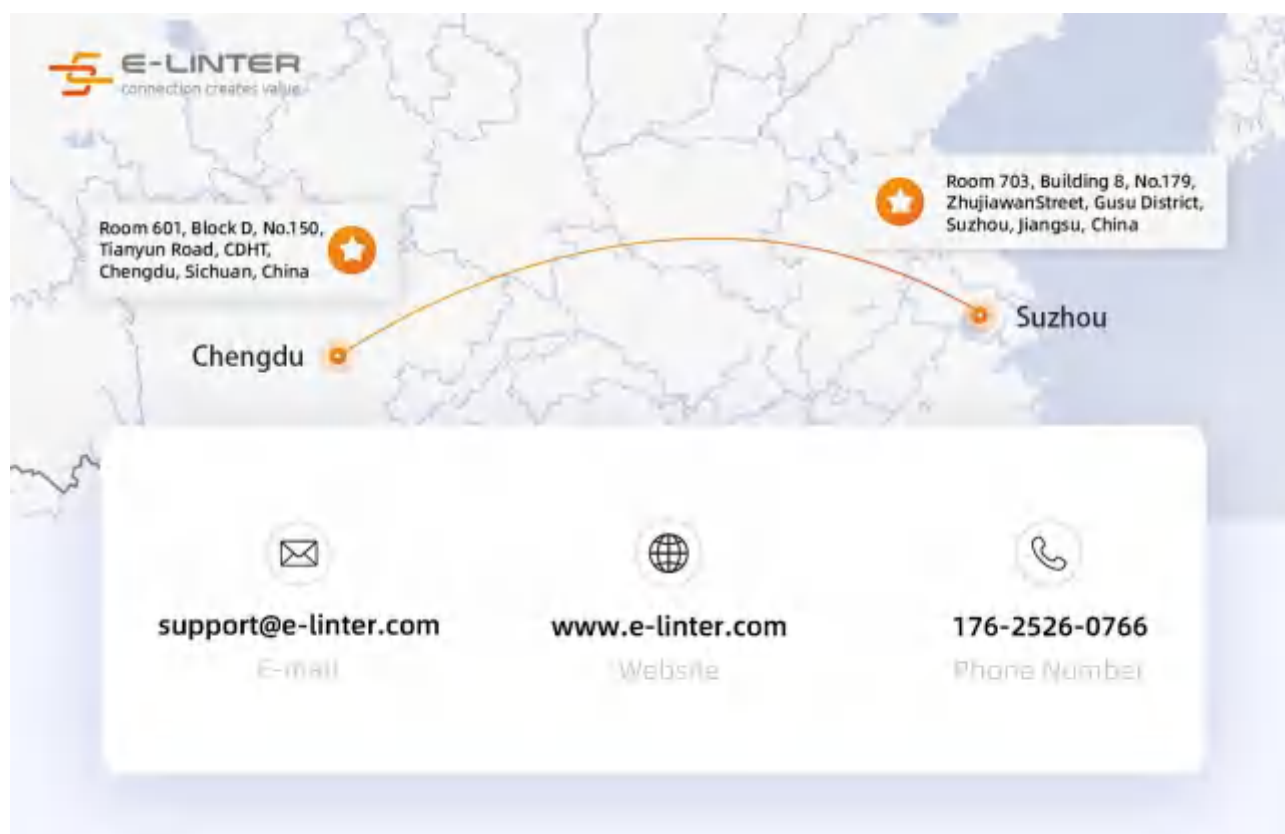
LED	Status	Meaning	Troubleshooting Solutions
	Steady on 	Normal communication with the connected device	/
	Lights up once every 1 second 	The product is powered on but has not established communication with the connected device	Communication abnormality: 1. Check if the communication line between the data logger and the connected device is normal, or contact the distributor. 2. Check if the interface between the data logger and the device is loose.
	Off for more than 30 seconds 	Abnormal power supply or damage to the product	Confirm whether the power supply of the inverter interface is normal, or contact the distributor.



	Steady on 	Normal communication with the server	/
	Lights up once every 1 second 	The product is powered on but has not connected to the router	Not connected to the router: 1. Check if the router password is correct. 2. Check if the router signal is weak.
	Lights up once every 2 seconds 	The product is connected to the router but not to the server	1. Check if the router has internet access permission. 2. Check if there is a firewall setting.
	Lights up once every 4 seconds 	The server returns product information error	Contact the distributor or us via email: support@e-linter.com
	Lights up twice consecutively and then turns off for 3 seconds 	SIM card abnormality	1. Reinsert the SIM card. 2. Contact the distributor or replace the 4G card.
	Lights up three times consecutively and then turns off for 3 seconds 	SIM card service suspended	Contact the operator or distributor to recharge, or replace the 4G card.



11. ontact Information





12.CE

Declaration of conformity

This product complies with the radio interference requirements of the European community. Hereby, Chengdu E-LINTER Information Technology Co., Ltd. declares that the product is in compliance with the essential requirements and other relevant provisions of RE Directive 2014/53/EU. You can find the Declaration of Conformity on www.e-linter.com.

RF frequency:

2.4G WIFI: 2412 MHz to 2472 MHz

BLE: 2402 MHz to 2480 MHz

4G:

LTE Band 1: 1 920 MHz to 1 980 MHz

LTE Band 3: 1 710 MHz to 1 785 MHz

LTE Band 7: 2 500 MHz to 2 570 MHz

LTE Band 8: 880 MHz to 915 MHz

LTE Band 20: 832 MHz to 862 MHz

LTE Band 28: 703 MHz to 748 MHz

RF power:

2.4G WIFI: 17.49 dBm

BLE: 9.85dBm

4G:

LTE Band 1: 22.66 dBm



LTE Band 3: 24.62 dBm

LTE Band 7: 24.36 dBm

LTE Band 8: 22.76 dBm

LTE Band 20: 22.68 dBm

LTE Band 28: 22.29 dBm

Manufacturer Name: Chengdu E-LINTER Information Technology Co., Ltd.

Address: No. 505, Building 6, Zone D, Tianfu Software Park, No. 599, Century City South Road, CDHT,
Chengdu, Sichuan, China



13.FCC Statement

1. 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.

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

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

Note: 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:

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

The device has been evaluated to meet general RF exposure requirement. This equipment should be installed and operated with a minimum distance of 20 cm between the radiator and your body.