



Hoymiles Single-phase Gateway **USER MANUAL**

HiBox-100S-G3

Legal Notice

Hoymiles has made every effort to ensure the accuracy and completeness of this manual. However, this manual may be changed and revised due to product enhancements or user feedback.

Hoymiles reserves the right to modify this manual without prior notice at any given time. The latest version of this manual can be found by visiting the Hoymiles official website www.hoymiles.com or scanning the QR Code below.



Warranty

Follow the installation instructions in this manual to ensure warranty compliance and reliability. The current warranty conditions can be accessed at www.hoymiles.com.

Contact Information

If you have technical queries or any questions concerning our products, please contact our support through the Hoymiles service portal:



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1 About This Manual

1.1 Purpose

This manual provides information on the installation, electrical connections, operation, and maintenance of the gateway device.

Please consider the following before installation:

- Carefully read this manual before operation.
- Keep this manual for reference.

1.2 Audience

This manual is intended for use by qualified persons only. Qualified persons must have the following skills:

- Knowledge of how a gateway device works.
- Knowledge of how an inverter works.
- Knowledge of how a battery works.
- Training in how to deal with the dangers and risks associated with the installation, maintenance, and use of electrical devices.
- Training in the installation, commissioning, and maintenance of electrical devices.
- Knowledge of and compliance with all applicable laws, standards, and directives.

1.3 Validity

This manual is valid for HiBox-100S-G3.

NOTE

Model identifier:

HiBox - 100S - G3



A B C D

[A]: Series Name

[B]: Max. Input/Output Current

[C]: Single Phase

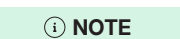
[D]: The Third Generation

2 Safety Information

IMPORTANT SAFETY INSTRUCTIONS—Before installing, operating, commissioning, and maintaining the device, please carefully read the safety rules and usage instructions in this document as failure to do so may result in safety hazards or device damage. Safety instructions in this manual cannot cover all precautions that should be taken. Please consider the actual conditions on site when performing operations. Any damage caused by a violation of the safety instructions in this manual shall not be the responsibility of Hoymiles.

2.1 Safety Symbols

Safety symbols are used in this manual as follows:

Symbol	Description
 DANGER	This symbol indicates potential risks that, if not avoided, may lead to death or serious physical injury.
 WARNING	This symbol indicates potential risks that, if not avoided, may lead to personal injury or device damage.
 CAUTION	This symbol indicates potential risks that, if not avoided, may lead to device malfunctions or financial losses.
 NOTICE	This symbol indicates potential risks that, if not avoided, may lead to minor injury or damage to the equipment.
 NOTE	This symbol indicates an important step or tip that leads to the best results but is not safety or damage-related.

2.2 Additional Symbols

The product label contains the following symbols with their meanings described below:

Symbol	Usage
	Treatment Electrical equipment that has reached the end of life must be collected separately and returned to an approved recycling facility to comply with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment and its implementation as national law. Return any devices you no longer need to an authorized dealer or an approved collection and recycling facility.
	CE mark The product conforms to the Low Voltage Directive of the European Union.
	FCC mark The product complies with the FCC standard.
	Observe the documentation Read and understand all documentation supplied with the product.

2.3 Safety Instructions

SAVE THESE INSTRUCTIONS-This manual contains important instructions for model HiBox-100S-G3, which should be followed during the installation and maintenance of the device.

To prevent personal injury and property damage and to ensure the long-term operation of the product, read this section carefully and observe all safety information at all times. Failure to observe the prescribed instructions may potentially void the manufacturer's warranty. If in doubt, please contact Hoymiles.

DANGER

Danger to life from electric shock

- Only qualified personnel are allowed to install, maintain, or replace the device.
- Qualified personnel must wear personal protective equipment (PPE) during operation.
- Attempting to service the device yourself may result in a risk of electric shock or fire and will void your warranty.
- Never insert or remove the AC connections when the device is running.
- The installation location must be inaccessible to children.
- The device should be installed away from heating devices.
- Before installation, operation, and maintenance, ensure that the upstream and downstream switches are disconnected.
- Before performing any work on the device, disconnect all power supply and wait for at least 5 minutes. The hazardous voltage will exist for up to 5 minutes after disconnection from the power supply.

WARNING

Risk of burns from hot surfaces

- The surface of the device might exceed 60°C, and touching the surface may result in burns.
- Do not touch hot surfaces before it cools down.
- All powers should be disconnected from the device before attempting any maintenance, cleaning, or working on any circuits connected to the device.
- Keep away from flammable and explosive materials to avoid fire hazard.
- The device should be installed away from humid or corrosive substances.
- When accessing the internal circuit of the device, wait for at least 10 minutes after disconnecting the power.

CAUTION

- Ensure that the existing wiring is in good condition and no wire is undersized.
- Do not disassemble any parts of the device which are not mentioned in the installation.
- Authorized service personnel must use insulated tools when installing or working with this device.

NOTICE

- The minimum rated temperature of the wire used is 90 °C.
- All electrical connections must be in accordance with local and national standards.
- Only with permission of the local utility grid company, the device can be connected to the utility grid.
- Do not open the inverter device or change any components without authorization, otherwise the warranty commitment for the device will be invalid.
- Prior to the application, please read this section carefully to ensure the correct and safe application. Please keep the user manual properly.
- The manual contains no instructions for user-serviceable parts. See Warranty for instructions on obtaining service.
- If an error occurs, contact your local distributor or qualified electricians.

3 Transportation and Storage

3.1 Transportation Requirements

- Place the device in the original packaging or specially designed transport packaging. The packaging materials should have sufficient strength and cushioning performance to prevent damage caused by collisions and squeezes during transportation.
- Secure the device firmly inside the packaging to avoid displacement during transportation.
- Maintain stability and avoid sudden starts, stops, or significant oscillations during transportation.
- Observe the safety symbols on the package of the device before transportation.
- Pay attention to the weight of the device. Be cautious to avoid injury when moving. Handle the device according to the personnel quantity required by local regulations.
- Wear protective gloves when moving the device by hand to prevent injuries.
- Hold the handle position and the bottom position of the device when lifting up the device. Keep the device horizontal in case of falling down.
- Professional handling equipment should be used, and it is essential to ensure that the operators possess the requisite operational skills and experience.

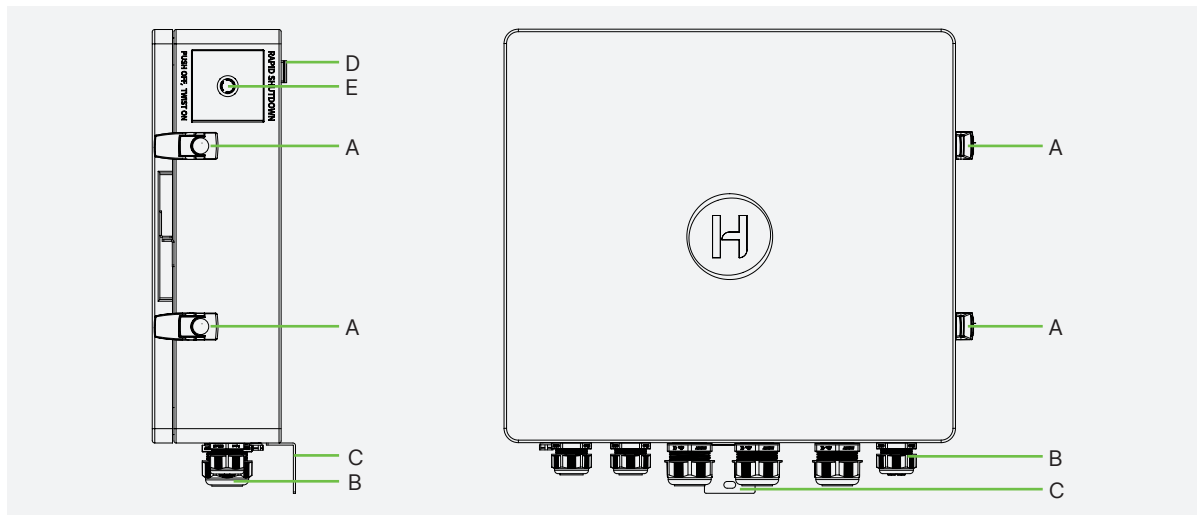
3.2 Storage Requirements

- Do not unpack the device if it is not used immediately.
- The storage temperature should not exceed 50 °C, and the relative humidity should be between 0% and 100%.
- Store the device in a clean and dry place to protect it from dust and moisture.
- The storage place should be well ventilated to ensure air circulation and avoid overheating of the device.
- Do not store the device in places exposed to direct sunlight, wet by rain, or with strong electric fields.
- Do not store the device in places with chemically corrosive substances or where there are pests and rodents.
- The device should be repackaged in its original packages with desiccants retained.
- The packages should not be tilted or inverted.
- Do not place heavy objects on the device to prevent damage to the housing or internal components.
- During the storage period, the device should be checked regularly, and it is recommended to check the device once every three months. Replace the packing materials damaged by insects or rodents in a timely manner.
- If the device has been stored for two years or longer, it must be inspected and tested by professionals before being put into use.

4 Product Introduction

The HiBox-100S-G3 is a smart gateway device, providing users with an excellent home backup solution. The device can communicate with Hoymiles energy storage inverters, providing you with a comprehensive PV ESS solution, thus helping you efficiently and independently use energy.

4.1 Appearance

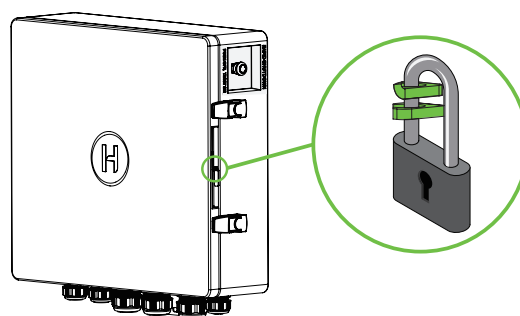


No.	Description	Function
A	Enclosure Door Lock	Secures the enclosure door to prevent accidental opening.
B	Cable Glands	Provides cable entry.
C	Lower Bracket	Secures the device to the wall.
D	Pre-installed Mounting Bracket	It is already fixed to the back of the device. During installation, insert the pre-installed mounting bracket into the mounting bracket to hang the device on the wall.
E	Rapid Shutdown Button	Press in an emergency to immediately shut down the system. To restart the system: Step 1: Twist the Rapid Shutdown Button clockwise to reset it. Step 2: In the S-Miles Installer app, tap Turn On to resume operation (Refer to 9.4 Turning On the System).

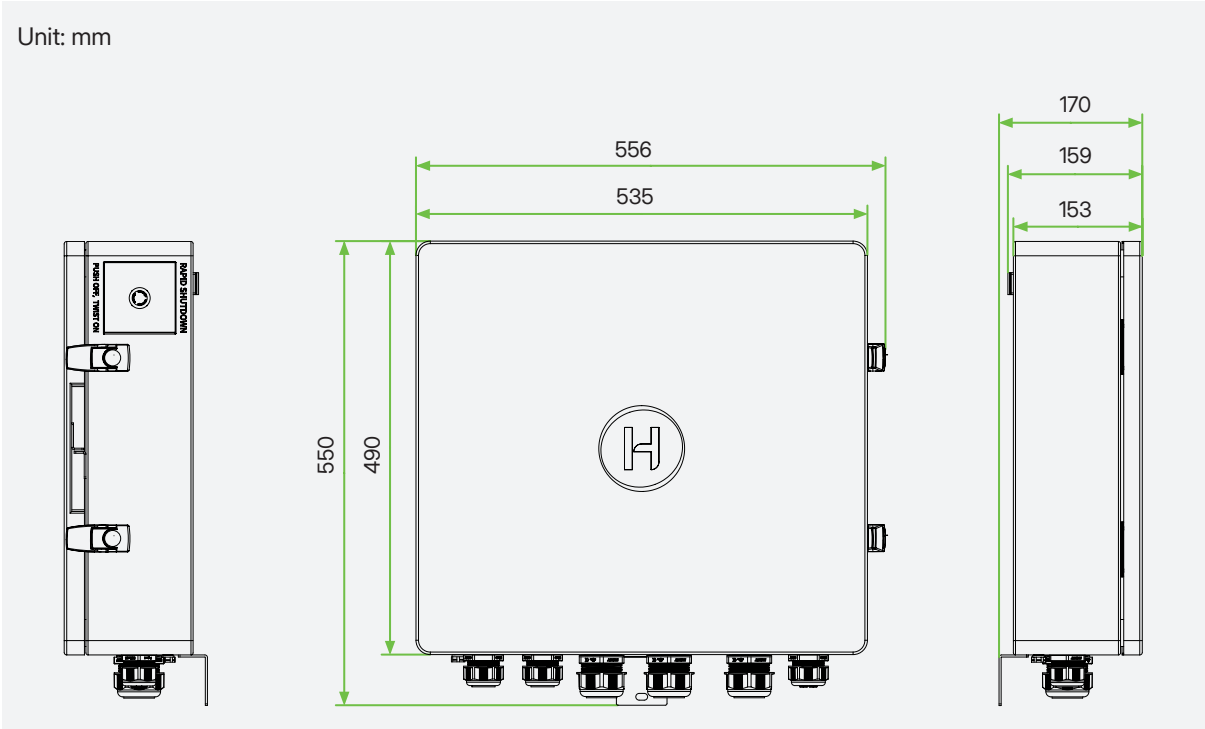
NOTICE

For safety, we recommend locking your HiBox. A mounting point for the lock is provided, as shown in the illustration on the right.

Please select and install the padlock according to the local standard. The acceptable lock shackle diameter is less than 7 mm.



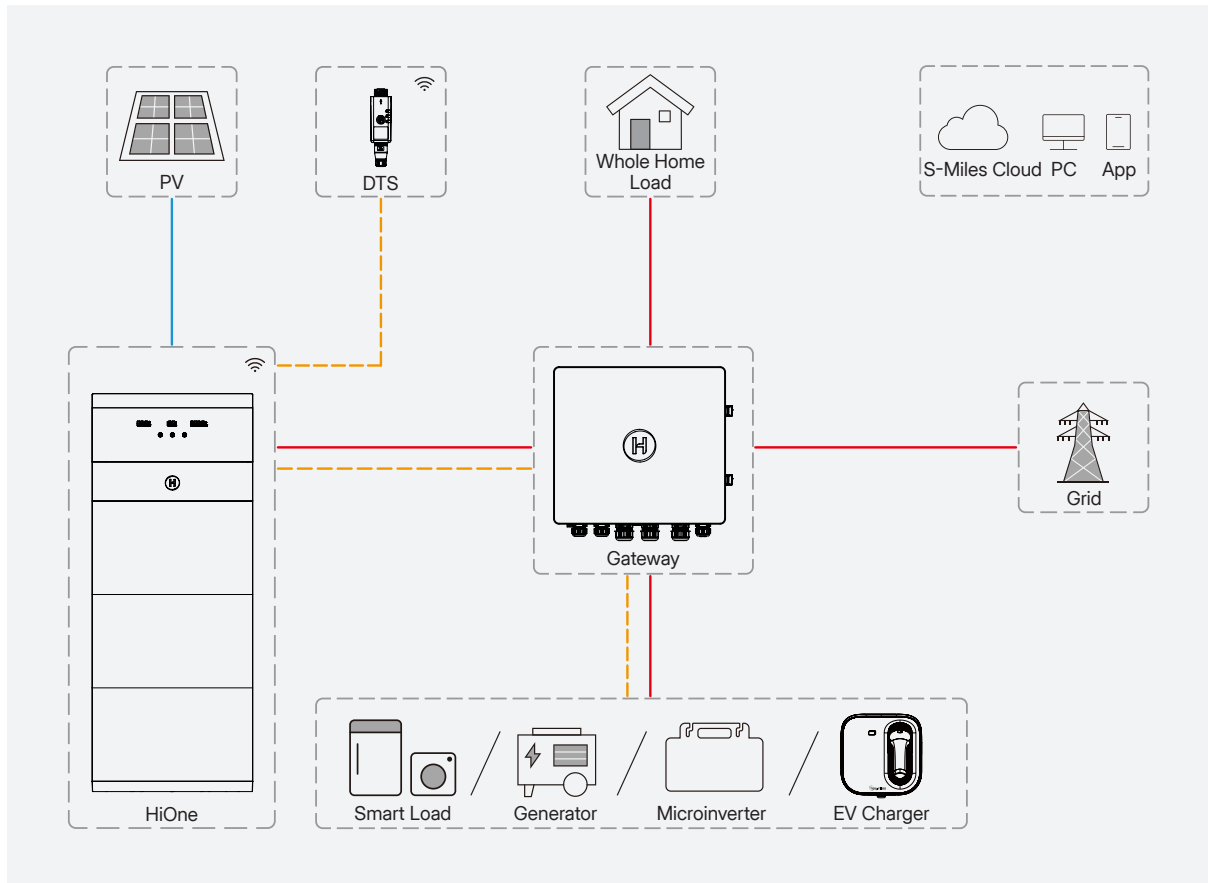
4.2 Dimensions



5 System Overview

5.1 Whole Home Backup System

In the whole home backup system, the whole home load, smart load, generator, microinverter, and EV charger can be connected to a Hoymiles Gateway. In the event of a grid outage, other components in this energy storage system will power the loads.

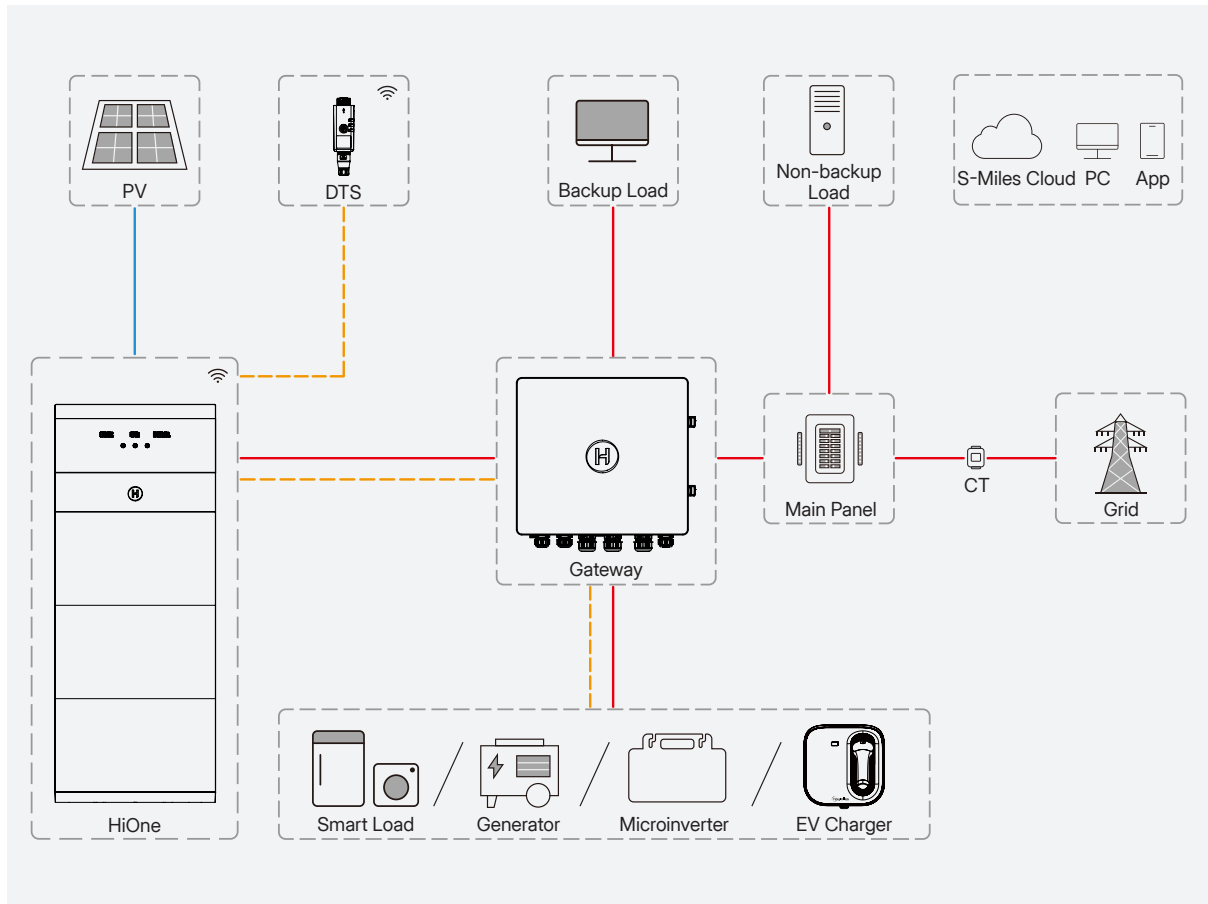


NOTE

Up to two HiOne series products can be connected.

5.2 Partial Home Backup System

In the partial home backup system, users can divide the home loads into backup loads and non-backup loads as required. All backup loads can be connected to the backup port of the gateway, and all non-backup loads can be connected to the the main panel. In the event of a grid outage, only the backup loads will be powered.



NOTE

Up to two HiOne series products can be connected.

6 Installation Instructions

⚠ DANGER

Danger to life due to fire or explosion!

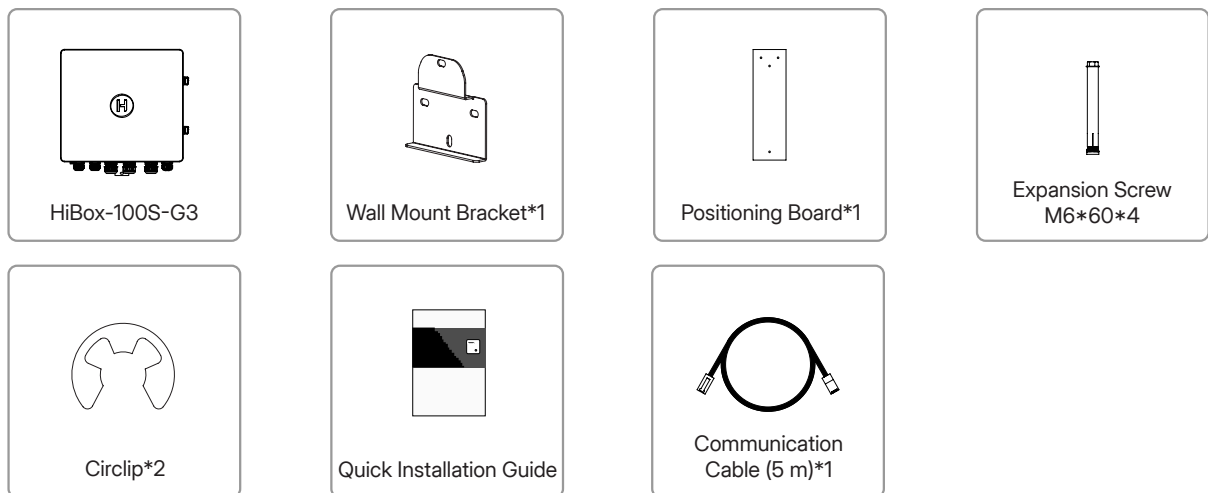
- Despite careful construction, electrical devices can cause fires. This can result in death or serious injury.
- Do not install the product in places containing highly flammable materials or gases.
- Do not install the product in places where there is a risk of explosion.

⚠ WARNING

- During the installation, comply with the National Electrical Code and ANSI/NFPA 70 wiring methods.
- Make sure there is no electrical connection before installation.
- To avoid electric shock or other injuries, make sure that holes are not drilled over any electrical parts or plumbing installations.
- Qualified personnel must wear personal protective equipment (PPE) during operation.

6.1 Unpacking

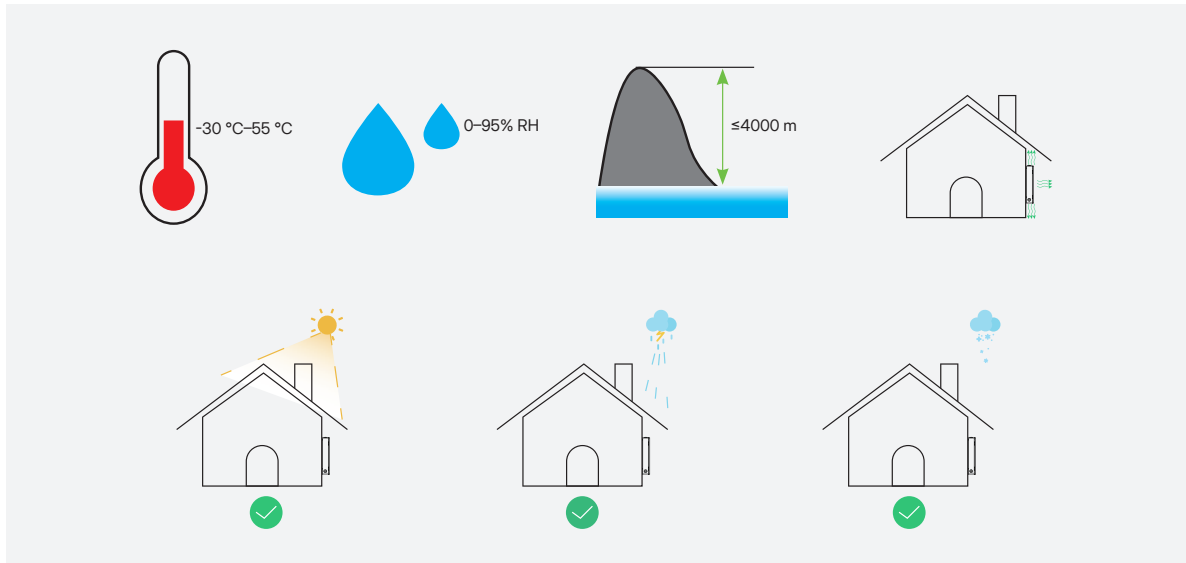
Unpack the package and carefully take out the product and other accessories. Check if the deliverables are complete and intact after unpacking the product. Please contact your supplier if the components are missing or damaged upon receipt of the product.



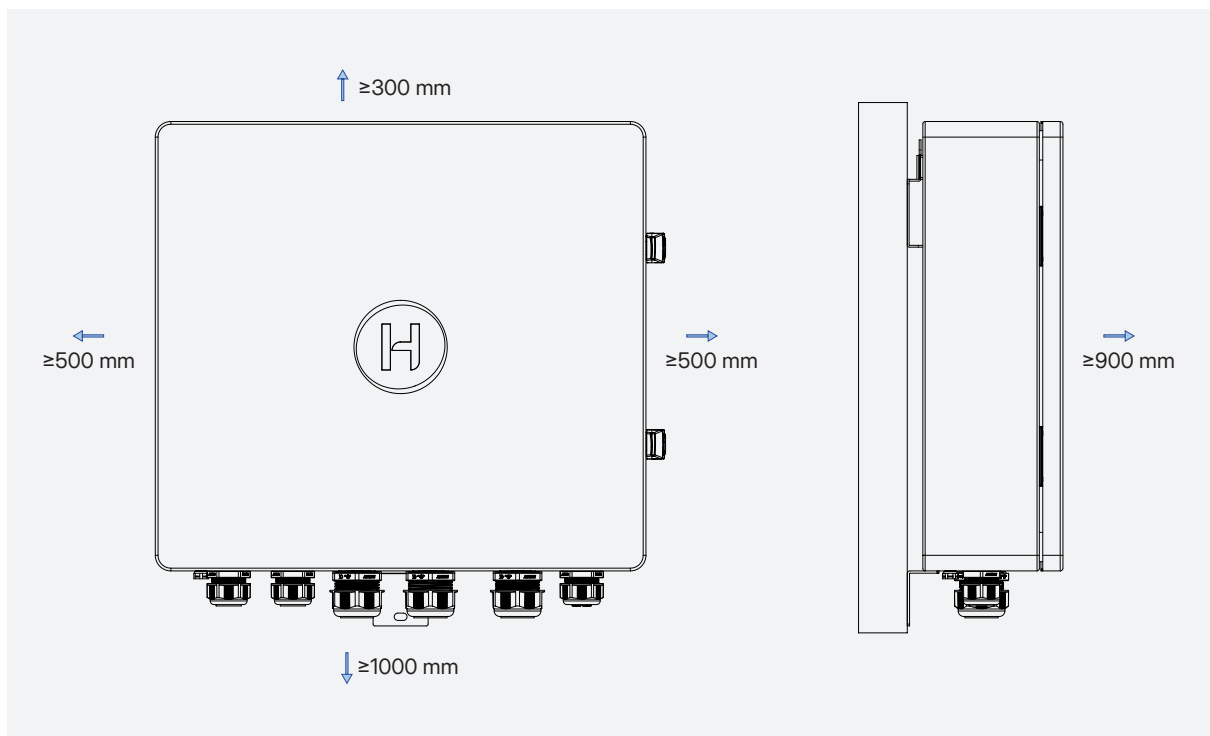
6.2 Environmental Requirements

- It is recommended to install the device in a location protected from direct sunlight and bad weather such as snow, rain, or lightning.
- The product should be installed on a solid surface that is suitable for its dimensions and weight.
- The product should be installed vertically.
- The product should be installed in an environment with good ventilation and heat dissipation conditions.
- The ambient temperature should be between -30 °C and 55 °C. High ambient temperatures will cause power derating.
- The relative humidity should be between 0% and 100%.
- The product should be installed at eye level for convenient maintenance.
- The label on the product should be visible after installation.
- The product should be installed away from flammable materials and corrosive chemicals.
- The product should be installed away from standing water.
- The product should be installed away from the heating device.

- The product should be installed away from dust and smoke.



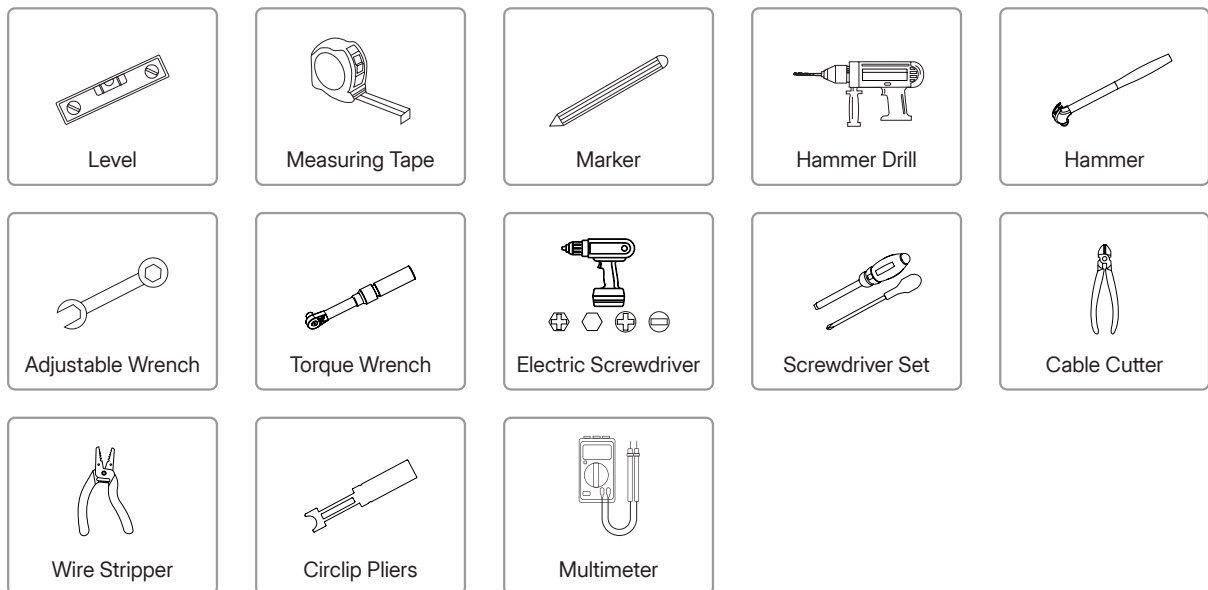
6.3 Space Requirements



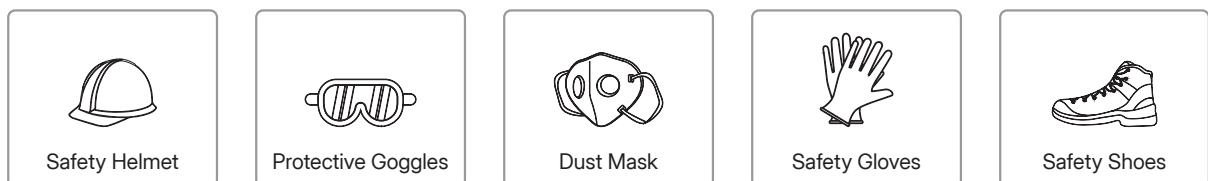
6.4 Installation Tools

The following tools are recommended in the installation process, and other auxiliary tools can also be used on site if necessary.

Tools



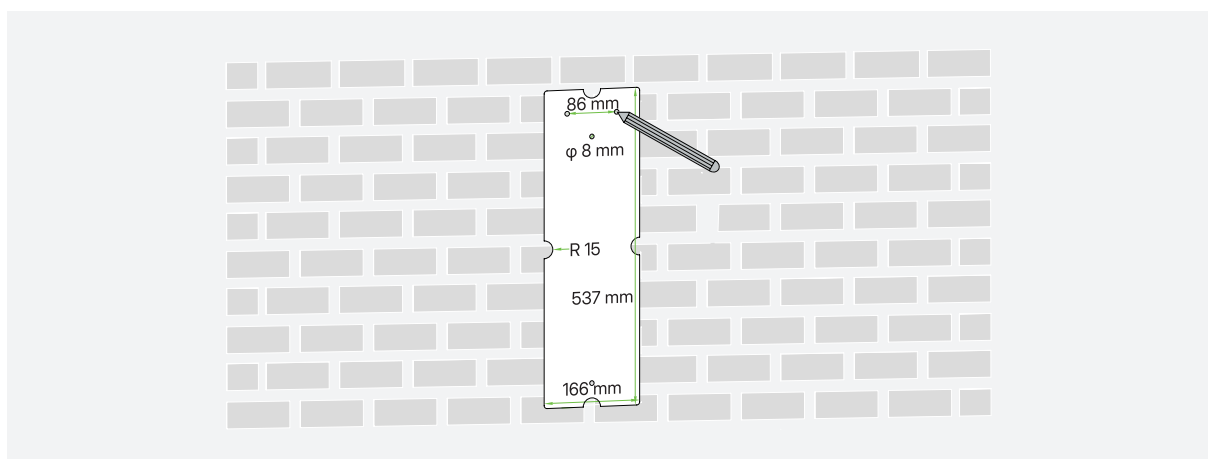
Personal Protective Equipment (PPE)



6.5 Installation Steps

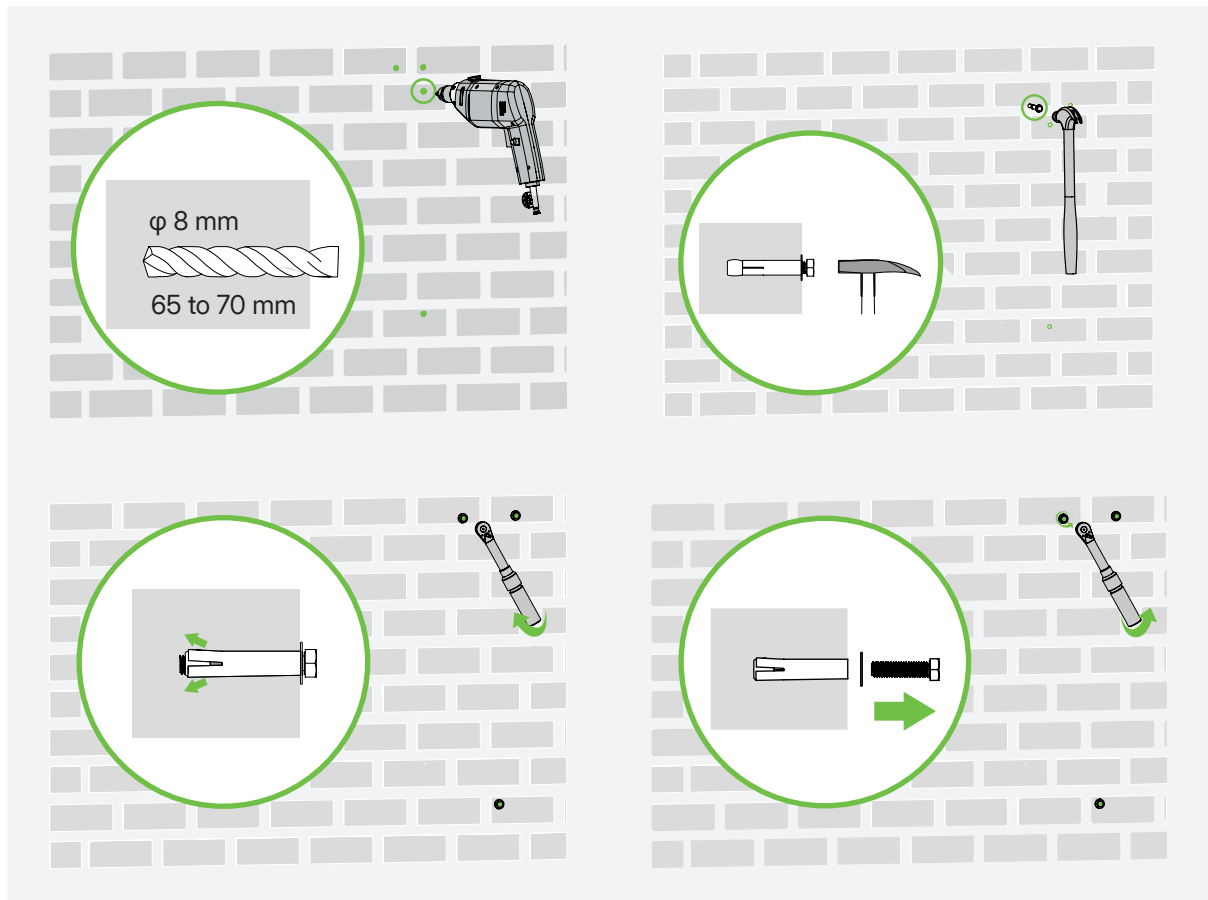
6.5.1 Mounting the HiBox

Step 1 Place the Positioning Board on the wall, adjust the angle with a level, and mark drilling positions.



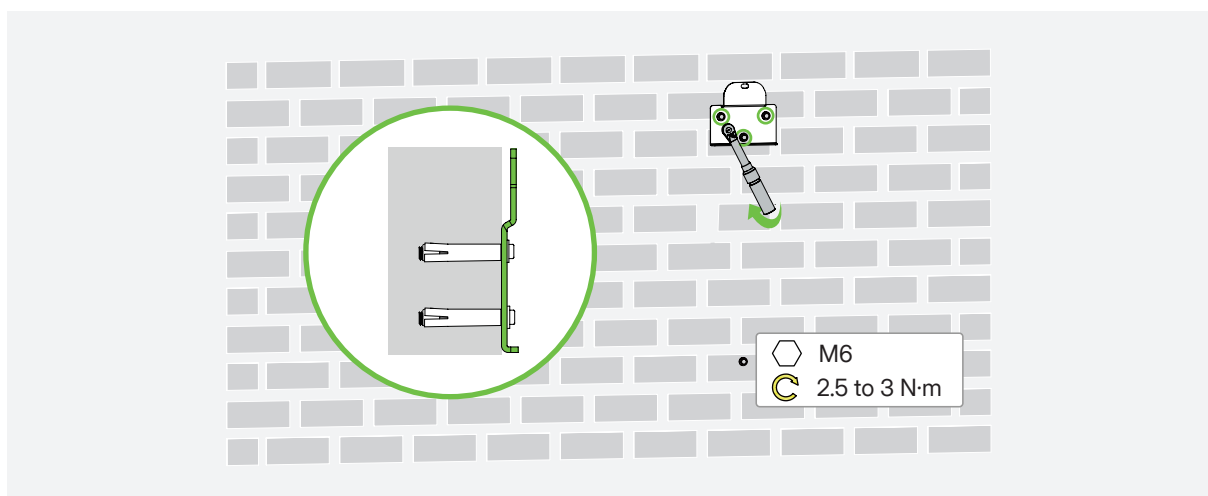
Step 2 Install the Expansion Sleeves

- Drill four holes, each 8 mm in diameter and 65 mm to 70 mm deep.
- Hammer the expansion bolts into the holes until the washers are flush with the surface.
- Fasten each bolt clockwise until the sleeve expands and grips the wall firmly.
- After the sleeve expands, unscrew and remove the washer and bolt.

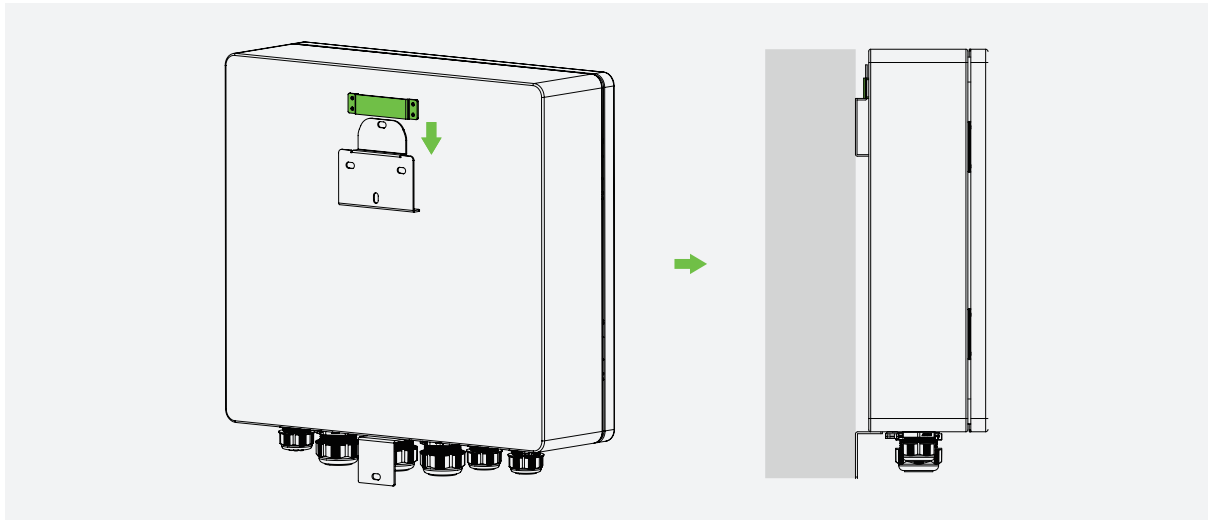


Step 3 Attach the Mounting Bracket

- Align the mounting bracket with the installed sleeves.
- Place the washers onto the expansion bolts, then insert them through the mounting bracket and into the sleeves.
- Tighten the bolts to secure the mounting bracket firmly.

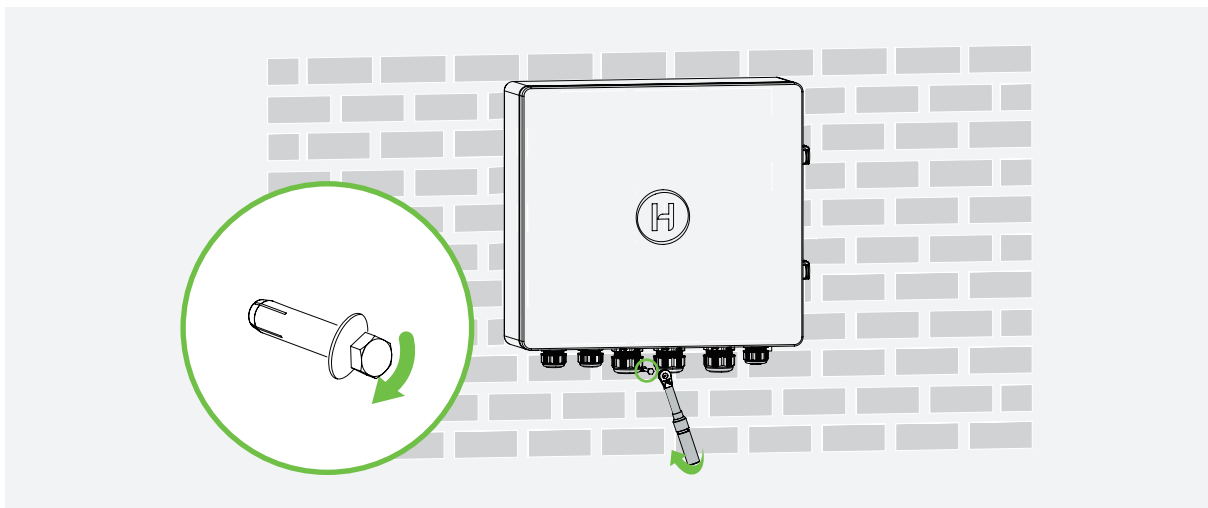


Step 4 Hook the HiBox onto the mounting bracket.



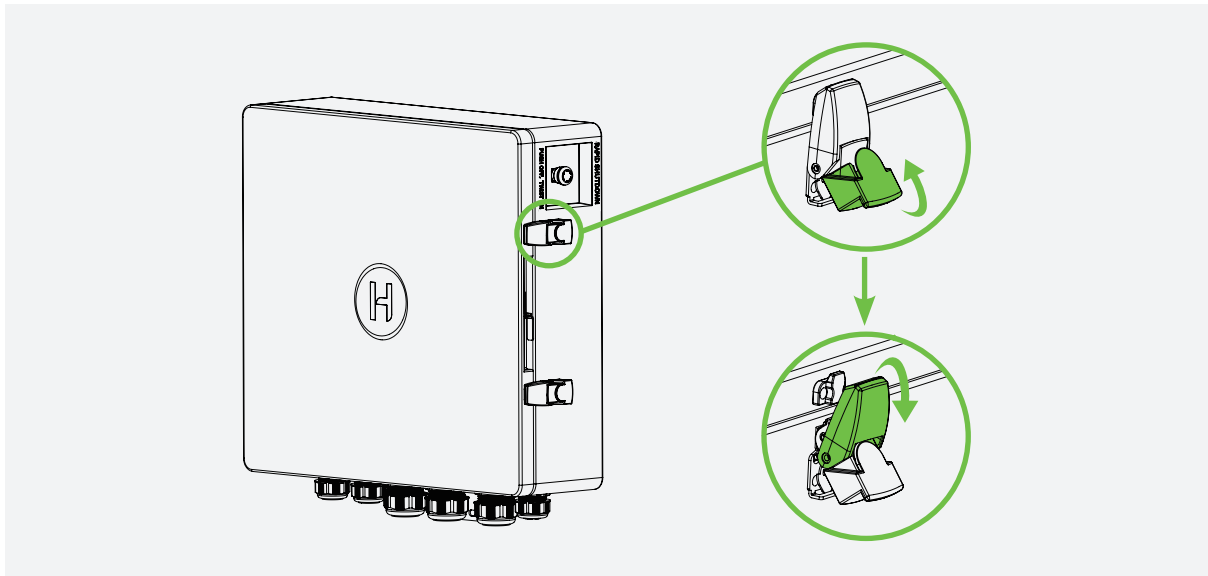
Step 5 Secure Lower Bracket

- Align the lower mounting bracket of the HiBox with the sleeve on the wall.
- Insert the expansion bolts into the sleeves through the lower bracket.
- Tighten the bolt with a torque wrench.



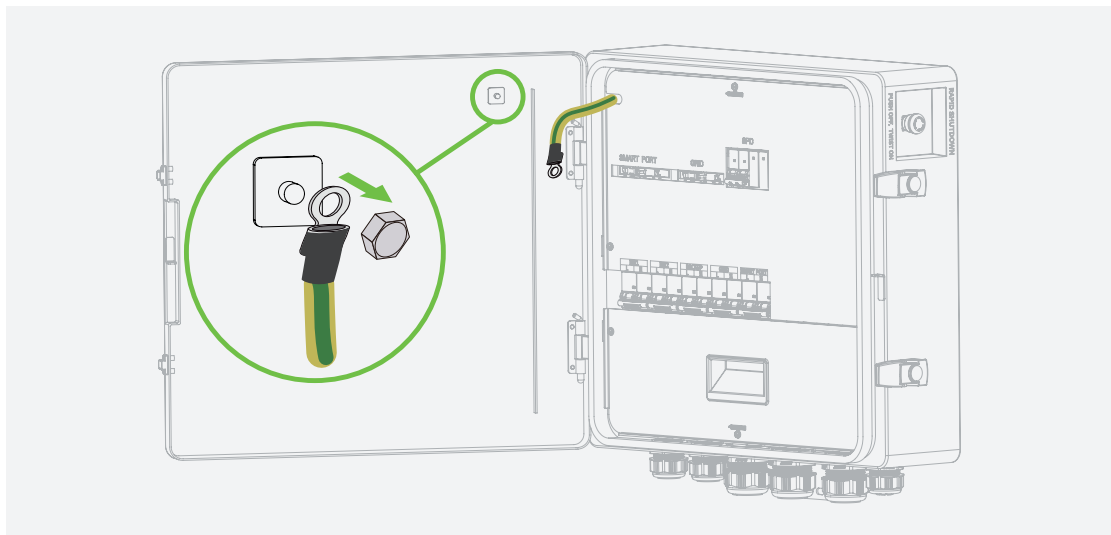
6.5.2 Removing the Wiring Protection Cover

Step 1 Unlock and open the enclosure door.

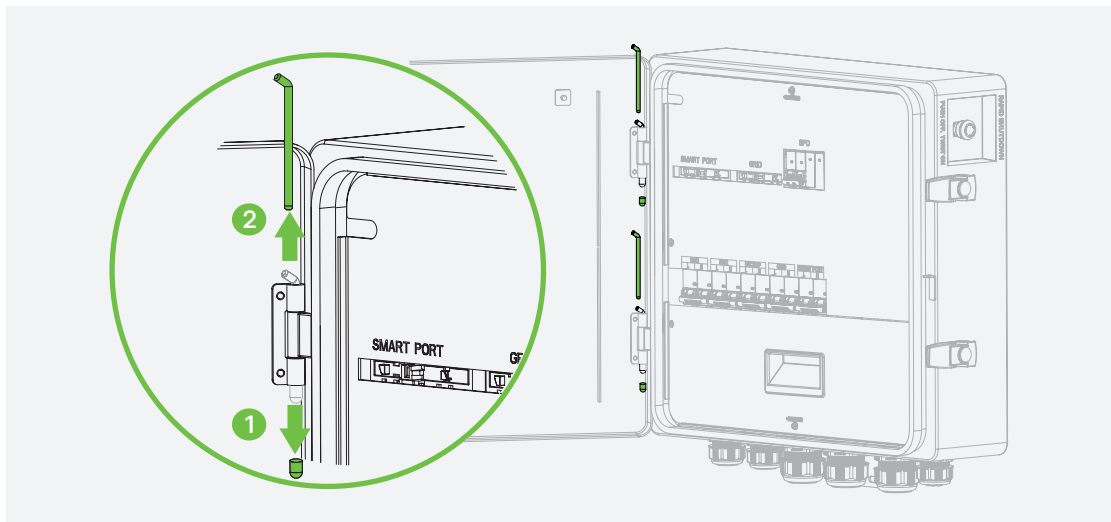


Step 2 (Optional) If needed, you can remove the door to make wiring easier.

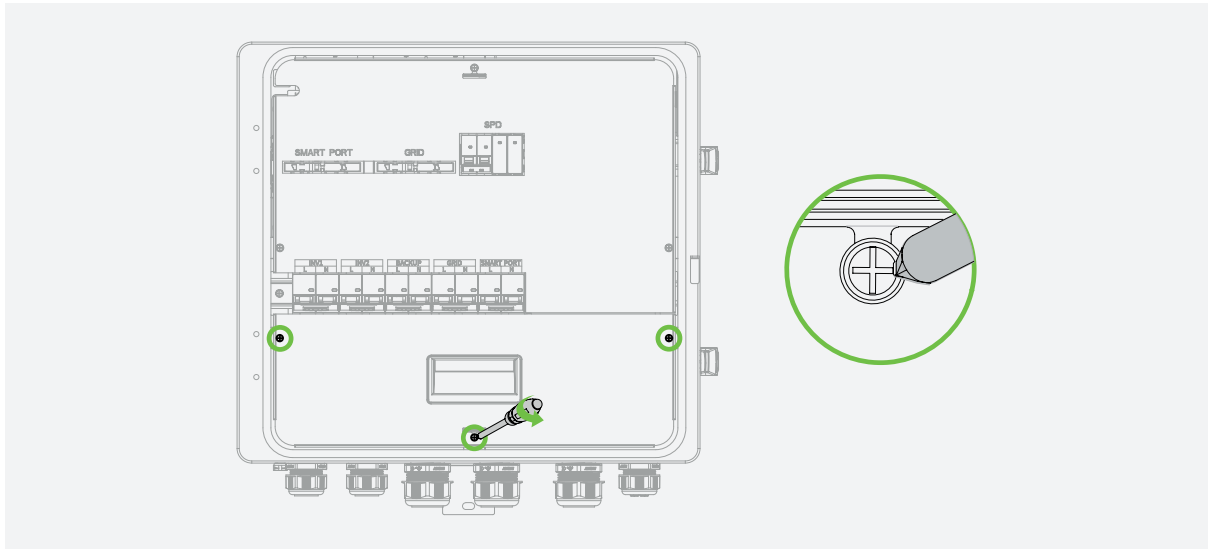
a. Disconnect the pre-installed grounding cable.



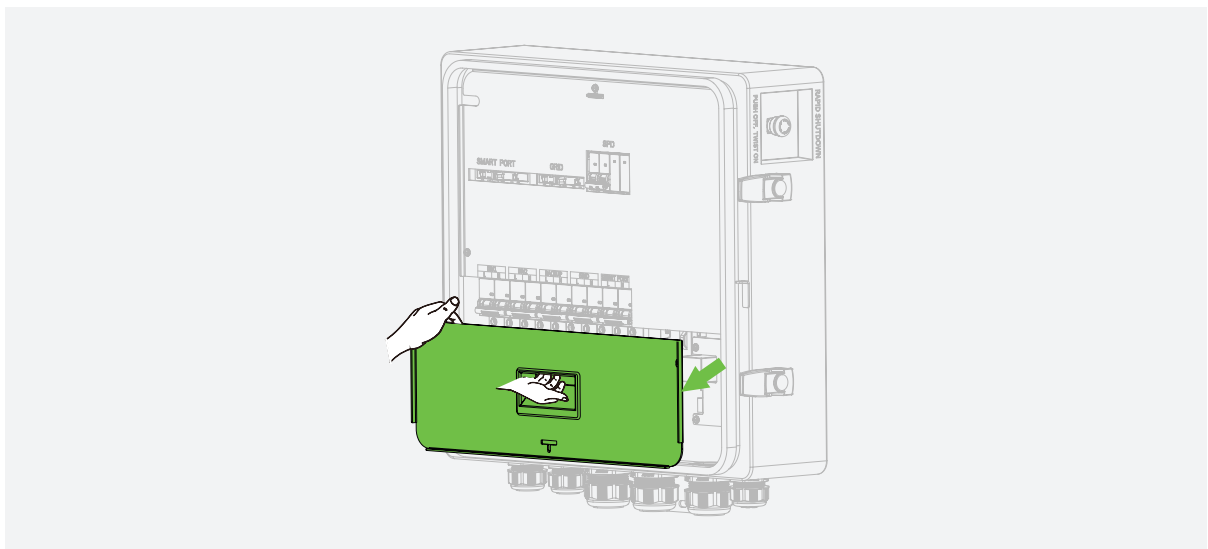
b. Unscrew the hinges to take off the door.



Step 3 Unscrew the three screws securing the wiring protection cover.



Step 4 Remove the lower cover.



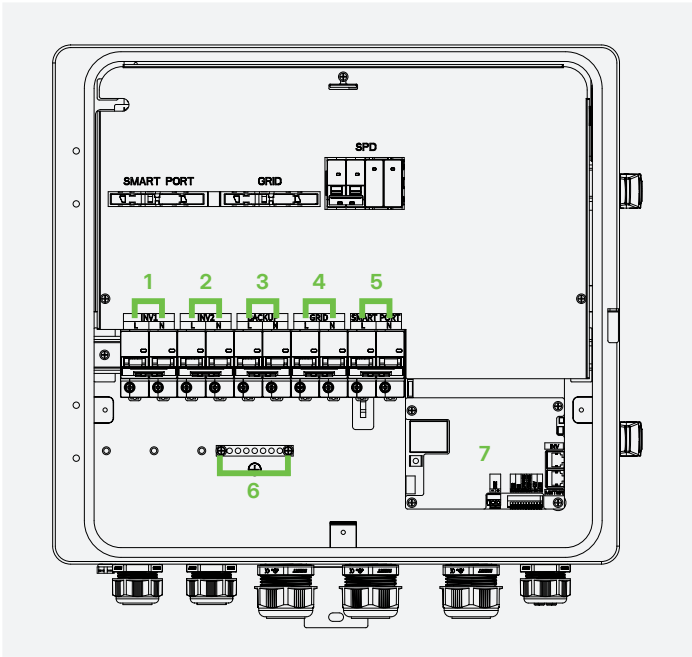
7
Electrical Connection

⚠ WARNING

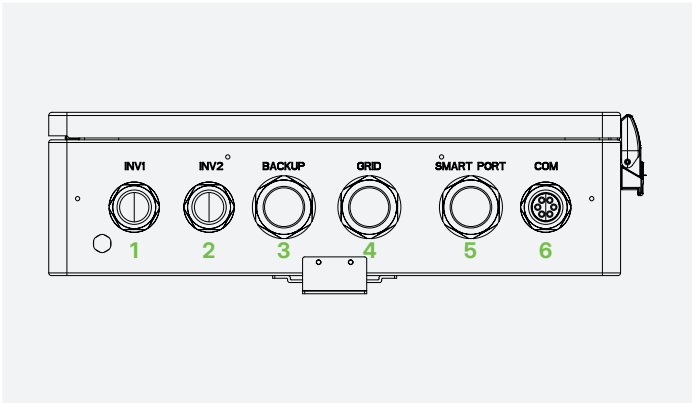
- During the electrical connection, comply with the National Electrical Code and ANSI/NFPA 70 wiring methods.
- The input and output circuits are isolated from the enclosure.
- Qualified personnel must wear personal protective equipment (PPE) during operation.

📘 NOTE

For the wiring color, refer to local laws and regulations. The colors of L, N, and PE are L-Brown, N-Blue, and PE-Yellow&Green.



NO.	Description
1&2	Inverter terminals
3	Backup load terminals
4	Grid terminals
5	Smart loads, generator, or PV inverter terminals
6	Grounding bar
7	Communication terminals



NO.	Description
1&2	Wire-in ports of inverters
3	Wire-in port of backup loads
4	Wire-in port of power grid
5	Wire-in port for smart loads, generator, or PV inverter terminals
6	Wire-in port of communication

7.1 Power Cable Connection

7.1.1 Inverter Power Cable Connection

Terminals	Wire Gauge					
Inverter terminals (L, N)	Outdoor three-core copper flexible cable					
	Applicable model	HiOne-3.6S-G3	HiOne-(4.6-6)S-G3	HiOne-8S-G3	HiOne-10S-G3	HiOne-12S-G3
	Wire size	2.5 mm ²	4 mm ²	6 mm ²	10 mm ²	16 mm ²
	Outer diameter	12 to 25 mm				
Grounding bar	Core conductor cross-section: ≤25 mm ²					

Step 1 Prepare the Cable Gland.

- Unscrew and remove the gland nut.
- Remove the filling plug.
- Remove the tightening rings.

NOTE

Two tightening rings are provided for different cable sizes. Use the large ring alone for cables with an outer diameter of 18–25 mm. For cables smaller than 18 mm, install both the small ring and the large ring together.

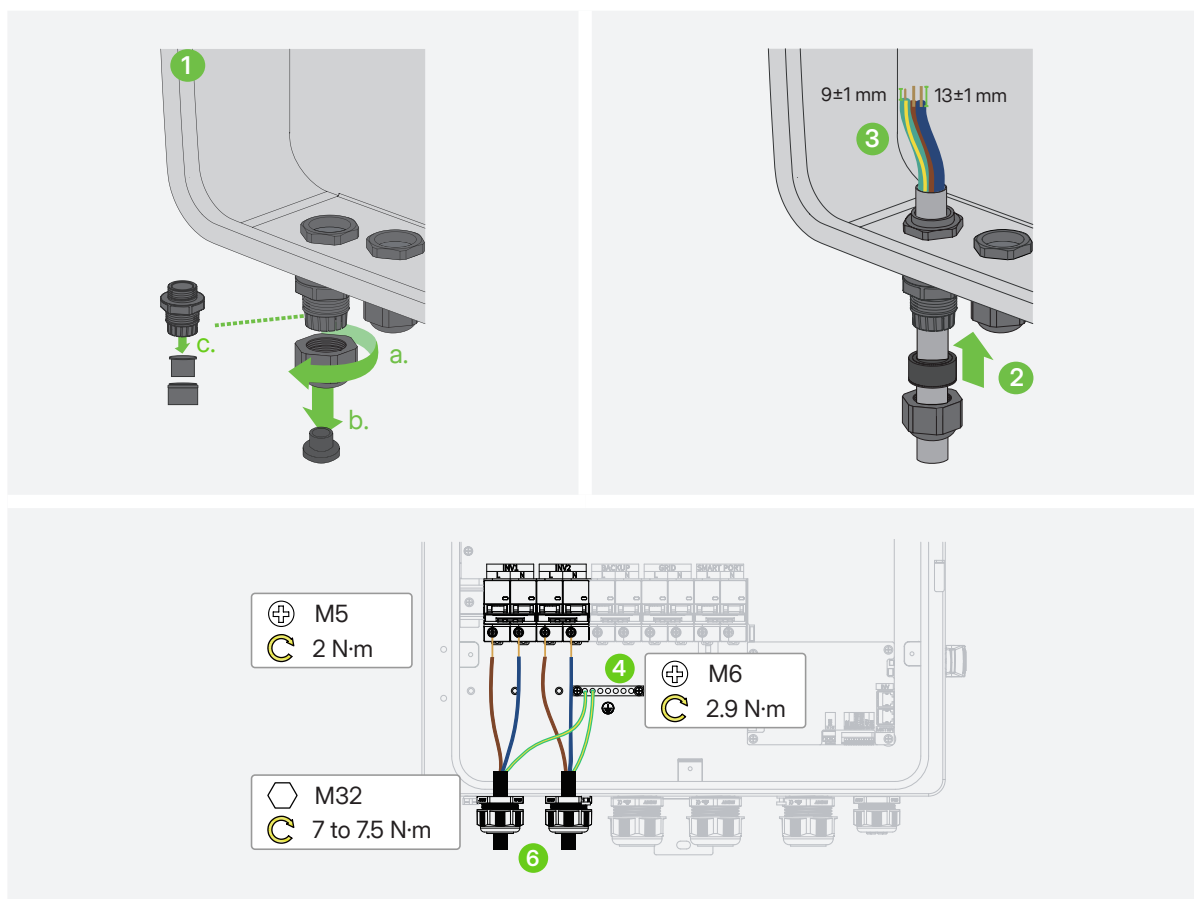
Step 2 Thread the cable through the nut, tightening ring, and connector body into the wiring area.

Step 3 Strip the insulation from the L/N wires by 13 ± 1 mm, and strip the PE wire by 9 ± 1 mm.

Step 4 Connect each wire (L/N/PE) to its matching terminal and tighten the screws.

Step 5 Gently pull each wire to confirm it is securely fastened.

Step 6 Slide the tightening ring and nut back into position and tighten the nut to secure the cable.



7.1.2 Backup load, Grid or Smart Port Power Cable Connection

Terminals	Wire Gauge
Backup load terminal Power grid terminal Smart port terminal (L, N)	Outdoor three-core copper flexible cable Cross-sectional area of core conductor: 35 mm ² Outer diameter: 24 to 32 mm
Grounding Bar	Core conductor cross-section: ≤25 mm ²

Step 1 Prepare the Cable Gland.

- Unscrew and remove the gland nut.
- Remove the filling plug.
- Remove the tightening rings.

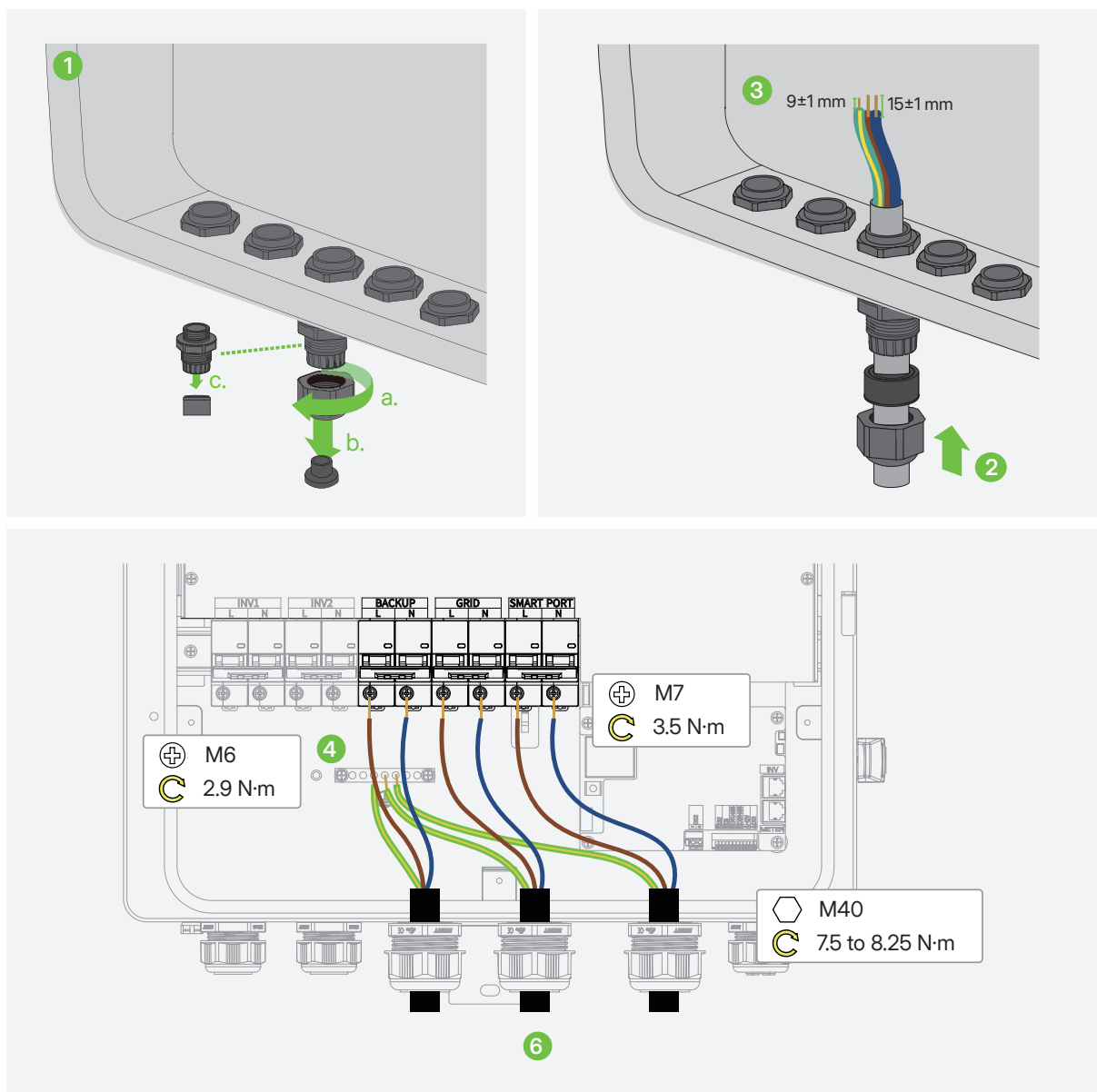
Step 2 Thread the cable through the nut, tightening ring, and connector body into the wiring area.

Step 3 Strip the insulation from the L/N wires by 15 ± 1 mm, and strip the PE wire by 9 ± 1 mm.

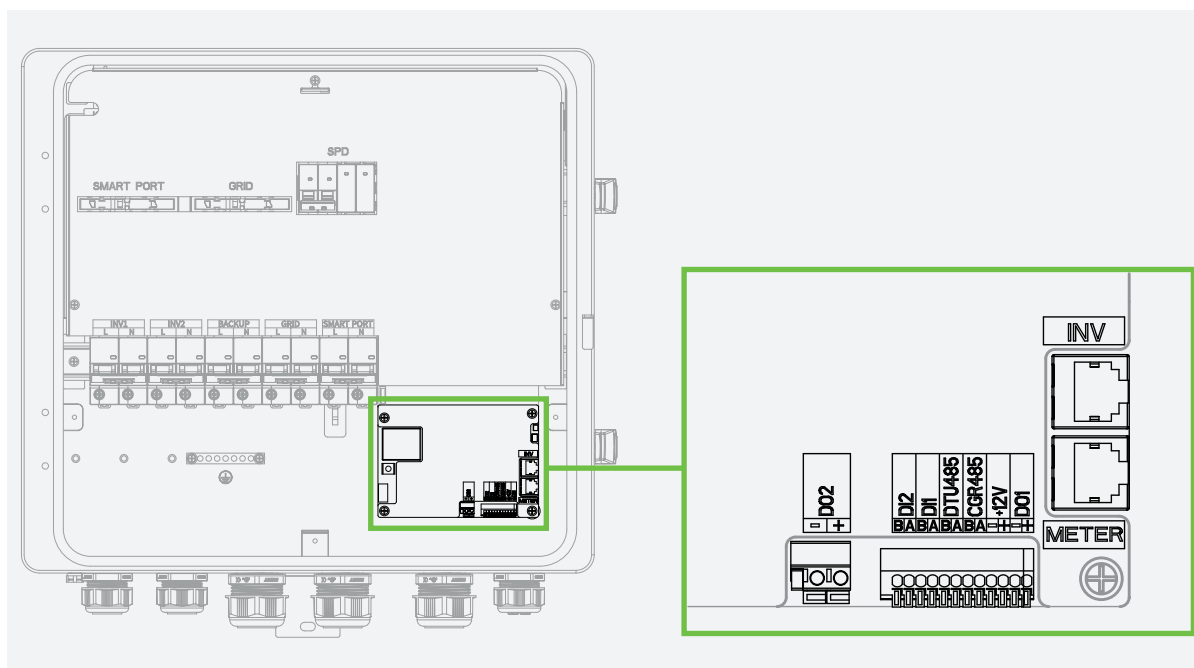
Step 4 Connect each wire (L/N/PE) to its matching terminal and tighten the screws.

Step 5 Gently pull each wire to confirm it is securely fastened.

Step 6 Slide the tightening ring and nut back into position and tighten the nut to secure the cable.



7.2 Communication Cable Connection



Terminal Functions		Description	Cable Requirements
INV (Required)		Connects the inverter.	- Outdoor RJ45 network cable, eight-core, shielded twin-twisted pair - Core conductor cross-section: 0.13 to 0.2 mm² - Outer diameter: 4.5 to 6 mm - Single cable length: ≤100 m - Standard: EIA/TIA 568B
METER (Not required for whole home backup system)		Connects the smart meter.	
DO1 (Optional)	Relay_HPA+	Dry contact for heat pump control.	
	Relay_HPA-		
+12V (Optional)	12 V 0.1 A OUT	/	- Outdoor cable, two-conductor shielded - Core conductor cross-section: 0.2 to 1.0 mm² - Outer diameter: 4.5 to 6 mm
	GND_SELF		
DTU485 (Optional)	DTU_485-A	Connects the DTU of the microinverter.	
	DTU_485-B		
CGR485 (Reserved)		Connects third-party devices.	
DI1, DI2 (Reserved)		/	
DO2 (Optional)		Dry contact for generator control.	- Outdoor cable, two-conductor shielded - Core conductor cross-section: 0.2 to 1.5 mm² - Outer diameter: 4.5 to 6 mm

7.2.1 Inverter and Meter Connection

NOTE

- The inverter and meter communication ports must be connected. If your system includes a heat pump or microinverter DTU, wire them using the same steps.
- The tightening ring contains six sealing plugs. Remove only as many as required.

Step 1 Prepare the COM Cable Gland

- Unscrew and remove the gland nut.
- Remove the tightening ring and the sealing plugs needed for your cables.

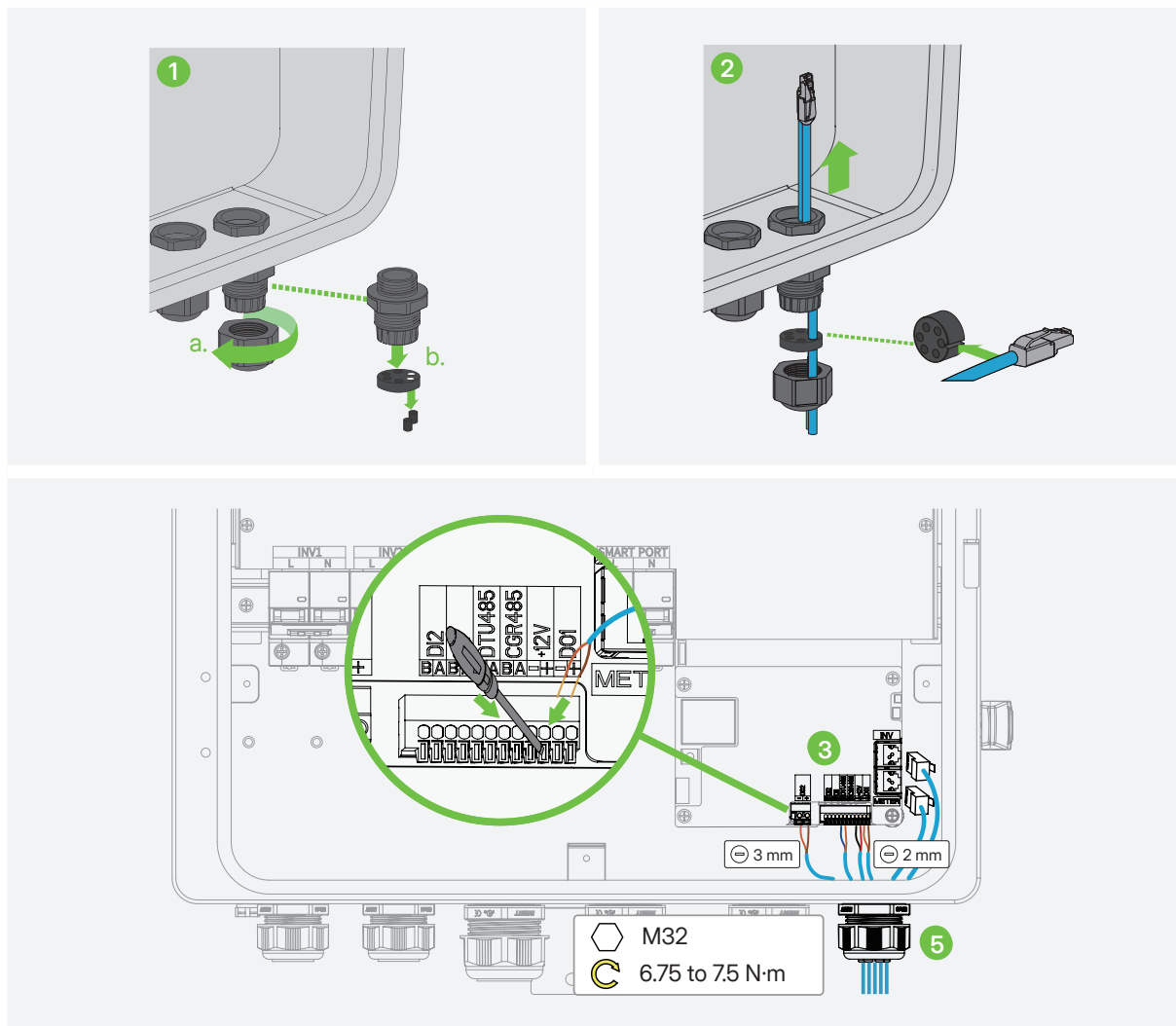
Step 2 Thread the cables through the nut, tightening ring, and connector body into the Hibox interior.

Step 3 Prepare and Connect the Wires

- **For inverter and meter:** Connect the RJ45 cable to the corresponding INV and METER terminals.
- **For DO1 / +12V / DTU / CGR / DI1 / DI2 / DO2 cables:**
 - Strip 11 ± 1 mm of insulation from cables connected to DO1 / +12V / DTU / CGR / DI1 / DI2, and strip 10 ± 1 mm from cables connected to DO2.
 - Insert a flathead screwdriver to open the terminal clamp, insert the wire, and release to lock it.

Step 4 Gently pull each wire to confirm it is securely fastened.

Step 5 Reinstall the tightening ring and nut, then tighten the nut to 6.75 to 7.5 N·m.



7.3 Complete the Installation

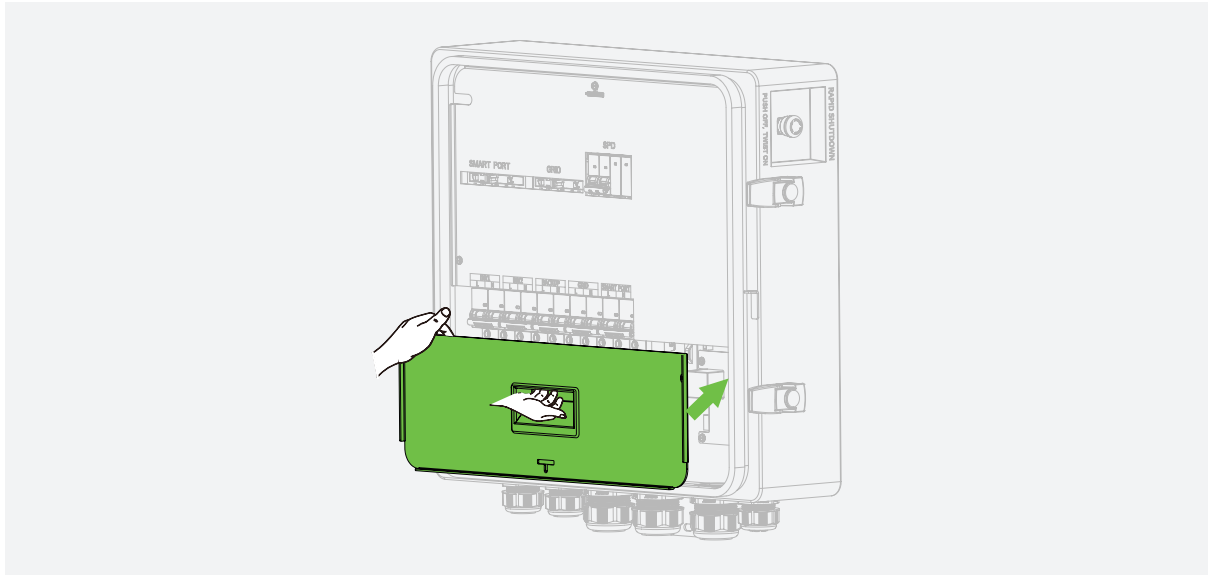
NOTICE

- Before closing any installed hardware, take photos of the completed wiring in the HiBox.
- Ensure that all cables are firmly connected and all cable entry points are properly sealed.

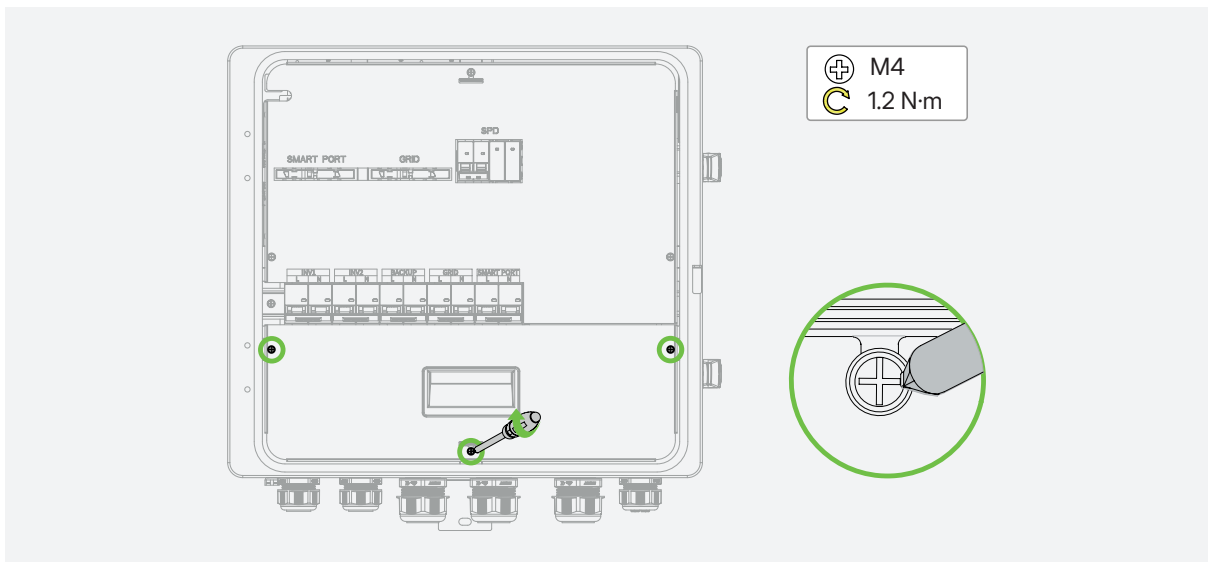
NOTE

After removing the panels, ensure that each panel hole is clean.

Step 1 Reinstall the lower cover.



Step 2 Tighten the screws to secure the lower cover.

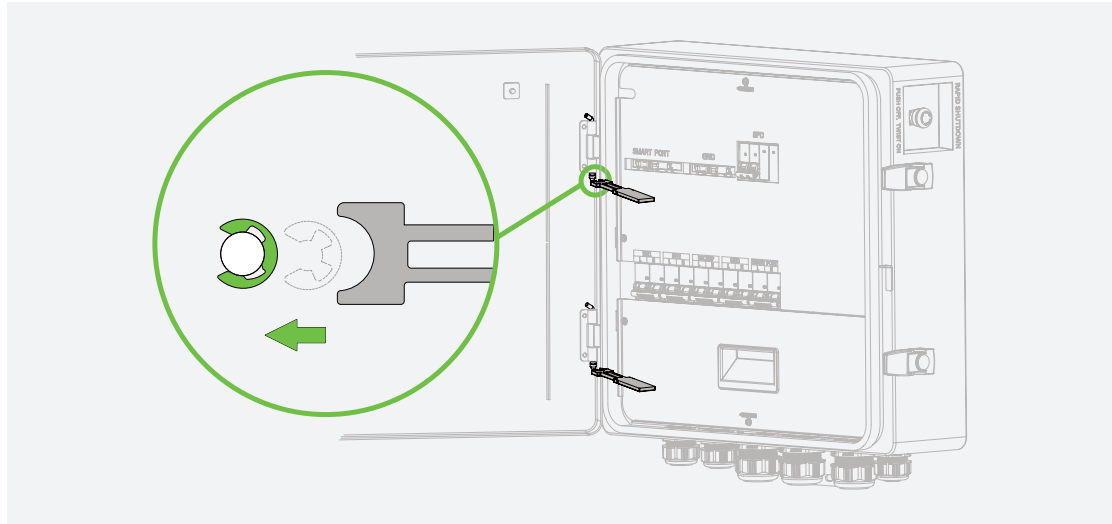


Step 3 Re-install the Enclosure Door

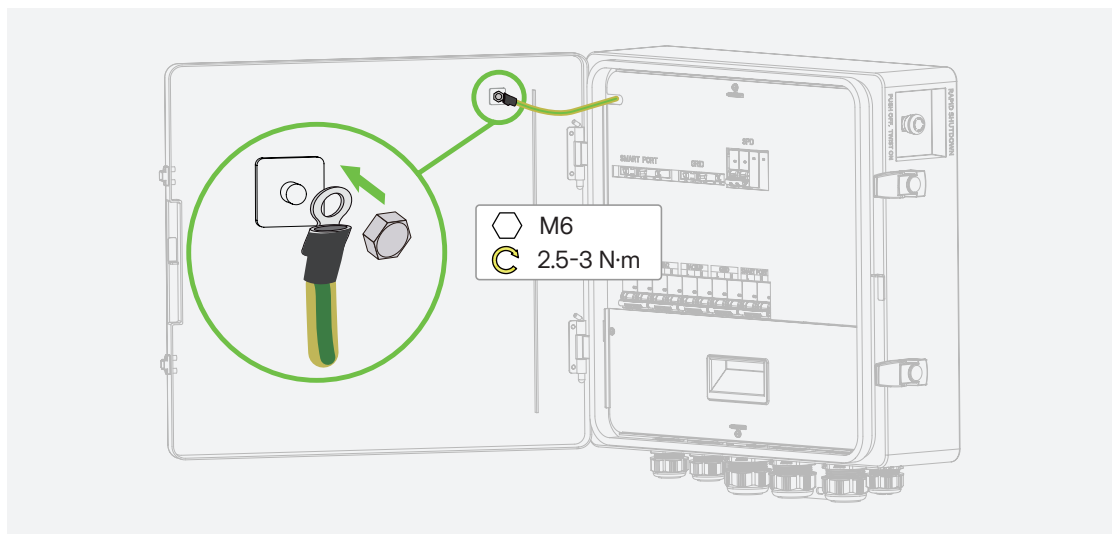
NOTE

Perform this step only if you previously removed the door and disconnected the pre-installed grounding cable.

- Insert the two door slide bolts into the hinges and secure them with circlips.



- Reconnect and fasten the grounding cable.



8 System Commissioning

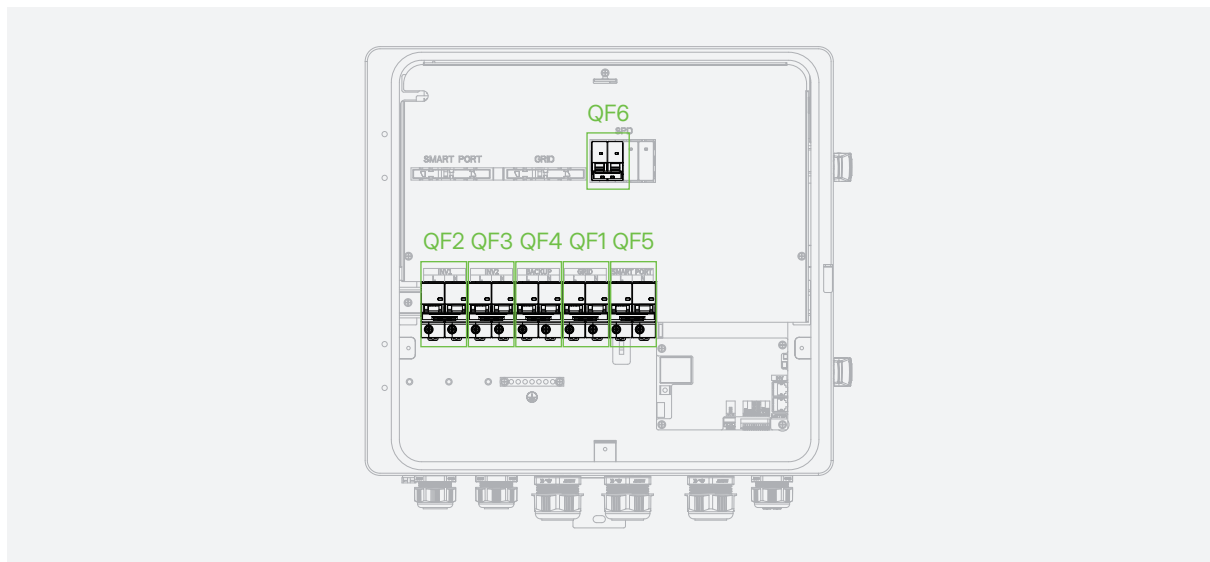
8.1 Preparation

Before the commissioning of the device and system, make sure:

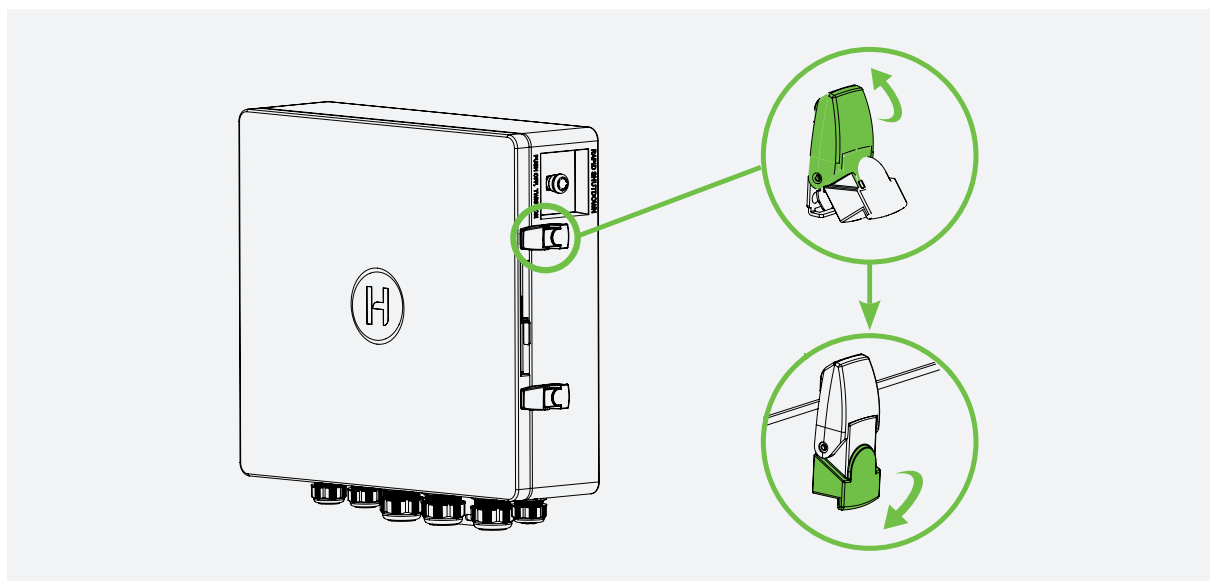
- The inverter DC switch and external circuit breaker are disconnected.
- All wiring has been completed correctly, following [6 Installation Instructions](#) and [7 Electrical Connection](#).
- The grid voltage is within the permissible range, verified with a multimeter.
- All unused terminals are properly sealed with the corresponding sealing plugs.
- All cables are routed safely and protected against mechanical damage.
- Warning signs and labels are intact.
- Nothing is left on the top of the device.

8.2 System Power-on

Step 1 Turn on the switches in the following order: QF6 > QF1 > QF2 / QF3 (If your system has two inverters, turn on both.) > QF5 (If a generator/PV inverter/smart load is connected.) > QF4.



Step 2 Close and lock the door.



9 S-Miles Cloud

The S-Miles App has been developed for Hoymiles and offers the following features.

- Network configuration
- Local installation assistant
- System monitoring



Please download the S-Miles App from the Google Play Store or the App Store. The QR code above can also be scanned to download the App.

NOTE

- The DTU mentioned in this manual refers to the DTS (Data Transfer Stick).
- In a residential energy storage system, the DTU displayed in the S-Miles Cloud refers to the DTS.
- The screenshots shown in this manual are for reference only. Since the App version will be updated periodically, the interface displayed on your screen may differ.
- For more information about S-Miles App, refer to [S-Miles Cloud User Manual \(App\)](#).

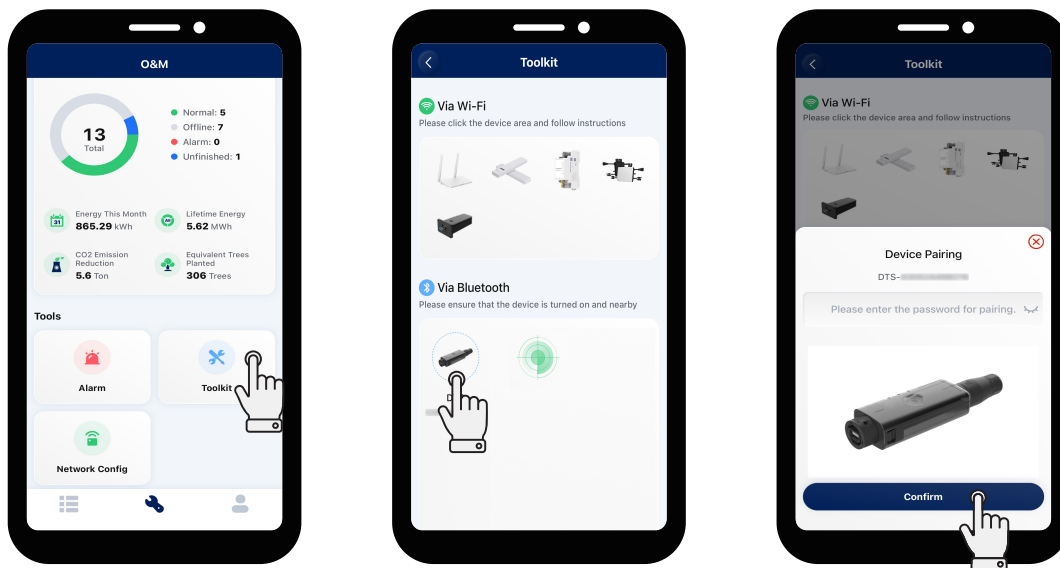
9.1 Commissioning

NOTE

The steps about the password are only required for the first connection.

Step 1 Connect to the DTS.

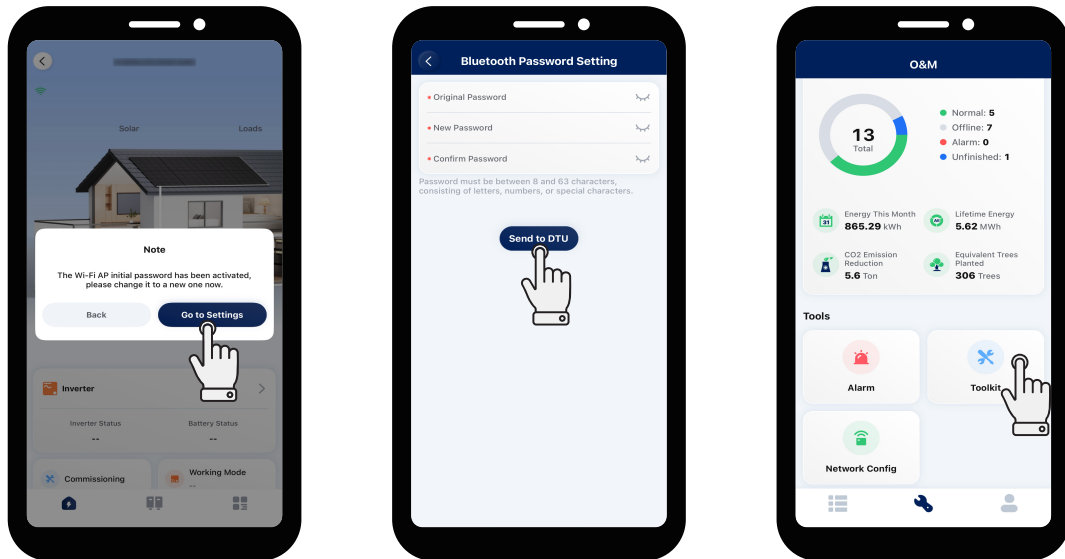
- Tap **O&M** > **Toolkit**.
- Under **Via Bluetooth**, tap the DTS you want to connect.
- Enter the default password **123456**, then tap **Confirm**.



D. Tap **Go to Settings**.

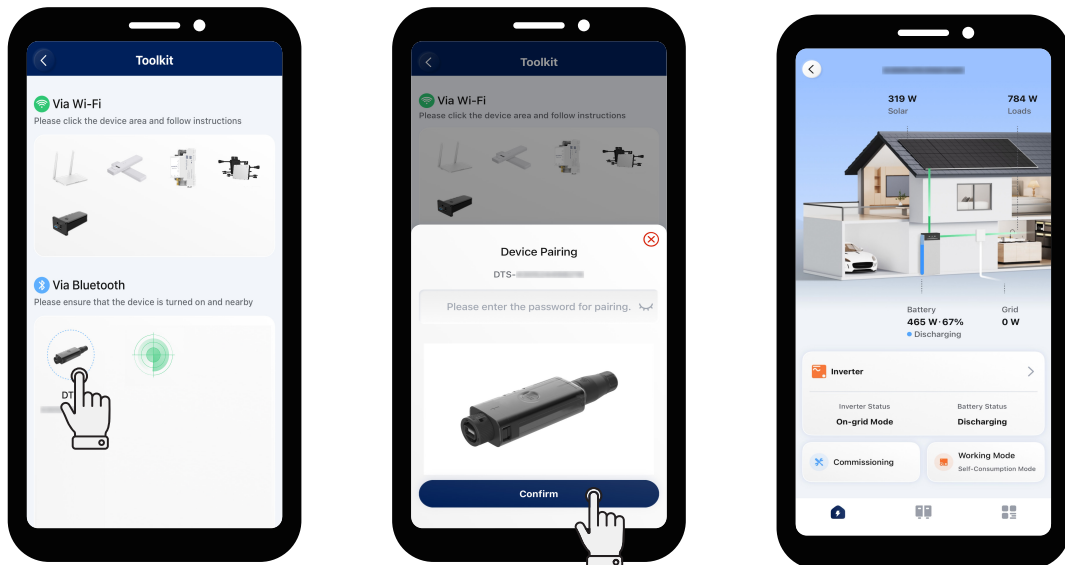
E. Enter the current password and a new password, confirm the new password, and tap **Send to DTU**.

F. Tap **Toolkit** again.



G. Under **Via Bluetooth**, tap the DTS again.

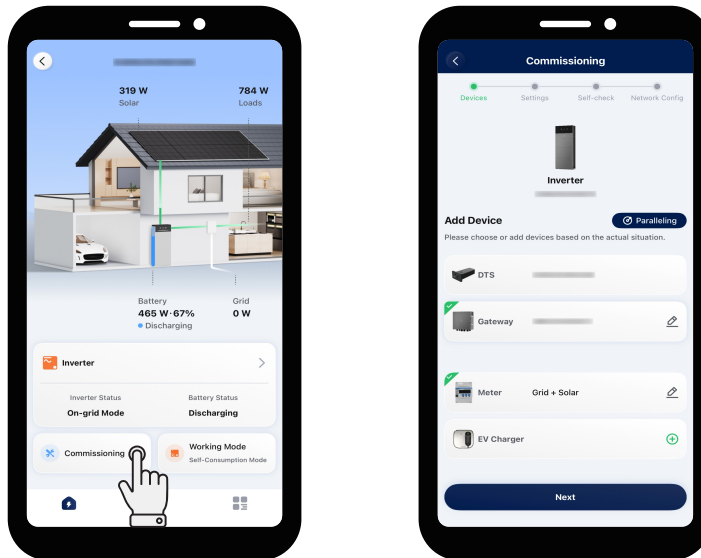
H. Enter the new password and tap **Confirm**.



Step 2 Start Commissioning.

A. Tap **Commissioning**.

B. Follow the on-screen instructions and add devices based on your actual installation. Then tap **Next**.

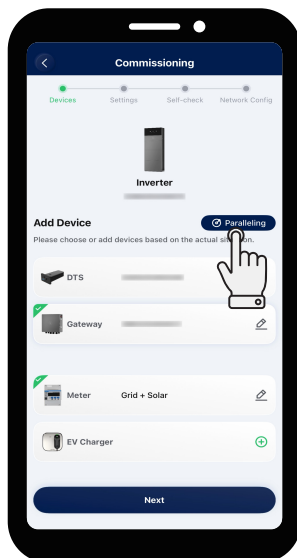


• Parallel System

If a parallel system is installed, tap **Paralleling**. All slave inverters will be automatically added.

NOTE

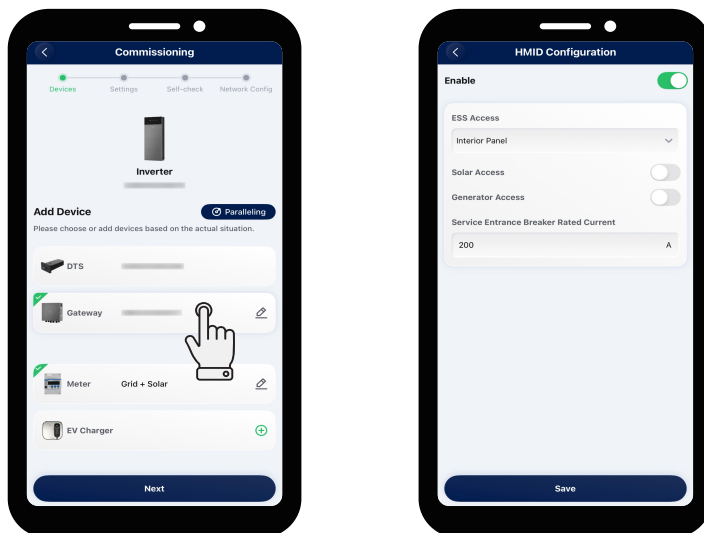
- The DTS must be connected to the master inverter.
- Slave inverters must be connected to the master via communication cables.
- One DTS supports communication with up to 10 inverters.



• Gateway

Tap **Gateway**, set the required parameters, and tap **Save**.

- Select **Interior Panel** or **Backup Terminal** according to the position that the ESS is connected to.
- Enable **Solar Access** if a PV inverter is connected to the gateway.
- Enable **Generator Access** if a generator is connected to the gateway.
- Set the value of **Service Entrance Breaker Rated Current**. The default value is 200 A with a range of 100 A to 200 A.

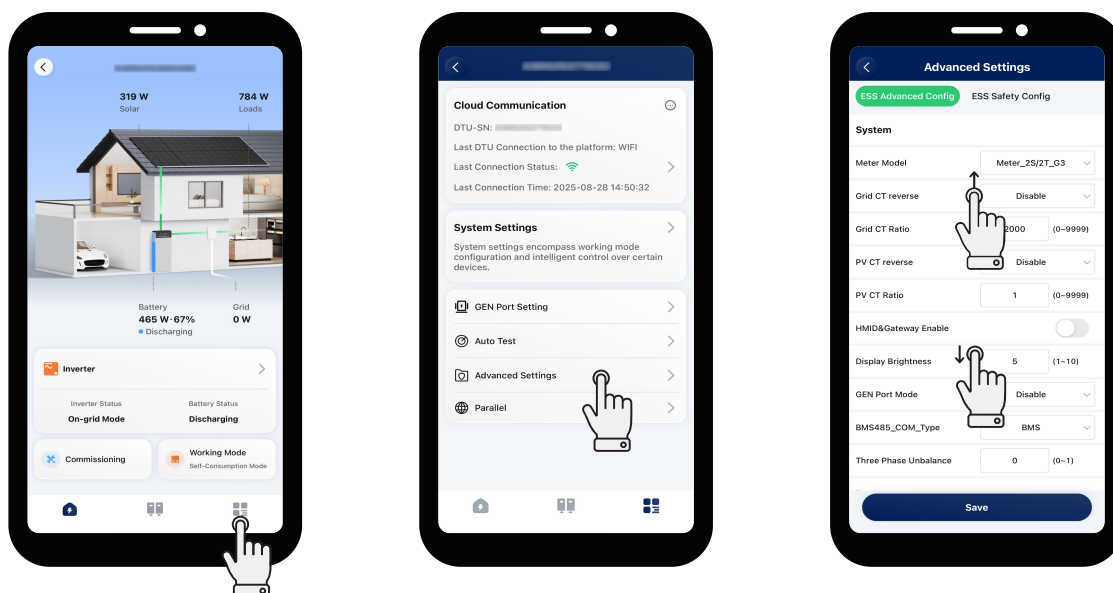


9.2 Setting System Parameters

9.2.1 Setting Advanced Parameters

Step 1 Tap **O&M** > **Toolkit**, and tap  in the lower right corner.

Step 2 Tap  **Advanced Settings** to set parameters of System, Battery, PV, Emergency Power Supply (EPS), and Generator, and tap **Save**.



★ System

Parameter	Description	Default Value
Meter Model	- For a single-phase inverter, select "Single-phase Meter", "Three-phase Meter", "Meter_1S/1T_G3", "Meter_2S/2T_G3", or "CT (Only G3)" according to the actual installation. - For a three-phase inverter, select "Three-phase Meter", "Meter_1S/1T_G3", "Meter_2S/2T_G3", or "CT (Only G3)" according to the actual installation.	No Meter
Grid CT Reverse	Enable it to get correct sampling current when the grid side CT is reversely connected.	Disable
Grid CT Ratio	Set the grid side CT ratio.	2000
PV CT Reverse	Enable it to get correct sampling current when the PV inverter side CT is reversely connected.	Disable
PV CT Ratio	Set the PV inverter side CT ratio.	2000
HMID&Gateway Enable	Manually enable or disable the HMID or gateway.	Disable
Display Brightness	Set the brightness of LED indicators.	10
GEN Port Mode	Select "PV", "Generator", or "Smart Load (Only G3)" based on the actual installation.	Disable
BMS485_COM_Type	- If the RS485 port is connected to the battery, select "BMS". - If the RS485 port is connected to the microinverter DTU, select "DTU Com".	BMS
Three-phase Unbalance	When the loads of the three-phase inverter are not balanced, enable the function. It can compensate for each load.	0

★ Battery

Parameter	Description	Default Value
Max. Discharging Power	Set the maximum discharging power.	100%
Max. Charging Power	Set the maximum charging power.	100%
Max. SOC	Set the maximum battery capacity as recommended by the battery manufacturer.	100%
Min. SOC	Set the minimum battery capacity as recommended by the battery manufacturer.	10%
Min. SOC Force Charging Power	Set the power to forcibly charge the battery when the battery SOC falls below the set minimum SOC.	200 W
Reserved SOC Force Charging Power	Set the power to charge the battery when the battery SOC falls below reserved SOC.	2%
Max. BAT Feed-in Power in Peak Time	Set the maximum value of the battery feed-in power in peak time.	100%
Max. Grid Charging Power in Off-peak Time	Set the maximum power to charge the battery from the grid in off-peak time.	0 W
Max. BAT Discharging Power in Partial Peak Time	Set the maximum value of the battery discharging power in partial peak time.	100%

★ PV

Parameter	Description	Default Value
MPPT Global Scan	If the PV modules are shaded, enable this function.	Disable

★ Emergency Power Supply (EPS)

Parameter	Description	Default Value
EPS Mode	- When the EPS port is connected, you can select "EPS" or "UPS". You can choose "UPS" when the load requires continuous power, and the system will automatically switch between the on-grid mode and the off-grid mode under UPS mode. - EPS is characterized by continuous power supply, which means that the loads are powered by bypass under normal power supply, and the DC power will be inverted to supply the loads during power outage, maximizing energy utilization.	EPS
EPS Mode	- UPS (Uninterruptible Power Supply) provides stable voltage and frequency, with extremely strict requirements for switching time. UPS not only operates during power outage, but also can output high-quality power to ensure normal operation of electrical equipment in case of abnormal situations such as overvoltage, undervoltage, and surge. - When the inverter is used as a PV inverter, select "Disable".	EPS
External Bypass	For inverters with an external ATS (EPS) Box, when the external bypass switch is enabled, the inverter EPS port works in the off-grid mode and will not work in the on-grid mode.	Disable
PV Only	In off-grid mode, the hybrid inverter supports operation with PV when there is no battery connection. (This function is not recommended since the system is unstable under this mode.)	Disable

★ Generator

Parameter	Range
GEN Location	None/GenSide. To ensure the normal operation of the generator, please select "GenSide".
GEN Signal Setting	Manual or DI/DO. If the generator cannot be controlled by dry contact, please select "Manual". If the generator can be controlled by dry contact, please select "DI/DO".
Min. Run Time	5–60 min
Max. Run Time	6–10 hour
Protection Interval	5–60 min
Synchronize Time	1–20 min
Shutdown Delay	1–20 min

GEN Rated Power	0–20000 W
High Voltage Limit	0–280 V
Low Voltage Limit	0–180 V
High Frequency Limit	0–70 Hz
Low Frequency Limit	0–59 Hz
Max. GEN Charging Power	0–20000 W

9.2.2 Enabling DRM Function

Step 1 Tap **O&M** > **Toolkit**, and tap in the lower right corner.

Step 2 Tap **Advanced Settings** > **ESS Safety Config**.

Step 3 Select the grid profile in your region and toggle on **DRM Function Activated**.

Step 4 (For some countries) Set the mode of **DRM Control**.

Step 5 Tap **Save**.

NOTE

- Only the installer can modify grid protection and power quality response mode parameters.

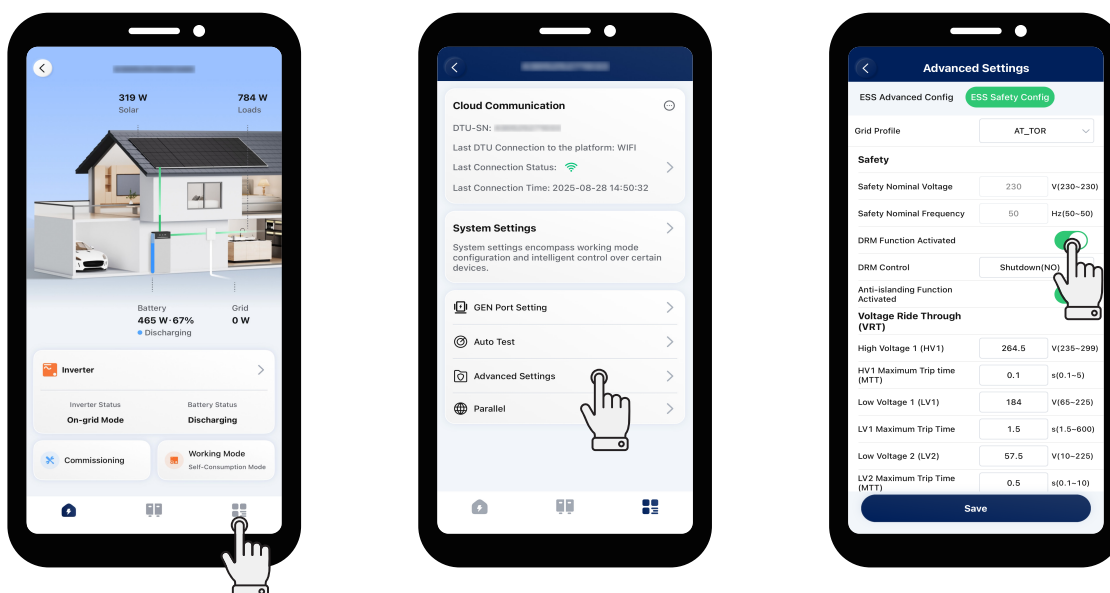
• DRM Control for Austria

Zero Export (NO): If the contactor is closed, the feed-in power of the inverter will be limited to zero; if the contactor is disconnected, the inverter will work normally.

Zero Export (NC): If the contactor is closed, the inverter will work normally; if the contactor is disconnected, the feed-in power of the inverter will be limited to zero.

Shutdown (NO): If the contactor is closed, the inverter will be shut down; if the contactor is disconnected, the inverter will work normally.

Shutdown (NC): If the contactor is closed, the inverter will work normally; if the contactor is disconnected, the inverter will be shut down.



9.2.3 Setting Export Management Parameters

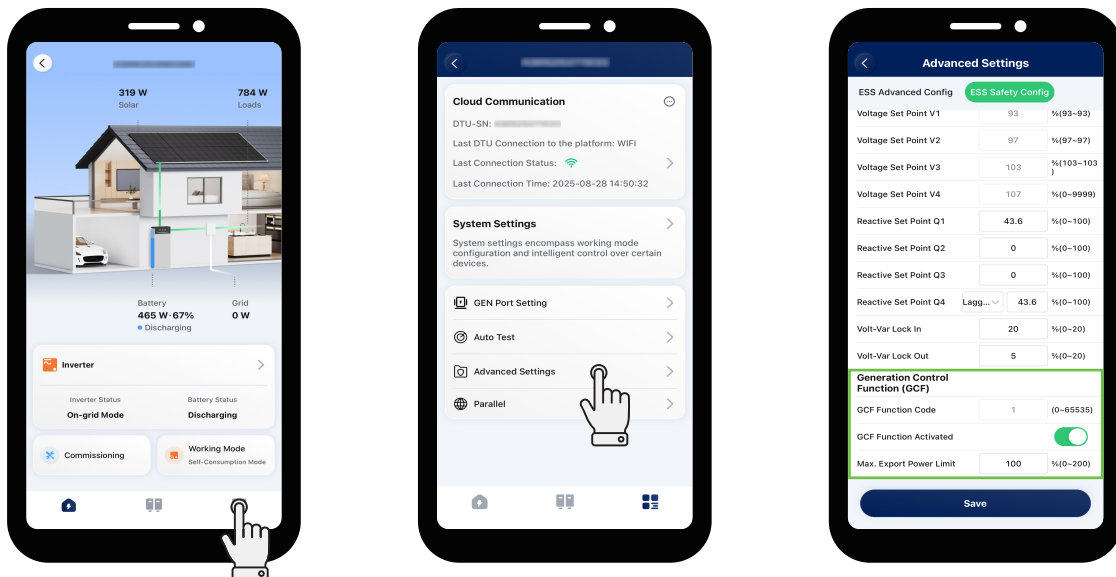
NOTE

- This function is enabled by default, and the default value of Max. Export Power Limit is 100%.
 - ESS refers to a single energy storage inverter or a parallel system.
 - The energy storage inverter cannot control the output power of other input devices connected to the grid side. It means that the feed-in power cannot be limited to 0 if other input devices are connected to the grid side.
 - If no input device is connected to the grid side, Max. Export Power Limit can be set to 0–100%.
- If no input device is connected to the grid side, and you do not need to limit the feed-in power, disable this function or skip this setting.
 - If an input device, such as a microinverter, is connected to the grid side, and you do not need to limit the feed-in power, disable this function.
 - If you need to limit the feed-in power, follow the instructions below to set Max. Export Power Limit.

Step 1 Tap **O&M** > **Toolkit**, and tap in the lower right corner.

Step 2 Tap **Advanced Settings** > **ESS Safety Config**, and slide your finger down to the bottom.

Step 3 Ensure **Generation Control Function (GCF)** is enabled, and set the value of Max. Export Power Limit, and tap **Save**.



Scenario 1: Max. Export Power Limit is 0

The feed-in power of an Energy Storage System (ESS) is 0. If an input device, such as a microinverter, is connected to the grid side, its output power cannot be controlled; it will output power according to its logic.

Scenario 2: Max. Export Power Limit is 50%

The maximum allowable feed-in power is 50% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate at full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

Scenario 3: Max. Export Power Limit is 100%

The maximum allowable feed-in power is 100% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate with its full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

Scenario 4: Max. Export Power Limit is 150%

The maximum allowable feed-in power is 150% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate with its full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

9.2.4 Setting Working Mode

NOTE

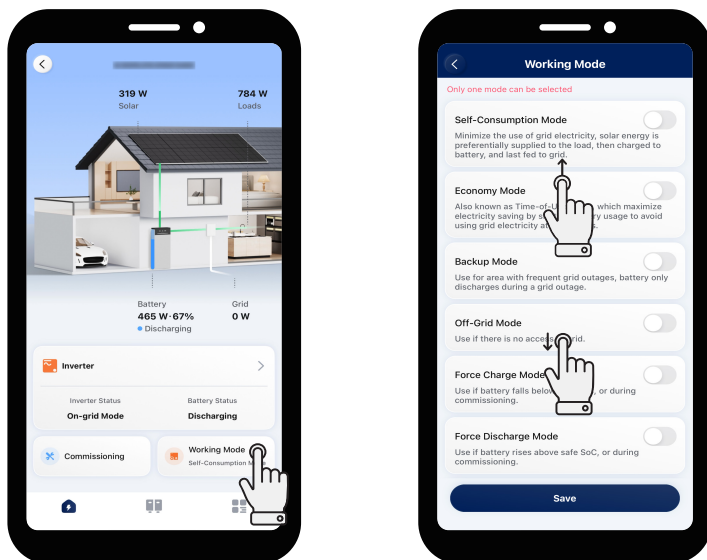
Only one mode can be selected at a time.

After the commissioning, if you want to change the working mode, follow the instructions below.

Method One

Step 1 Tap O&M > Toolkit, and tap Working Mode.

Step 2 Select one mode, set relevant parameters, and tap **Save**.

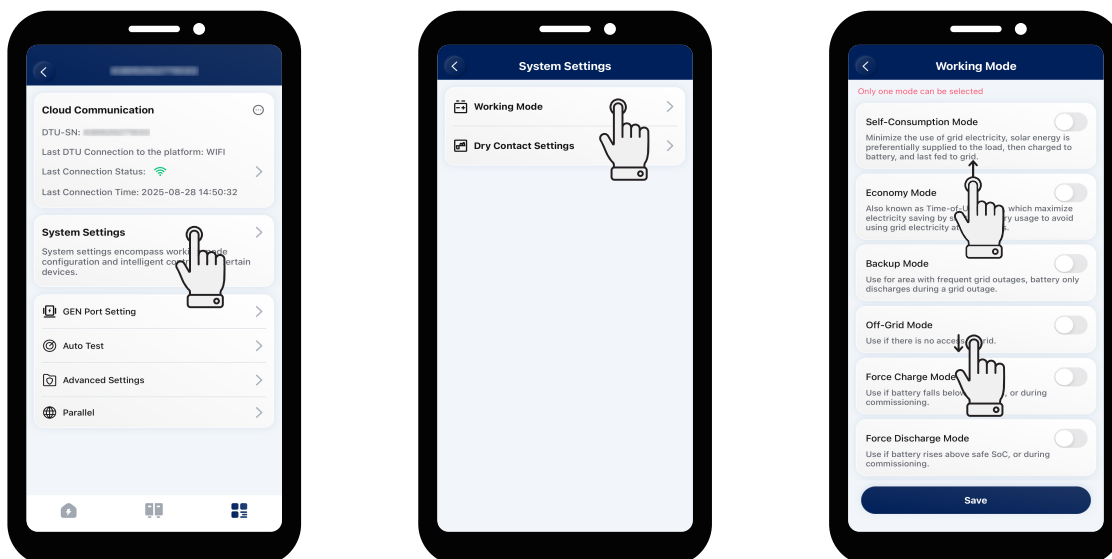


Method Two

Step 1 Tap O&M > Toolkit, tap in the lower right corner, and tap **System Settings**.

Step 2 Tap Working Mode.

Step 3 Select one mode, set relevant parameters, and tap **Save**.



9.2.5 Setting Dry Contact Function

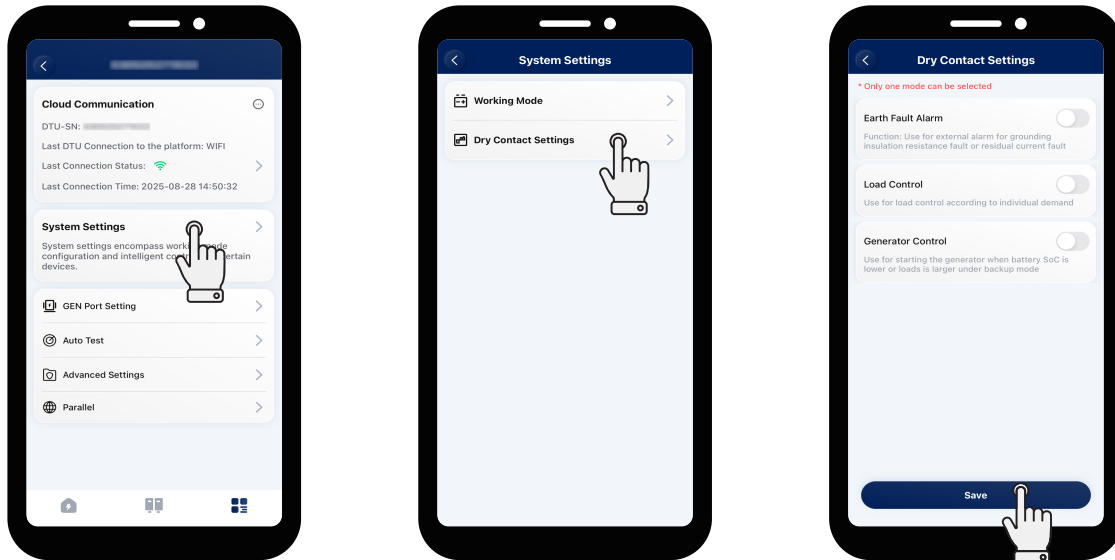
NOTE

Only one mode can be selected at a time.

Step 1 Tap **O&M** > **Toolkit**, tap in the lower right corner, and tap **System Settings**.

Step 2 Tap **Dry Contact Settings**.

Step 3 Select one mode, set relevant parameters, and tap **Save**.



★ Earth Fault Alarm

This function is used for external alarm caused by grounding insulation resistance fault or residual current fault. Disable the external alarm when the load is connected. This function is to produce alarm, not to cause tripping.

★ Load Control

Load control can be used according to the individual demand. This setting is to control whether the smart load works or not. There are five modes available as follows.

- **Manual Mode**

The inverter can supply power to the smart load after you select this mode.

- **Scheduled Mode**

Set the time period for the smart load to work. The inverter can supply power to the smart load during this set time, and the smart load will be disconnected at other times.

- **Intelligent Mode**

NOTE

Before selecting the intelligent mode, return to page, tap **Advanced Settings**, and set the **Gen Port Mode** to **Smart Load (Only G3)**.

It is necessary to set the value of Min. Running Time and Rated Load Power.

In this mode, the inverter will detect the feed-in power generated by PV in real time. If the feed-in power exceeds the rated load power, the inverter can supply power to the smart load during the pre-set minimum running time. Once the time is up, the inverter will detect the feed-in power again. If the feed-in power is less than the rated load power, the smart load will be disconnected; conversely, the inverter will repeat the above process according to the same logic.

- **EPS Port Smart Control**

In this mode, battery protection SOC can be set.

In off-grid state, if the battery SOC is higher than the protection SOC, the inverter can supply power to the smart load; if the battery SOC is lower than the protection SOC, the smart load will be disconnected.

- Heat Pump Control (will be coming soon)

The heat pump control function allows you to add up to four runtimes. According to the set power and battery SOC, it can control the start and stop as well as the power of the SG Ready heat pump, maximizing the PV energy utilization.

Parameter	Description
Start Power	When the start power reaches this value, the heat pump control mode is enabled.
Shutdown Power	When the shutdown power reaches this value, the heat pump control mode is disabled.
Battery Starting SOC (Optional)	When the battery SOC reaches this value, the heat pump control mode is enabled.
Battery Shutdown SOC	When the battery SOC reaches this value, the heat pump control mode is disabled.
Min. Single Runtime	When the single runtime reaches this value, the heat pump control mode is disabled.
Max. Single-day Runtime (Optional)	When the running time of the day reaches this value, the heat pump control mode is disabled.
Runtime Settings	Up to 4 operating periods can be set.

★ Generator Control

- Exercise Mode

The generator starts regularly during the preset period to ensure the operation of the generator.

Parameter	Description
Frequency	It allows the generator to start regularly at this frequency.
Start Time	It allows the generator to start regularly at this time.
Duration	The generator will stop running after this duration.

- Running Mode

This mode is the off-grid operation mode of the generator, including manual mode and auto mode.

▷ Manual Mode

The manual mode is used to turn on or turn off the generator manually.

▷ Auto Mode

The auto mode is used to turn on or turn off the generator according to the battery capacity. The auto mode only supports generators controlled by Dry Contact. Otherwise, please select the manual mode.

Parameter	Description
GEN Start SOC	In off-grid mode, start the generator when the battery capacity is lower than the safety SOC.
GEN Shutdown SOC	In generator mode, shut down the generator when the battery capacity is higher than the safety SOC.
Quiet Time	During the quiet time, the generator is disabled. If you set this time, it will affect the normal use of electricity.

- Battery Charge Time

Parameter	Description
Battery Charge Time	The generator will charge the battery during the preset period. Choose the time period when the PV power is low to avoid wasting PV power.

9.3 Upgrading the Firmware

NOTE

During the firmware upgrade, do not power off the device.

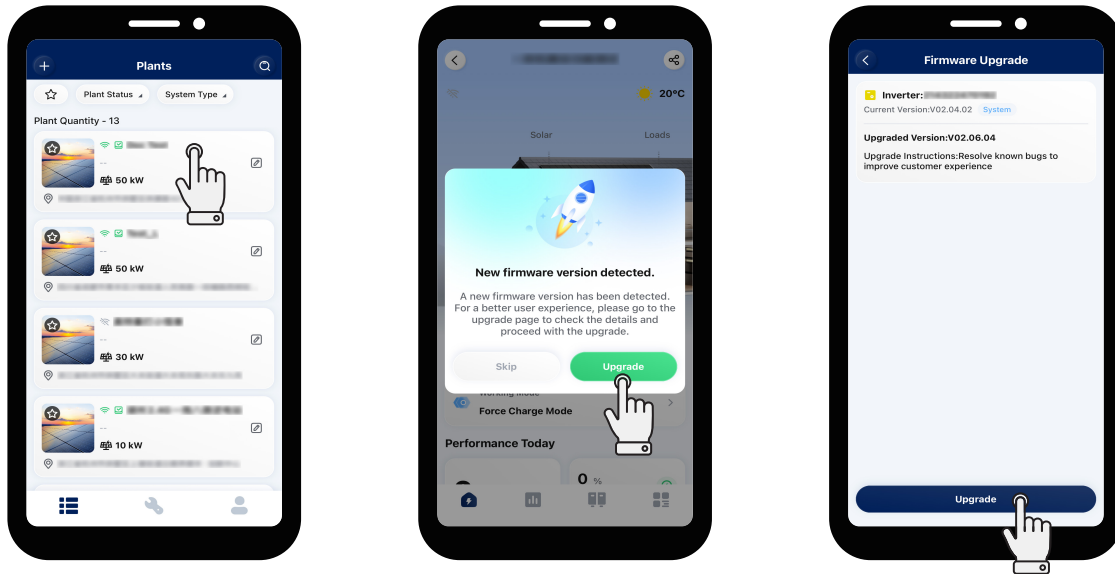
When you enter the plant overview interface, there will be a pop-up window if there is a new firmware version.

Method One

Step 1 Tap the target plant.

Step 2 Tap **Upgrade**.

Step 3 Tap **Upgrade**.

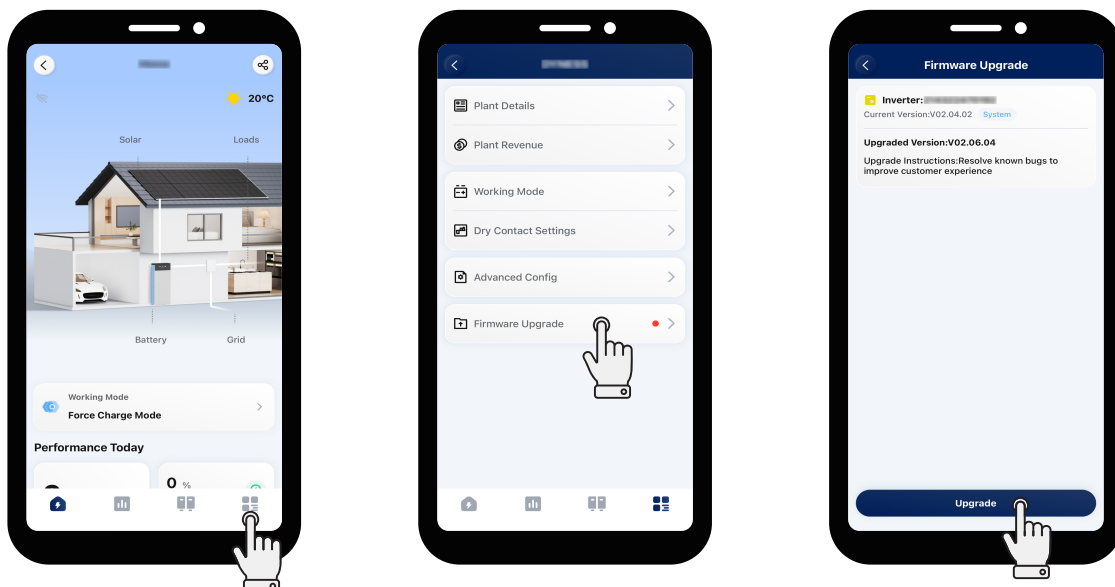


Method Two

If you have tapped **Skip** to perform other operations, you can also follow the instructions below to upgrade the firmware.

Step 1 Tap  in the lower right corner.

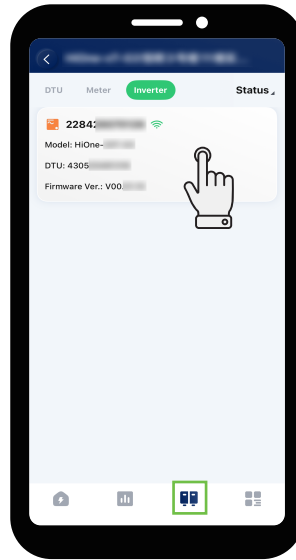
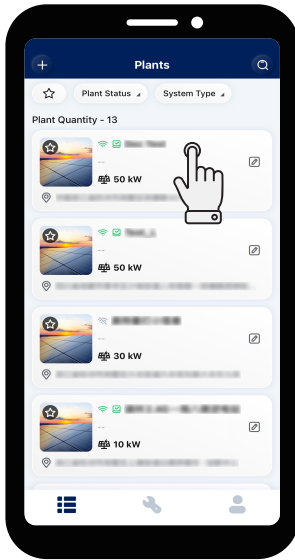
Step 2 Tap  **Firmware Upgrade** > **Upgrade**.



9.4 Turning On the System

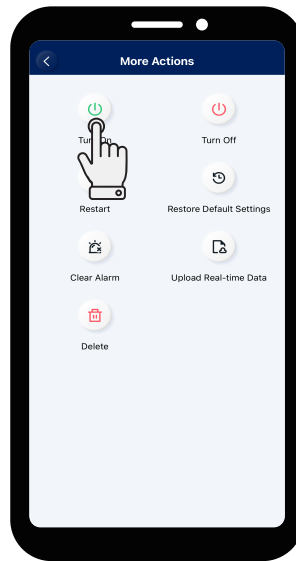
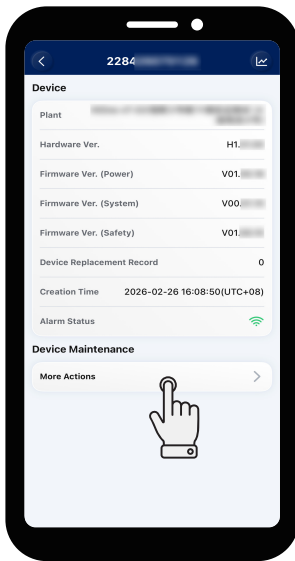
Step 1 Tap the target plant.

Step 2 Tap Inverter > Device SN number.



Step 3 Tap More Actions.

Step 4 Tap Turn On.



10 System Maintenance

10.1 System Power-off

Step 1 Unlock and open the enclosure door.

Step 2 Turn off the switches in the following order: QF4 > QF5 (If a generator/PV inverter/smart load is connected.) > QF2 / QF3 (If your system has two inverters, turn off both.) > QF1 > QF6.

10.2 Routine Maintenance

Check Item	Check Method	Maintenance Interval
System Operation Status	- Check whether the device is damaged or deformed. - Check whether there is an abnormal sound when the device is working. - Check whether the device parameters are set correctly.	Once every 6 months
Electrical Connection	- Check whether the cables are firmly connected and intact; in particular, ensure that the parts being contacted with the metal surface are not scratched. - Check whether the waterproof plugs or covers of unused ports are firmly in place.	The first inspection is 3 months after the first installation, and the subsequent inspections can be carried out once every 6 to 12 months.
Grounding Reliability	Check whether the ground cables are firmly connected.	The first inspection is 3 months after the first installation, and the subsequent inspections can be carried out once every 6 to 12 months.

11 Decommissioning

11.1 Removing the Product

Step 1 Power off the product as described in [10.1 System Power-off](#).

Step 2 Disconnect all cables.

Step 3 Remove the device from the wall.

11.2 Packing the Product

If the original package is available, put the product and its accessories into the package and keep them in a dry and proper place.

If the original package is not available, put the product and its accessories into a suitable package. The package should be easy to remove, can bear the weight of the product, and can be sealed properly.

11.3 Disposing of the Product

If the product can not be used and needs to be disposed of, dispose of the product and its accessories in accordance with the European Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

In accordance with the WEEE and its implementation in national law, the electrical devices must be collected separately and recycled in an environmentally responsible manner. We recommend that you return your used device to your dealer or obtain information regarding a local, authorized collection and disposal system. Failure to comply with this EU Directive may result in a negative impact on the environment.

12 Technical Datasheet

Model	HiBox-100S-G3
Grid	
Grid form	L/N/PE
Nominal AC voltage (V)	220/230/240
Nominal AC frequency (Hz)	50/60
Max. AC current (A)	100
Back-up switch time (ms) ⁽¹⁾	0
Inverter	
Max. connection number	2
Nominal AC voltage (V)	220/230/240
Max. AC current (A)	54.5
Smart Port (GEN / PV Inverter / Load)	
Max. connection number	1
Nominal AC voltage (V)	220/230/240
Max. AC current (A)	100
Backup	
Nominal AC voltage (V)	220/230/240
Nominal AC frequency (Hz)	50/60
Max. AC current (A)	100
General	
Dimensions (W × H × D [mm])	535 × 490 × 170
Weight (kg)	17
Mounting	Wall mounting
Operating temperature (°C)	-30 to +55
Relative humidity	0 to 100%
Cooling	Natural convection
Altitude (m)	≤4000
Protection degree	IP54
Communication	RS485
Warranty	5 years

(1) It refers to the interruption time of the Backup loads. The function can only be achieved when HiBox is used together with HiOne inverters and batteries. The test conditions are as follows: the grid is in the open-circuit state, and the rated power of the inverter exceeds the total power of the Backup loads.

13 Regulatory Compliance Statement



This product complies with the following EU directives and can be used without restrictions in the European Union:

- Directive 2014/53/EU (RED) and 2009/125/EC: Relating to the provision of electrical equipment within certain voltage limits on the market (Low Voltage Directive).
- Directive 2011/65/EU and 2015/863/EU (RoHS): Restricting the use of certain hazardous substances in electrical and electronic equipment.

More detailed information can be found at <https://www.hoymiles.com/>.

FCC Statement



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.

FCC Radiation Exposure Statement

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment and it also complies with Part 15 of the FCC RF Rules. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. End-users and installers must be provided with antenna installation instructions and consider removing the no-collocation 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.

Caution!

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

Canada Statement

This device contains licence-exempt transmitter(s)/receiver(s) that comply with Innovation, Science and Economic Development Canada's licence-exempt RSS(s). Operation is subject to the following two conditions:

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

L'émetteur/récepteur exempt de licence contenu dans le présent appareil est conforme aux CNR d'Innovation, Sciences et Développement économique Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes:

- 1) L'appareil ne doit pas produire de brouillage;
- 2) L'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.

The device meets the exemption from the routine evaluation limits of RSS 102 and compliance with RSS-102 RF exposure, users can obtain Canadian information on RF exposure and compliance.

Le dispositif rencontre l'exemption des limites courantes d'évaluation dans de RSS 102 et la conformité à l'exposition de RSS-102 rf, utilisateurs peut obtenir l'information canadienne sur l'exposition et la conformité de rf.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

Cet émetteur ne doit pas être Co-placé ou ne fonctionnant en même temps qu'aucune autre antenne ou émetteur. Cet équipement devrait être installé et actionné avec une distance minimum de 20 centimètres entre le radiateur et votre corps.



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