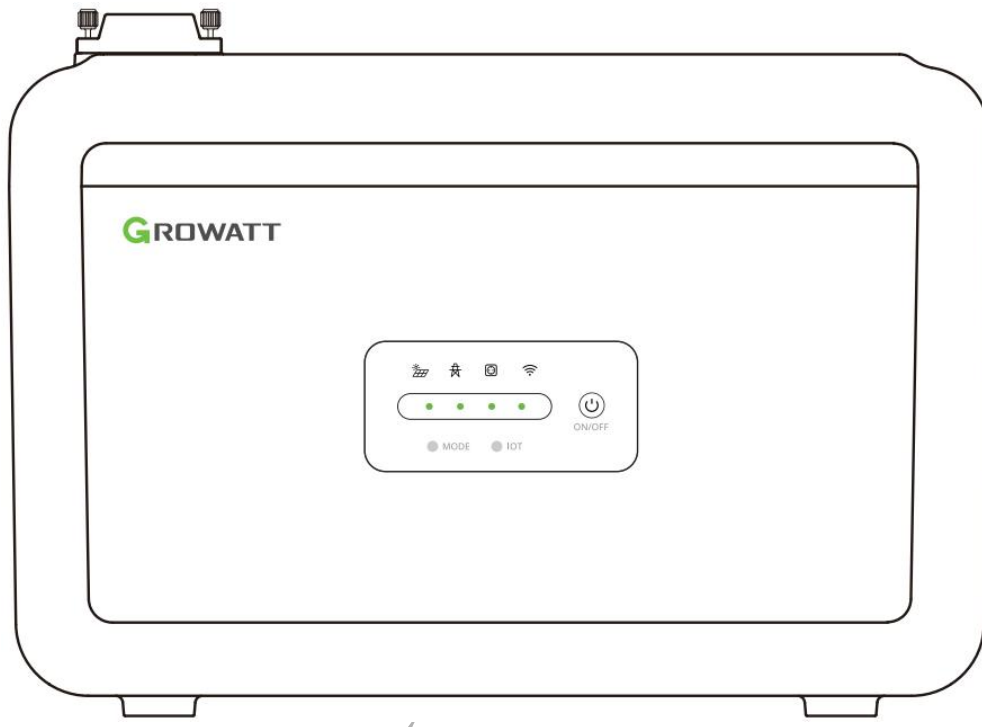




## NEXA 2000

### All-in-one Balcony Solar Storage User Manual

#### Contact us

[www.ginverter.com](http://www.ginverter.com)

1. Keep it dry and do not place heavy objects on the NEXA 2000.
2. Do not dismantle, punch, shake, hit, or burn it.
3. Recycle and place NEXA 2000 according to local policies.

# Content

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## Disclaimer

Please read the document carefully before you use the product to ensure that you completely understand the product and can correctly use it. After reading, please keep the document properly for future reference. If you use this product incorrectly, you risk significant injury to yourself or others, as well as product damage and property loss. Once you use this product, you are deemed to have understood, approved, and accepted all the terms and content of this document. Users promise to be responsible for their actions and all consequences arising therefrom. Growatt is not responsible for any damage caused by using the product not in accordance with the document.

## Disposal Guide

1. When conditions permit, be sure to discharge the batteries of this product completely before placing it in the designated battery recycling bin. This product contains batteries, which are hazardous chemicals and are not permitted to be disposed of in the general waste bin. For details, please follow your local battery recycling and disposal laws and regulations.
2. If the battery cannot be completely discharged due to the product's own fault, please do not dispose of the battery directly in the battery recycling bin, but contact a professional battery recycling company for further processing.
3. The battery will not be able to start after over-discharging. Please dispose of it as discarded.

## Safety Guidelines

1. Do not place this product in high temperature environments or in fire.
2. Avoid exposing it to moisture or submerging it in liquids.
3. Do not use near strong electrostatic or magnetic fields. Such conditions may disable some protective features of the product, leading to severe malfunctions.
4. Do not disassemble this product. Consult official channels for service or repair. Improper disassembly or reassembly may pose a risk of fire or personal injury.
5. When using this product, adhere strictly to the operational temperature range specified in the user manual. Excessive temperatures may cause fire or explosion; low temperatures can significantly reduce performance or cause the product to fail and cease functioning.
6. Do not place the product in unventilated areas during use.
7. Avoid causing a short circuit in the product with wires or other metal objects.
8. Ensure the product is not subjected to impact, drops, or severe vibration. Secure it during transport to prevent damage. If severely damaged, immediately turn off the power and cease using the product.
9. If the product accidentally falls into water, place it in a safe, open area and stay away from it until it is completely dry. Do not reuse a dried product; dispose of it properly as Disposal Guide in this document.
10. Growatt is not responsible for accidents or malfunctions caused by parts not provided by Growatt.
11. Clean the product only with a dry cloth.
12. Place it on a flat surface to prevent it from falling. If it topples over and is severely damaged, immediately turn it off; place the battery in an open area, away from people and flammable materials, and dispose of it in accordance with local laws and regulations.
13. Keep out of reach of children and pets.
14. Electromagnetic fields inevitably generated during the use of power products may affect the normal functioning of implanted medical devices or personal medical devices, such as pacemakers, implanted cochlear implants, hearing aids, defibrillators, etc. If you use such medical devices, consult their manufacturers for restrictions on using related equipment to ensure a safe distance is maintained between the product and implanted medical devices (like pacemakers, cochlear implants, hearing aids, defibrillators, etc.) during operation.

## Declaration of Conformity

Hereby, Shenzhen Growatt Power Technology Co., Ltd. declares that this product is in compliance with Directives 2014/35/EU, 2014/30/EU, 2014/53/EU & 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: <https://growattportable.com/pages/download-center>.

Hereby, Shenzhen Growatt Power Technology Co., Ltd. declares that this device is in compliance with The Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023. For the Statement of Compliance, visit the Web site <https://growattportable.com/pages/download-center>.

Directive 2014/53/EU Radiation Exposure Statement:

This equipment should be installed and operated with a minimum distance of 20cm between the radiator and your body.

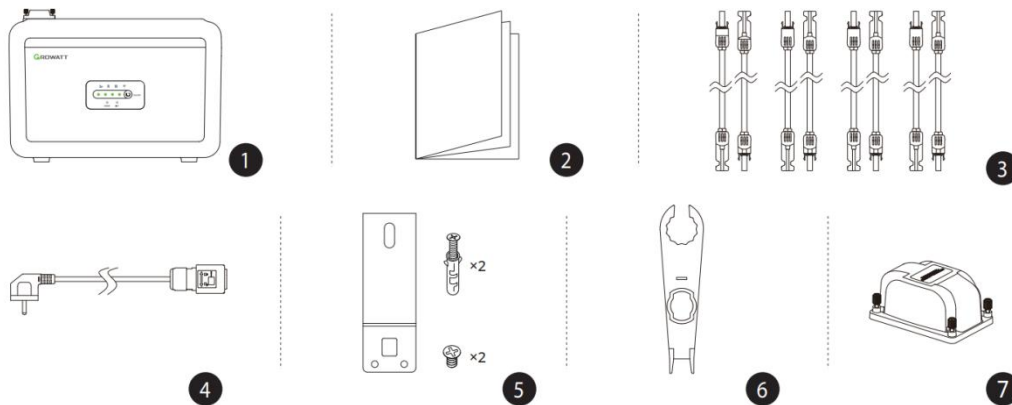
This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

## Specifications

| Basic Information               |                          |
|---------------------------------|--------------------------|
| Net Weight                      | ≈24Kg                    |
| Dimensions (L*W*H)              | 406*255*290mm            |
| Wireless Connection             | Bluetooth, 2.4G Hz Wi-Fi |
| Operation Frequency             | 2400-2483.5MHz           |
| Max RF Output Power             | <20dBm                   |
| Wireless technology             | LoRa                     |
| Wi-Fi HaLow Operation Frequency | 863-870MHz               |
| Wi-Fi HaLow Max RF Output Power | <13.98dBm                |
| LED Display                     | Supported                |
| PV Input                        |                          |
| Operation Voltage Range         | 16-60Vdc                 |
| Max PV Input Voltage            | 60Vdc                    |
| Max PV Input Current            | 20A                      |
| Max Isc PV                      | 20A                      |
| Number Of MPPT                  | 4                        |
| Max MPPT Input Power            | 2600W                    |
| On-grid Port                    |                          |
| AC Output                       | 230Vac,50/60Hz,800W      |
| Max AC Output Current           | 3.5A                     |

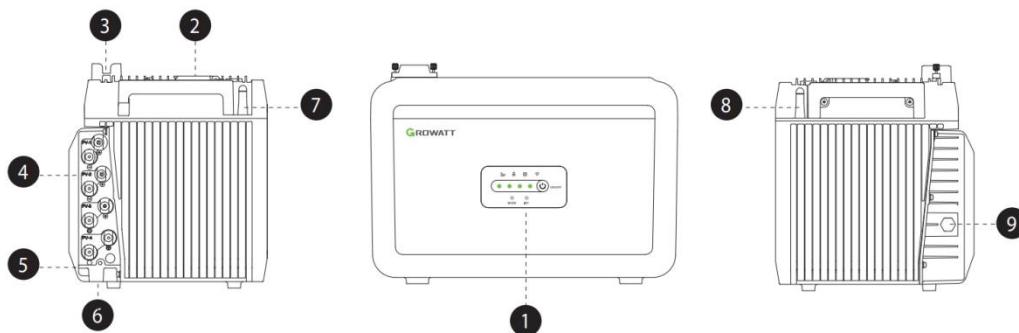
|                               |                         |
|-------------------------------|-------------------------|
| Power Factor                  | > 0.99 (-0.8~+0.8)      |
| <b>Versatile AC Port</b>      |                         |
| AC Output                     | 230VAC,50/60Hz,3.5A     |
| Max AC Output Power           | 800W                    |
| Max AC Apparent Power         | 800VA                   |
| Power Factor                  | -0.8~+0.8               |
| <b>Battery</b>                |                         |
| Rated Capacity                | 2048Wh                  |
| Battery Rated Voltage         | 51.2Vdc                 |
| Max Charge Current            | 40A                     |
| Max Discharge Current         | 60A                     |
| Max Charging Power            | 2000W                   |
| Max Discharging Power         | 800W                    |
| Rechargeable Li-Ion Battery   | LifePO4                 |
| Expandable Battery Quantity   | 3                       |
| Max Expandable Capacity       | 8192Wh                  |
| <b>Protection</b>             |                         |
| Overvoltage Protection        | Yes                     |
| Overcurrent Protection        | Yes                     |
| Short Circuit Protection      | Yes                     |
| Temperature Protection        | Yes                     |
| Overcharging Protection       | Yes                     |
| Over-Discharge Protection     | Yes                     |
| <b>General Parameters</b>     |                         |
| Charging Temperature Range    | 0℃~55℃                  |
| Discharging Temperature Range | -20℃~55℃                |
| Self-Heating                  | Yes, activated below 0℃ |
| Relative Humidity             | 5%-95%                  |
| Maximum Altitude Rating       | 4000m                   |
| Ingress Protection            | IP66                    |
| Pollution Degree              | PD3 (External)          |
| Overvoltage Category          | OVCII (DC), OVCI (AC)   |
| Protective Class              | Class I                 |
| Operating Environment         | Indoor used             |
| Warranty                      | 10 Years                |

## Packing List



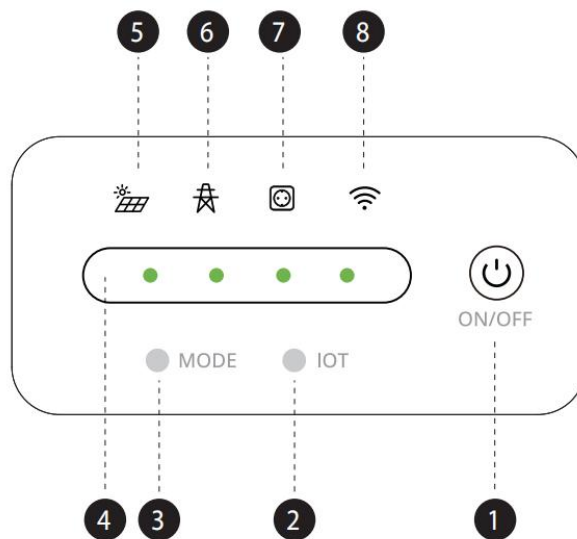
- 1.NEXA 2000 Balcony Storage
- 2.Documentations (Disclaimer & Warranty & Quick Start Guide & APP Guide)
- 3.PV Input Extension Cable
- 4.On-grid Cable
- 5.Fix-Bracket
- 6.MC4 Withdrawal Tool
- 7.Plug-Cover

## Product Introduction



- 1.LED Panel
- 2.Versatile Port(Inverter In/Off-grid Out)
- 3.On-grid Port
- 4.PV Input Port
- 5.External Grounding Terminal
- 6.Battery Expansion Port
- 7.WIFI
- 8.Wi-Fi HaLow
- 9.Vent Valve

## LED Panel



1.Main Power Button: short press 1s to switch on; long press 3s to switch off;

2.IOT Button (WiFi-Bluetooth):

-Short press 1s, IOT icon flashes, indicating pending connection status;

-Press and hold for 3s to reset, the IOT icon flashes and then goes out, press 1s again to turn it on again and enter the pending connection state;

3.Mode Switch Button: press and hold for 3s to switch between On-grid Mode and Off-grid Mode. The default mode is On-grid Mode when the device is switched on;

4.Battery Level Indicator: indicates the percentage of power. One cell represents 0-25%. When the battery level is 0-10% and the whole machine is in standby or discharging state, the first cell on the left side will flash.

5.Solar Panel Connection Indicator: when the icon is lit, it means the PV is connected; when the PV power input is lower than 25W, the PV icon flashes quickly, and when it exceeds this value, the PV icon is always lit;

6.On-grid Indicator: when the icon is lit, it indicates that the device is connected to the grid;

7.Off-grid Indicator: when the icon is lit, it means the device is Off-grid;

8.IOT Indicator (WiFi/Bluetooth): when the icon is always on, it indicates successful grid connection; when the icon is blinking, it indicates pending connection status.

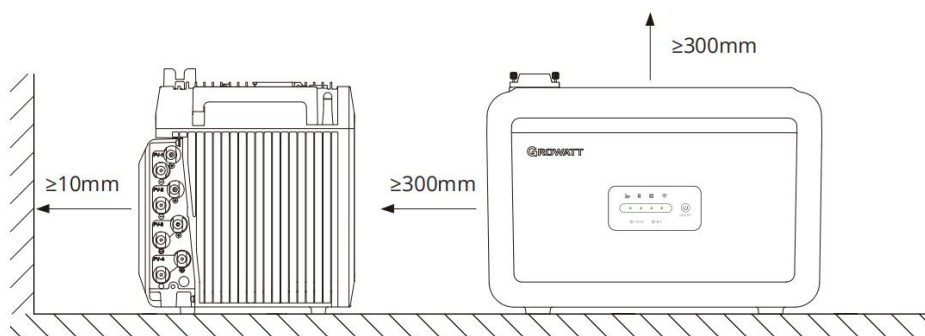
## Installation

## Installation Instructions

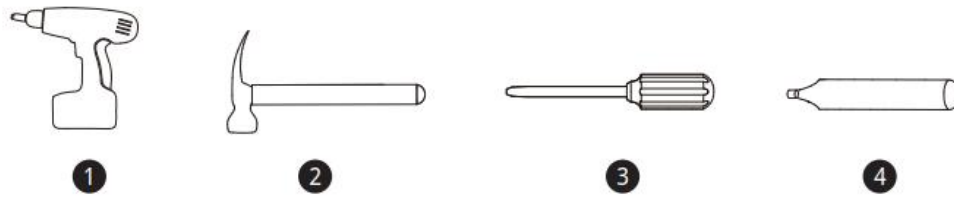
- System Application Diagram



- Space Required



- Tools Required

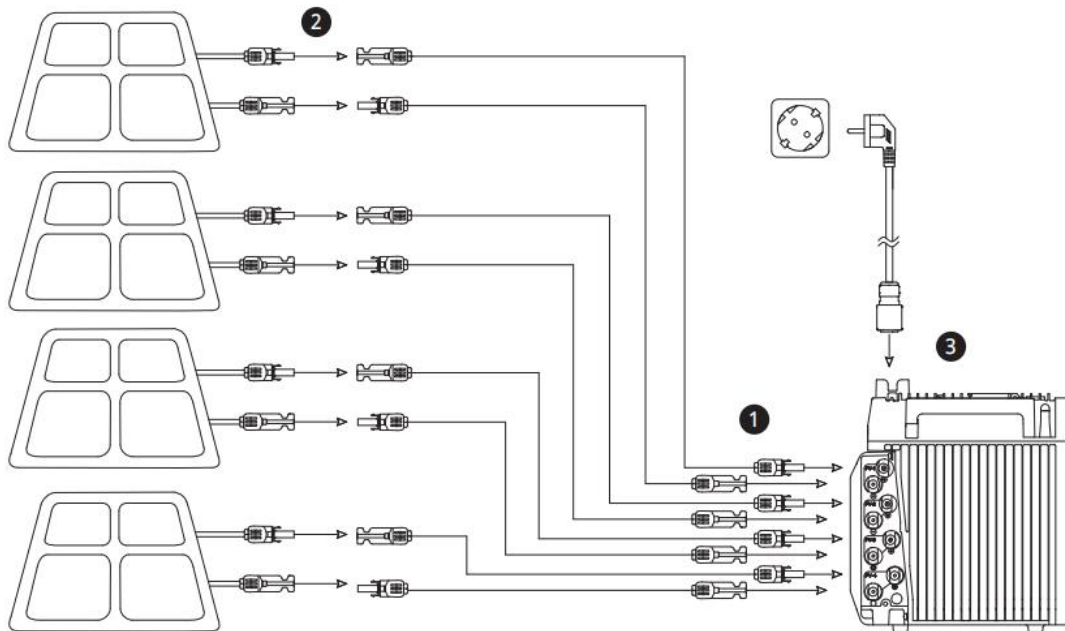


1. Multifunction Electric Screwdriver (Ø 12mm Drill Bit)
2. Hammer
3. Phillips Screwdriver
4. Pencil

## On-grid Application

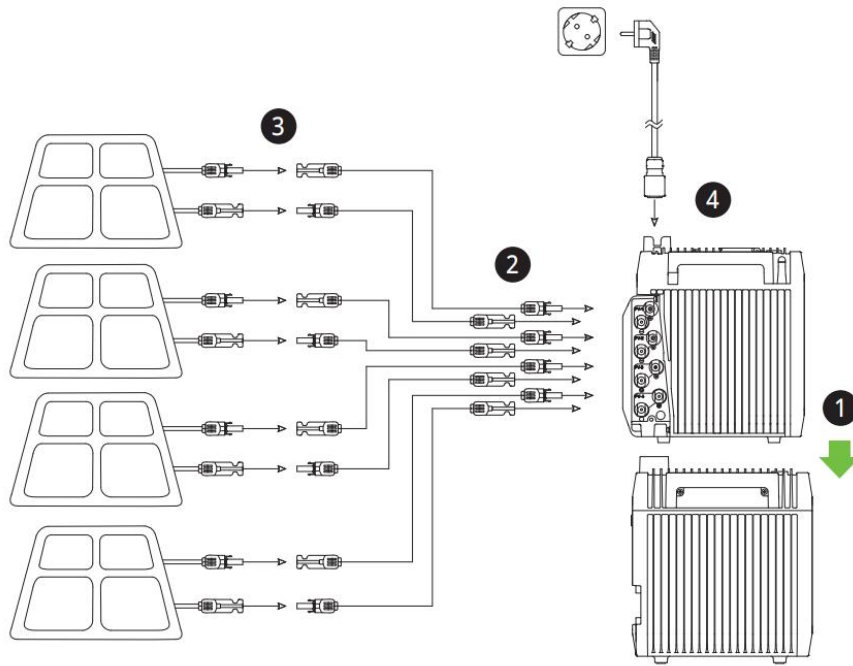
### Application 1: NEXA 2000+Solar Panel

1. Connect PV Input Extension Cable to NEXA 2000;
2. Wiring solar panels with PV Input Extension Cable;
3. Connect NEXA 2000 to home-grid with On-grid Cable.



### Application 2: NEXA 2000+Solar Panel+EBM

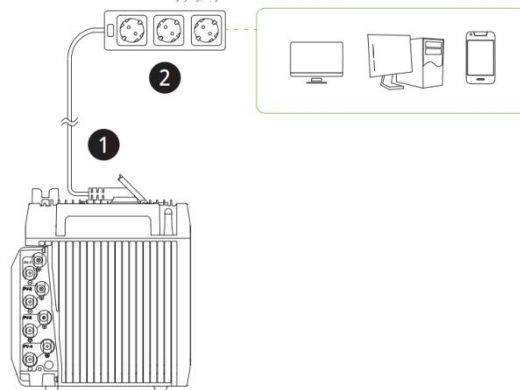
1. Stack NEXA 2000 to EBM, Max 3 EBMs are recommended;
2. Connect PV Input Extension Cable to NEXA 2000;
3. Wiring solar panels with PV Input Extension Cable;
4. Connect NEXA 2000 to home-grid with On-grid Cable.



## Off-grid Application

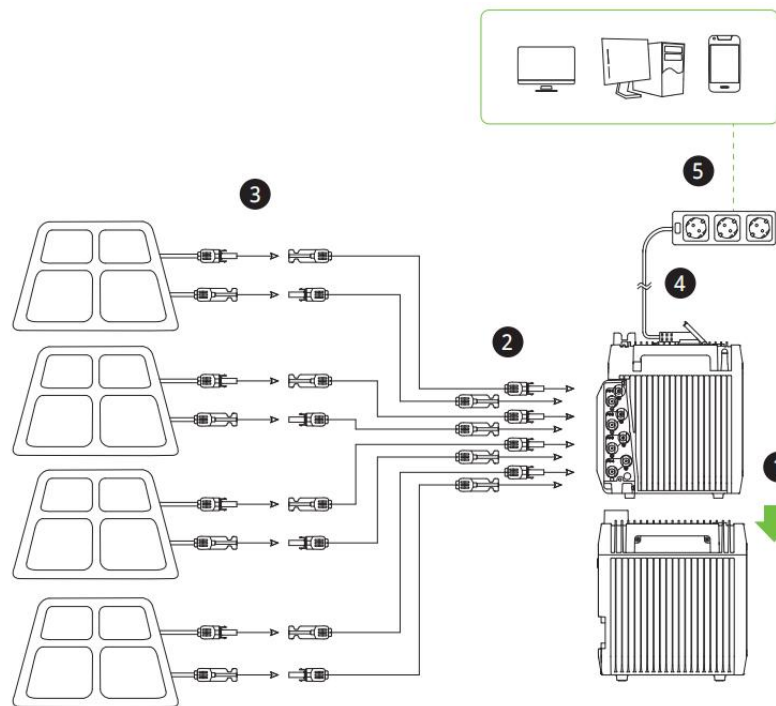
### Application 1: NEXA 2000(Only)

1. Connect the row plug to the NEXA 2000's VERSATILE AC PORT;
2. Connecting household appliances to the row plug.



### Application 2: NEXA 2000+Solar Panel+EBM

1. Stack NEXA 2000 to EBM, Max 3 EBMs are recommended;
2. Connect PV Input Extension Cable to NEXA 2000;
3. Wiring solar panels with PV Input Extension Cable;
4. Connect the row plug to the NEXA 2000's VERSATILE AC PORT;
5. Connecting household appliances to the row plug.

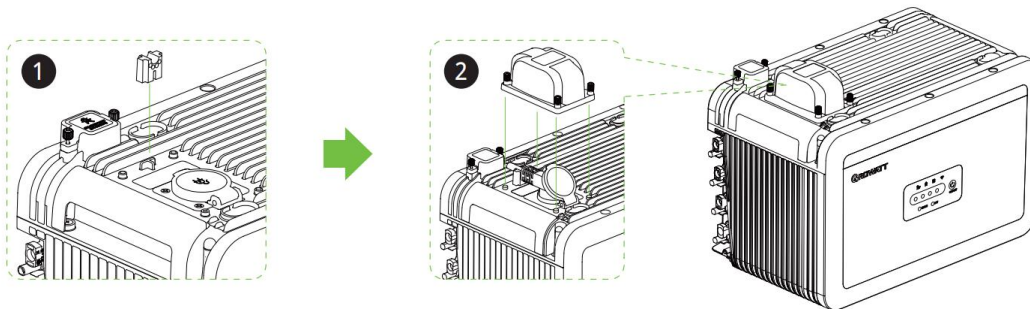


## Other Tips

### Plug-Cover Install

NEXA 2000 supports waterproof to your device's plug for well connection stability as follows:

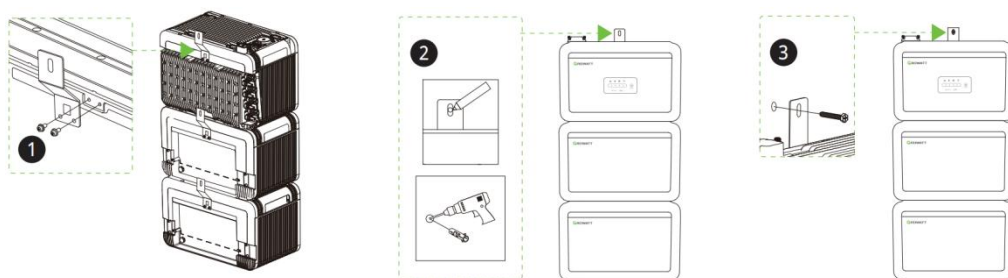
1. Install the block of Plug-Cover onto Versatile Port;
2. Insert the device's plug and secure Plug-Cover(Torque 1.5N·m) .



### Floor-Standing Install

NEXA 2000 supports battery expansion with EBM stacked(Max 3 EBM's are recommended), Fix-bracket can be used to enhance stability as follows:

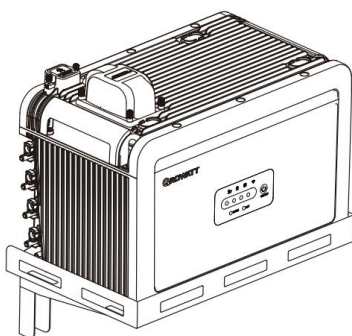
1. Install Fix-Bracket onto NEXA 2000/EBM(Torque 1.5N·m);
2. Mark the wall after positioning NEXA 2000/EBM, Drill holes (Φ12\*50mm) at the marked spots and insert expansion plugs;
3. Secure NEXA 2000/EBM to the wall (Torque 6.0 N·m) .



## Wall-Hung Install

NEXA 2000 supports Wall-Hung to minimize the use of balcony floor space.

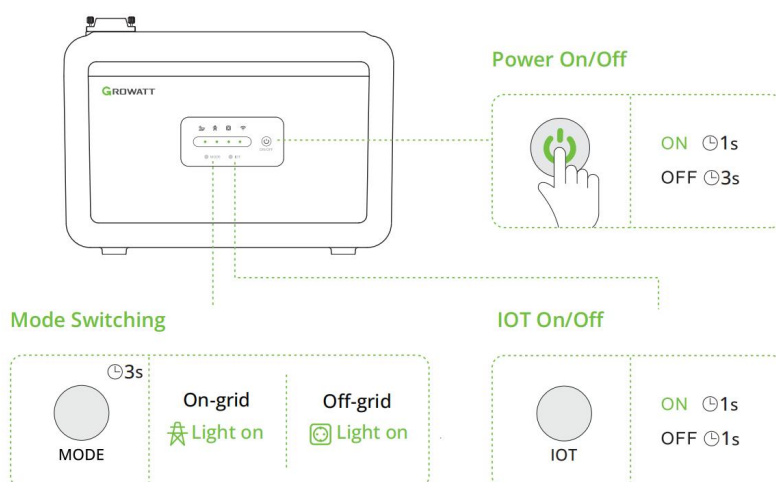
\*This accessory Wall-Hung bracket is sold separately.\*



## How To Start

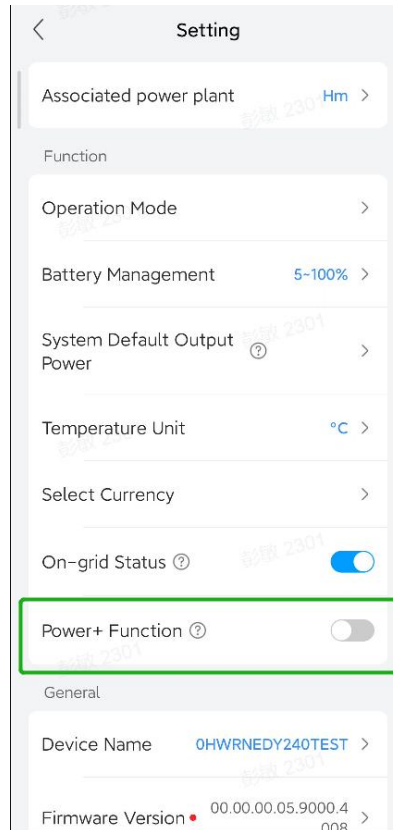
### Power On / Off & Mode Setting

1. Short press the Main Power Button for 1 second to turn on; long press the main power button for 3 seconds to turn off.
2. Short press the IOT button for 1s, the IOT indicator flashes, that is, enter the pending connection state, you can configure the network for the device according to the APP guidelines.
3. The device is in On-grid mode by default, and can be switched to Off-grid mode by long-pressing the Mode button for 3s.



## POWER PLUS Function

You can use this function on APP, enable to set the maximum value of the On-grid output power, please use with caution.



## Connect ShinePhone APP

Use the ShinePhone application to remotely monitor and control your NEXA 2000 All-in-one Balcony Solar Storage system.

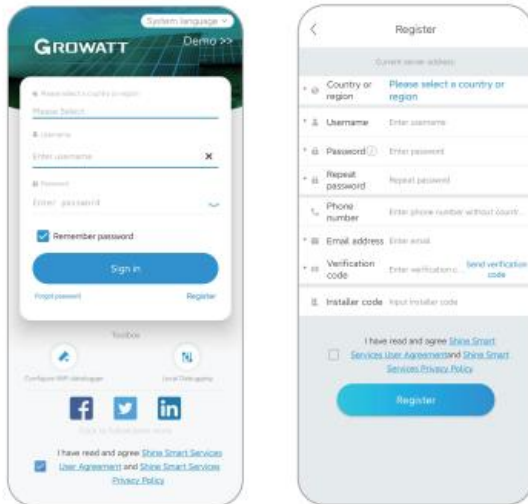
### Create A Power Plant

1.Scan the QR code to download the 'ShinePhone' APP. You can also search for 'ShinePhone' on the APP Store or Google Play to download.

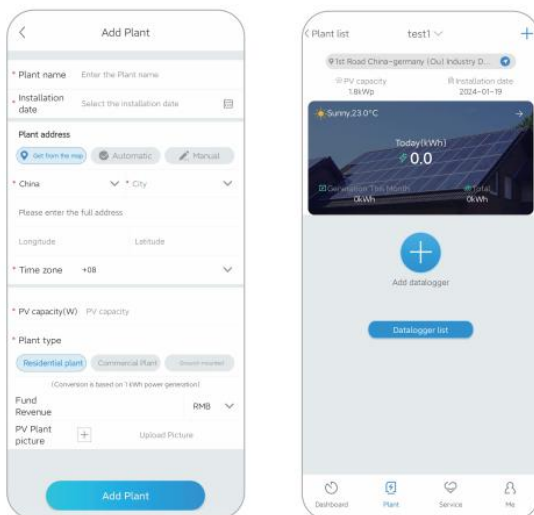


2.Click “Register” to create an account.

**Installer code: GWATT**



3. Create a power plant: Set the time and location according to the actual situation, and fill in the PV capacity and grid electricity price information.

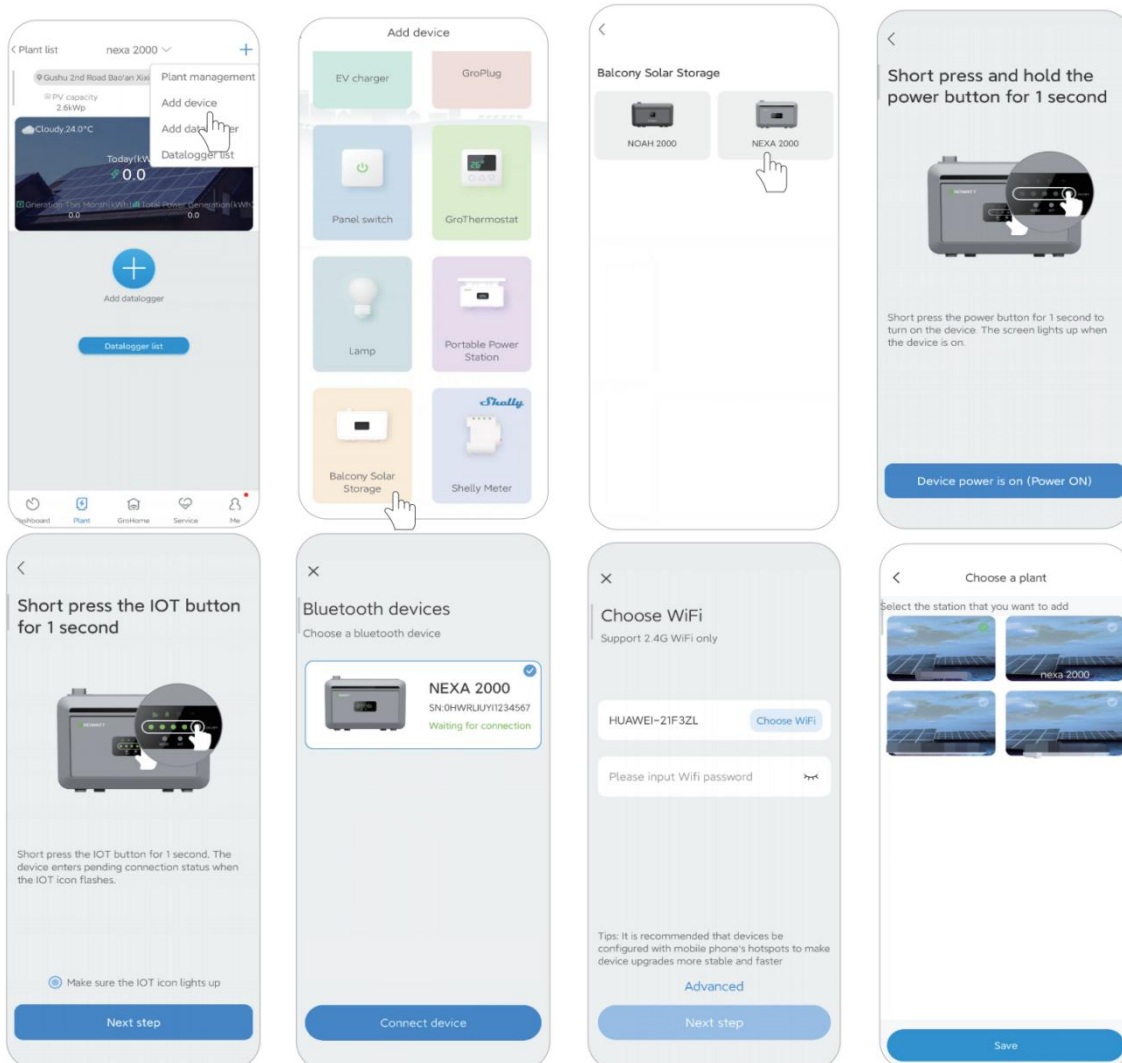


## Configure Network

4. Connect NEXA 2000 to the network

4.1 Find and enter the "Plant" page from the bottom menu. Click the "+" button in the upper right corner of the page, select "Add device", scroll down and choose "Balcony Solar Storage".

4.2 Click "NEXA 2000" and follow the instructions on the app to complete the remaining distribution steps and add it to the power plant.

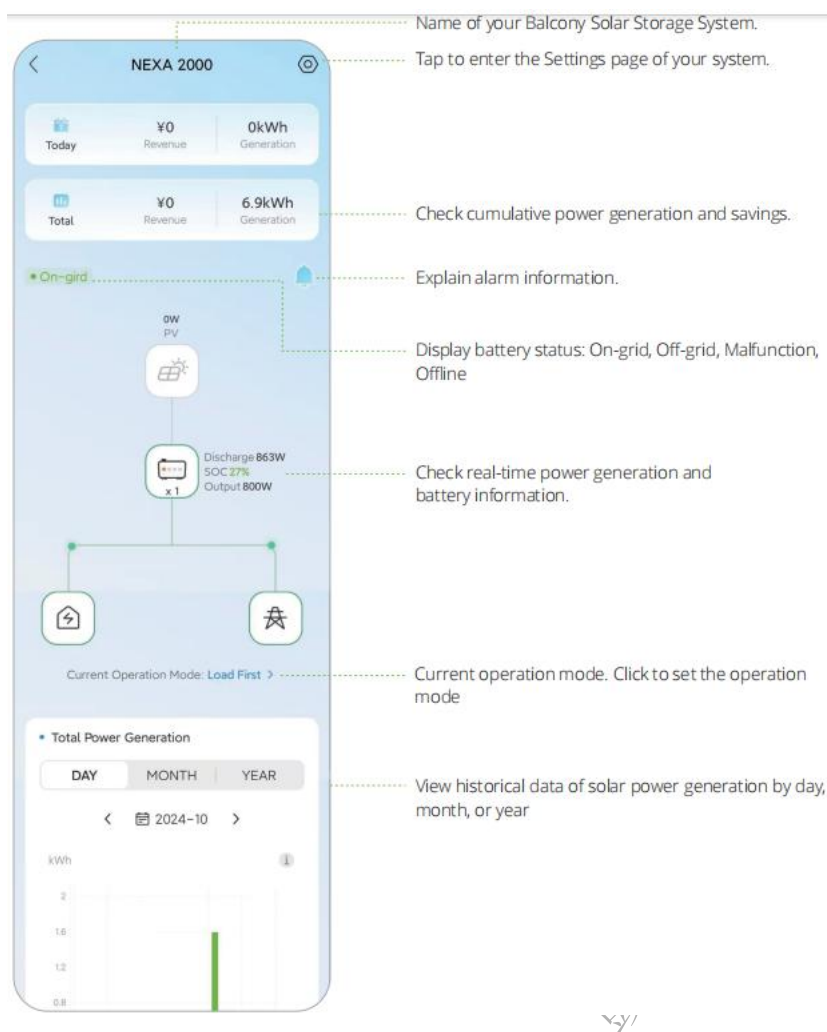


#### Note:

Re-pair the product with a new mobile device: If the device is already bound to a mobile device, you need to press the device's IoT button for 3 seconds to unpair the product from the current device and then re-pair it with the new mobile device.

#### Page Introduction

5. Page of your NEXA 2000 Balcony Solar Storage



## Set Operation Mode

### 6.Set Operation Mode

6.1 Click "Add time", add a time period, and select a work mode for that time period.

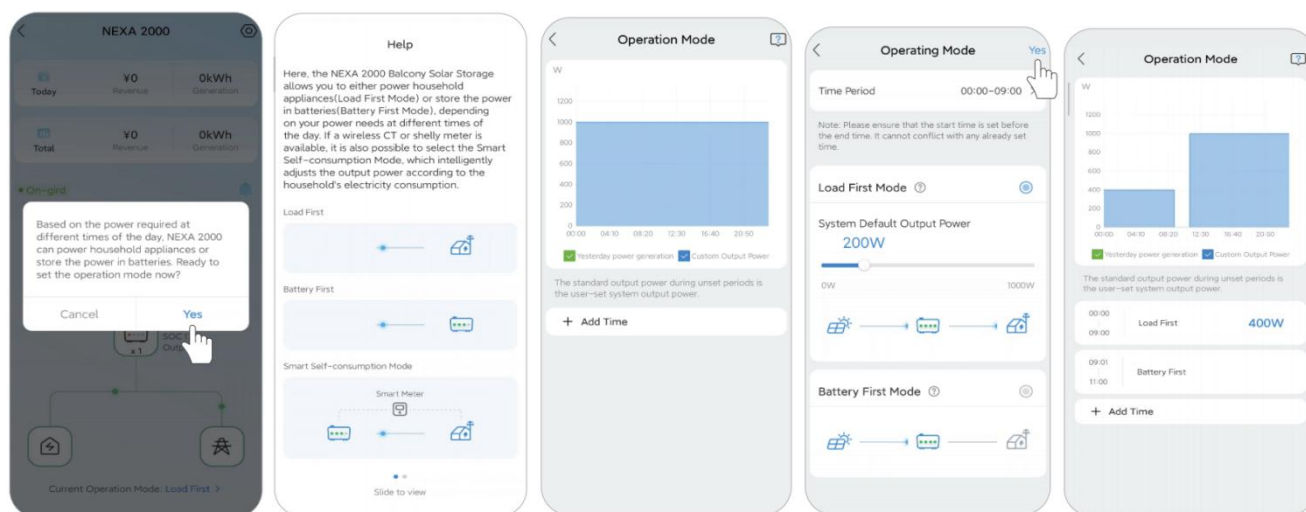
**Load First Mode:** It is a setting that prioritizes the use of photovoltaic power to power the load. If the photovoltaic energy generated is more than the System Output Power you have set, the excess energy will be stored in the battery. Conversely, if the photovoltaic energy generated is less than the System Output Power you have set, the battery will be discharged automatically to power the load along with the photovoltaic energy.

**Battery First Mode:** It is a setting that prioritizes the use of photovoltaic power to charge the battery until it reaches its upper limit SOC, at which point the battery stops discharging. When the battery is fully charged and there is still photovoltaic energy, it will output according to the actual photovoltaic power.

**Smart Self-consumption Mode:** This function is only available if the system is connected to a smart meter. The smart meter monitors the home's power consumption (drawing power from or feeding power to the grid) and intelligently adjusts the system's power output.

**Note:** The default is Load First Mode, and the default system output power is set to 200W. You can adjust this value to your preferred level within the APP.

6.2 Click on the "?" icon in the upper right corner to view detailed operating instructions.



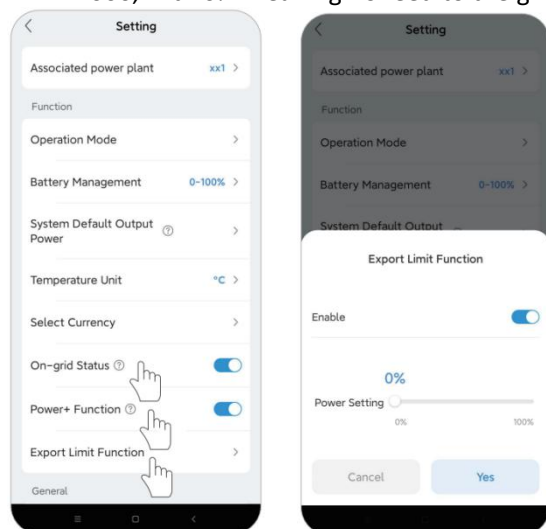
## Other Important Settings

### Associated Inverter

7. On-grid Status: Enable to enter on-grid status, disable to enter off-grid status.

8. Power+ Function: Enable to adjust the maximum value of the grid-connected output, use with caution.

9. Export Limit Function: Can only be used when associated with a wireless meter. Enable to limit the feed power of NEXA 2000, with 0% meaning no feed to the grid and 10% meaning maximum feed to the grid of 10%.



## Cold-start

When the battery temperature is between -30°C and -20°C, connecting solar panels with photovoltaic input can automatically heat the battery to the working temperature, allowing the NEXA 2000 to function normally, thus enabling its use in low-temperature environments.

| Battery temperature | Remaining heating time/min |
|---------------------|----------------------------|
| -30°C               | 83                         |
| -25°C               | 75                         |

|                                                 |    |
|-------------------------------------------------|----|
| -20°C (Minimum allowable discharge temperature) | 65 |
| -15°C                                           | 54 |
| -10°C                                           | 42 |
| -5°C                                            | 29 |
| 0°C (Minimum allowable charging temperature)    | 15 |
| 5°C                                             | 0  |

\*Note:

1. This estimated remaining heating time is calculated based on the maximum heating power (photovoltaic input power  $\geq 140W$ ) and is for reference only, subject to the actual heating. The heating function will stop when the battery temperature reaches 5°C.
2. Remaining heating time: The time required to heat from the current temperature to 5°C. For example, if the current temperature is -20°C, it takes 65 minutes to heat up to 5°C.
3. If the NEXA 2000 is below 0°C and the photovoltaic input power is  $\leq 140W$ , the photovoltaic energy is prioritized for battery heating.

## FAQ

### Q1: Does NEXA 2000 support simultaneous charging and discharging?

Yes, the input/output ports of NEXA 2000 are different, allowing simultaneous charging and discharging.

### Q2: Is it possible to charge NEXA 2000 with solar panels from other brands?

Yes, just meet the photovoltaic charging specifications of this product.

### Q3: How to store my NEXA 2000?

If long-term storage is required, please fully charge the machine, disconnect the photovoltaic connection, and then turn off the machine. Charge and discharge the product every 3 months: first discharge it to 20%, then charge it to 80%.

### Q4: Can one battery be connected to four solar panels?

Sure, you can purchase the Y-Branch Solar Parallel Cable to connect 4 solar panels.

### Q5: What is the waterproof performance of this device?

NEXA 2000 has an IP66 rating, making it suitable for outdoor use in challenging conditions, whether it's dusty environments or unexpected rain showers.

### Q6: How to monitor the electricity generation of NEXA 2000 All-in-one Solar Balcony Storage system?

On the ShinePhone app, you can monitor solar power generation data and regulate the system's real-time output power.

### Q7: How does NEXA 2000 All-in-one Solar Balcony Storage operate??

NEXA 2000 supports three working modes: Load First Mode, Battery First Mode and Smart Self-Consumption Mode. Users can set different working modes at different time periods as needed.

The system operates on a Load First mode by default, which prioritizes the use of photovoltaic power to power the load. If the photovoltaic energy generated is more than the system output power, the excess energy will be stored in the battery. Conversely, if the photovoltaic energy generated is less than the system output power, the battery will be discharged automatically to power the load along with the photovoltaic energy. The default system output power is set to 200W, but users can adjust this value to their preferred level within the app.

Battery First mode is a setting that prioritizes the use of photovoltaic power to charge the battery until it reaches its upper limit SOC, at which point the battery stops discharging. When the battery is fully charged and there is still photovoltaic energy, it will output according

to the actual photovoltaic power.

Smart Self-consumption Mode: This function is only available if the system is connected to a wireless CT or meter. The wireless CT or meter monitors the home's power consumption (drawing power from or feeding power to the grid) and intelligently adjusts the system's power output.

**Q8: What precautions should I take before installing/adding an extended battery?**

When installing/adding an extended battery, the system must be turned off to protect you and the machine. Performing this operation while powered on is not covered under warranty. Please follow these steps for proper installation.

- a. Disconnect the NEXA 2000 from the solar panel.
- b. Press and hold the On/Off button for 1 second to switch off the power.
- c. After powering off the NEXA 2000, install the extended battery onto the NEXA 2000.
- d. Connect the solar panel for normal use.

**Q9: What other precautions should I take when installing and using this product?**

Please make sure the AC power outlet is well grounded. If the PE of 'Receptacle, Grid Connector' cannot be conducted (e.g. the user's wall plug does not have PE), you can choose the reserved grounding hole on the chassis for additional grounding.

**Q10: How to switch Off-grid mode?**

Long press the device Mode Switch Button or in the APP setting page to switch Off-grid mode.

## Alert & Failure

| APP Displayed Fault Code | APP Displayed Fault Content     | Solution                                                                                                                                             |
|--------------------------|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| F01                      | PV1 Over Voltage Protection     | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F02                      | PV1 Overcurrent Protection      | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F03                      | PV1 Over Temperature Protection | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F04                      | PV2 Over Voltage Protection     | Please check whether the input meets the specifications of solar charging. Remove the solar input to resume normal operation.                        |
| F05                      | PV2 Overcurrent Protection      | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F06                      | PV2 Over Temperature Protection | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F07                      | DC Low Voltage Protection       | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F08                      | DC Over Voltage Protection      | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F09                      | Product Overheating             | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F10                      | DC output overload protection   | Normal operation will be resumed automatically after you remove the overloaded device. Long-term overload may cause product damage.                  |

|     |                                               |                                                                                                                                                      |
|-----|-----------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| F11 | Battery Low Voltage Protection                | Please ensure timely recharging. If the problem persists after 2-3 hours of recharge, contact Growatt Customer Service.                              |
| F12 | Battery Over Voltage Protection               | Turn off the PV input and restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.              |
| F13 | Battery Charge Low Temperature Protection     | Please move the product to a warmer spot or connect it to PV power before use.<br>(Not displayed in the app)                                         |
| F14 | Battery Charge Over Temperature Protection    | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F15 | Battery Discharge Low Temperature Protection  | Please move the product to a warmer spot or connect it to PV power before use.<br>(Not displayed in the app)                                         |
| F16 | Battery Discharge Over Temperature Protection | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F17 | Battery Charge Overcurrent Protection         | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F18 | Battery Discharge Overcurrent Protection      | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F19 | Battery Failure                               | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F20 | Abnormal battery temperature sampling         | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F21 | Abnormal battery voltage sampling             | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F22 | BMS Communication Failure                     | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F23 | Communication Failure with MPPT               | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F24 | Communication failure with INV                | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F26 | PV3 Over Voltage Protection                   | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F27 | PV3 Overcurrent Protection                    | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F28 | PV3 Over Temperature Protection               | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F29 | PV4 Over Voltage Protection                   | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F30 | PV4 Overcurrent Protection                    | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F31 | PV4 Over Temperature Protection               | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F40 | Grid Voltage Failure                          | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |

|     |                              |                                                                                                                                                      |
|-----|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| F41 | ISO Failure                  | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F42 | Grid Disconnection Failure   | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F43 | Grid Frequency Failure       | Restart the product. If the problem persists after several attempts, please contact Growatt Customer Service.                                        |
| F44 | Relay Detection Failure      | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F45 | Inverter Temperature Failure | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F46 | BUS Voltage Failure          | Turn off the product and place it in an open area for 2-3 hours. After cooling, the product will continue to work normally.                          |
| F47 | Hardware OCP Failure         | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |
| F48 | EEPROM Failure               | Please check whether the input meets the specifications of solar charging. Remove the solar input or restart the product to resume normal operation. |

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