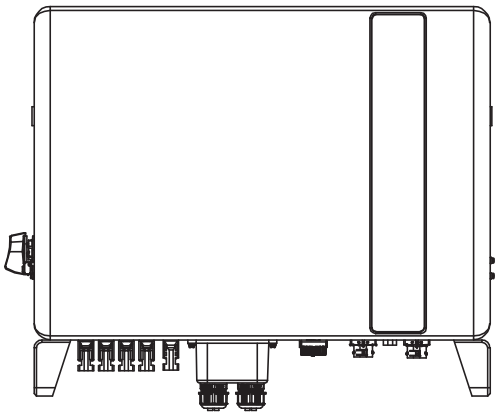
Haier

User Manual

Hybrid Inverter



Applicable models

HH3P-5KA1/HU
HH3P-6KA1/HU
HH3P-8KA1/HU
HH3P-10KA1/HU

Applicable System

Three phase system

Version 1.1, Release Date: 10,2025

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1.1 Product Description

The Haier HH3P Series is designed for residential hybrid systems, which can work with batteries to optimize self-consumption.

The unit can operate in both off and on-grid modes.

This manual covers the Haier HH3P Series inverter model listed below:

HH3P-5KA1/HU, HH3P-6KA1/HU, HH3P-8KA1/HU, HH3P-10KA1/HU

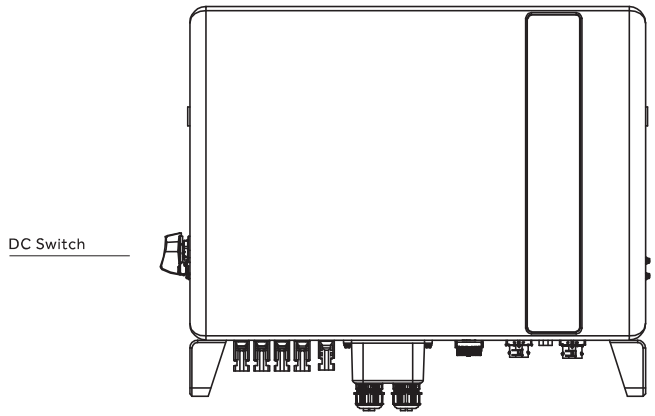


Figure 1.1 Front side view

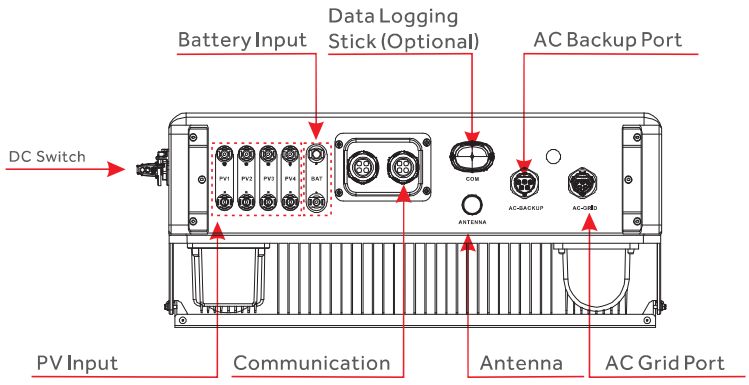
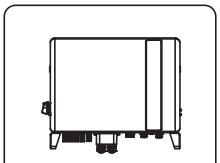
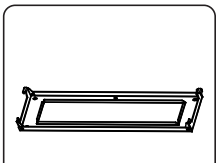


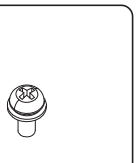
Figure 1.2 Bottom side view

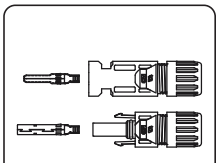
1.2 Packaging

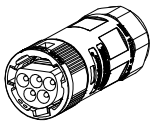
Please ensure that the following items are included in the packaging with your machine:


Inverter x1

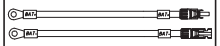

Back Plate x1


Fixing Screws(M4*12) x4


PV Connector x4

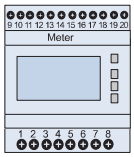

AC Backup x1


AC Grid x1


Battery cable x1

CAN cable x1

Meter cable x1

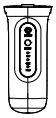


Eastron Meter x1


CT x3


RJ45 connector x6

Bluetooth Antenna x1


Data Logging Stick (Optional) x1

User Manual x1

If anything is missing, please contact your local distributor.

1.3 Inverter Circuit Diagram

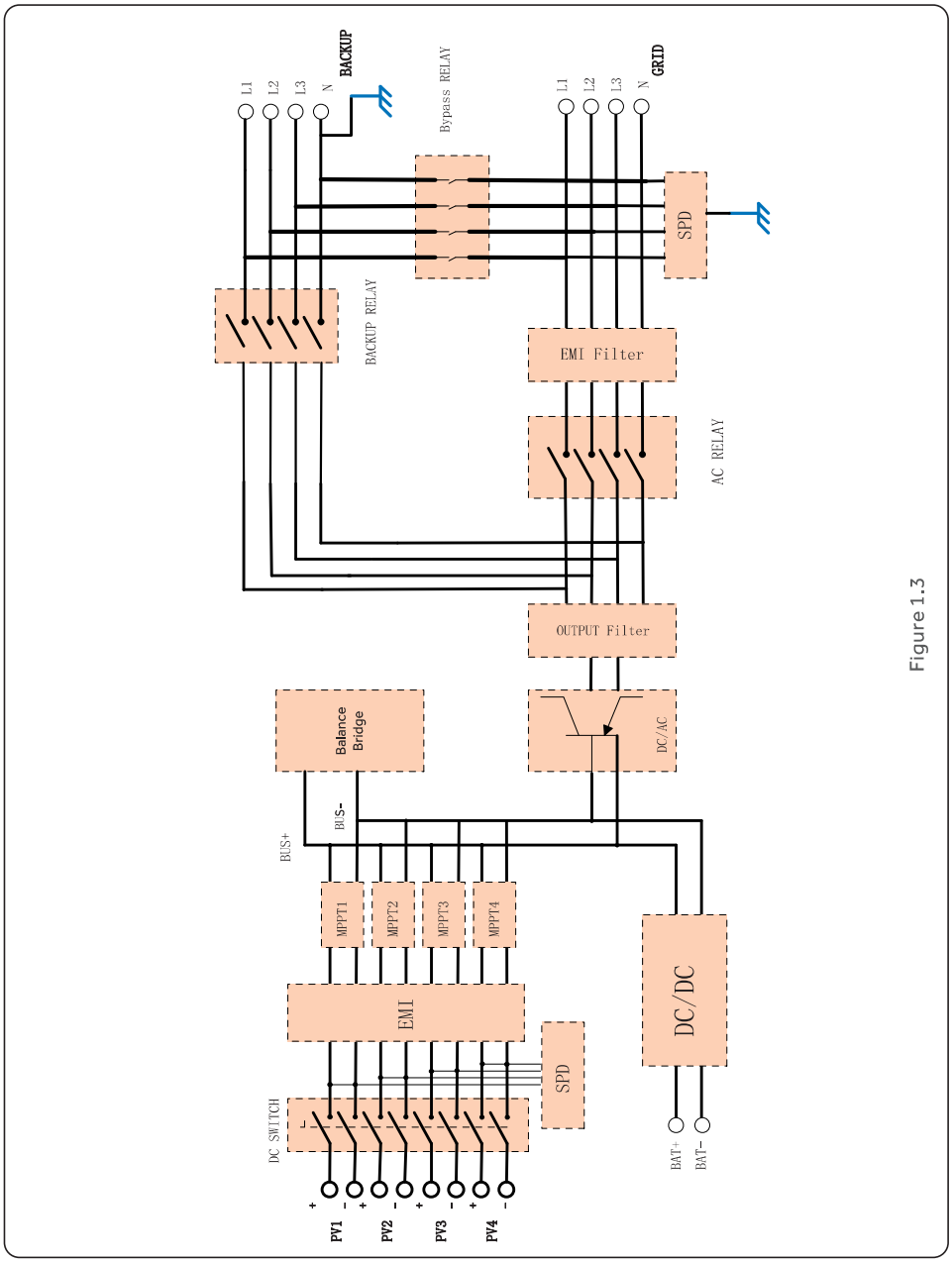


Figure 1.3

2. Safety & Warning

2.1 Safety

The following types of safety instructions and general information appear in this document as described below:

DANGER:
"Danger" indicates a hazardous situation which if not avoided, will result in death or serious injury.

WARNING:
"Warning" indicates a hazardous situation which if not avoided, could result in death or serious injury.

CAUTION:
"Caution" indicates a hazardous situation which if not avoided, could result in minor or moderate injury.

NOTE:
"Note" provides tips that are valuable for the optimal operation of your product.

WARNING: Risk of fire
Despite careful construction, electrical devices can cause fires.
- Do not install the inverter in areas containing highly flammable materials or gases.
- Do not install the inverter in potentially explosive atmospheres.

2.2 General Safety Instructions

WARNING:
Only devices in compliance with SELV (EN 69050) may be connected to the RS485 and USB interfaces.

WARNING:
Please don't connect PV array positive (+) or negative (-) to ground, it could cause serious damage to the inverter.

WARNING:
Electrical installations must be done in accordance with the local and national electrical safety standards.

WARNING:
Do not touch any inner live parts until 5 minutes after disconnection from the utility grid and the PV input.

WARNING:
The DC OCPD shall be installed per local requirements.
As they may superseded the requirements of this document.

CAUTION:
Risk of electric shock, do not remove cover. There is no user serviceable parts inside, refer servicing to qualified and accredited service technicians.

CAUTION:
The PV array supplies a DC voltage when they are exposed to sunlight.

CAUTION:
The surface temperature of the inverter can reach up to 75°C (167 F).
To avoid risk of burns, do not touch the surface of the inverter while it's operating. Inverter must be installed out of the reach of children.

NOTE:
PV module used with inverter must have an IEC 61730 Class A rating.

WARNING:
Operations below must be accomplished by licensed technician or Haier authorized person.

WARNING:
AC BACKUP Port of Haier Series is not allowed to connect to the grid.

WARNING:
Please refer to the specification of the battery before configuration.

2.3 Notice for Use

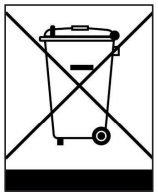
The inverter has been constructed according to the applicable safety and technical guidelines. Use the inverter in installations that meet the following specifications ONLY:

1. Permanent installation is required.
2. The electrical installation must meet all the applicable regulations and standards.
3. The inverter must be installed according to the instructions stated in this manual.
4. The inverter must be installed according to the correct technical specifications.

NOTE:
Inverters have not been tested to AS/NZS 4777.2:2020 for multiple phase combinations.

2.4 Notice for Disposal

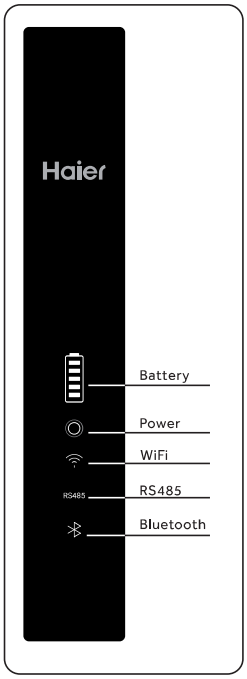
This product shall not be disposed of with household waste.
They should be segregated and brought to an appropriate collection point to enable recycling and avoid potential impacts on the environment and human health.
Local rules in waste management shall be respected .



3.1 Intelligent LED Indicators

There are five indicators on the The Haier Inverter (Battery, Power, WiFi, Ethernet and Bluetooth) which indicate the working status of the inverter.

The Bluetooth Antenna or WiFi datalogger shall be installed at the Antenna/COM port of the hybrid inverter before local debugging.



Light	Status	Description
Battery	White Flashing every 3s	Battery discharging.
	White Flashing every 1.5s	Battery charging.
	White Solid ON	Idle.
	OFF	No Battery or not working.
Power	White Solid ON	Normally Operating.
	Orange Solid ON	Warning.
	RedSolid ON or flashing every 3s	Alarm.
	OFF	No Battery or not working.
WiFi	White Solid ON	COM Port is using.
	OFF	COM Port is not used.
RS485	White Solid ON	RS485 Port is using.
	OFF	RS485 Port is not used.
Bluetooth	White Solid ON	Bluetooth Port is using.
	OFF	Bluetooth Port is not used.

Turning On the LED Indicator Lights

After a few minutes, the LED indicator lights will turn off to conserve power. To turn the lights back on, short-press the Inverter LED light.

Alarm State

When the inverter has an alarm, the Inverter LED light turns red and starts flashing. It is recommended to connect to the inverter with the Bluetooth tool. Then you can determine what the alarm code is.

NOTE:

Battery/WiFi/Ethernet/Bluetooth indicators will automatically turn off after 1 minute. The Power indicator will remain on with lower brightness. Short press the Power indicator can wake up all indicators.

4.1 Product Handling

Please review the instruction below for handling the inverter:

1. The red circles below denote cutouts on the product package.
   Push in the cutouts to form handles for moving the inverter (see Figure 4.1).

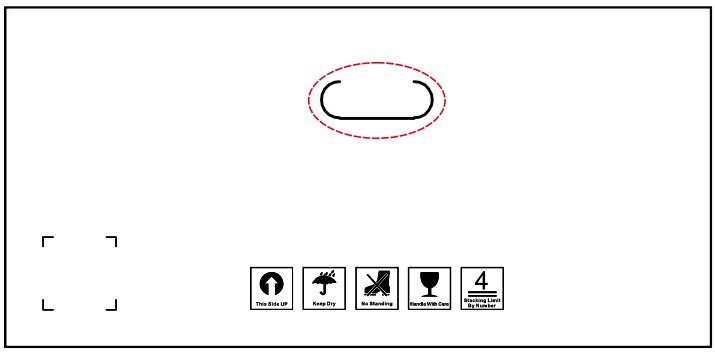


Figure 4.1 Move the inverter

2. Open the carton, then handle both sides of inverter through the area denoted dotted line.
   (see figure 4.2).

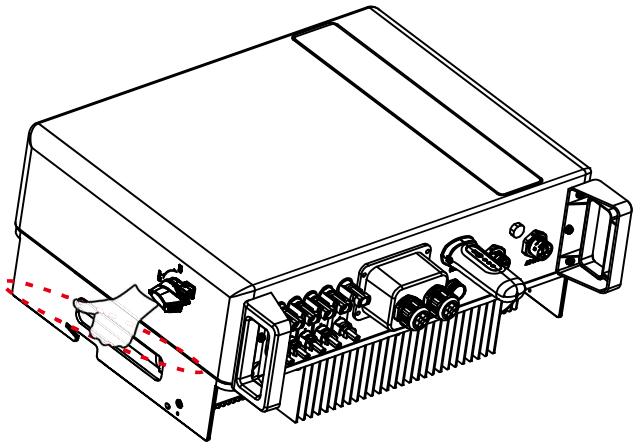


Figure 4.2 Inverter handles

4.2 Product Storage

If the inverter is not to be installed immediately, storage instructions and environmental conditions are below:

- Use the original box to repackage the inverter, seal with adhesive tape with the desiccant inside the box.
- Store the inverter(s) in a clean and dry place, free of dust and dirt.
- Storage temperature must be between -40℃ and 70℃ and the humidity must be between 0 and 100% non-condensing.
- Stack no more than four (4) inverters high.
- Keep box(es) away from corrosive materials to avoid damage to the inverter enclosure.
- Inspect packaging regularly. If packaging is damaged(wet, pest damage, etc), repackage the inverter immediately.
- Store the inverter(s) on a flat, hard surface - not inclined or upside down.
- After long-term storage, the inverter needs to be fully examined and tested by qualified service or technical personnel before using.
- Restarting after a long period of non-use requires the equipment to be inspected and, in some cases, the removal of oxidation and dust that has settled inside the equipment will be required.

4.3 Select a Location for the Inverter

To select a location for the inverter, the following criteria should be considered:

- Exposure to direct sunlight will cause output power derating.
- Do not install the inverter in direct sunlight.
- It is recommended that the inverter is installed in a cooler ambient which doesn't exceed 104°F/40°C.

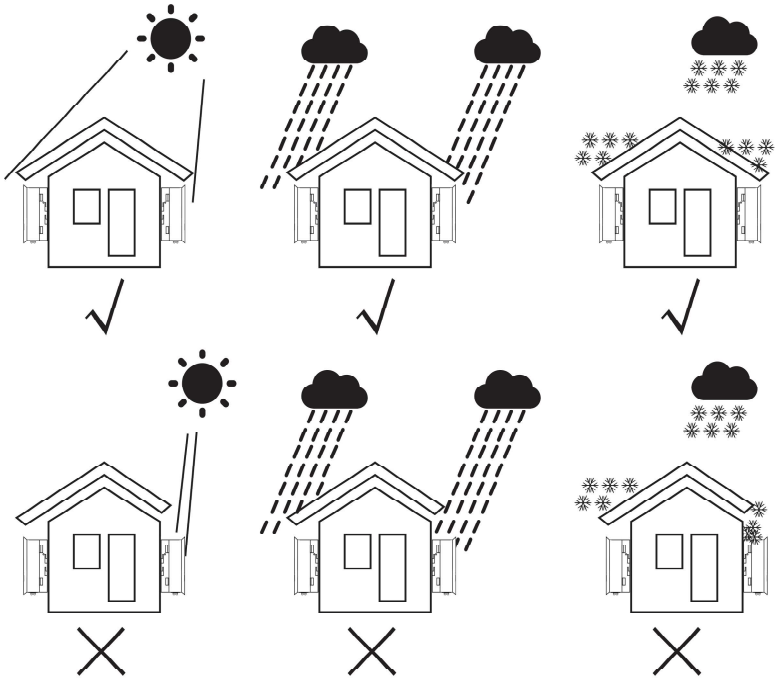


Figure 4.3 Required Installation locations

WARNING: Risk of fire

Despite careful construction, electrical devices can cause fires.

- Do not install the inverter in areas containing highly flammable materials or gases.
- Do not install the inverter in potentially explosive atmospheres.
- The mounting structure where the inverter is installed must be fireproof.

- Install on a wall or strong structure capable of bearing the weight of the machine (30kg).
- Install vertically with a maximum incline of +/- 5 degrees, exceeding this may cause output power derating.
- To avoid overheating, always make sure the flow of air around the inverter is not blocked. A minimum clearance of 500mm should be kept between inverters or objects and 1000mm clearance between the bottom of the machine and the ground.

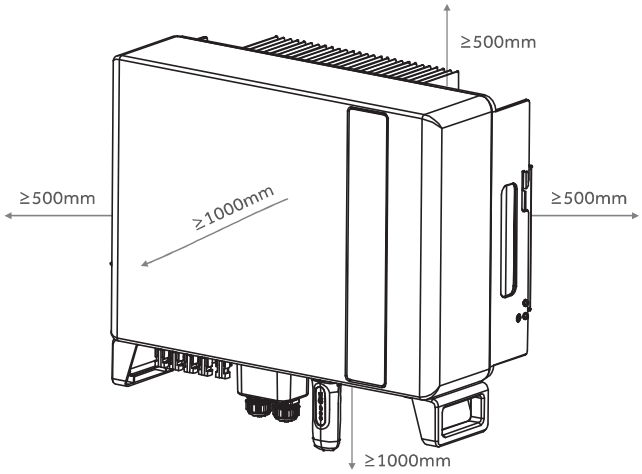


Figure 4.4 Inverter Mounting clearance

- Adequate ventilation must be provided.

NOTE:
Nothing should be stored on or placed against the inverter.

4.4 Mounting the Inverter

Dimensions of mounting bracket:

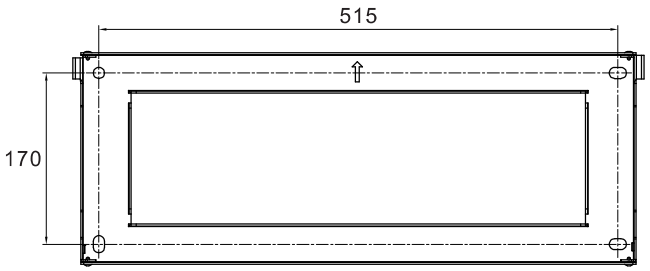


Figure 4.5 Inverter wall mounting

Once a suitable location has be found accordingly to 4.3 using figure 4.5 mount the wall bracket to the wall.

The inverter shall be mounted vertically.

The steps to mount the inverter are listed below:

1. Select the mounting height of the bracket and mark the mounting holes.
   For brick walls, the position of the holes should be suitable for the expansion bolts.
2. Lift up the inverter (be careful to avoid body strain), and align the back bracket on the inverter with the convex section of the mounting bracket. Hang the inverter on the mounting bracket and make sure the inverter is secure.

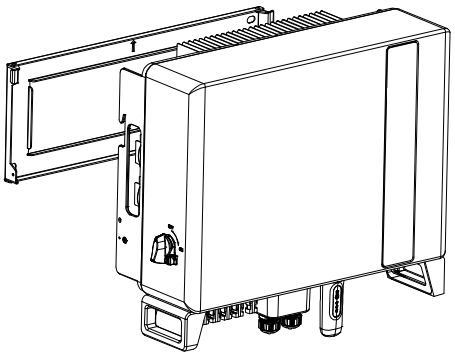


Figure 4.6 Wall Mount Bracket

WARNING:

The inverter must be mounted vertically.

4.5 PE Cable Installation

An external ground connection is provided at the right side of inverter.

Prepare OT terminals: M4. Use proper tooling to crimp the lug to the terminal.

Connect the OT terminal with ground cable to the right side of inverter. The torque is 2N.m.

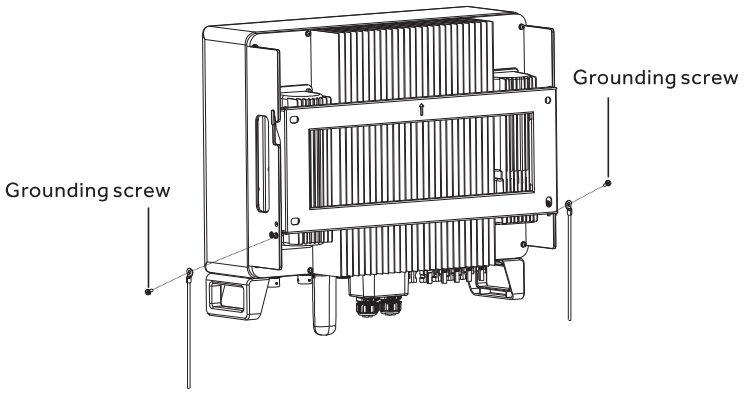


Figure 4.7 Connect the external grounding conductor

4.6 PV Input Cable Installation

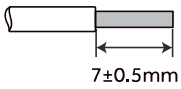
Before connecting inverter, please make sure the PV array open circuit voltage is within the limit of the inverter.

Before connection, please make sure the polarity of the output voltage of PV array matches the"DC+"and"DC-"symbols.

Please use approved DC cable for PV system.

The PV array should be floating.

1. Select a suitable DC cable and strip the wires out by 7±0.5mm. Please refer to the table below for specific specifications.



Cable type	Cross section（mm²）	
	Range	Recommended value
Industry generic PV cable	4.0~6.0 (12~10AWG)	4.0（12AWG）

Figure 4.8

2. Take the DC terminal out of the accessory bag, turn the screw cap to disassemble it, and take out the waterproof rubber ring.

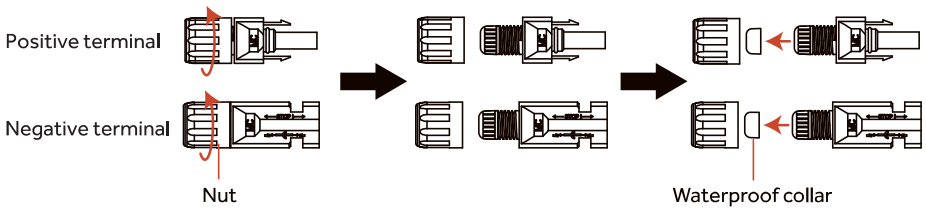


Figure 4.9

3. Pass the stripped DC cable through the nut and waterproof rubber ring.

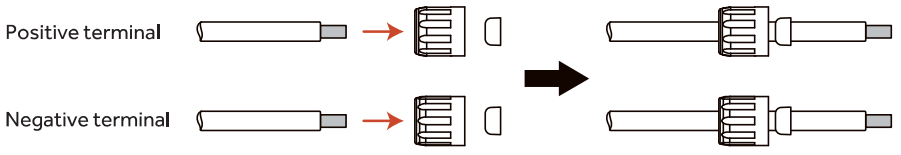


Figure 4.10

4. Connect the wire part of the DC cable to the metal DC terminal and crimp it with a special DC terminal crimping tool.

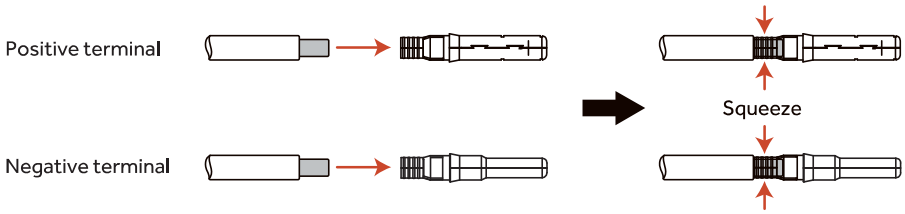


Figure 4.11

5. Insert the crimped DC cable into the DC terminal firmly, then insert the waterproof rubber ring into the DC terminal and tighten the nut.

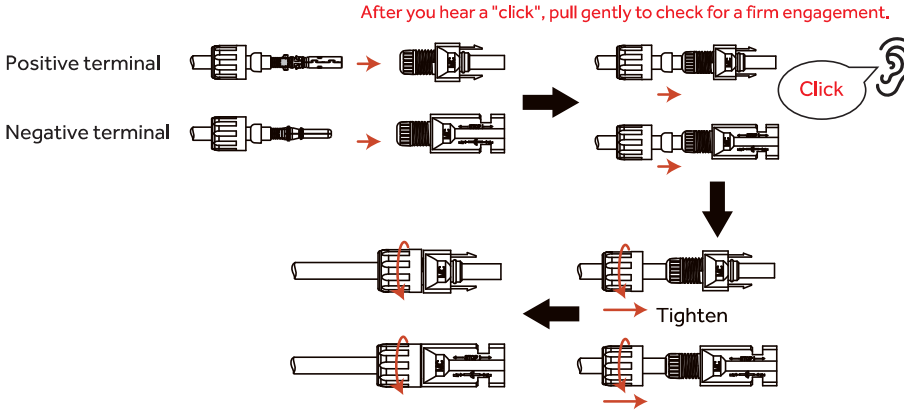


Figure 4.12

6. Measure PV voltage of DC input with multimeter, verify DC input cable polarity.

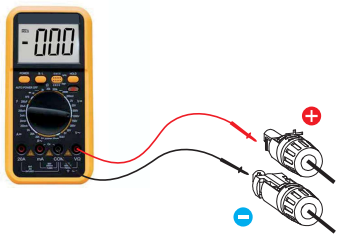


Figure 4.13

7. Connect the wired DC terminal to the inverter as shown in the figure, and a slight "click" is heard to prove the connection is correct.

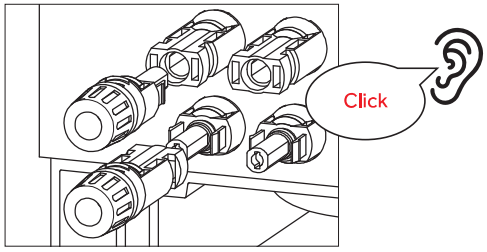


Figure 4.14

CAUTION:

If DC inputs are accidently reversely connected or inverter is faulty or not working properly, it is NOT allowed to turn off the DC switch. Otherwise it may cause DC arc and damage the inverter or even lead to a fire disaster.

The correct actions are:

*Use a clip-on ammeter to measure the DC string current.

*If it is above 0.5A, please wait for the solar irradiance reduces until the current decreases to below 0.5A.

*Only after the current is below 0.5A, you are allowed to turn off the DC switches and disconnect the PV strings.

* In order to completely eliminate the possibility of failure, please disconnect the PV strings after turning off the DC switch to aviod secondary failures due to continuous PV energy on the next day.

Please note that any damages due to wrong operations are not covered in the device warranty.

4.7 Battery Power Cable Installation

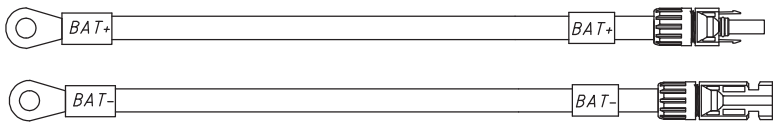


Figure 4.15

1. Connect the battery ends to the battery module positive and negative terminals.
2. Measure DC voltage of DC input with multimeter, verify DC input cable polarity.

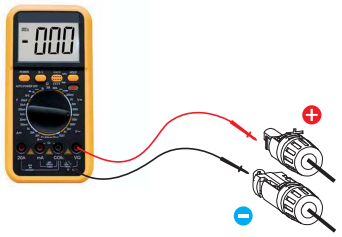


Figure 4.16

3. Connect the inverter end to the battery input port of the inverter as shown below, and push it in until you hear a "Click" sound which proves the fastened connection.

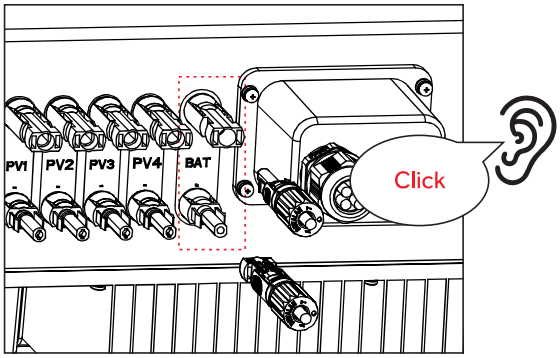


Figure 4.17

4.8 AC Cable Installation

There are two AC terminals on the inverter and the assembly steps are similar.
AC Grid Port is to connect to the grid and AC Backup Port is to connect to the critical load circuit.

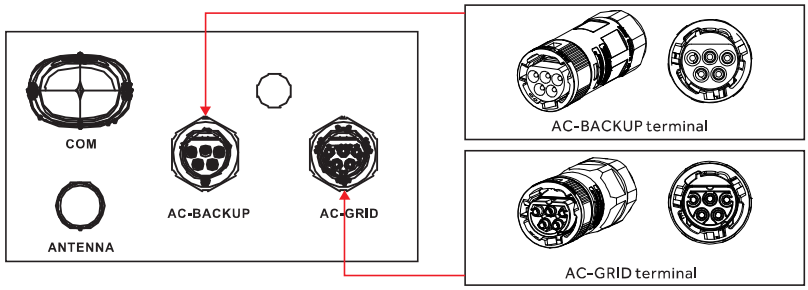


Figure 4.18

NOTE:
AC Backup Connector is longer while the AC Grid Connector is shorter.

4.8.1 AC Grid Port Connection

Describe	Numerical value
Cable diameter	14~17mm
Traverse cross sectional area	6mm^2
Exposure Length	7mm

Table 4.1

1. Strip the AC wires about 7mm.

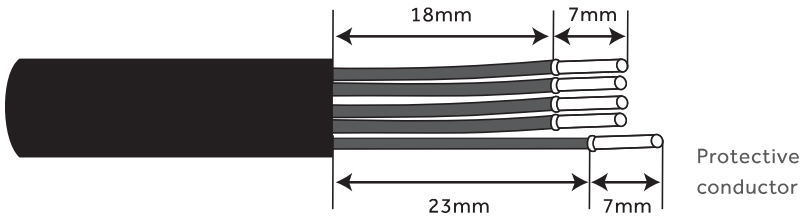
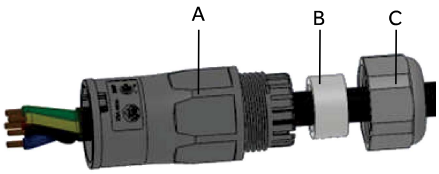


Figure 4.19

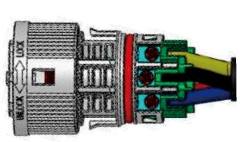
2. Disassemble the AC Grid Connector and set the parts on the cable.



A: Body
B: Seal body
C: Nut

Figure 4.20

3. Crimp wires, screw torque 0.8N·m±0.1N·m.



AC Grid

Figure 4.21

4. Push Housing into Body until you hear a "click" sound.

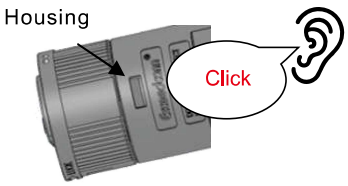


Figure 4.22

5. Insert Seal Body and Claw into the Body, and then tighten the Nut with torque 2.5N·m±0.5N·m.

Figure 4.23

6. Push the AC Grid Connector into the AC Grid Port on the inverter and rotate the rotatory ring on the AC Grid connector to the direction as marked "LOCK" on the connector. (Hold the Body while rotating the ring).

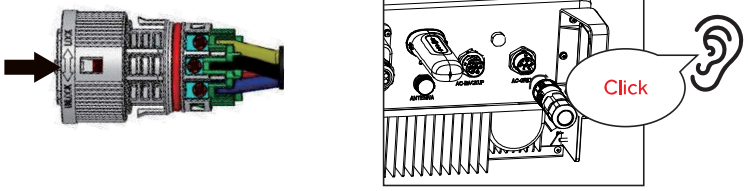


Figure 4.24

NOTE:
A continuity test shall be made to ensure that the correct terminations have been made after field wiring. As incorrect polarity will cause damage the inverter.

4.8.2 AC Backup Port Connection

Describe	Numerical value
Cable diameter	14~17mm
Traverse cross sectional area	6mm^2
Exposure Length	7mm

Table 4.2

1. Strip the AC wires about 7mm.

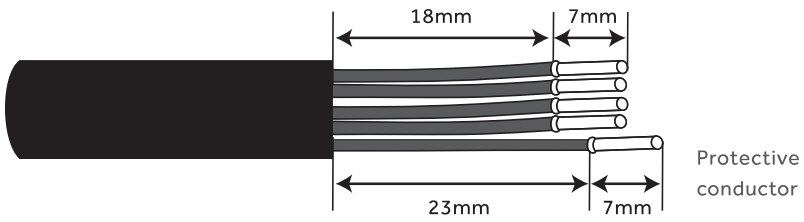
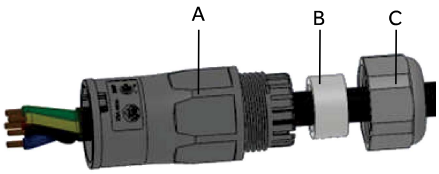


Figure 4.25

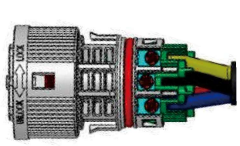
2. Disassemble the AC Backup Connector and set the parts on the cable.



A: Body
B: Seal body
C: Nut

Figure 4.26

3. Crimp wires, screw torque 0.8N·m±0.1N·m.



AC Backup

Figure 4.27

4. Push Housing into Body until you hear a "click" sound.

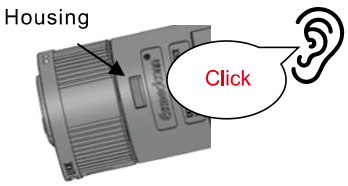


Figure 4.28

5. Insert Seal Body and Claw into the Body, and then tighten the Nut with torque 2.5N·m±0.5N·m.

Figure 4.29

6. Push the AC Backup Connector into the AC Backup Port on the inverter and rotate the rotatory ring on the AC Backup connector to the direction as marked "LOCK" on the connector. (Hold the Body while rotating the ring).

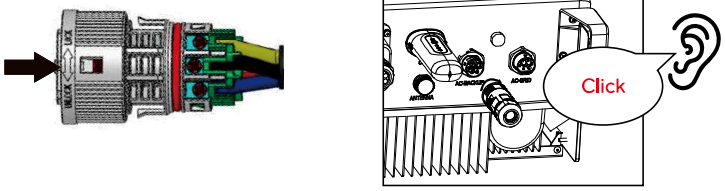


Figure 4.30

NOTE:
A continuity test shall be made to ensure that the correct terminations have been made after field wiring. As incorrect polarity will cause damage the inverter.

4.8.3 Disassembly Connector

1. Separate the male and female connector, rotate the locker according to the direction instructed by the marks on the locker.

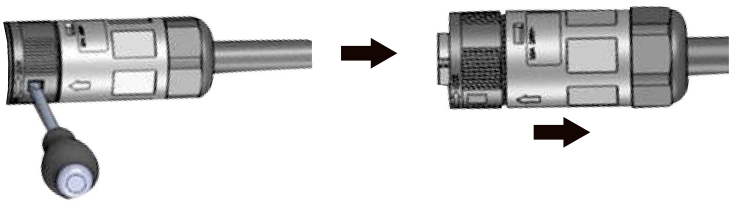


Figure 4.31

2. Disassembling body and housing for rewire.

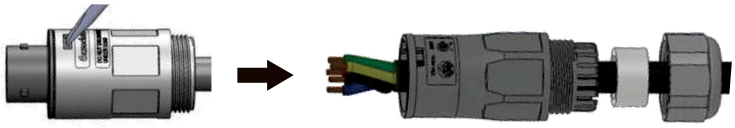


Figure 4.32

4.9 Communication Cable Installation

4.9.1 Protective Cover for Communication Ports

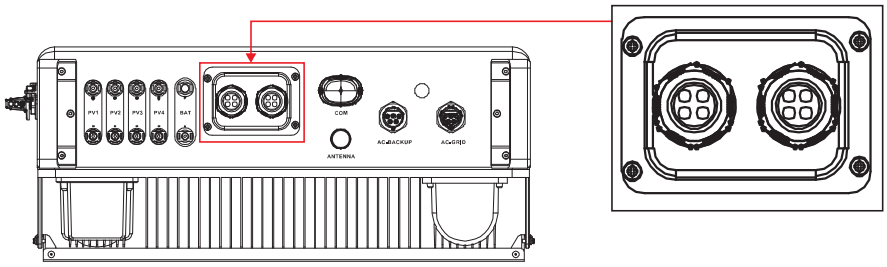


Figure 4.33

Inverter in the package is with a protective cover assembled to protect the communication ports.

Step 1. Use Phillips screwdriver to take out the 4 screws on the cover.

Step 2. Read through the following sections of the manual and prepare the internet cables correspondingly.

Step 3. Loose the cable gland and remove the watertight caps inside the cable gland based on the number of the cables and keep the unused holes with watertight cap.

Step 4. Lead the cables into the holes in the cable gland. (Hole Diameter: 6mm)

Step 5. Crimp the RJ45 connectors onto the cables according to the pin definitions described in the following sections and connect to the ports accordingly.

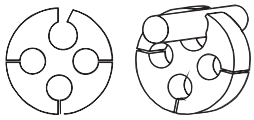
Step 6. Fasten the 4 screws on the cover (Torque: 1.7N.m-2 N.m)

Step 7. Reassemble the cable gland and ensure there is no bending or stretching of the internet cables inside the cover.

NOTE:

The 4-hole fastening rings inside the cable gland are with openings on the side.

Please separate the gap with hand and squeeze the cables into the holes from the side openings.



4.9.2 Communication Port Definition

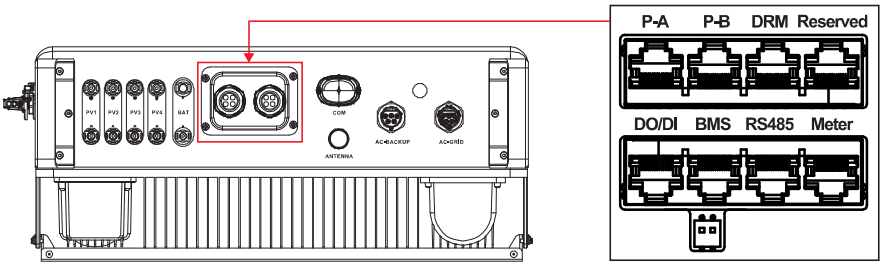


Figure 4.34

Port	Function
BMS	Used for CAN communication between inverter and Lithium battery BMS.
Meter	Used for RS485 communication between inverter and the smart meter. It is necessary to realize the normal hybrid control logics.
DRM	(Optional) To realize Demand Response or Logic interface function, this function may be required in UK and Australia.
RS485	(Optional) Used for Modbus RTU communication with 3rd party external device or controller.
P-A/P-B	(Optional) Parallel operation communication ports (Reserved).

Table 4.3

4.9.3 BMS Port Connection

Please follow the pin difinition to make the CAN cable and connect one end of the CAN cable to the battery CAN port and then connect the other end to the inverter BMS port.

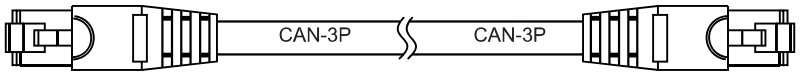


Figure 4.35

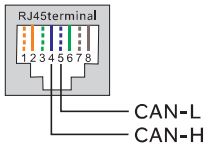
NOTE:

Pin definition of the BMS Port is following

EIA/TIA 568B.

CAN-H on Pin 4: Blue

CAN-L on Pin 5: Blue/White



4.9.4 Meter Port Connection

Take out the pre-made Meter cable from the package and connect RJ45 end to inverter Meter port and then connect another end with loose RS485 A & B pins to the meter RS485 terminal.

Cable Length: 5 meters.

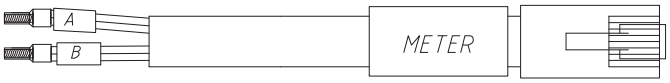


Figure 4.36

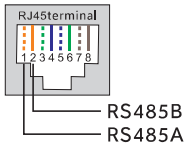
NOTE:

Pin definition of the Meter Port is following

EIA/TIA 568B.

RS485A on Pin 1:Orange/white

RS485B on Pin 2:Orange



NOTE:

Compatible Smart Meter Pin definition.

Eastron SDM630MCT – Pin 13 is RS485B & Pin 14 is RS485A.

Eastron SDM630 – Pin B is RS485B & Pin A is RS485A.

4.9.5 DRM Port Connection (Optional)

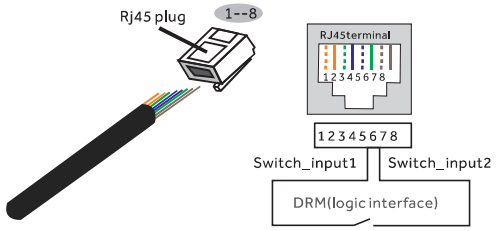
4.9.5.1 For Remote Shutdown Function

Haier inverters support remote shutdown function to remotely control the inverter to power on and off through logic signals.

The DRM port is provided with an RJ45 terminal and its Pin5 and Pin6 can be used for remote shutdown function.

Signal	Function
Short Pin5 and Pin6	Inverter Generates
Open Pin5 and Pin6	Inverter Shutdown in 5s

Table 4.4



Correspondence between the cables and the stitches of plug, Pin5 and Pin6 of RJ45 terminal is used for the logic interface, other Pins are reserved.

Pin 1: Reserved; Pin 2: Reserved
Pin 3: Reserved; Pin 4: Reserved
Pin 5: Switch_input1; Pin 6: Switch_input2
Pin 7: Reserved; Pin 8: Reserved

Figure 4.37 Strip the insulation layer and connect to RJ45 plug

4.9.5.2 For DRED Control Function (For AU and NZ Only)

DRED means demand response enable device. The AS/NZS 4777.2:2020 required inverter need to support demand response mode(DRM).

This function is for inverter that comply with AS/NZS 4777.2:2020 standard.

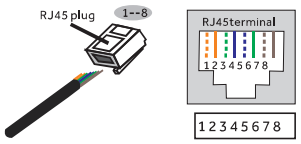
A RJ45 terminal is used for DRM connection.

Pin	Assignment for inverters capable of both charging and discharging	Pin	Assignment for inverters capable of both charging and discharging
1	DRM 1/5	5	RefGen
2	DRM 2/6	6	Com/DRM0
3	DRM 3/7	7	V+
4	DRM 4/8	8	V-

Table 4.5

NOTE:

Haier hybrid inverter is designed to provide 12V power for DRED.



Correspondence between the cables and the stitches of plug

Pin 1: white and orange ; Pin 2: orange
Pin 3: white and green; Pin 4: blue
Pin 5: white and blue; Pin 6: green
Pin 7: white and brown; Pin 8: brown

Figure 4.38 Strip the insulation layer and connect to RJ45 plug

4.9.6 RS485 Port Connection (Optional)

If a 3rd party external device or controller needs to communicate with the inverter, the RS485 port can be used. Modbus RTU protocol is supported by Haier inverters.

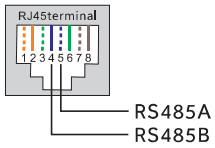
To acquire latest protocol document, please contact Haier local service team or Haier sales.

NOTE:

Pin definition of the RS485 Port is following EIA/TIA 568B.

RS485A on Pin 5: Blue/White

RS485B on Pin 4: Blue



4.10 Meter Installation

CAUTION:
Make sure the AC cable is totally isolated from AC power before connecting the Smart Meter and CT.

The Haier HH3P Series inverter is able to connected standard Eastron meters to fulfill the control logic of the self-consumption mode, export power control, monitoring, etc.

Eastron 3ph meter (With CT): SDM630MCT (Provided by default)

Eastron 3ph meter (Direct Insert): SDM630 (Optional, Customer prepare if needed)

NOTE:
Please note that the CT orientation must be correct, otherwise the system will not work properly.

Compatible Smart Meter Model	Meter RS485 Pin Definition
SDM630MCT	Pin 13 – RS485B, Pin 14 – RS485A
SDM630	B – RS485B, A – RS485A

Table 4.6

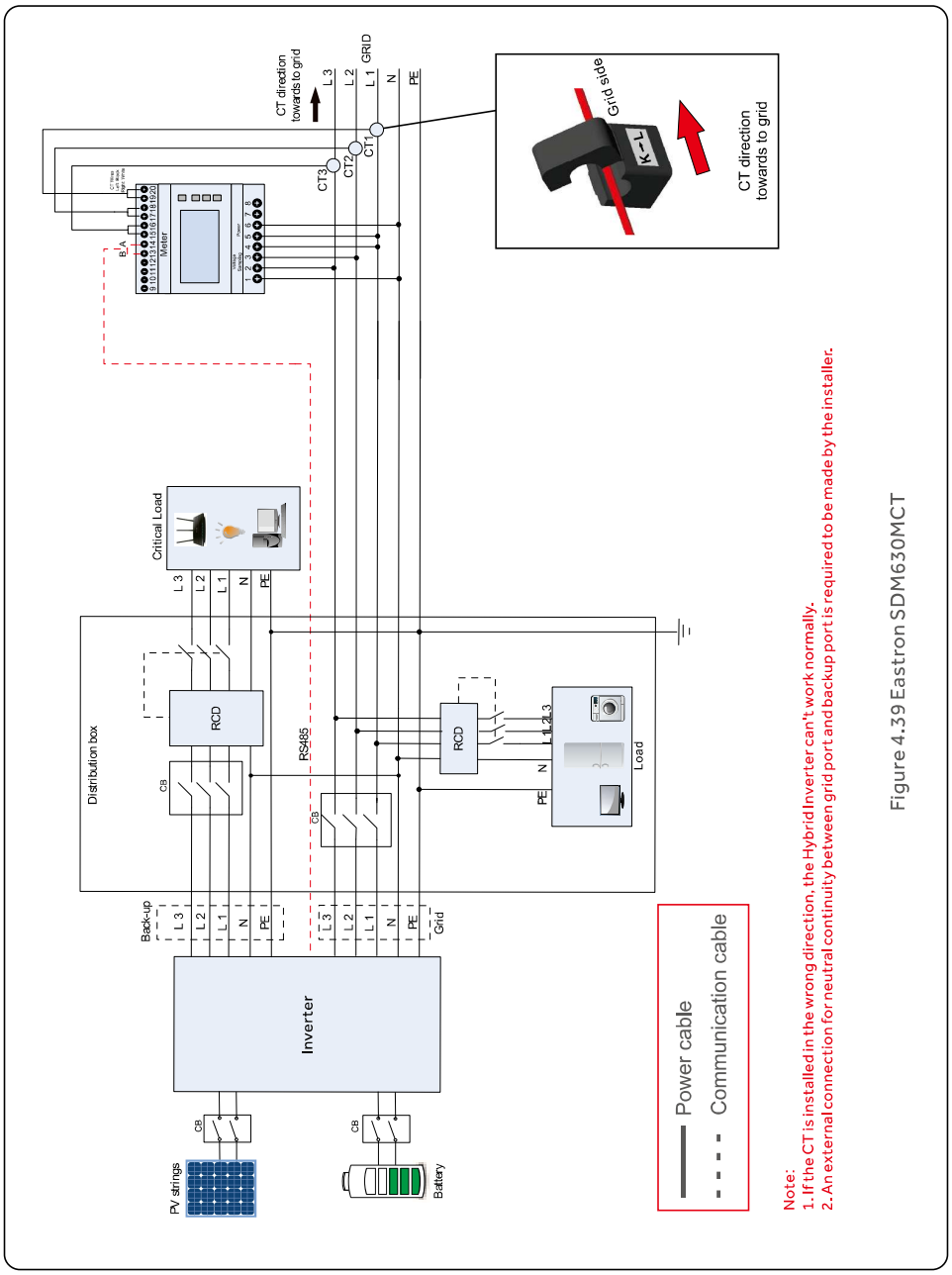


Figure 4.39 Eastron SDM630MCT

Note:
1. If the CT is installed in the wrong direction, the Hybrid Inverter can't work normally.
2. An external connection for neutral continuity between grid port and backup port is required to be made by the installer.

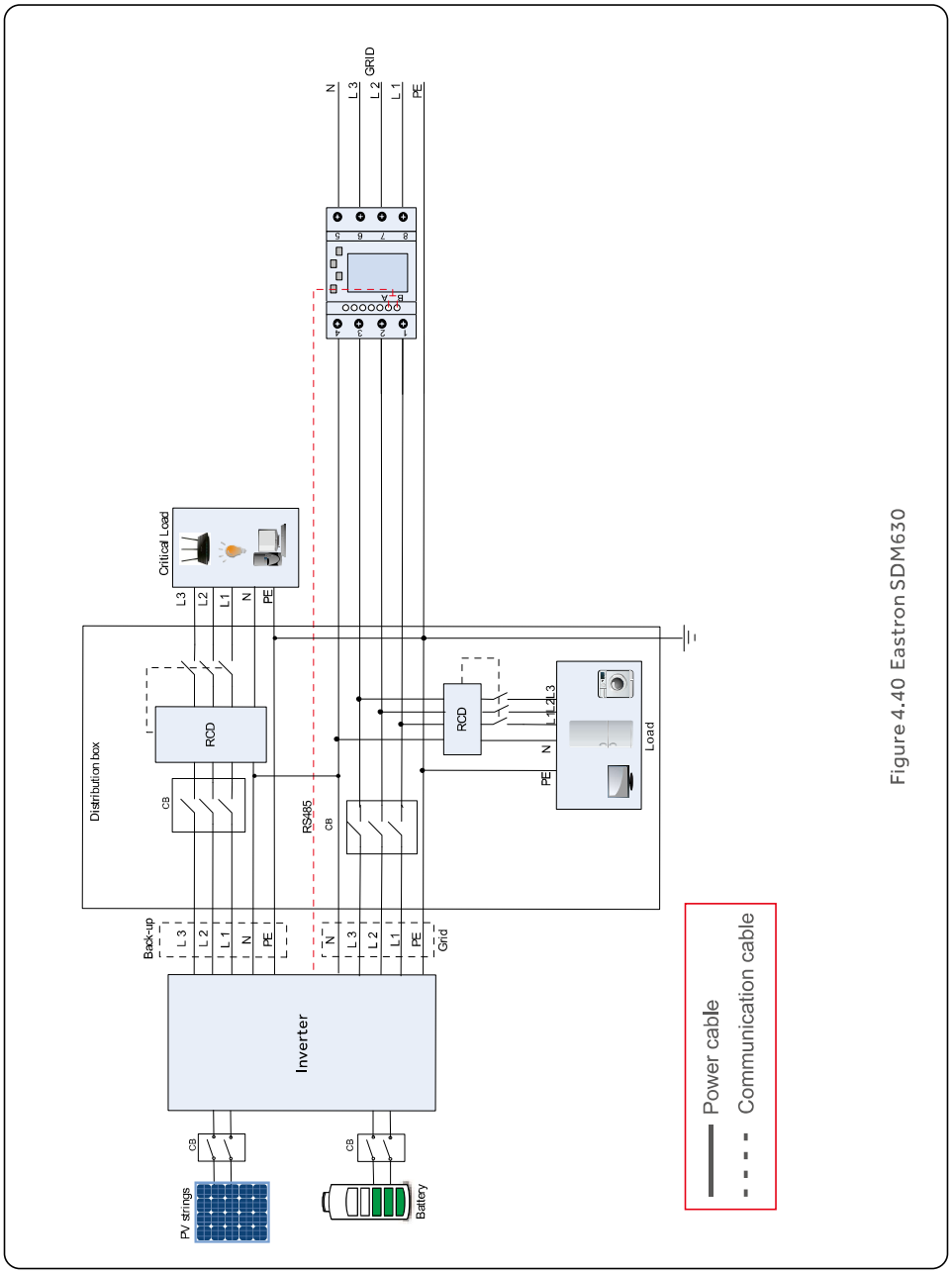


Figure 4.40 Eastron SDM630

4.11 Inverter Remote Monitoring Connection

The inverter can be remotely monitored via WiFi, LAN or 4G.
The USB type COM port at the bottom of the inverter can connect to different kinds of data loggers to realize the remote monitoring on cloud platform.
To install data loggers, please refer to corresponding user manuals of data loggers.
The data loggers are optional and can be purchased separately.
Dust cover is provided the inverter package in case the port is not used.

WARNING:
The USB type COM port is only allowed to connect data loggers.
It is forbidden to be used for other purposes.

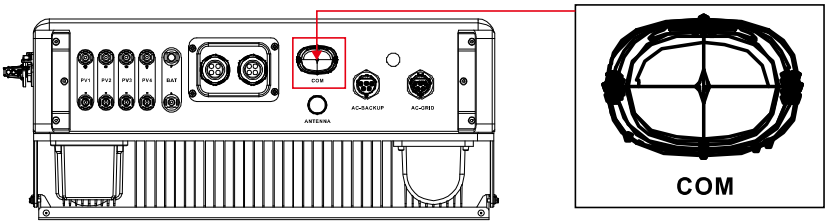


Figure 4.39

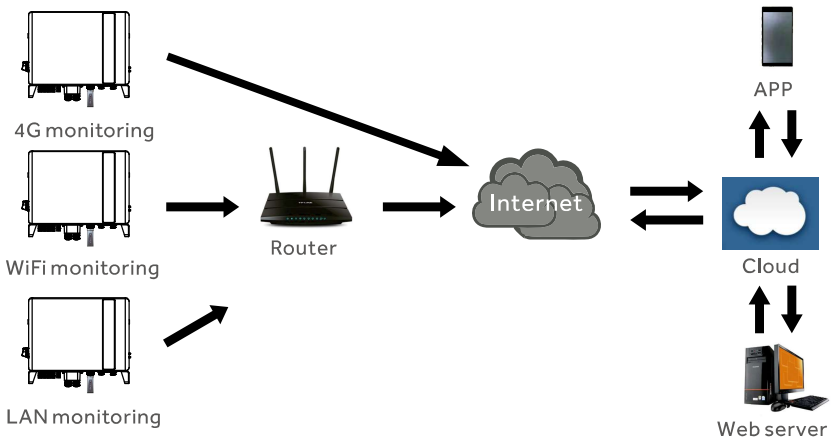


Figure 4.41 Wireless communication function

4.12 External Residual Current Device(RCD)

All series of Haier inverters are integrated with an internal residual current device to protect against any potential d.c component and a.c component of residual current. Therefore, all Haier inverters, due to the design, are not able to feed in DC fault current to the system which fully complies with IEC60364-7-712.

If an external RCD is required to be installed by local regulations, Haier recommends installing a Type-A RCD with a threshold current higher than 100mA.

4.13 Max. Over Current Protection Device (OCPD)

To protect the inverter's AC grid connection conductors, Haier recommends installing AC breakers that will protect againt overcurrent. The following table defines OCPD ratings for these inverters.

Inverter	Rated voltage	Rated output current	Rated input current	Current for protection device
HH3P-5KA1/HU	380V/400V	7.6A/7.2A	11.4A	20A
HH3P-6KA1/HU	380V/400V	9.1A/8.7A	13.8A	20A
HH3P-8KA1/HU	380V/400V	12.2A/11.5A	18.2A	32A
HH3P-10KA1/HU	380V/400V	15.2A/14.4A	22.8A	32A

Table 4.7 Rating of grid OCPD

4.14 Earth Fault Alarm

Haier inverters fully comply with IEC62109-2 in terms of earth fault alarm (PV insulation detection and protection). When the earth fault on PV side happens, the yellow alarm indicator will flash and the alarm code "PVISO-PRO" will show up on the APP.

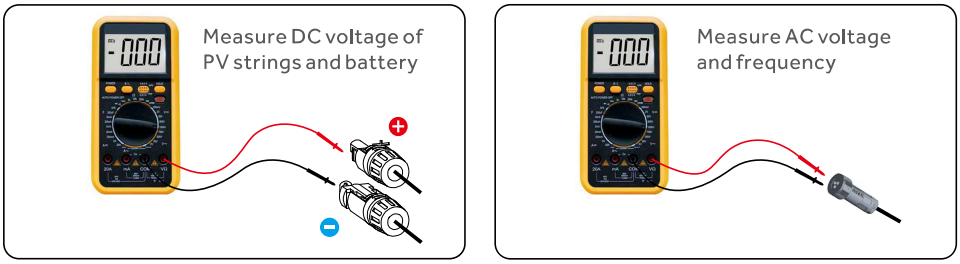
The Inverter is best installed in a high traffic area to ensure the alarm to be noticed.

The inverter can't start to generate until the earth fault is resolved. Please refer to the troubleshooting section of this manual to resolve the earth fault or contact Haier service team for help.

For the earth fault happened on battery inputs, customer shall install external alarm and monitoring device to comply AS/NZS 5139.

5.1 Installation & Commissioning Checklist

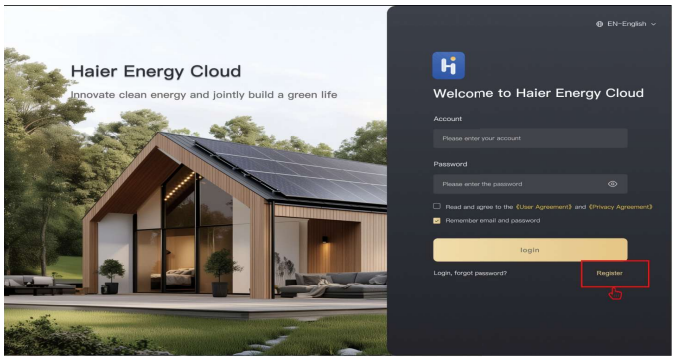
- Confirm all devices are accessible for operation, maintenance, and service.
- Verify the inverter is securely mounted and mechanically stable.
- Ensure adequate ventilation space is provided for single or multiple inverters.
- Confirm no objects are placed on top of the inverter or battery modules.
- Check that the inverter and all accessories are correctly connected.
- Verify all cables are safely routed and protected from mechanical damage.
- Ensure warning labels and safety signs are properly affixed, visible, and durable.
- Confirm the Bluetooth antenna is connected to the designated inverter port.
- Verify an Android or iOS mobile device with Bluetooth capability is available for setup.
- Measure DC voltage of PV strings and battery, ensuring polarity is correct.
- Measure AC voltage and frequency, confirming they comply with local grid standards.

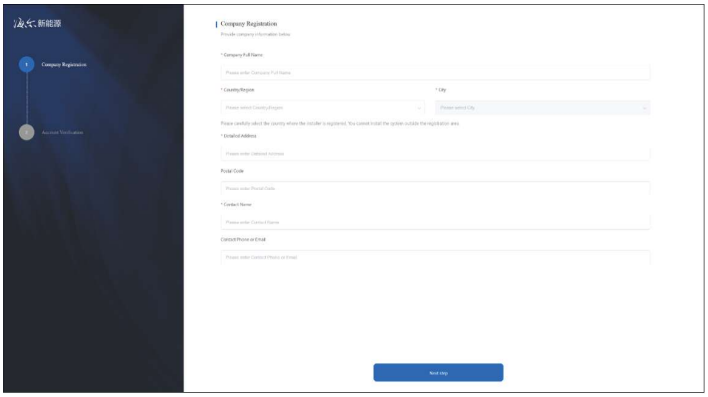


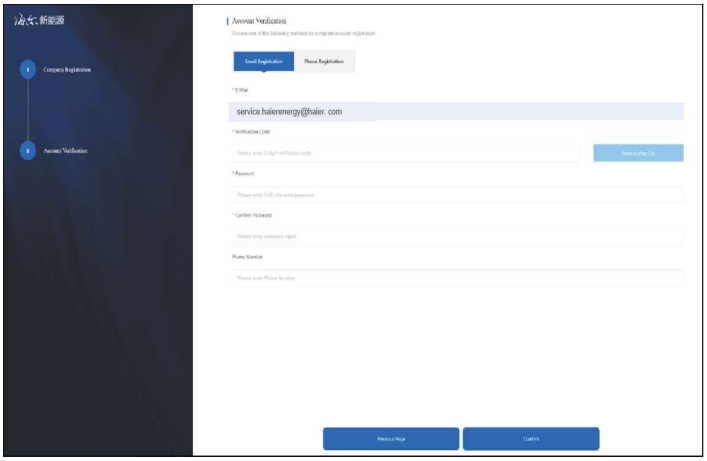
5.2 Installer account registration and APP configuration via Bluetooth

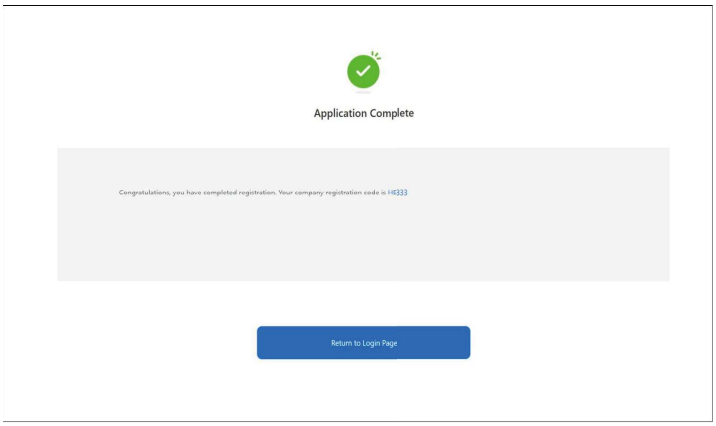
Step 1: There are two ways to register an installer account

1. Online Registration (Current Option): Visit https://hemseu.haier-energy.com and sign up for your installer account. Follow the on-screen prompts to complete your registration and verify your account via email.



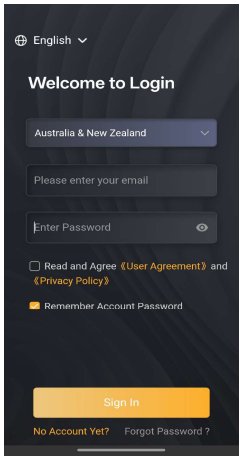

Company Registration
Company Registration
Account Verification
Company Registration
Next step

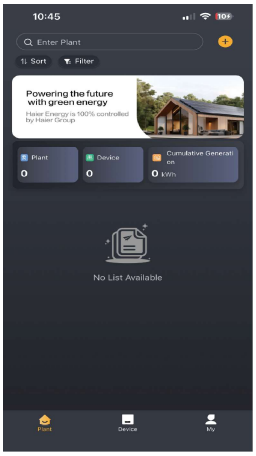

Company Registration
Account Verification
Account Verification
Email Registration
Phone Registration
service.haierenergy@haier. com
Previous Page
Confirm


Application Complete
Congratulations, you have completed registration. Your company registration code is HE333
Return to Login Page

APP Download :
the App should be downloaded firstly in the following two ways:
1. Search the "Haier Energy"APP in Play store or App Store.
2. Scan the QR code which will take you directly to the app download page and install ed the app.

Log in the "Haier Energy" with the installer account and password registered above. The Data Center is Australia & New Zealand.





NOTE:
1. Both the installer and the home owner use Haier Energy app.
2. The screenshots given in this document are for illustration purposes only. Interfaces in different periods may differ. The actual interface display shall prevail.

2. Mobile App Registration – Coming Soon

Note:

This registration method is expected to be available by the end of 2025.

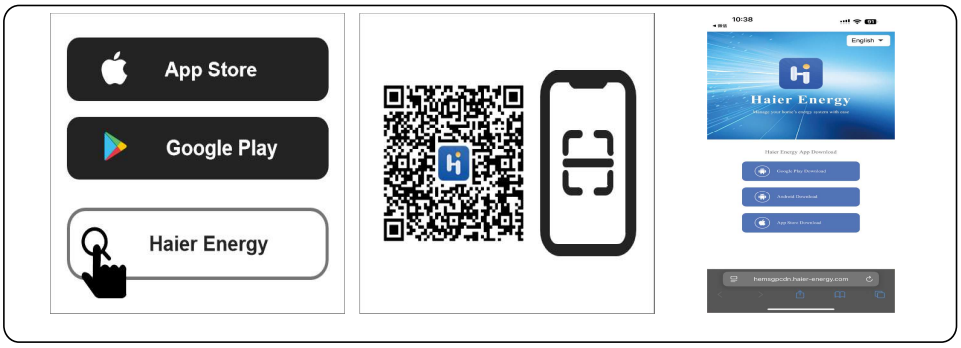
Before registering, please download the Haier Energy app using one of the following methods:

1. App Search Method:

Search for "Haier Energy" in the Play Store (for Android) or App Store (for iOS).

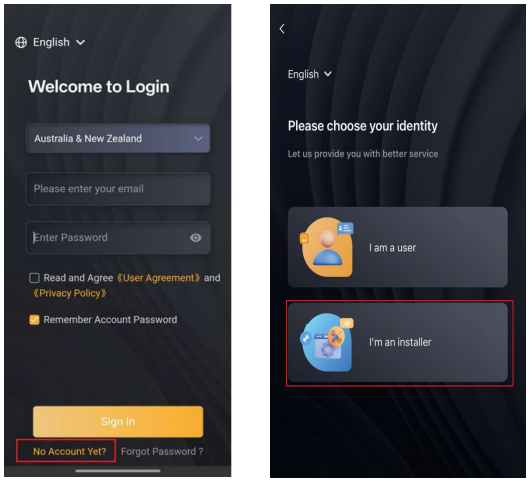
2. QR Code Method:

Scan the provided QR code to go directly to the app download page, then install the app.



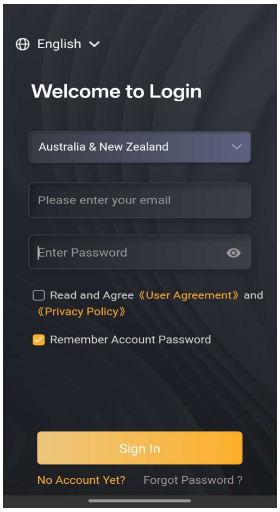
Once installed, open the Haier Energy App, tap

1. "No account yet"
2. Complete the registration information according to the prompts .
3. Select I'm an installer to progress to your home page.

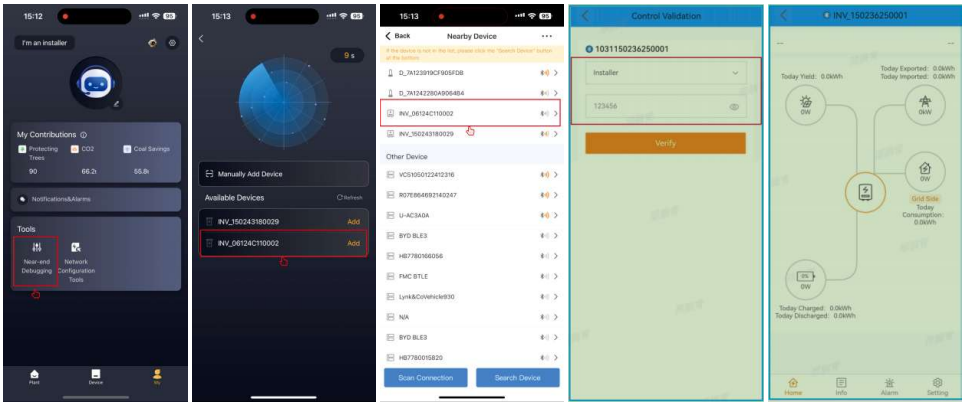


NOTE:

1. Both the installer and the home owner use Haier Energy app.
2. The screenshots given in this document are for illustration purposes only. Interfaces in different periods may differ. The actual interface display shall prevail.

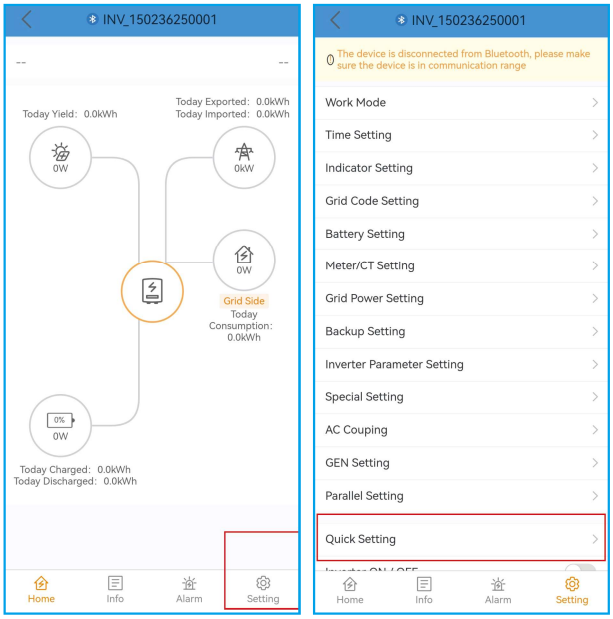


1. On the "MY" page, find the "Near end Debugging" tool.
2. In the Bluetooth **Available Device** list, find the device name and click to enter the next page.
3. In the **Nearby Device list** Select the consistent SN with inverter (Represented with a inverter icon) to enter the Control validation page. The default role is installer, then set your initial password for control validation. (On first login initial inverter set up is required.).
4. The inverter configuration page is displayed after the configuration is complete. You can click the "**Setting**"to set the parameters of the inverter.



Step 4: **Set the parameters of the inverter.**

After connecting the inverter for the first time, you need to perform initial settings on the inverter. Click "**Quick Settings**" to enter the quick Settings page.



Step 4.1: **Set the inverter Date and Time.**

You can set it to follow the time on your mobile phone.

Step 4.2: **Set the battery model.**

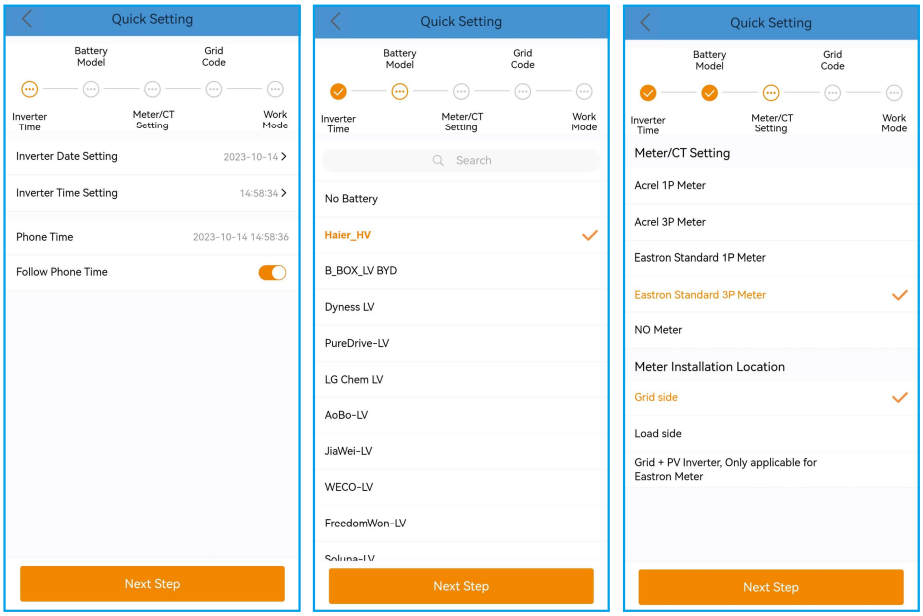
It must be based on the battery model that is actually connected to the inverter.

The default setting for battery over-discharge SOC is 20%, and force charge SOC is 10%.

If there is no battery connected for the moment, please select "No Battery" to avoid alarms.

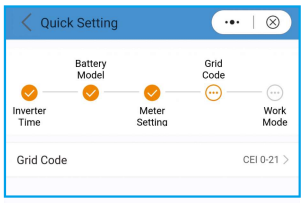
Step 4.3: **Set the meter setting.**

It must be based on the meter type that is actually connected to the inverter. If there is no meter connected for the moment, please select "**No Meter**" to avoid alarms. It is suggested to install the meter at the system grid connection point and select "**Meter in Grid**".



Step 4.4: **Set the grid code setting.**

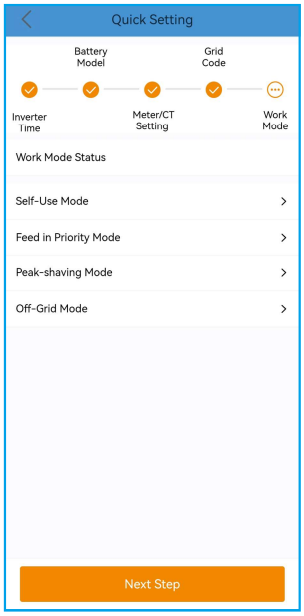
Please select the grid code based on the local grid network requirements.



Step 4.5: **Set the work mode setting.**

There are four work modes that can be set.

- Work mode1: Self-Use Mode (default)
- Work mode2: Feed in Priority Mode
- Work mode3: Peak-shaving Mode
- Work mode4: Off-grid Mode



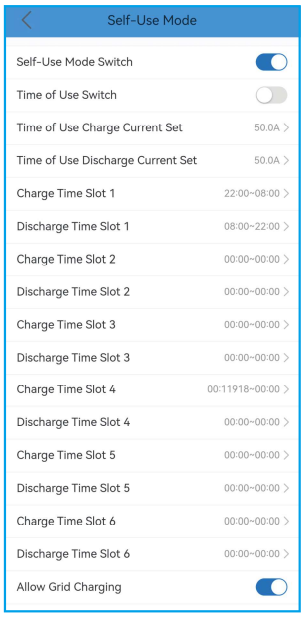
Work mode1: Self-Use Mode (default)

The recommended setting is Self-Use Mode.

This mode can maximize the use of PV power generation for household electricity or store it in batteries and use it for household electricity.

If you need to manually control the battery charging and discharging with respect to time, please use the Time of Use switch and the following set points.

The "Allow Grid Charging" is recommended to be turned on (If turned off, the inverter will not force charge the battery, and the battery could potentially go to sleep)

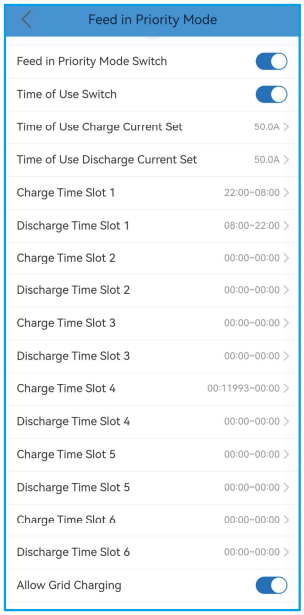


Work mode2: Feed in Priority Mode

This mode can preferentially send power to the grid when the load is met, used in areas with a subsidy for power to the grid.

If you need to manually control the battery charging and discharging with respect to time, please use the Time of Use switch and the following set points.

The "Allow Grid Charging" is recommended to be turned on (If turned off, the inverter will not force charge the battery, which could potentially go to sleep).

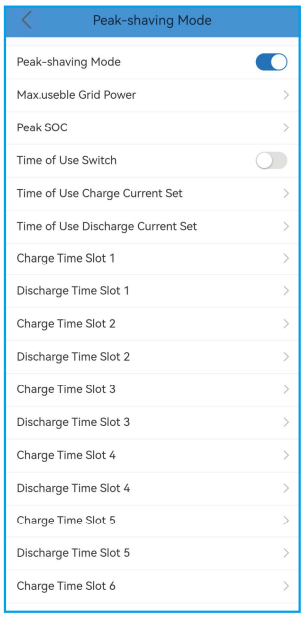


Work mode3: Peak-shaving Mode

This mode is typically used when the local grid company charges the electricity price based on the peak power consumption of the system. Customers can use this peak shaving mode to avoid the peak consumption power at the grid connection point.

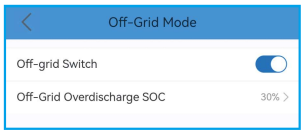
Customers can set a maximum import power limit for this system, and the inverter can automatically discharge the battery to compensate for the excess load consumption to ensure the maximum import power limit at the grid connection point is not breached. (The correct operation logic depends on the availability of the battery; Haier is not responsible for the excess electricity price caused by the battery fault.)

When the system load consumption power is lower than the max import power limit AND the battery SOC is lower than the Peak SOC, the system may charge the battery from the grid by using the difference between the max import limit and the actual load consumption power until the battery SOC is charged to Peak SOC. This logic ensures the battery can have enough energy to support the peak shaving logic.



Work mode4: Off-Grid Mode

This mode is only used for pure off-grid and is not recommended for standard storage systems. Note that if this mode is enabled in the grid-connected state, the working logic of the machine will be confused, and the "Off-grid" will be displayed.



Step 4.6: Setup complete.

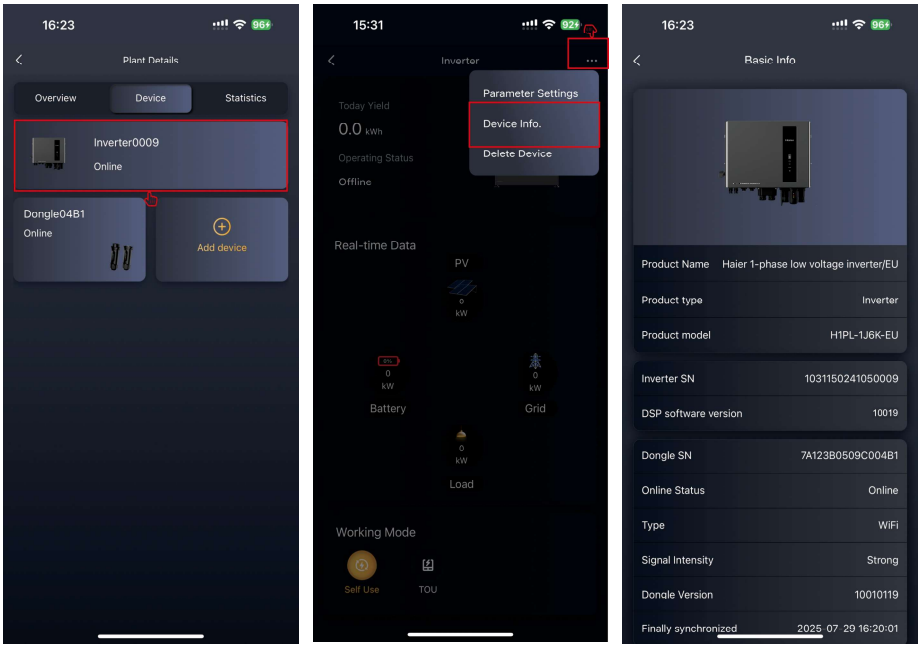
Now the initial settings on the inverter have been set, and you can switch on the inverter. DC switch and switch on the battery breaker to start up the system. You can also explore the APP to check the operating data, alarm message, or other advanced settings.

5.3Check device Serial number and device info

5.3.1 Check device Serial number and device info

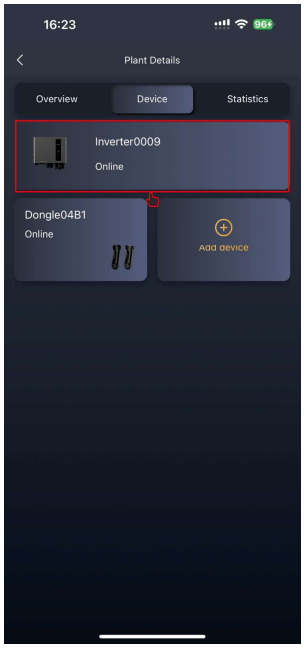
1. Enter the plant page.
2. Click on the plant name.
3. Click the device.
4. Select the required inverter.
5. Select the 3 dotes.
6. Then select Device info from the drop down menu.

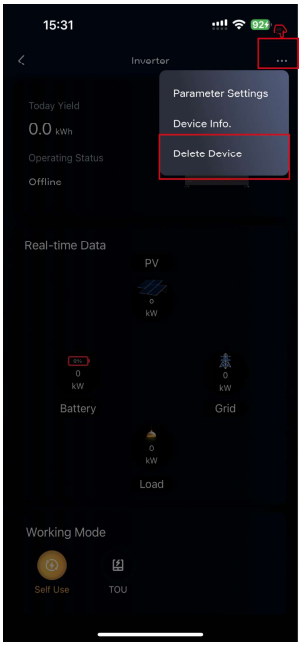
This will then open the inverter information page.

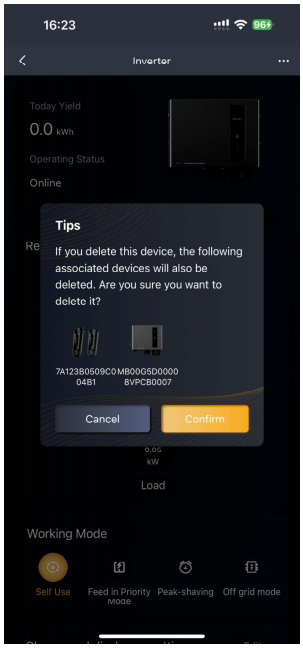


5.3.2 How to Delete a inverter from a plant

1. Enter the plant page.
2. Click on the plant name.
3. Click the device.
4. Select the required inverter.
5. Select the 3 dotes.
6. Then select Delete Device from the drop down list
7. Confirm the device to be deleted.







5.4 Startup Procedure

Startup and shutdown procedures may vary depending on the site. In conjunction with the bellow Please refer to site-specific labels and instructions.

Step 1. Turn on the PV DC switch

Step 2. Turn on the battery breaker and the battery switch button on the battery.

Step 3. Switch on the AC backup and AC grid.

Step 4. Waiting for inverter initializing.

5.5 Shutdown Procedure

Step 1. Turn off the backed up circuits.

Step 2. Turn off the AC breaker at the grid connection point.

Step 3. Turn off the DC switch of the inverter.

Step 4. Turn off the battery breaker.

Step 5. Waiting for the device powered off and the system shutdown is completed.

5.6 Australian Grid Code Settings

Customers can follow the quick setting process to select the corresponding grid codes based on AS/NZS 4777.2:2020 Amd 2:2024 (ASNZ 4777-A/ ASNZ 4777-B/ ASNZ 4777-C/ ASNZ 4777-N). Or modify the grid code in following path in the APP: Settings -> Grid Code Setting

NOTE:

The standard code selection "ASNZ 4777-A", "ASNZ 4777-B", "ASNZ 4777-C" and "ASNZ 4777-N" already have preset default settings as required by AS/NZS 4777.2: 2020 Amd 2:2024. Unless specially required, customers do not need to gain access to the following sections or modify any settings inside. When "4777-C" is selected, the upper connection and reconnection frequency(fURF), is 50.50 Hz.

Region	Australia A	Australia B	Australia C	New Zealand	
Standard Code Name	ASNZ 4777-A	ASNZ 4777-B	ASNZ 4777-C	ASNZ 4777-N	Setting Range
OV-G-V1	265V	265V	265V	265V	230-276V
OVGV1-T	1.5S	1.5S	1.5S	1.5S	1-2S
OV-G-V2	275V	275V	275V	275V	230-276V
OVGV2-T	0.1S	0.1S	0.1S	0.1S	0.1-2S
UN-G-V1	180V	180V	180V	180V	38-230V
UNGV1-T	10S	10S	10S	10S	10-11S
UN-G-V2	70V	70V	70V	70V	38-230V
UNGV2-T	1.5S	1.5S	1.5S	1.5S	1-2S
OV-G-F1	52HZ	52HZ	55HZ	55HZ	50-55HZ
OVGF1-T	0.1S	0.1S	0.1S	0.1S	0.1-2S
OV-G-F2	52HZ	52HZ	55HZ	55HZ	50-55HZ
OVGF2-T	0.1S	0.1S	0.1S	0.1S	0.1-2S
UN-G-F1	47HZ	47HZ	45HZ	45HZ	45-50HZ
UNGF1-T	1.5S	1.5S	5S	1.5S	1-6S
UN-G-F2	47HZ	47HZ	45HZ	45HZ	45-50HZ
UNGF2-T	1.5S	1.5S	5S	1.5S	1-6S
Startup-T	60S	60S	60S	60S	10-600S
Restore-T	60S	60S	60S	60S	10-600S
Recover-VH	253V	253V	253V	253V	230-276V
Recover-VL	205V	205V	205V	196V	115-230V
Recover-FH	50.15Hz	50.15Hz	50.50Hz	50.15Hz	50-52Hz
Recover-FL	47.5Hz	47.5Hz	47.5Hz	47.5Hz	47-50Hz
Start-VH	253V	253V	253V	253V	230-276V
Start-VL	205V	205V	205V	196V	115-230V
Start-FH	50.15Hz	50.15Hz	50.50Hz	50.15Hz	50-52Hz
Start-FL	47.5Hz	47.5Hz	47.5Hz	47.5Hz	47-50Hz

5.6.1 Working Mode Set

Haier AU version inverters have the following working mode settings:

1. Null

2. Volt-Watt

3. Volt-Var

4. Fixed PF

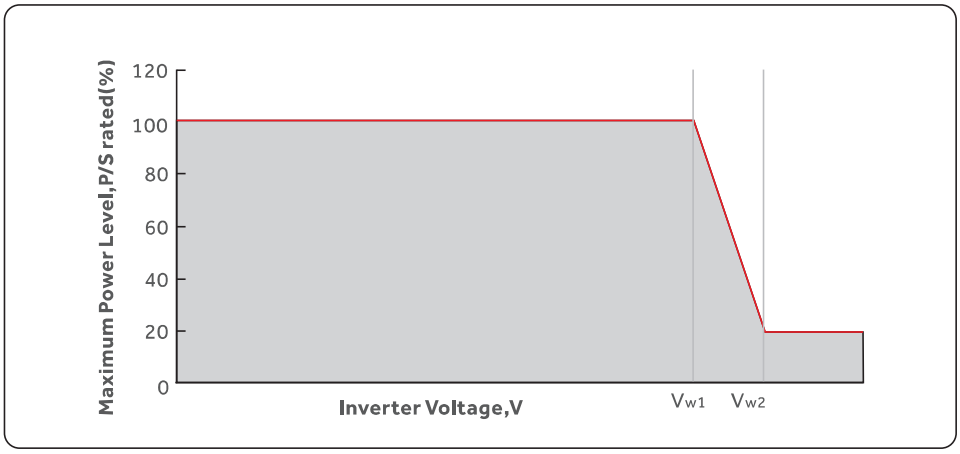
5. Fixed Reactive

The setting path in the APP is: Settings-> Inverter Parameter Setting ->
Advanced Setting of Grid Code -> Work Mode Setting

1. NULL

Description: Inverter will not be under any working mode.

2. Volt-Watt



Status: Enable/Disable (Note: This is used to enable or disable the Volt-Watt mode)

Voltage 1: 207V

P-Limit 1: 100%

Voltage 2: 220V

P-Limit 2: 100%

Voltage 3 (Vw1):

235-255V (Default: 4777-A(253V); 4777-B(250V);4777-C(253V);4777-N(242V))

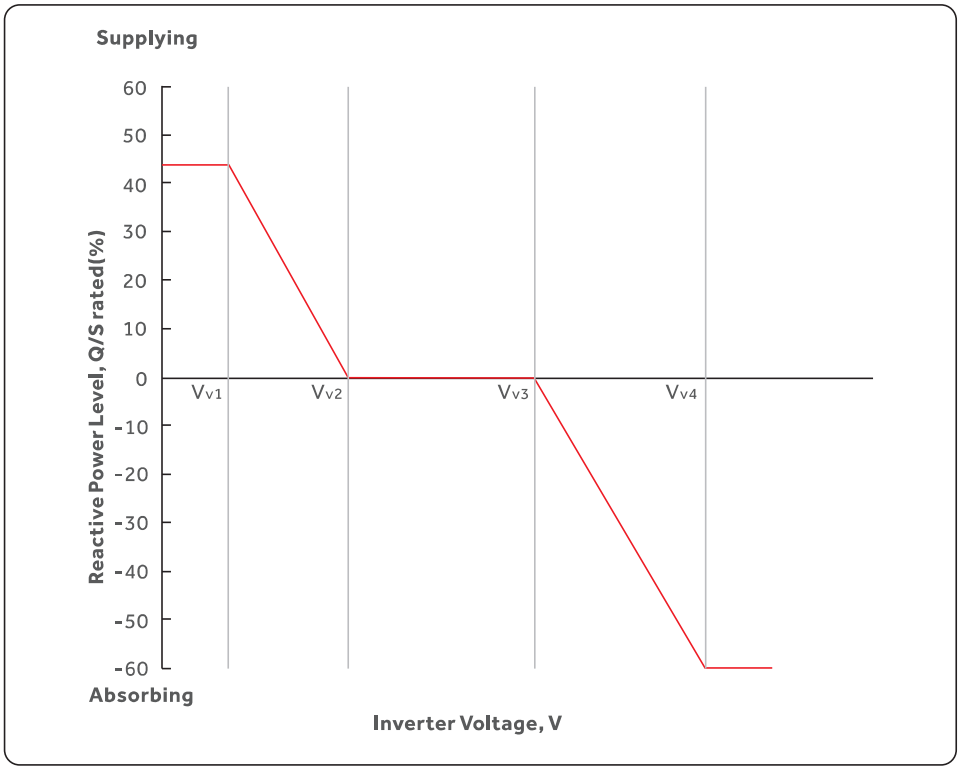
P-Limit 3: 100%

Voltage 4 (Vw2):

240-265V (Default: 4777-A(260V); 4777-B(260V);4777-C(260V);4777-N(250V))

P-Limit 4: 0%-20% (Default: 20% for 4777-A; 4777-B; 4777-C; 4777-N)

3. Volt-Var



Voltage 1 (Vv1):

180-230V (Default: 4777-A(207V); 4777-B(205V);4777-C(215V);4777-N(207V))

Voltage 2(Vv2) :

180-230V (Default: 4777-A(220V); 4777-B(220V);4777-C(230V);4777-N(220V))

Voltage 3(Vv3) :

230-265V (Default: 4777-A(240V); 4777-B(235V);4777-C(240V);4777-N(235V))

Voltage 4(Vv4) :

230-265V (Default: 4777-A(258V); 4777-B(255V);4777-C(255V);4777-N(244V))

Leading(Supplying) :

+30~+60% (Default: 4777-A(+44%); 4777-B(+30%);4777-C(+44%);4777-N(+60%))

Lagging(Absorbing) :

-30%~-60% (Default: 4777-A(-60%); 4777-B(-40%);4777-C(-60%);4777-N(-60%))

4. Fixed PF

Description: This mode is to set a fixed power factor output

Range: -0.8~+0.8

Default: 1

5. Fixed Reactive

Description: This mode is to set a fixed reactive power output

Range:-60%~+60%

Default: 0%

5.6.2 Power Rate Limit

Settings-> Inverter Parameter Setting -> Advanced Setting of Grid Code->Power Limit

To set the power rate limits for increase and decrease in power level per minute.

Wgra+: 5-100%, Default:16%

Wgra-: 5-100%, Default:16%

5.6.3 Freq Derate Set

Settings-> Inverter Parameter Setting -> Advanced Setting of Grid Code->

Frequency Derating Setting

To set the frequency response limits for response to a decrease/increase in frequency.

OVF_Start(F_ULCO): 50.1Hz~50.5Hz

(Default: 4777-A(50.25Hz), 4777-B(50.15Hz), 4777-C(50.5Hz), 4777-N(50.2Hz))

OVF_Stop(F_Pmin): 51Hz~53Hz

(Default: 4777-A(52Hz), 4777-B(52Hz), 4777-C(53Hz), 4777-N(52Hz))

UNF_Start(F_LLCO): 49.5Hz~49.9Hz

(Default: 4777-A(49.75Hz), 4777-B(49.85Hz), 4777-C(49.5Hz), 4777-N(49.8Hz))

UNF_Stop(F_Pmax): 47Hz~49Hz

(Default: 4777-A(48Hz), 4777-B(48Hz), 4777-C(47Hz), 4777-N(48Hz))

5.6.4 10mins Voltage Set

Settings-> Inverter Parameter Setting -> Advanced Setting of Grid Code->Special Setting -> 10min Overvoltage Setting

To set the 10mins average protection limit.

Range: 244V to 258V

Default: 4777-A (258V); 4777-B(258V); 4777-C(258V); 4777-N(249V)

5.6.5 DRM Settings

Settings-> Inverter Parameter Setting -> Advanced Setting of Grid Code->DRM Setting

"DRM ON/OFF" is used to enabled or disable the functionality of the DRM port.

5.7 Export Power Control

The export power control function is designed to comply with AS/NZS4777.2:2020. When customer select the grid code "4777-A","4777-B","4777-C","4777-N", customer can find the export power control settings in the follow path on the APP: Settings-> System Export Power Setting.

Following parameters can be found on the APP and the functions are explained below:

Parameters	Functions	Setting Range
System Export Power Limit Switch	Enable/Disable the export power control function	ON/OFF
System Export Power Limit Value	The soft backflow power limit. Inverter will dynamically control the inverter output to meet the system export power limit	0~Inverter Max Output Power
System Export Power Hard Limit Switch	Enable/Disable the export power control hard limit	ON/OFF
System Export Power Hard Limit Value	The hard backflow power limit. If the System Export Power Hard Limit Switch is enabled and hard limit value is reached, inverter will shut down within 5s and give alarm as "EPM-Hard Limit"	0~Inverter Max Output Power

6. Maintenance

Haier HH3P Series inverter does not require any regular maintenance. However, cleaning the heatsink will help inverter dissipating heat and increase the lifetime of inverter. The dirt on the inverter can be cleaned with a soft brush.

CAUTION:

Do not touch the surface when the inverter is operating. Some parts may be hot and cause burns. Turn off the inverter and let it cool down before you do any maintenance or cleaning of inverter.

The Screen and the LED status indicator lights can be cleaned with cloth if they are too dirty to be read.

NOTE:

Never use any solvents, abrasives or corrosive materials to clean the inverter.

Message Name	Information Description	Troubleshooting Suggestion
Off	Control device to shutdown	1. Turn on the device in the ON/OFF Setting.
LmtByEPM	The device's output is under controlled	1. Confirm whether the inverter is connected to an external EPM/meter to prevent reverse current. 2. Confirm whether the inverter is controlled by an external third-party device. 3. Confirm whether the power setting of the inverter power control is limited. 4. Verify settings in section 6.6.7 and check your meter readings.
LmtByDRM	DRM Function ON	1. No need to deal with it.
LmtByTemp	Over temperature power limited	1. No need to deal with it, the device is in normal operation.
LmtByFreq	Frequency power limited	
LmtByVg	The device is in the Volt-Watt mode	1. Due to the requirements of local safety regulations, when the grid voltage is high, the Volt-watt working mode is triggered, which generally does not need to be dealt with. 2. Inverter factory test errors causing this mode to open, if you need to close, you can close this mode in LCD, set the process: Main menu Advanced Settings Password 0010 STD mode settings Working Mode Working mode: NULL Save and exit.
LmtByVar	The device is in the Volt-Var mode of operation	1. Due to the requirements of local safety regulations, when the grid voltage is high, the Volt-watt working mode is triggered, which generally does not need to be dealt with. 2. Inverter factory test errors causing this mode to open, if you need to close, you can close this mode in LCD, set the process: Main menu Advanced Settings Password 0010 STD mode settings Working Mode Working mode: NULL Save and exit.
LmtByUnFr	Under frequency limit	1. No need to deal with it.
Standby	Bypass run	
StandbySynoch	Off grid status to On grid status	
GridToLoad	Grid to load	

Message Name	Information Description	Troubleshooting Suggestion
Surge Alarm	On-site grid surge	1. Grid side fault, restart the device. If it is still not eliminated, please contact the manufacturer's customer service.
OV-G-V01	Grid voltage exceeds the upper voltage range	1. Confirm whether the power grid is abnormal. 2. Confirm that the AC cable is properly connected. 3. Restart the system and check if the fault persists.
UN-G-V01	Grid voltage exceeds the lower voltage range	
OV-G-F01	Grid frequency exceeds the upper frequency range	
UN-G-F01	Grid frequency exceeds the lower frequency range	
G-PHASE	Unbalanced grid voltage	
G-F-GLU	Grid voltage frequency fluctuation	
NO-Grid	No grid	
OV-G-V02	Grid transient overvoltage	
OV-G-V03	Grid transient overvoltage	1. Restart the system, confirm if that the fault continues.
IGFOL-F	Grid current tracking failure	1. Confirm whether the power grid is abnormal. 2. Confirm that the AC cable is properly connected. 3. Restart the system and check if the fault persists.
OV-G-V05	Grid voltage RMS instantaneous overvoltage fault	
OV-G-V04	Grid voltage exceeds the upper voltage range	
UN-G-V02	Grid voltage exceeds the lower voltage range	
OV-G-F02	Grid frequency exceeds the upper frequency range	
UN-G-F02	Grid frequency exceeds the lower frequency range	
NO-Battery	Battery is not connected	1. Check on information page 1 – Verify the battery voltage is within standards. 2. Measure battery voltage at plug.
OV-Vbackup	Inverting overvoltage	1. Check whether the backup port wiring is normal 2. Restart the system, confirm that the fault continues.
Over-Load	Load overload fault	1. Backup load power is too large, or some inductive load startup power is too large, need to remove some backup load, or remove the inductive load on the backup.

Message Name	Information Description	Troubleshooting Suggestion
BatName-FAIL	Wrong battery brand selection	1. Confirm whether the battery model selection is consistent with the actual one.
CAN Fail	CAN Fail	1. Can failure is a failure of communication between inverter and battery. Check cable conditions. Check to ensure you have it plugged in on the CAN port of the battery and inverter. Check that you are using the right cable. Some batteries require a special battery from the battery manufacturer.
OV-Vbatt	Battery overvoltage detected	1. Verify battery voltage is within standards. Measure battery voltage at inverter connection point. Contact your battery manufacturer for further service.
UN-Vbatt	Battery undervoltage detected	1. Restart the system and check if the fault persists. If it is still not eliminated, please contact the manufacturer's customer service.
Fan Alarm	Fan alarm	1. Check if the internal fan is working correctly or jammed.
OV-DC01 (1020 DATA:0001)	DC 1 input overvoltage	1. Check if the PV voltage is abnormal 2. Restart the system, confirm that the fault continues
OV-DC02 (1020 DATA:0002)	DC 2 input overvoltage	
OV-BUS (1021 DATA:0000)	DC bus overvoltage	1. Restart the system, confirm that the fault continues.
UN-BUS01 (1023 DATA:0001)	DC bus undervoltage	
UNB-BUS (1022 DATA:0000)	DC bus unbalanced voltage	
UN-BUS02 (1023 DATA:0002)	Abnormal detection of DC bus voltage	
DC-INTF. (1027 DATA:0000)	DC hardware overcurrent (1, 2, 3, 4)	1. Check if the DC wires are connected correctly without loose connection.
OV-G-I (1018 DATA:0000)	A phase RMS value overcurrent	1. Confirm that the grid is abnormal. 2. Confirm that the AC cable connection is not abnormal. 3. Restart the system, confirm that the fault continues.
OV-DCA-I (1025 DATA:0000)	DC 1 average overcurrent	1. Restart the system, confirm that the fault continues.
OV-DCB-I (1026 DATA:0000)	DC 2 average overcurrent	
GRID-INTF. (1030 DATA:0000)	AC hardware overcurrent (abc phase)	

Message Name	Information Description	Troubleshooting Suggestion
DCInj-FAULT (1037 DATA:0000)	The current DC component exceeds the limit	1. Confirm that the grid is abnormal. 2. Confirm that the AC cable connection is not abnormal. 3. Restart the system, confirm that the fault continues.
IGBT-OV-I (1048 DATA:0000)	IGBT overcurrent	1. Restart the system, confirm that the fault continues.
OV-TEM (1032 DATA:0000)	Module over temperature	1. Check whether the surrounding environment of the inverter has poor heat dissipation. 2. Confirm whether the product installation meets the requirements.
RelayChk-FAIL (1035 DATA:0000)	Relay failure	1. Restart the system, confirm that the fault continues.
UN-TEM (103A DATA:0000)	Low temperature protection	1. Check the working environment temperature of the inverter. 2. Restart the system to confirm if the fault continues.
PV ISO-PRO01 (1033 DATA:0001)	PV negative ground fault	1. Check whether the PV strings have insulation problems. 2. Check whether the PV cable is damaged.
PV ISO-PRO02 (1033 DATA:0002)	PV positive ground fault	
12Power-FAULT (1038 DATA:0000)	12V undervoltage failure	1. Check current leakage to ground. Verify your grounding. Verify all wires are in good condition and not leaking current to ground.
ILeak-PRO01 (1034 DATA:0001)	Leakage current failure 01 (30mA)	
ILeak-PRO02 (1034 DATA:0002)	Leakage current failure 02 (60mA)	
ILeak-PRO03 (1034 DATA:0003)	Leakage current failure 03 (150mA)	
ILeak-PRO04 (1034 DATA:0004)	Leakage current failure 04	
ILeak_Check (1039 DATA:0000)	Leakage current sensor failure	
GRID-INTF02 (1046 DATA:0000)	Power grid disturbance 02	1. Confirm whether the grid is seriously distorted. 2. Check whether the AC cable is connected reliably.
OV-Vbatt-H/ OV-BUS-H (1051 DATA:0000)	Battery overvoltage hardware failure / VBUS	1. Check if the battery circuit breaker is tripping. 2. Check if the battery is damaged.

Message Name	Information Description	Troubleshooting Suggestion
OV-ILLC (1052 DATA:0000)	LLC hardware overcurrent	1. Check whether the backup load is overloaded. 2. Restart the system, confirm that the fault continues.
INI-FAULT (1031 DATA:0000)	AD zero drift overlink	1. Restart the system, confirm that the fault continues.
DSP-B-FAULT (1036 DATA:0000)	The master-slave DSP communication is abnormal	
AFCI-Check (1040 DATA:0000)	AFCI self-test failure	
ARC- FAULT (1041 DATA:0000)	AFCI failure	1. Verify connections are tight within your PV system. Arc fault settings can be changed in advanced settings if further adjustment is necessary.
PV Grounding-FAULT	The impedance of the PV positive and negative poles to ground is in the M ohm level under normal circumstances. When the inverter detects that the impedance between the positive and negative poles of the PV to ground is less than 200K, it will report a fault and the inverter will stop working.	1. Check if the grounding of the PV system is normal. 2. Restart the system, confirm that the fault continues.

Table 7.1 Fault message and description

NOTE:

If the inverter displays any alarm message as listed in Table 7.1; please turn off the inverter and wait for 5 minutes before restarting it .
If the failure persists, please contact your local distributor or the service center.

Please keep ready with you the following information before contacting us.

1. Serial number of Haier Three Phase Inverter;
2. The distributor/dealer of Haier Three Phase Inverter (if available);
3. Installation date.
4. The description of the problem together with necessary information, pictures, attachment.
5. The PV array configuration (e.g. number of panels, capacity of panels, number of strings, etc.);
6. Your contact details.

8. Specifications

Technical Data	HH3P-5KA1/HU	HH3P-6KA1/HU
Input DC (PV side)		
Recommended max. PV power	8000W	9600W
Max. input voltage	1000V	
Rated voltage	600V	
Start-up voltage	160V	
MPPT voltage range	200-850V	
Full load MPPT voltage range	200-850V	
Max. input current	16A/16A/16A	
Max. short circuit current	24A/24A/24A	
MPPT number/Max input strings number	3/3	
Battery		
Battery Type	Li-ion	
Battery Voltage range	120 - 600Vdc	
Maximum charging Power	5kW	6kW
Maximum Charge/discharge current	25A	
Communication	CAN/RS485	
Output AC(Grid-side)		
Rated output power	5kW	6kW
Max. apparent output power	5kVA	6kVA
Rated grid voltage	3/N/PE, 380V/400V	
The grid voltage range	320-460V	
Rating grid frequency	50 Hz/60 Hz	
AC grid frequency range	45-55 Hz/ 55-65Hz	
Rating grid output current	7.6A/7.2A	9.1A/8.7A
Max. output current	7.6A/7.2A	9.1A/8.7A
Power factor	> 0.99 (0.8 leading to 0.8 lagging)	
THDi	< 3%	

Technical Data	HH3P-5KA1/HU	HH3P-6KA1/HU
Input AC(Grid-side)		
Max. input power	7.5kW	9kW
Rated input current	11.4A	13.8A
Rated input voltage	3/N/PE, 380V/400V	
Rated input frequency	50 Hz/60 Hz	
Output AC(Back-up)		
Rated output power	5kW	6kW
Peak apparent output power	8.0kVA, 60 sec	9.6kVA, 60 sec
Back-up switch time	< 10ms	
Rated output voltage	3/N/PE, 380V/400V	
Rated frequency	50 Hz/60 Hz	
Rated output current	7.6A/7.2A	9.1A/8.7A
THDv(@linear load)	<2%	
Efficiency		
PV Max. efficiency	96.50%	97.00%
EU efficiency	96.77%	97.10%
BAT charged by PV Max. efficiency	98.37%	98.45%
BAT charged/discharged to AC Max. efficiency	97.32%	97.34%
Protection		
Anti-islanding protection	Yes	
AFCI	Yes	
Insulation Resistor detection	Yes	
Residual current monitoring unit	Yes	
Output over current protection	Yes	
Output short protection	Yes	
Output over voltage protection	Yes	
DC switch	Yes	
DC reverse polarity protection	Yes	
PV overvoltage protection	Yes	
Battery reverse protection	Yes	
Over Voltage Category	III(Main) II(PV & Battery)	

8. Specifications

Technical Data	HH3P-5KA1/HU	HH3P-6KA1/HU
General data		
Dimensions(W/H/D)	600*500*230mm	
Weight	27.58kg	
Topology	Transformerless	
Self consumption (Night)	<25 W	
Operation temperature range	-25℃～+60℃	
Relative humidity	0-95%	
Ingress protection	IP66	
Cooling concept	Natural convection	
Max.operation altitude	4000m	
Grid connection standard	G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15/VFR:2019, RD 1699/RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA, AS/NZS 4777.2:2020	
Safty/EMC standard	IEC 62109-1/-2 ,EN 61000-6-1/-3	
Features		
PV connection	MC4 connector	
Battery connnection	Quick Connection plug	
AC connection	Quick Connection plug	
Display	LED + Bluetooth + APP	
Communication	CAN, RS485, Optional:Wi-Fi, Cellular, LAN	

NOTE:

Values of backfeed short-circuit currents available from each port under fault conditions don't exceed the maximum rated current for the port.

8. Specifications

Technical Data	HH3P-8KA1/HU	HH3P-10KA1/HU
Input DC (PV side)		
Recommended max. PV power	12800W	16000W
Max. input voltage	1000V	
Rated voltage	600V	
Start-up voltage	160V	
MPPT voltage range	200-850V	
Full load MPPT voltage range	200-850V	250-850V
Max. input current	16A/16A/16A/16A	
Max. short circuit current	24A/24A/24A/24A	
MPPT number/Max input strings number	4/4	
Battery		
Battery Type	Li-ion	
Battery Voltage range	120 - 600Vdc	
Maximum charging Power	8kW	10kW
Maximum Charge/discharge current	50A	
Communication	CAN/RS485	
Output AC(Grid-side)		
Rated output power	8kW	10kW
Max. apparent output power	8kVA	10kVA
Rated grid voltage	3/N/PE, 380V/400V	
The grid voltage range	320-460V	
Rating grid frequency	50 Hz/60 Hz	
AC grid frequency range	45-55 Hz/ 55-65Hz	
Rating grid output current	12.2A/11.5A	15.2A/14.4A
Max. output current	12.2A/11.5A	15.2A/14.4A
Power factor	> 0.99 (0.8 leading to 0.8 lagging)	
THDi	< 3%	

Technical Data	HH3P-8KA1/HU	HH3P-10KA1/HU
Input AC(Grid-side)		
Max. input power	12kW	15kW
Rated input current	18.2A	22.8A
Rated input voltage	3/N/PE, 380V/400V	
Rated input frequency	50 Hz/60 Hz	
Output AC(Back-up)		
Rated output power	8kW	10kW
Peak apparent output power	12.8kVA, 60 sec	16kVA, 60 sec
Back-up switch time	< 10ms	
Rated output voltage	3/N/PE, 380V/400V	
Rated frequency	50 Hz/60 Hz	
Rated output current	12.2A/11.5A	15.2A/14.4A
THDv(@linear load)	<2%	
Efficiency		
PV Max. efficiency	97.50%	97.90%
EU efficiency	97.41%	97.51%
BAT charged by PV Max. efficiency	98.22%	98.31%
BAT charged/discharged to AC Max. efficiency	97.50%	97.50%
Protection		
Anti-islanding protection	Yes	
AFCI	Yes	
Insulation Resistor detection	Yes	
Residual current monitoring unit	Yes	
Output over current protection	Yes	
Output short protection	Yes	
Output over voltage protection	Yes	
DC switch	Yes	
DC reverse polarity protection	Yes	
PV overvoltage protection	Yes	
Battery reverse protection	Yes	
Over Voltage Category	III(Main) II(PV & Battery)	

8. Specifications

Technical Data	HH3P-8KA1/HU	HH3P-10KA1/HU
General data		
Dimensions(W/H/D)	600*500*230mm	
Weight	30.18kg	
Topology	Transformerless	
Self consumption (Night)	< 25 W	
Operation temperature range	-25℃～+60℃	
Relative humidity	0-95%	
Ingress protection	IP66	
Cooling concept	Natural convection	
Max.operation altitude	4000m	
Grid connection standard	G98 or G99, VDE-AR-N 4105 / VDE V 0124, EN 50549-1, VDE 0126 / UTE C 15/VFR:2019, RD 1699/RD 244 / UNE 206006 / UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA, AS/NZS 4777.2:2020	
Safty/EMC standard	IEC 62109-1/-2 ,EN 61000-6-1/-3	
Features		
PV connection	MC4 connector	
Battery connnection	Quick Connection plug	
AC connection	Quick Connection plug	
Display	LED + Bluetooth + APP	
Communication	CAN, RS485, Optional:Wi-Fi, Cellular, LAN	

NOTE:

Values of backfeed short-circuit currents available from each port under fault conditions don't exceed the maximum rated current for the port.

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This manual may be updated according to user's or customer's feedback. The information in this manual is subject to change without notice. Please check our website at https://www.haier-energy.com for latest version.

Please adhere to the actual products in case of any discrepancies in this user manual. If you encounter any problem on the inverter, please find out the inverter S/N and contact us, we will try to respond to your question ASAP.