

AKAI

ENERGY

PROTECT YOUR WARRANTY

**This unit must be installed by a registered,
licensed installer as required by
Government regulations.**



Single Phase Hybrid Inverter

Installation Manual

Model Numbers:

AKE-4.6KW-HBI / AKE-5KW-HBI / AKE-5.5KW-HBI / AKE-6KW-HBI

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Important Safety Information

IMPORTANT SAFETY INSTRUCTIONS READ CAREFULLY AND KEEP FOR FUTURE REFERENCE

Read this manual thoroughly before first use, even if you are familiar with this type of product. The safety precautions enclosed herein reduce the risk of fire, electric shock and injury when correctly adhered to. Keep the manual in a safe place for future reference, along with the completed warranty card, purchase receipt and carton. If applicable, pass these instructions on to the next owner of the appliance.

Always follow basic safety precautions and accident prevention measures when using an electrical appliance, including the following:

WARNING: Electric shock hazard - professional installation only!

- This appliance must be professionally installed to an appropriately earthed wiring system by a licensed installer, following the instructions in this manual.
- Ensure to make these instructions available to the installer. Failure to install the appliance correctly could invalidate any warranty or liability claims.
- Alterations to the domestic wiring system must only be made by a qualified electrician. Failure to follow this advice may result in electric shock or death.

General usage conditions and restrictions

- **Installation location and parameters:** The inverters are designed for indoor and outdoor installation (IP65). To increase the safety, performance and lifespan of the inverter, please select the mounting location carefully. The inverter should be installed on a solid surface, far from flammable or corrosion materials, where is suitable for inverter's weight and dimensions. The ambient temperature should be within -25°C ~ 60°C . The installation of inverter should be protected under shelter. Do not expose the inverter to direct sunlight, water, rain, snow, spray lightning, etc. The inverter should be installed vertically on the wall, or lean back on plane with a limited tilted angle. Leave the enough space around inverter, easy for accessing to the inverter, connection points and maintenance (see pages 12-13 for more information).
- **WARNING! This equipment is not suitable for use in locations where children are likely to be present.**
- **Intended purpose:** Only use this inverter for its intended purpose, in its intended environment and as described in this manual. Any other use may cause fire, electric shock or injury and may void the warranty,
- **Follow instructions:** Make sure to observe all rules and provisions in this manual. These instructions are not intended to cover every possible condition and situation. As with any product such as this, use common sense and caution when installing, operating and maintaining.

Important Safety Information (Cont.)

Electrical Safety

- **WARNING! High Voltage:** Any object - particularly a wet object - coming into contact with a high voltage power supply (directly or indirectly) can cause serious injury or death.
- **Tools:** When working with high voltage and AC power, be sure to only use the required, special-purpose tools.
- **Static electricity:** Any static electricity could damage veneer on the electrostatic sensitive components. Before touching the plug in, circuit board or chips, be sure to use correct electrostatic prevention measures.
- **WARNING! Power supply:** When installing or maintaining this inverter, the power supply must be disconnected first.
- **WARNING! Hazardous Voltage:** The inverter system operates with hazardous voltages. Installation, maintenance and repairs must ONLY be carried out by qualified personnel.
- **WARNING! Authorised personnel:** Only persons are adequately familiar with inverters and with the required precautionary measures may replace inverters and supervise operations. Unauthorized persons must be kept well away from the inverter.
- **WARNING! Metal items:** Inverters may cause electric shock and have a high short-circuit current. Please remove all wristwatches, rings and other metal personal objects before maintenance or repair, and only use tools with insulated grips and handles for maintaining or repairing.
- **WARNING!** An overcurrent and disconnection protection device must be installed between the battery and the inverter.
- **WARNING! Replacements:** When replacing the inverter, install the same number and same type of inverter.
- **WARNING! Do not open or destroy inverters.**
- **WARNING! Fuse:** Please replace the fuse only with the same type and amperage in order to avoid fire hazards.
- **WARNING! Disassembly:** Do not open or disassemble the inverter system.
- **WARNING! Disconnecting:** Do not touch the inverter cover until at least 5 minutes after disconnecting both DC and AC power supply.
- **WARNING! Enclosure:** Do not touch the inverter enclosure when operating, keep away from materials that may be affected by high temperatures.

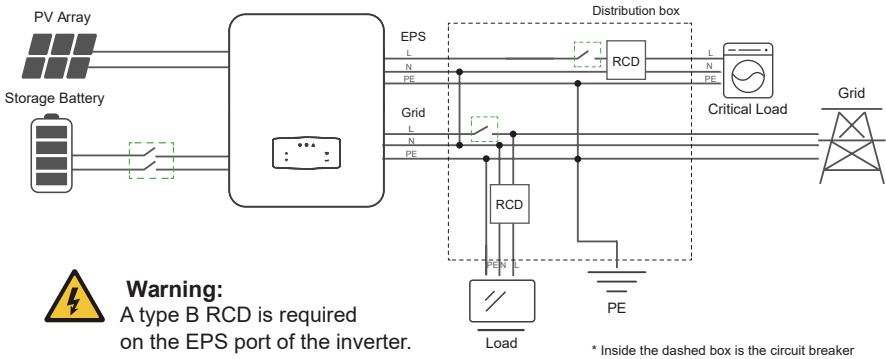
Important Safety Information (Cont.)

- **WARNING! Disposal:** Please ensure that the used device and any relevant accessories are disposed of in accordance with applicable regulations.
- **WARNING! Handle with care:** This inverter should be placed upwards and handled with care in delivery. Pay attention to waterproof requirements. Do not expose the inverter directly to water, rain, snow or spray.
- **WARNING! Modifications:** Alternative use or modifications to the inverter are not recommended. The warranty can become void if the inverter was tampered with or if the installation is not in accordance with the relevant installation instructions.
- **NOTE:** The product should not be installed in multiple phase combinations.
- The product is not tested to section 5 of AS/NZS 4777.2:2020 and should not be installed in multiple inverter combinations without external devices in accordance with the requirements of AS/NZS 4777.1.
- The product can be remotely monitored, please refer to the Web manual and App manual for more information.

Introduction

Inverter Introduction

These hybrid inverters are designed to increase energy independence for homeowners. Energy management is based on time-of-use and demand charge rate structures, which significantly reduces the amount of energy purchased from the public grid and optimize self-consumption.



Warning:

A type B RCD is required on the EPS port of the inverter.



Note:

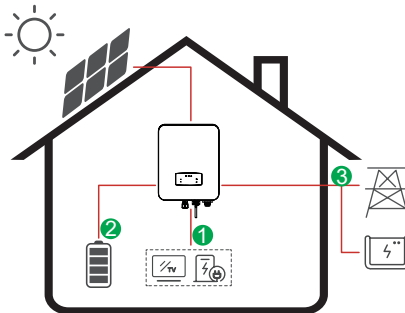
However if an external residual current device (RCD) (type B is recommended) is mandatory, the switch must be triggered at a residual current of 300 mA (recommended). RCD of other specifications can also be used according to local standard.

To maintain the neutral continuity in standalone mode, as required by Australian safety code, the neutral cable on the AC Load output port and AC-Grid Port must be connected together.

Operation Modes

Self-Use Mode

The Self-Use mode is designed for areas with low feed-in tariff and high electricity prices. The energy produced by the PV system is used to optimize self-consumption needs. The excess energy is used to recharge the batteries, any remaining excess is then exported to the grid.



Energy flow:

PV → Load → Battery → Grid

Introduction (Cont.)

Note: Advanced Settings

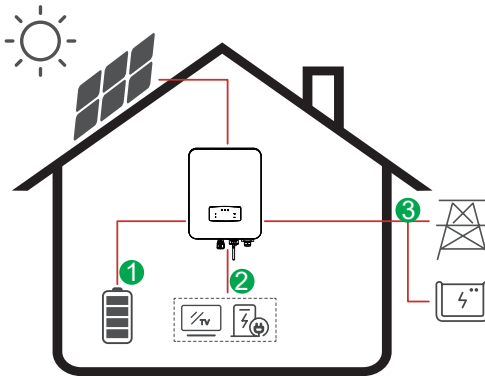
- When you select 0 W under P_Feed menu, the inverter will export zero energy to the grid.
- When you select xx W under P_Feed menu, the inverter will export customized energy to the grid.

Time of Use Mode

The Time of Use mode is designed to reward customers who do their part to reduce demand on the electric grid, particularly during peak usage periods. This allows you to use most of your electricity from PV energy and during off-peak time periods, which could significantly lower your monthly bill.

A) Charge Setting

PV Charge Mode

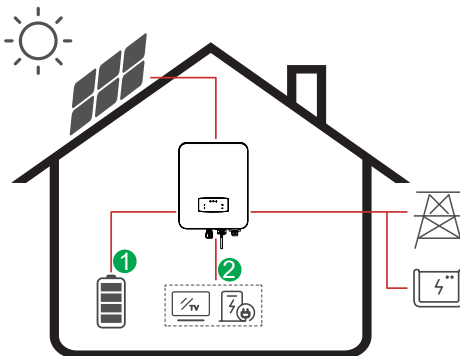


4 periods of time charge setting.

Energy flow:

PV → Battery → Load → Grid

AC Charge Mode



4 periods of time charge setting.

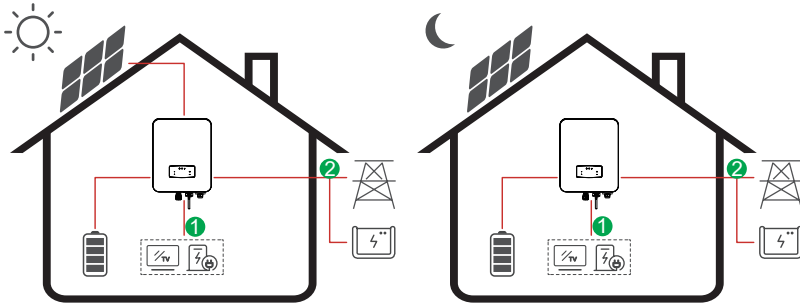
Energy flow:

PV and Grid → Battery → Load

Note: After selecting AC charge, when PV does not have sufficient power, AC will also charge the battery.

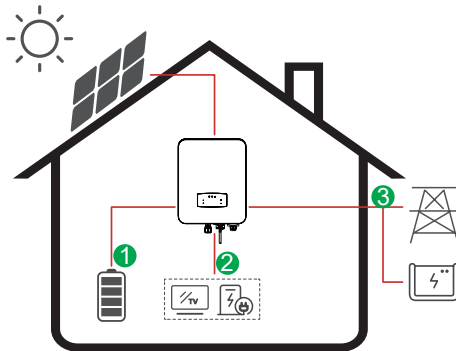
Introduction (Cont.)

B) Discharge



Energy flow: Battery and PV → Load → Grid

C) Forbidden Discharge

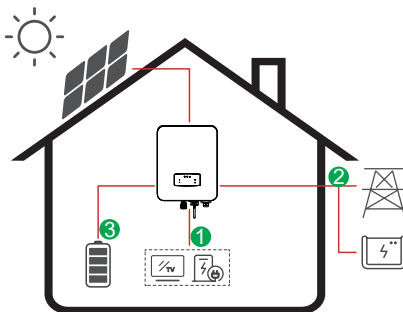


Energy flow:

PV → Battery → Load → Grid

Selling First

The Selling First mode is suitable for regions with a high-feed-in tariff.



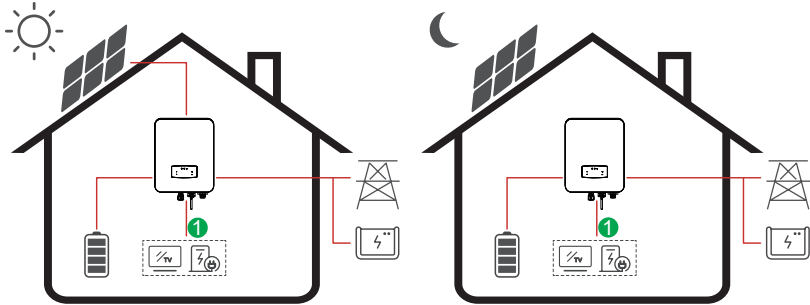
Energy flow:

PV → Load → Grid → Battery

Introduction (Cont.)

Back-Up

When the grid fails, the system will automatically switch to Back-Up mode. The back-up loads can be supplied by both PV and battery energy.



Energy flow: PV and Battery → Load

Product Overview

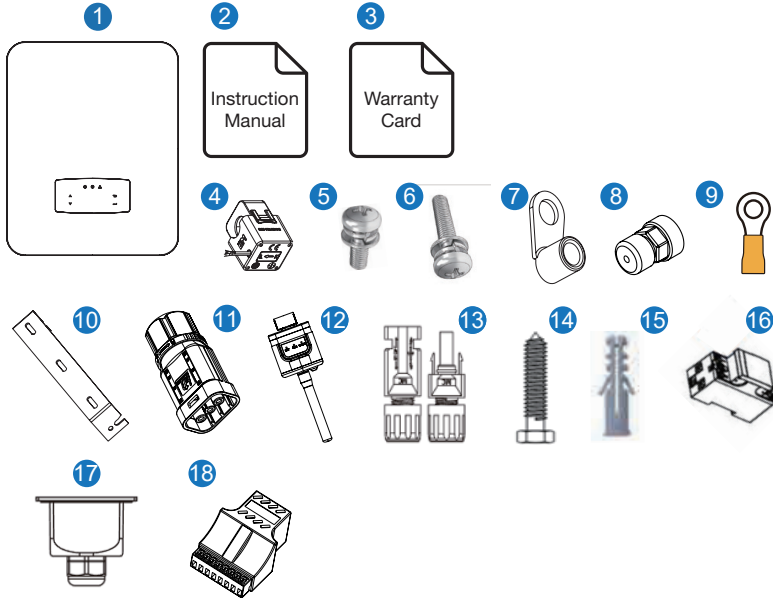
Inverter Overview

Unpacking

On receiving the inverter, please check to make sure the packing and all components are not missing or damaged. Please contact your dealer directly for support if there are any damage or missing components.

Package List

When opening the package, please check that the contents are as shown below.



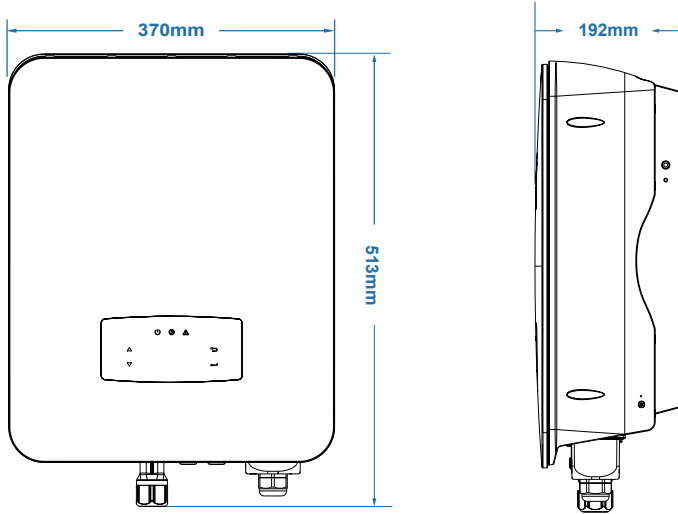
No.	Qty	Items	No.	Qty	Items
1	1	Hybrid Inverter	10	1	Wall Mounting Bracket
2	1	Installation Instructions	11	1	Battery Connector
3	1	Warranty Card	12	1	Monitor Module
4	1	CT	13	1/2	DC Connector
5	4	AC Wiring Cover Screw	14	3	Mounting Bracket Screw
6	1	Security Screw	15	3	Plastic Expansion Tube
7	4	AC Wiring Terminal	16	1	Smart Meter (Optional)
8	2	Communication Connectors	17	1	AC Waterproof Cover
9	1	Grounding Terminal	18	1	Communication Adapter

Product Overview (Cont.)

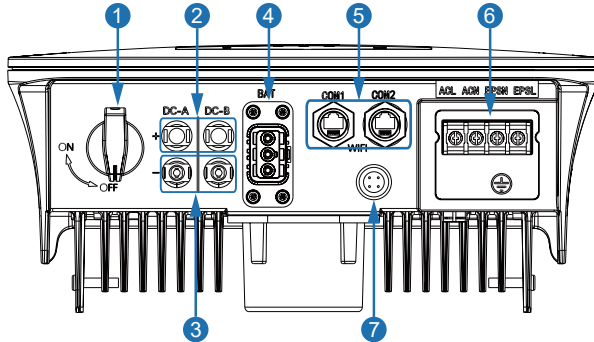
Note: DC connectors Qty.:

- The AF1K-SL-1 / AF3.6K-SL-1 is 1 pair of DC plug connector, the AF3K-SL / AF6K-SL is 2 pairs.

Product Overview



Inverter Terminals



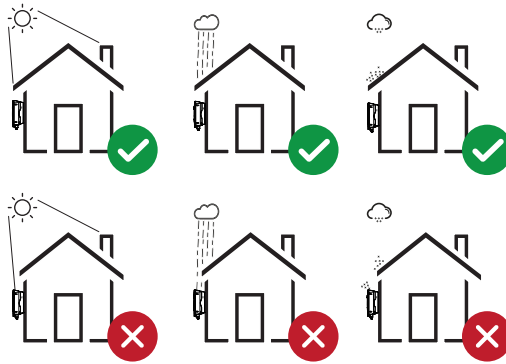
No.	Items	No.	Items
1	DC Switch	5	Communication Port
2	DC Connectors (+) For PV Strings	6	AC Port & EPS Port
3	DC Connectors (-) For PV Strings	7	Monitor Module Port
4	Battery Port		

Installation

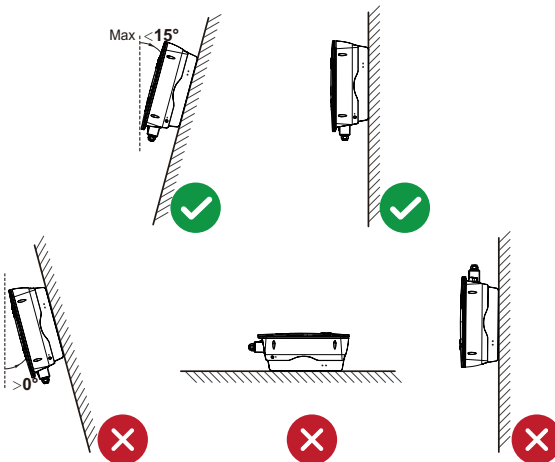
Installation Location

The inverters are designed for indoor and outdoor installation (IP65). To increase the safety, performance and lifespan of the inverter, please select the mounting location carefully based on the following rules:

- The inverter should be installed on a solid surface, far from flammable or corrosive materials, that is suitable for the inverter's weight and dimensions.
- The ambient temperature should be within $-25^{\circ}\text{C} \sim 60^{\circ}\text{C}$.
- The installation of inverter should be protected and sheltered. Do not expose the inverter to direct sunlight, water, rain, snow, spray lightning, etc.

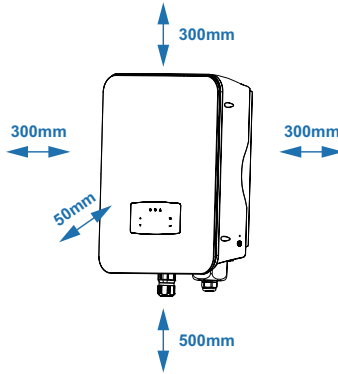


The inverter should be installed vertically on the wall, or lean back on a plane with a limited tilted angle. Please refer to the below picture.



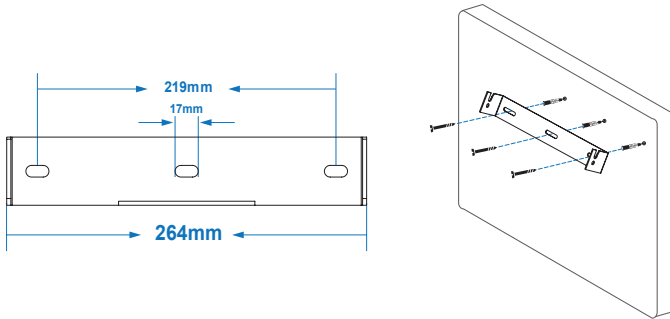
Installation (Cont.)

Leave the enough space around the inverter to allow for easy for access to the inverter and its connection points for maintenance.

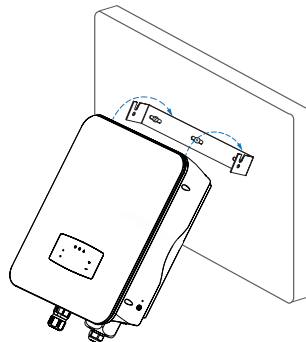


Mounting

Step 1:

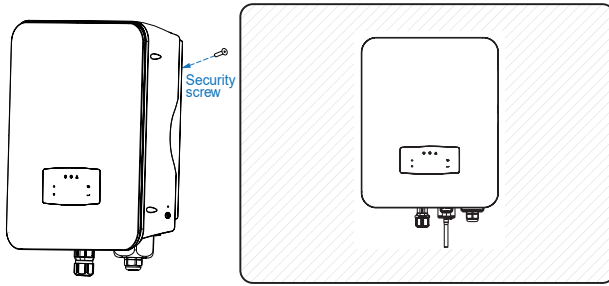


Step 2:



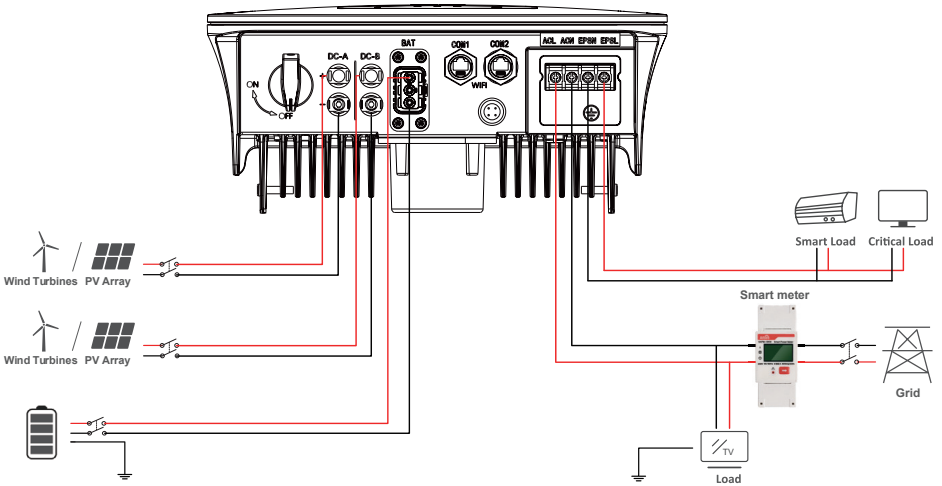
Installation (Cont.)

Step 3:

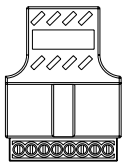


Installation (Cont.)

Electrical Connection



Communication Adapter pin assignment



1234567 8

No.	COM1	COM2
1	NTC+	Meter 485A
2	NTC-	Meter 485B
3	Dry Contact	BAT 485A
4	Dry Contact	BAT CANH
5	DRM	BAT CANL
6	DRM	BAT 485B
7	485A	CTU
8	485B	CTN

Note:

- For diesel generators or multi-machine parallel use, please contact the manufacturer, and provide installation and operation instructions separately.

Installation (Cont.)

PV Connection

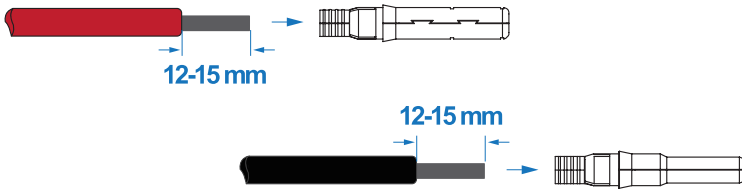
This series of hybrid inverter has one/two MPPT channels, can be connected with one/two strings of PV panels. Please make sure below requirements are followed before connecting PV panels and strings to the inverter:

- The open-circuits voltage and short-circuit current of PV string should not exceed the reasonable range of inverters.
- The isolation resistance between PV string and ground should exceed 300 k Ω .
- The polarity of PV strings are correct.
- Use the DC plugs in the accessory.
- The lightning protector should be equipped between PV string and inverter.
- Disconnect all of the PV (DC) switches during wiring.

WARNING!

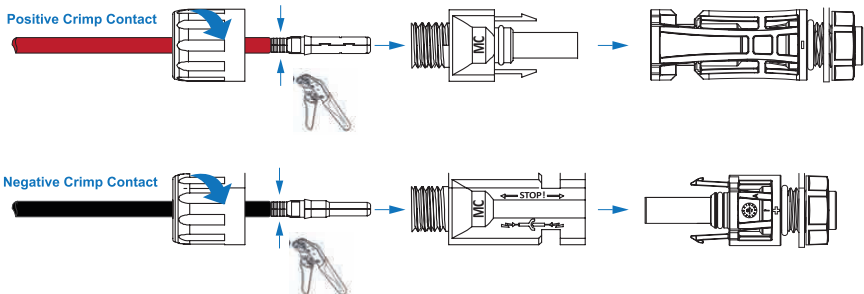
The DC voltage may be fatally high - please comply with electrical safety warnings when connecting. Please make sure the correct polarity of the cable is connected with inverter, otherwise the inverter could be damaged.

Step 1:



Note: PV cable suggestion for cross section is 4 mm².

Step 2:

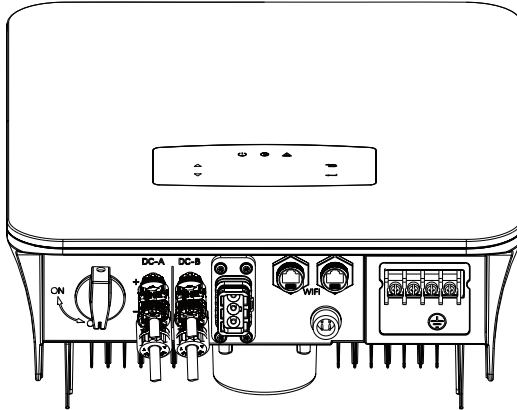


Note: Please use PV connector crimper to pinch the point of the arrow.

Note: You'll hear a click sound when the connector assembly is correct.

Installation (Cont.)

Step 3:

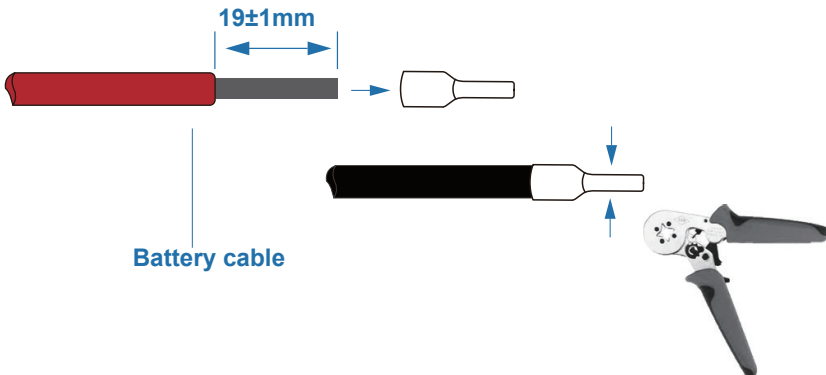


Battery Connection

These hybrid inverters are compatible with a lithium battery. For a lead acid battery or batteries from other brands, please contact Tempo for technical support.

Note: BMS (Battery Management System) communication is needed between inverter and battery.

Step 1:

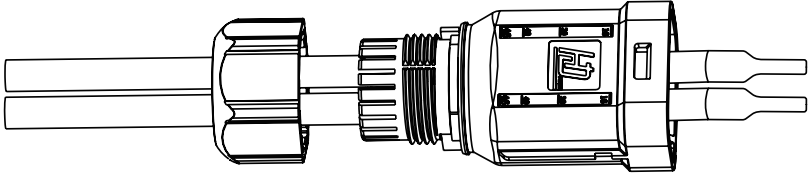


Note: Battery cable suggestion Cross - section 8-10 AWG. Please make sure the battery polarities are correct.

Installation (Cont.)

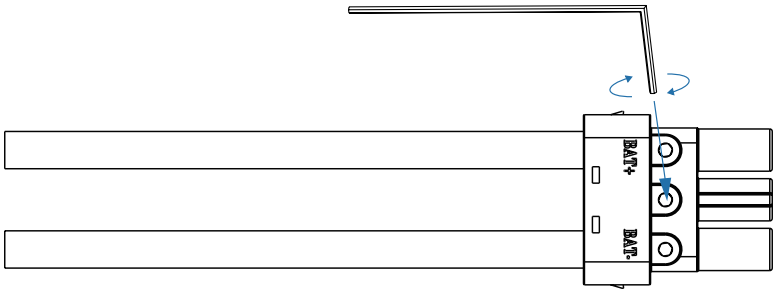
Step 2:

Pass the crimped battery harness through the waterproof connector and the cover.



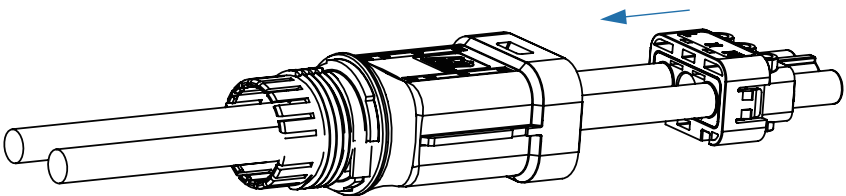
Step 3:

Insert the wire harness into the terminals according to “+” and “-” polarity. Make sure the the insulated terminals are parallel with the terminals. The crimping screw torque should be $2.0 \pm 0.1 \text{ N.m}$



Step 4:

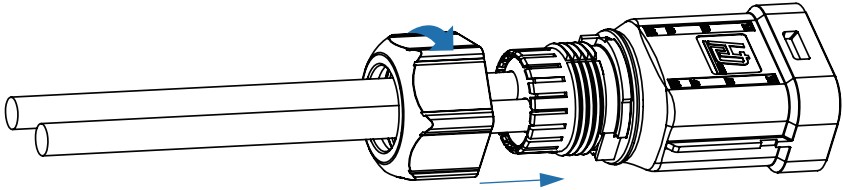
A “click” sound will be heard when the connector assembly is correct.



Installation (Cont.)

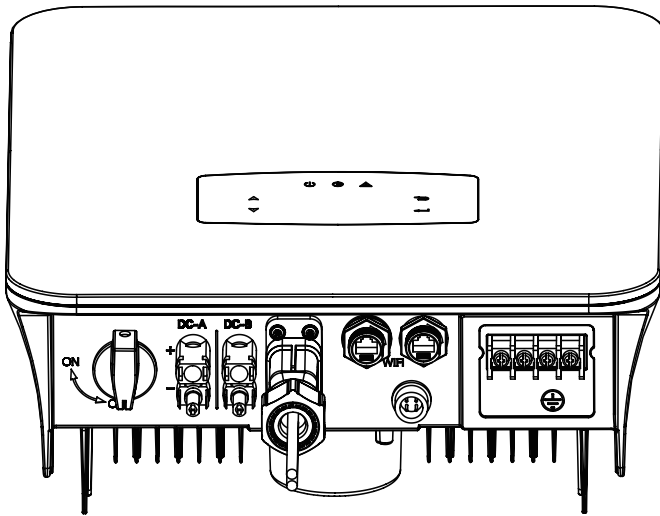
Step 5:

Use an open-end wrench to tighten the waterproof lock.



Step 6:

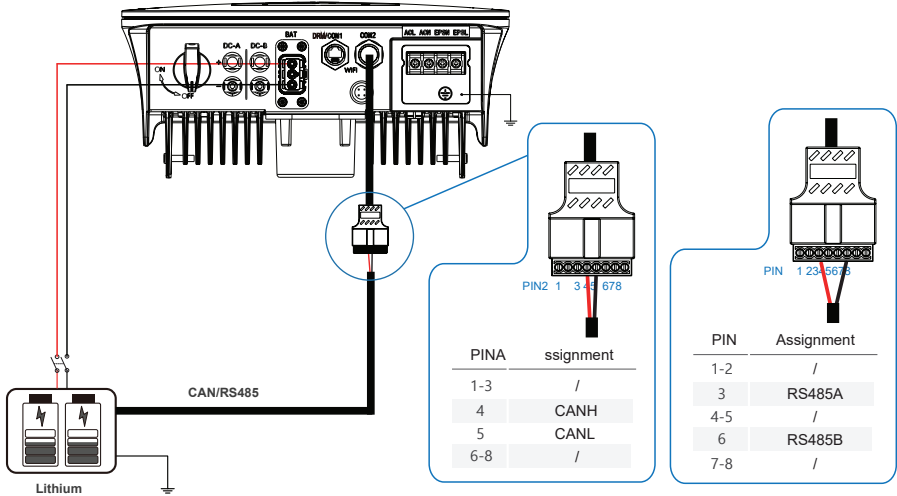
Insert the battery connector into the inverter, if hear a “click”, it means the battery connection is finished.



Installation (Cont.)

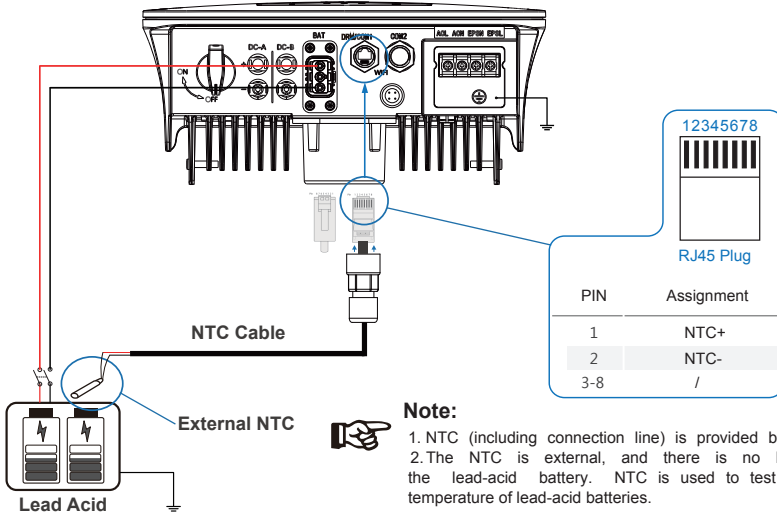
Lithium Battery Communication Connection

The inverter uses RS485 cable to communicate with the Meter and CAN to communicate with the battery's BMS. The image below shows the assembly of the RS485/CAN communication cables.



Lead acid battery-NTC

The NTC cable enables the communication between the inverter and Lead acid batteries.

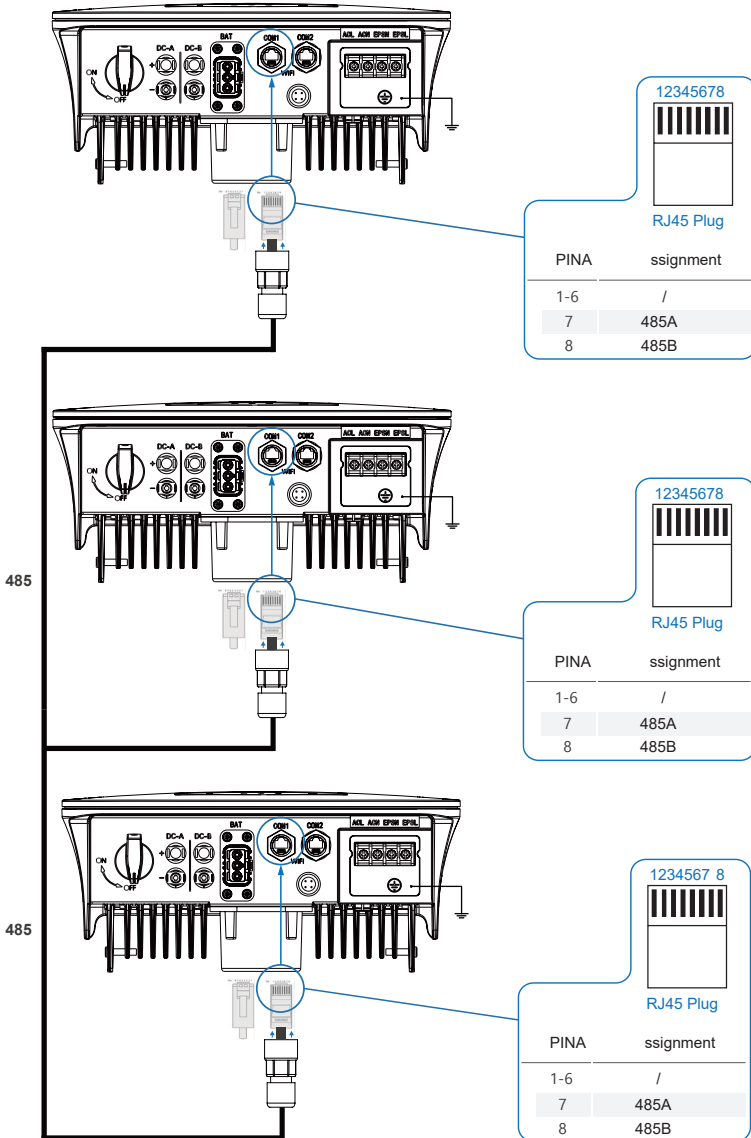


Note:

1. NTC (including connection line) is provided by battery manufacturers.
2. The NTC is external, and there is no NTC connection port on the lead-acid battery. NTC is used to test the working environment temperature of lead-acid batteries.

Installation (Cont.)

Multi-Inverter Panel



Installation (Cont.)

AC Connection

The AC terminal contains “GRID” and “EPS”, GRID for load, and EPS for emergency load.

Before connecting, a separate AC breaker between individual inverter and AC input power is necessary. This will ensure the inverter be securely disconnected during maintenance and fully protected from current of AC input.

An extra AC breaker is needed for On-Grid connection to be isolated from grid when necessary. Below are requirements for the On-Grid AC-breaker.

Inverter Model	AC Breaker Specification
AKE-4.6KW-HBI / AKE-5KW-HBI / AKE-5.5KW-HBI / AKE-6KW-HBI	63 A / 200 V / 230 V AC breaker

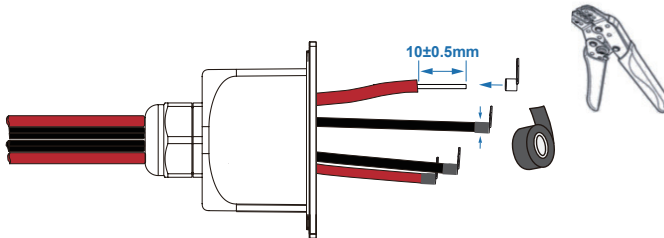
Note: A qualified electrician will be required to connect the wiring.

Model	Wire Size	Cable	Torque Value
1-6 kW	8-10 AWG	4-6 mm ²	1.2 N·m

Please follow the below steps for AC connection:

- Connect DC protector or breaker first before connecting.
- Remove insulation sleeve 11 mm (0.5 inch) length, unscrew the bolts, insert the AC input wires according to polarities indicated on the terminal block and tighten the terminal screws.

Step 1:



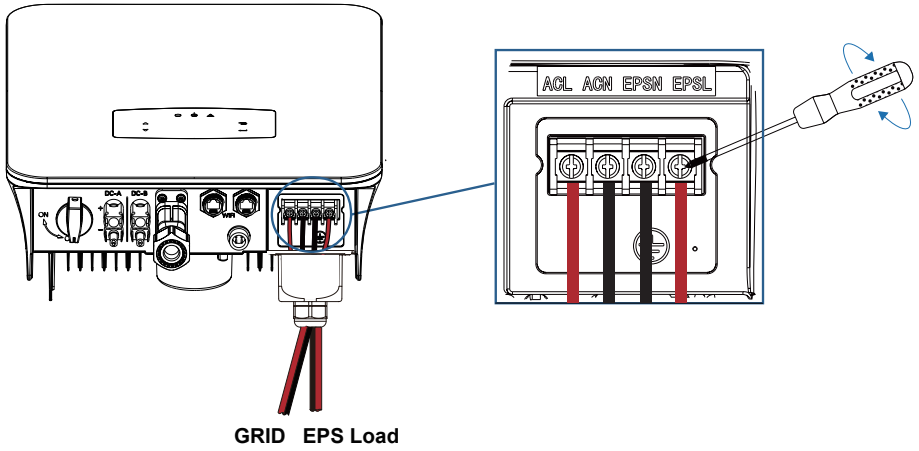
Note: Cable suggestion cross-section 8-10 AWG.

Note: The wiring terminals should be wrapped with insulation tape, otherwise it will cause a short circuit and damage the inverter.

Note: The Max. power load connects to EPS port should not exceed the inverter's EPS Max. output power range.

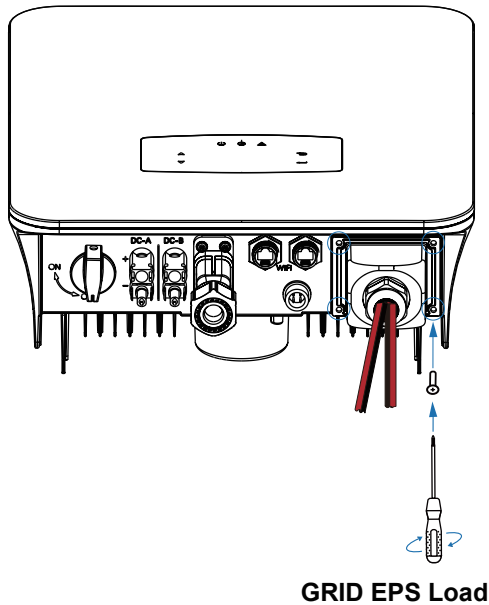
Installation (Cont.)

Step 2:



Step 3:

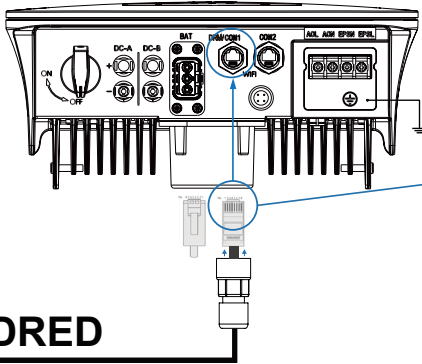
Fix the AC wiring cover with cover screws.



Installation (Cont.)

DRM

The inverter provides a terminal block for connecting to a demand response enabling device (DRED). The DRED asserts demand response modes (DRMs). The inverter detects and initiates a response to all supported demand response commands within 2s. The inverter only supports DRM0 : The inverter is in the state of “Turn off”.



12345678

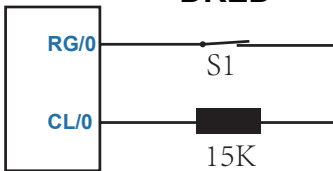


RJ45 Plug

PIN	Assignment
1-4	/
5	REF GEN/0
6	COM LOAD/0
7-8	/

DRED

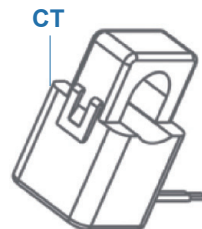
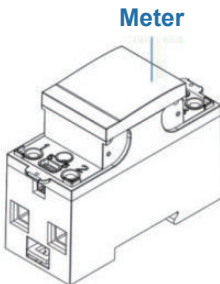
DRED



Note:
When DRM0 is enabled, switch S1 is opened.

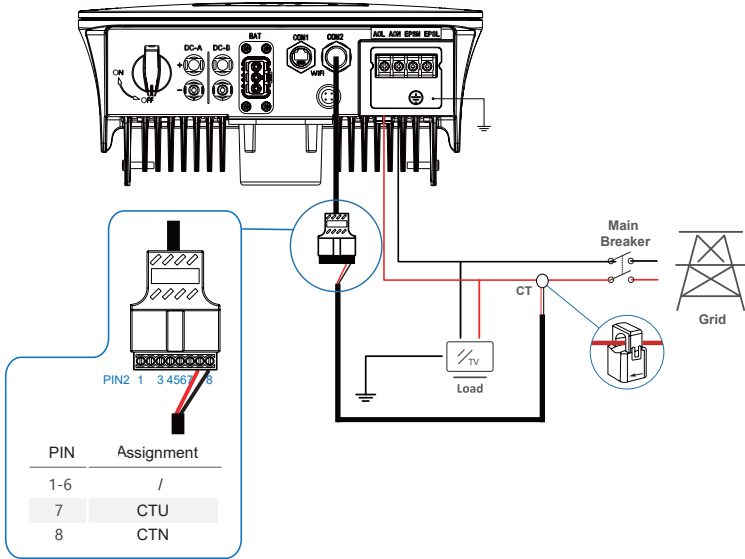
CT or Meter Connection

Meter and a current sensor (CT for short below) are used to detect current power direction of the local load and the grid. The output control function of the inverters will be activated based on the detected data.

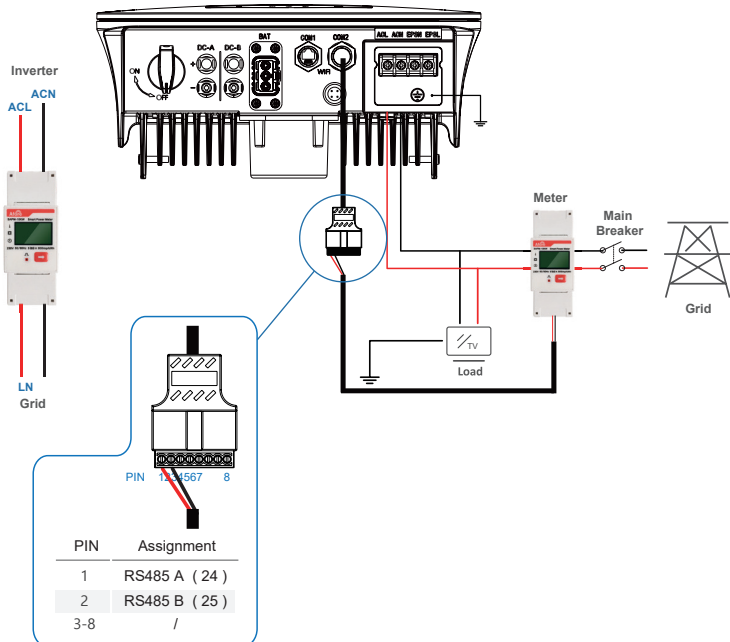


Installation (Cont.)

Install the CT



Install the Meter



Installation (Cont.)

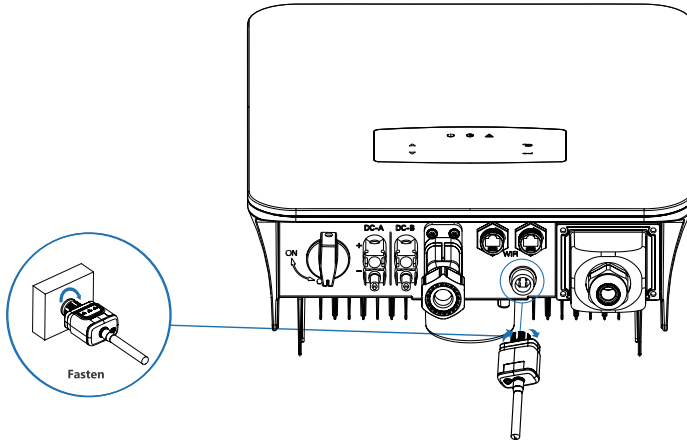
Communication Connection

The monitoring module could transmit the data to the cloud server, and display the data on the PC, tablet and smart-phone.

Install the WIFI / Ethernet / GPRS / RS485 Communication

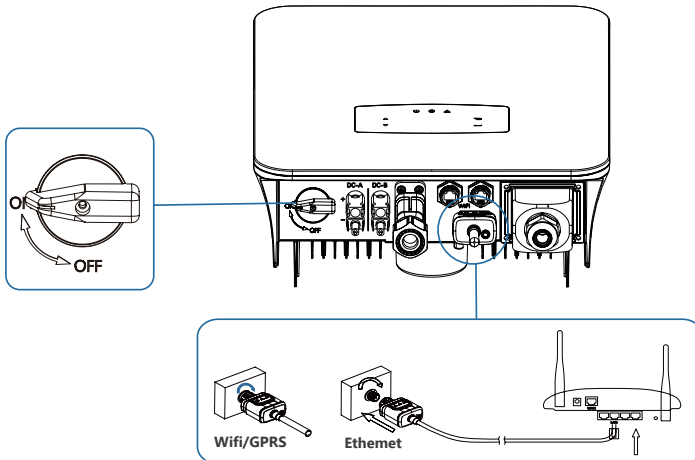
WIFI / Ethernet / GPRS / RS485 communication is applicable to the inverter.

Step 1:



Step 2:

Turn on the DC switch and AC circuit breaker, and wait until the LED indicator on the monitoring module flashes, indicating that the monitoring module is successfully connected.

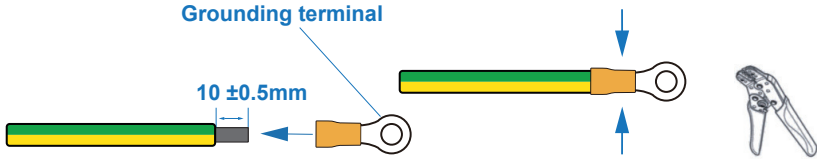


Installation (Cont.)

Earth Connection

Note: A second protective earth (PE) terminal should be connected to the inverter. This prevents electric shock if the original protective PE wire fails.

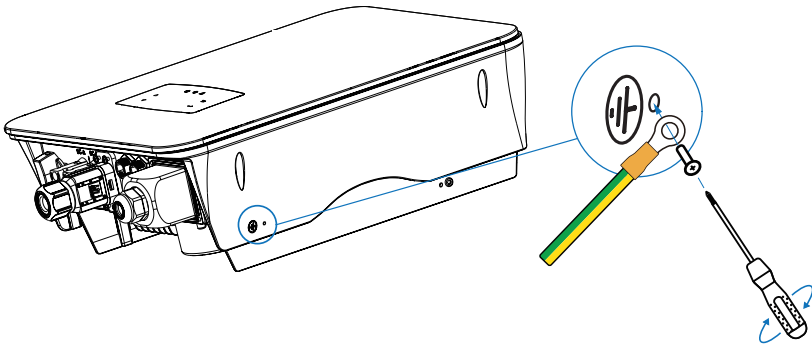
Step 1:



Note: Earth cable PE suggestion: Cross-section (Copper) $4\text{-}6\text{ mm}^2$ / 10 AWG.

Step 2:

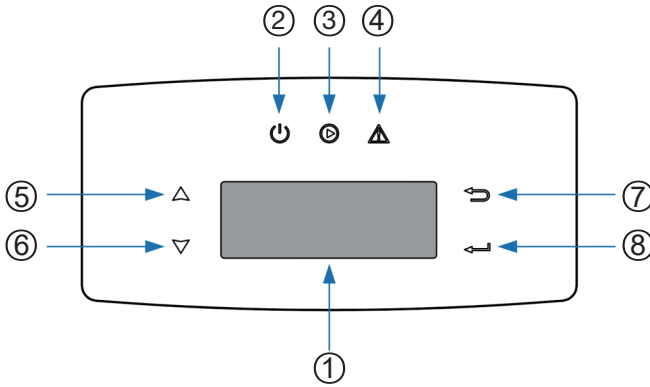
Fix the grounding screw to the grounding connection of the machine housing.



Note: Make sure the earth cables on the inverter and solar panel frame are separate.

Operation

Control Panel



No.	Items	No.	Items
1	LCD Display	5	UP Touch Button
2	POWER LED Indicator	6	DOWN Touch Button
3	GRID LED Indicator	7	BACK Touch Button
4	FAULT LED Indicator	8	ENTER Touch Button

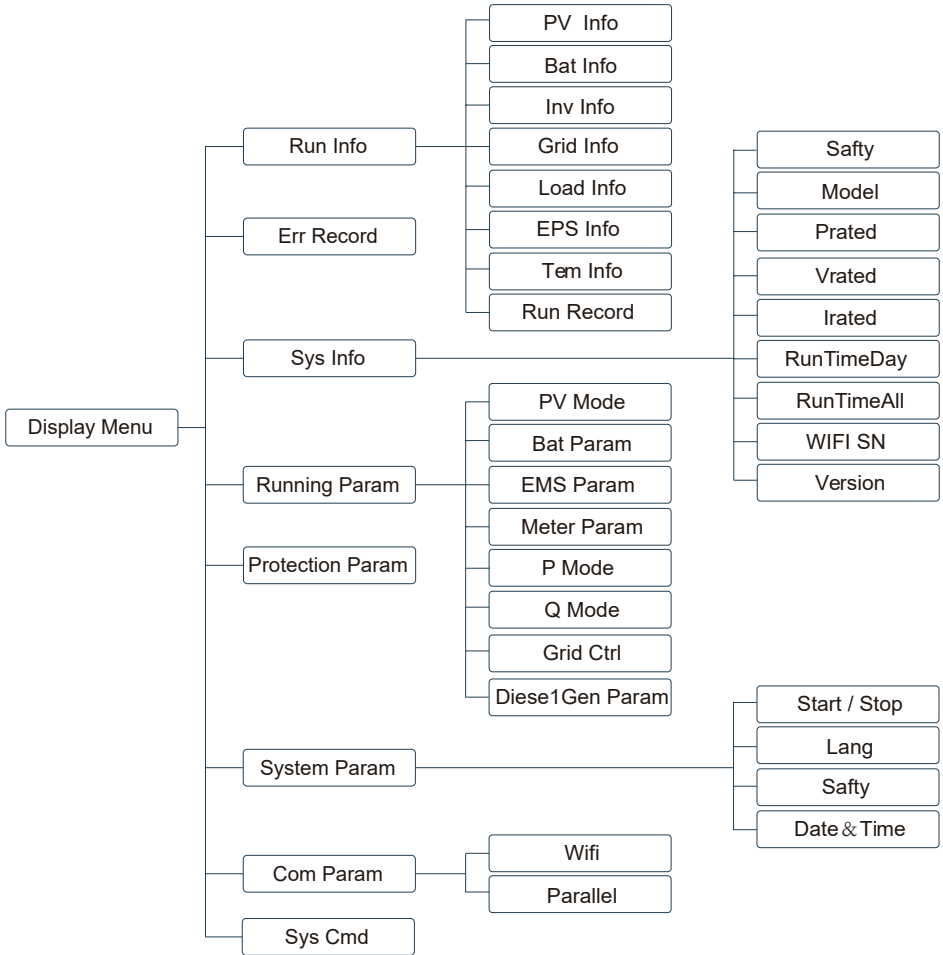
Note: Hold the UP/DOWN button to quickly scroll through the options.

Sign	Power	Color	Explanation
POWER	ON	Green	The inverter is stand-by
	OFF		The inverter is power off
GRID	ON	Green	The inverter is feeding power
	OFF		The inverter is not feeding power
FAULT	ON	Red	Fault occurred
	OFF		No fault

Operation (Cont.)

Menu Overview

AF-SL hybrid inverter has a LCD for clearly operating, and menu of the LCD can be presented as the following:

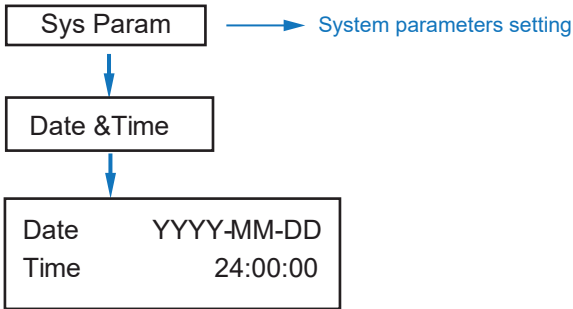


Operation (Cont.)

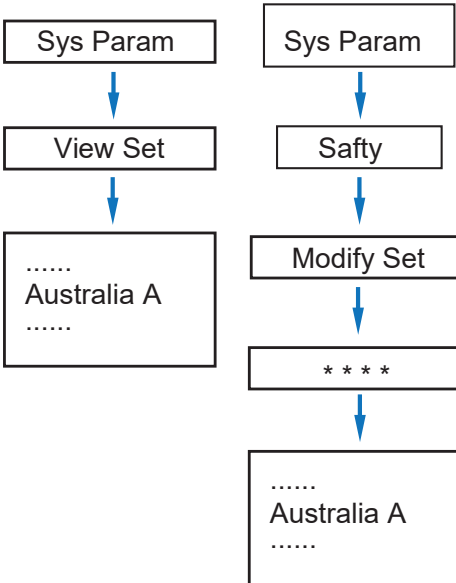
Inverter Setting

The setting is for AF-SL Hybrid inverter. If you have any questions, please don't hesitate to contact us.

Time and Date



Safety



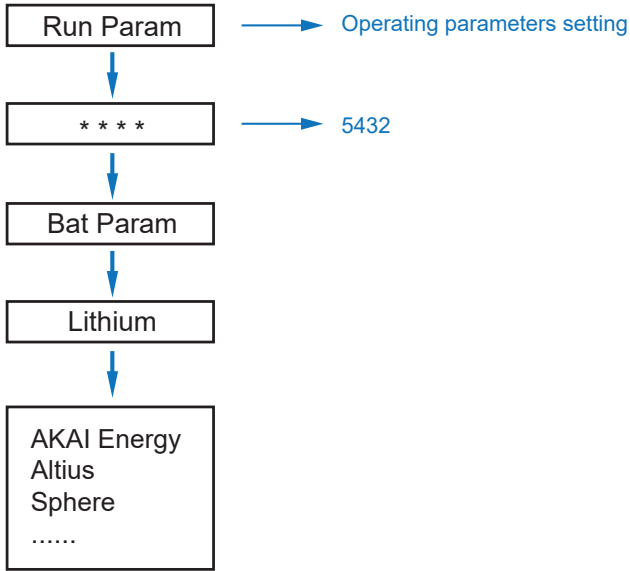
Note:

For compliance to AS/NZS 4777.2:2020, please select Region from Australia A, B, C or New Zealand. Please contact your local grid operator on which Region to select.

Note: Select the safety settings according to the requirements of the installation site.

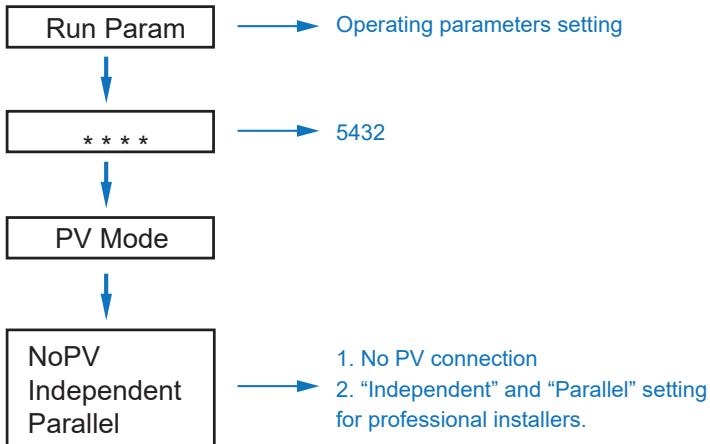
Operation (Cont.)

Lithium Battery



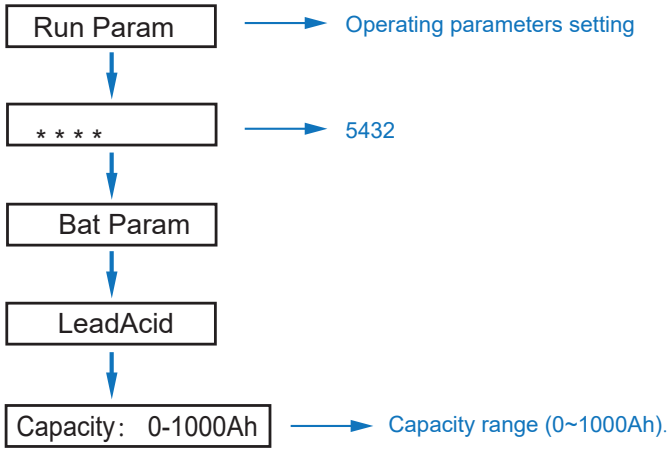
Note: Please select the correct battery brand.

PV Mode

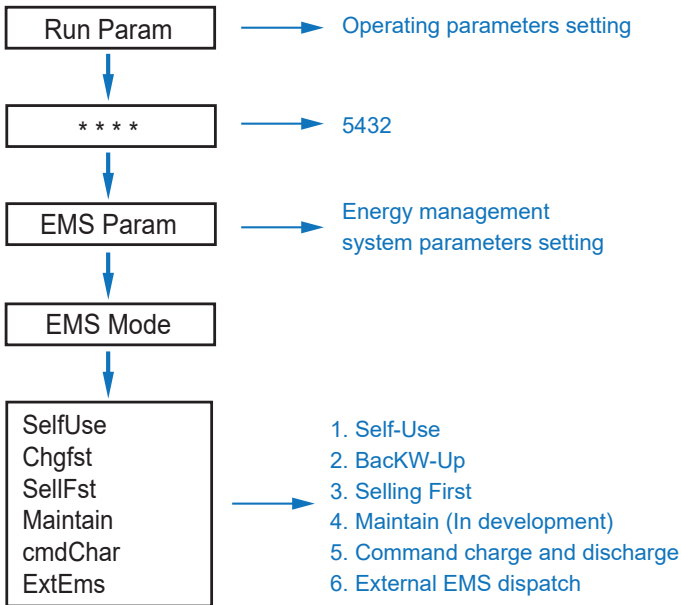


Operation (Cont.)

Lead Acid



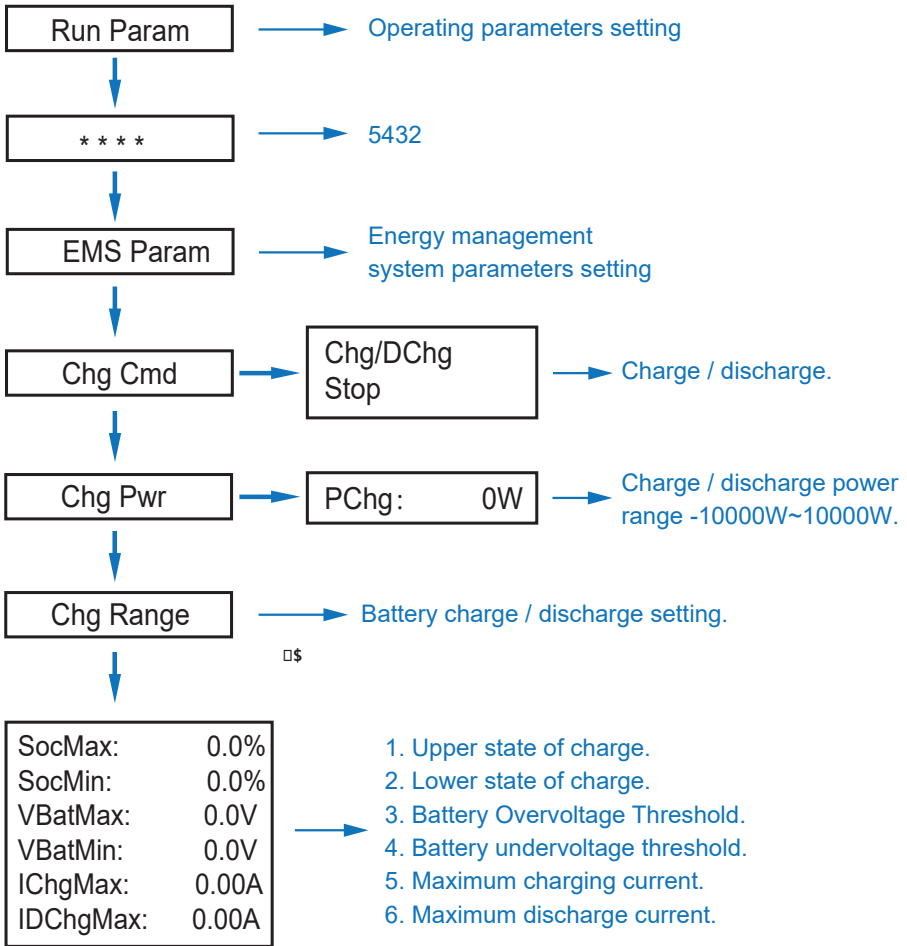
Energy Management System (EMS Param)



Note: For a detailed explanation of each mode, please see the “Introduction” section of this manual.

Operation (Cont.)

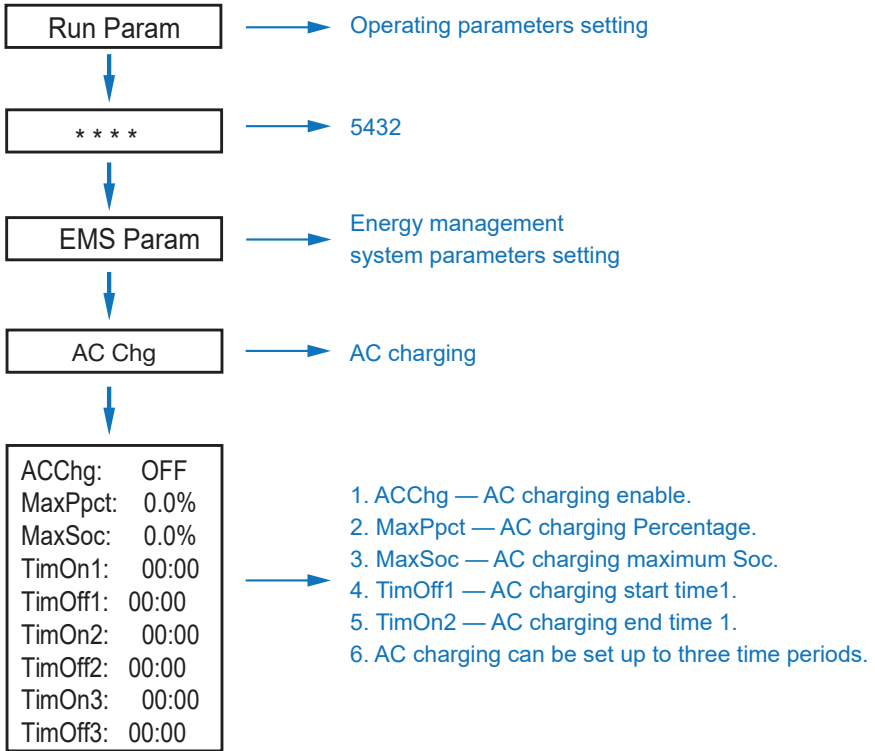
Time of Use



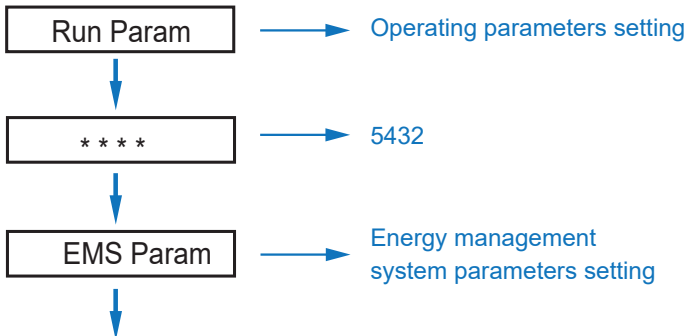
Note: Timed charge and discharge need to complete the three settings of “Chg Cmd”, “Chg Pwr” and “Chg Range”, otherwise it will not work properly.

Operation (Cont.)

AC Charging



Forced Charging



Operation (Cont.)

Force Chg → Forced charging

ForceChg:	ON
PForce:	0.0%
MaxSoc:	0.0V
TimOn1:	00:00
TimOff1:	00:00
TimOn2:	00:00
TimOff2:	00:00
TimOn3:	00:00
TimOff3:	00:00

1. ForceChg — Force charging enable.
2. PForce — Forced charging power percentage.
3. MaxSoc — Forced charging Max Soc.
4. TimOn1 — Forced charging start time 1.
5. TimOff2 — Forced charging end time 1.
6. Forced charging can be set to three time periods .

Forced Discharging

Run Param → Operating parameters setting

* * * * → 5432

EMS Param → Energy management system parameters setting

Force DChg → Forced discharge

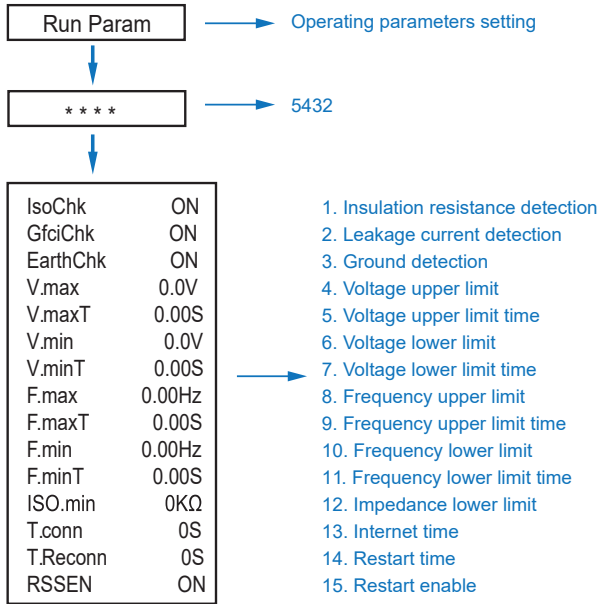
ForceDChg:	ON
PForce:	0.0%
MinSoc:	0.0V
TimOn1:	00:00
TimOff1:	00:00
TimOn2:	00:00
TimOff2:	00:00
TimOn3:	00:00
TimOff3:	00:00

1. ForceDChg — Forced discharging enable.
2. PForce — Forced discharging power percentage.
3. MinSoc — Forced discharging max Soc.
4. TimOn1 — Forced discharging start time 1.
5. TimOff1 — Forced discharging end time 1.

Note: Forced discharging can be set to three time periods.

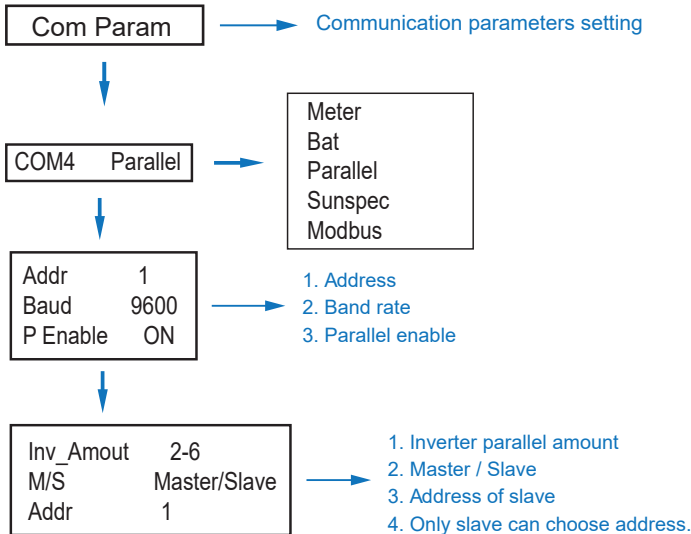
Operation (Cont.)

Protection Parameters



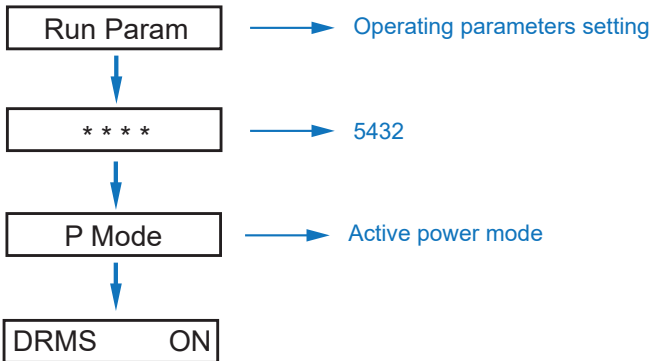
Note: When modifying parameters, you need to pay attention to the unit.

Multi-Machine in Parallel



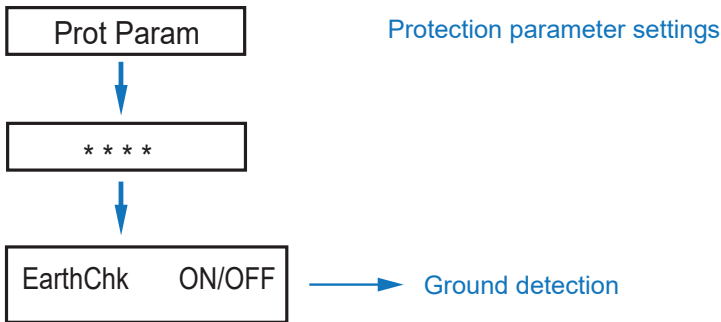
Operation (Cont.)

DRM Setting (DRMS)



Note: If EarthChk is not turned on, it cannot detect whether the machine is grounded. After EarthChk and DRMS functions are turned on, the power must be cut off before normal use. If the machine display shows “J04”, it means that the machine is not connected to the ground wire. EarthChk settings refer to “Protection parameters”.

Ground Detection



Note:

This inverter complies with IEC 62109-2 clause 13.9 for earth fault alarm monitoring.

If an Earth Fault Alarm occurs, the fault code “J 04” will be displayed on the inverter screen / the LED indicator “Alarm” will light up.



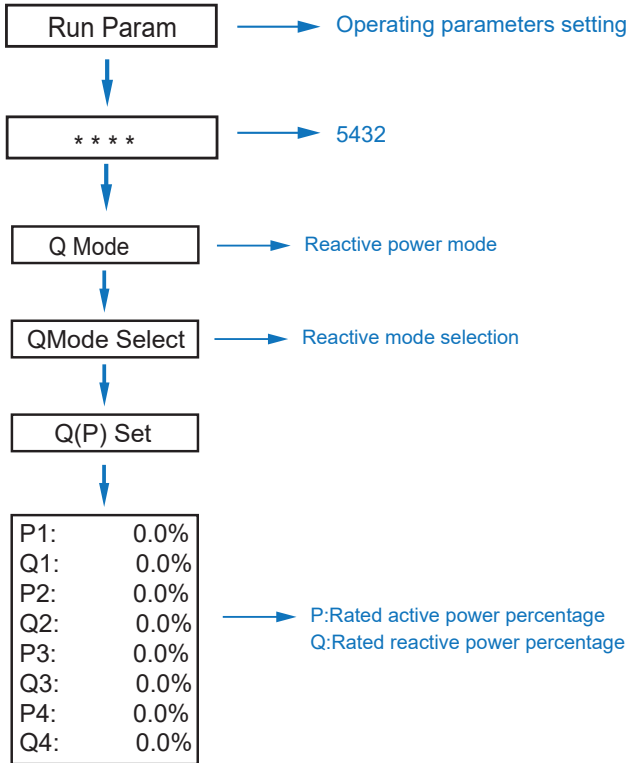
Note:

The product is to be installed in a high traffic area where the fault is likely to be seen.

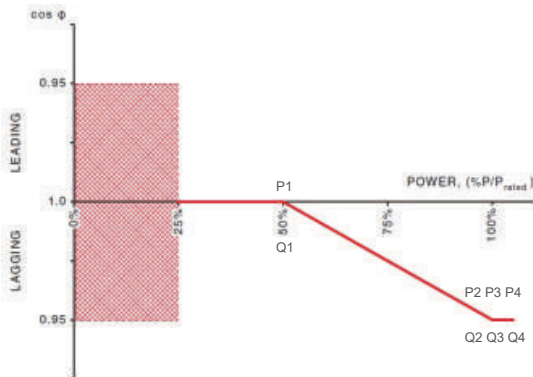
Operation (Cont.)

Enable Power Quality Response Modes

a) Active Power Control Power Factor

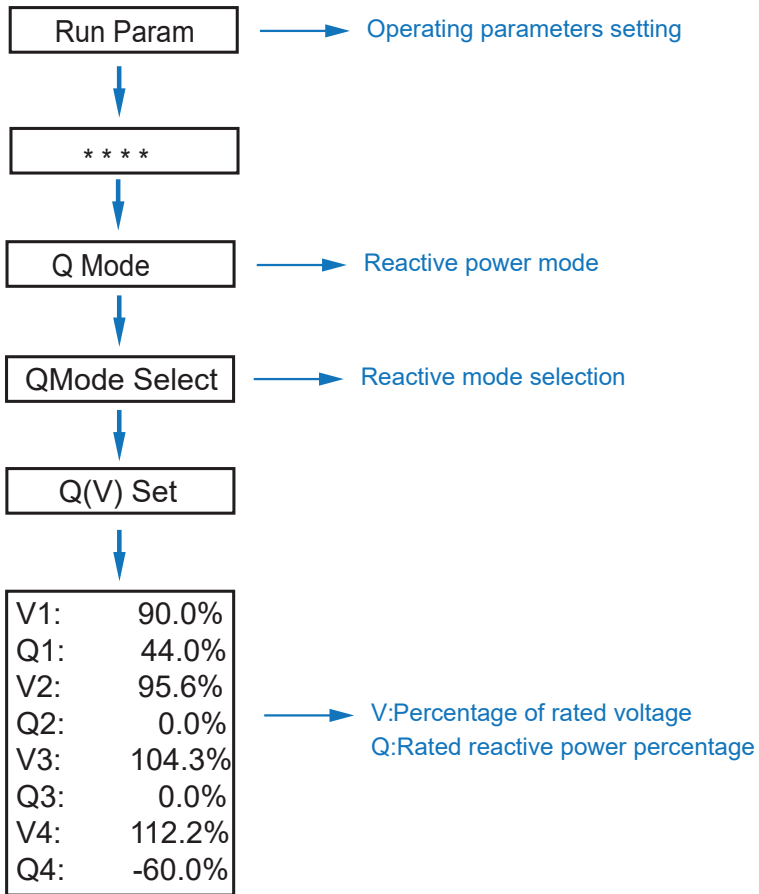


Note: When Q(P) Set is set, Power Quality Response Mode is enabled.



Operation (Cont.)

b) Voltage Control Reactive Power

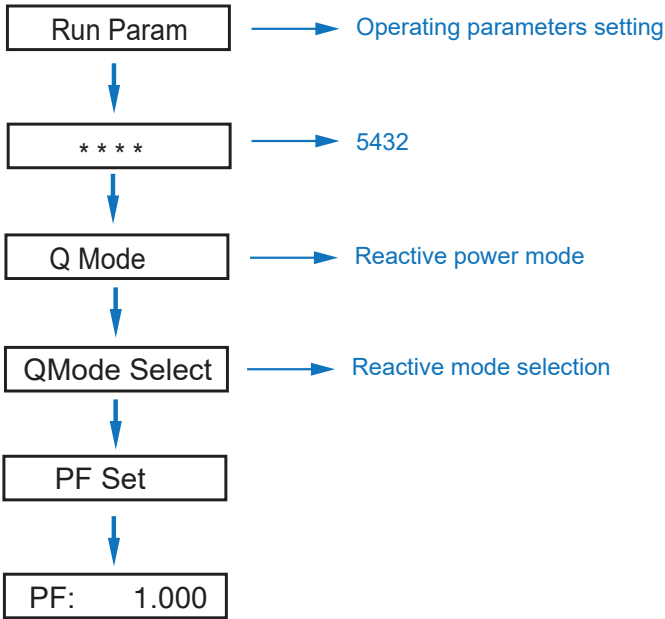


Note: When Q(V) Set is set, Power Quality Response Mode is enabled.

Note: Volt-var is enabled by default.

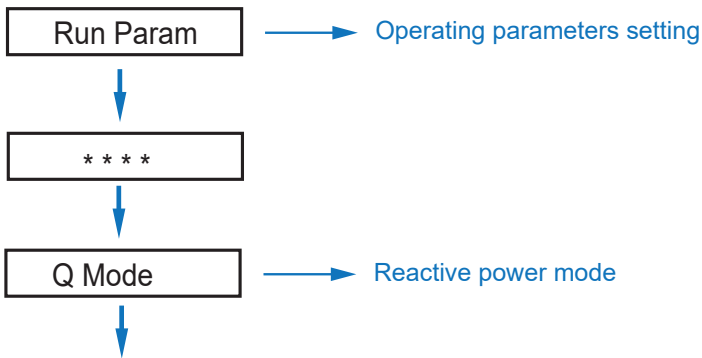
Operation (Cont.)

c) Fixed Power Factor

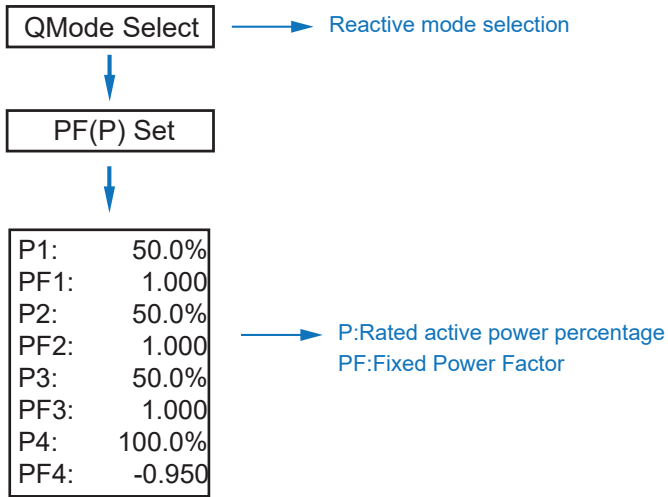


Note: Set PF (-0.8, +0.8), Resolution 0.001. When PF Set is set, Power Quality Response Mode is enabled.

d) Fixed Reactive Power (%)

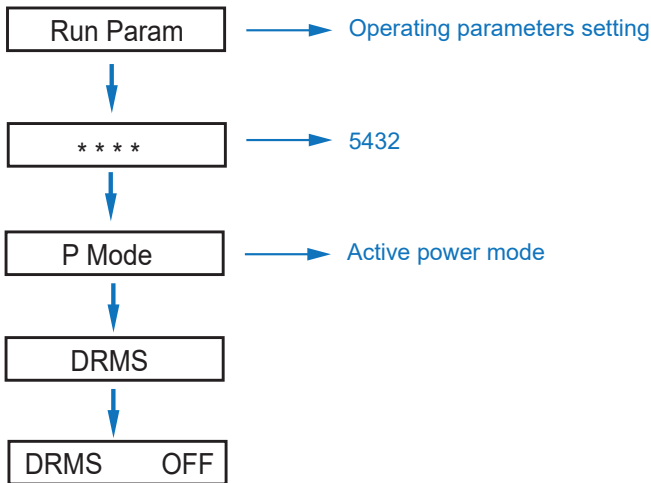


Operation (Cont.)



Note: When PF(P) Set is set, Power Quality Response Mode is enabled.

Disable Power Quality Response Modes

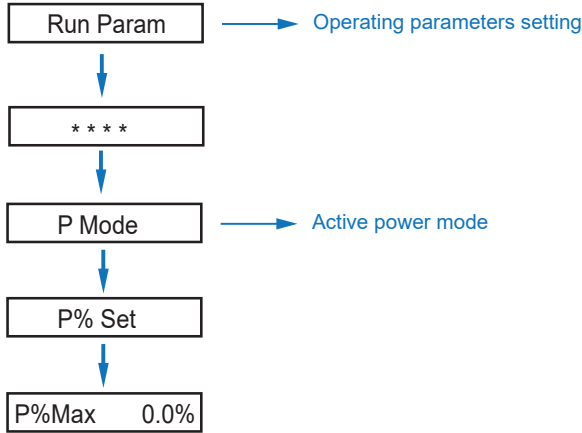


Note: When OFF is set, Power Quality Response Modes is disabled.

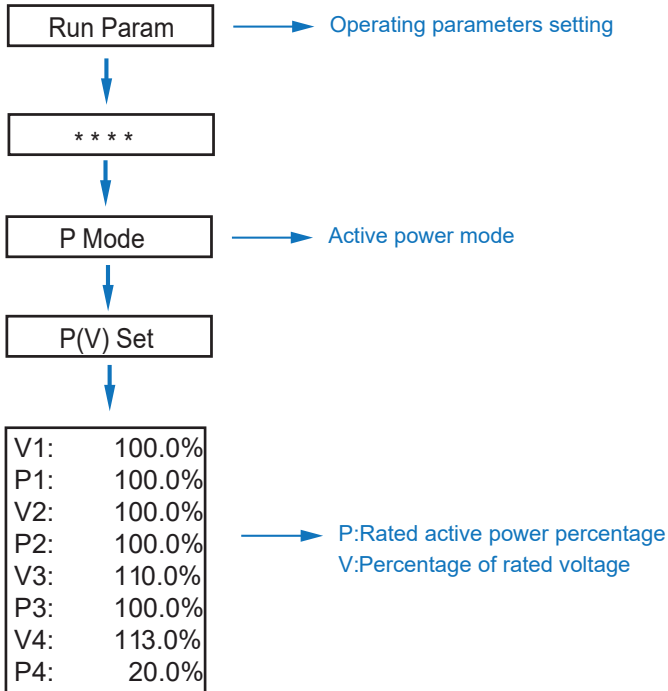
Operation (Cont.)

Active Power Mode Set

a) Active Power Percentages

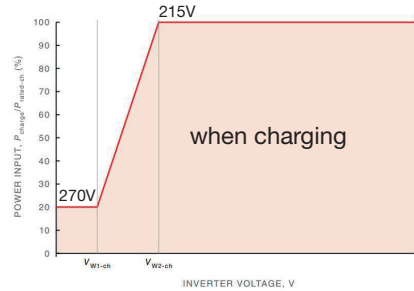
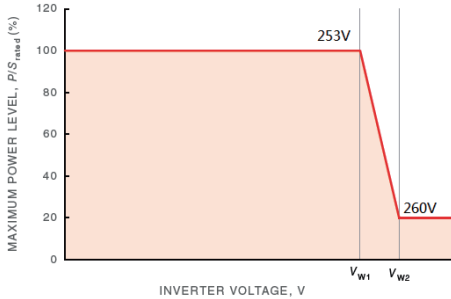


b) Volt-watt

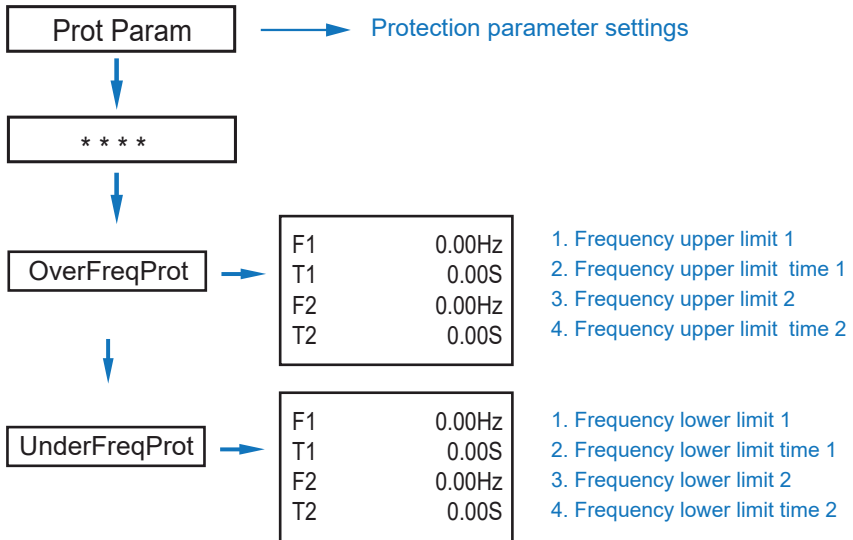


Operation (Cont.)

Note: The volt-watt response mode shall be enabled by default. When charging, the software has set the parameters by default.

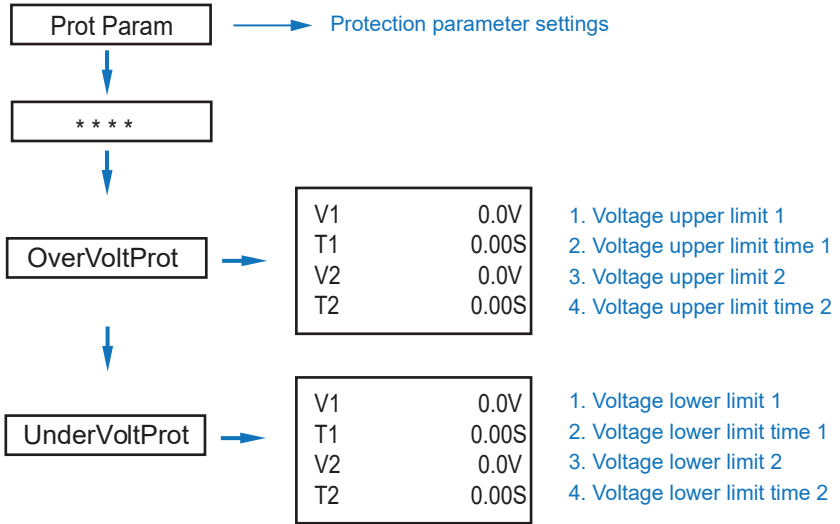


Frequency protection Range (Freq Range) Setting

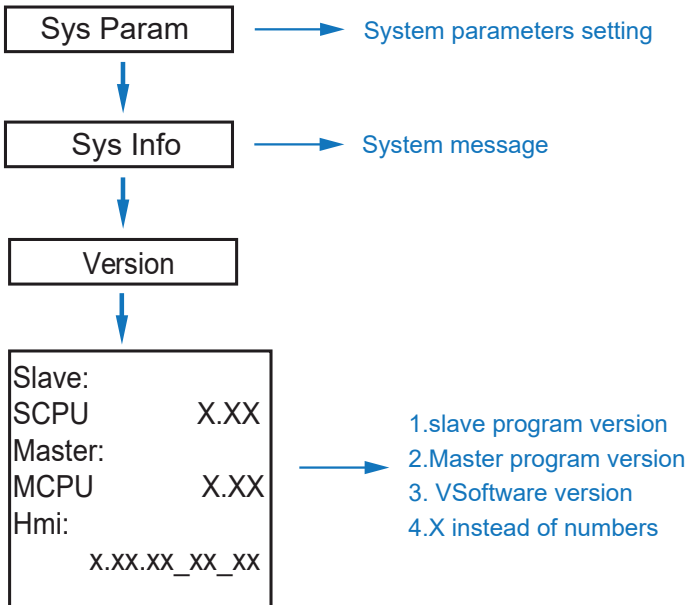


Operation (Cont.)

Voltage protection Range (Volt Range) Set

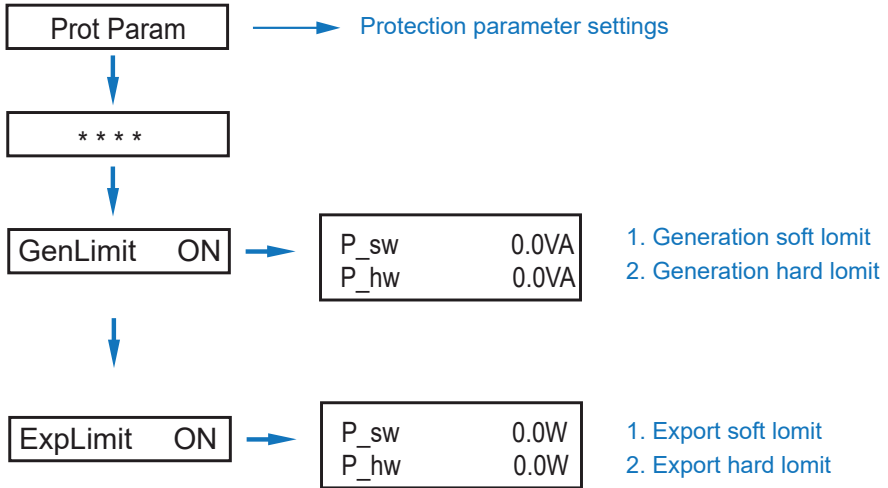


Version



Operation (Cont.)

Install Dual Meters



Active Anti-Islanding Protection

The method of active anti-islanding protection:

Shifting the frequency of the inverter away from nominal conditions in the absence of a reference frequency (frequency shift).

Power ON/OFF

Please check the following requirements before testing:

- The installation location is suitable (see pages 12-13).
- All electrical wires are connected tightly, including PV modules, battery and AC sides (such as the grid side, EPS side, Gen Side).
- Earth line and smart meter/CT line are connected.
- These hybrid inverters should be set according to the required local grid standard.
- For more information, please contact After Sales Support.

Power ON

- Turn on the DC switch.
- After the LED illuminates, the hybrid inverter should be set following the instructions on page 30 for first time use.
- When the inverter is running under normal mode, the running indicator will light up.

Power OFF

- Turn off the DC switch (in the hybrid inverter) and all extra breakers.
- Note: The hybrid inverter should be restarted after a minimum of 5 minutes.

Restarting

- To restart this device, first power it off, as described above.
- Then, after a minimum of five minutes, power it back on again, as described above.

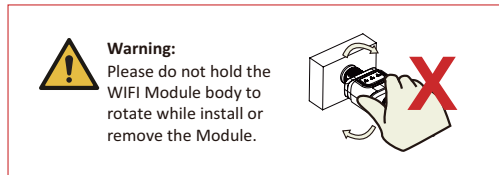
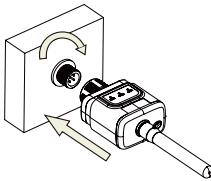
Wi-Fi Connection

Note:

- Please read this manual carefully before using products and keep it in the place where O&M providers can easily find.
- Due to product upgrade and other factors, the content of this manual might change from time to time. Please take actual product as standard and get latest manual from home.aforenergy.com. Unless otherwise agreed herein, this manual will only be used as guidance. Any statement, information or suggestion in this manual will not take any form of responsibility.
- Without written permission, any content of this document (partly or entirely) cannot be extracted, copied or transmitted in any form by any company or individual.
- **WARNING:** Please remove WIFI Module after power off.




Wi-Fi Module Installation

- Assemble WIFI Module to the inverter communication interface as shown in the diagram.



Wi-Fi Module Status

- Check the indicator light.

Lights	Implication	Status Description(All lights are single green lights.)
	Communication with router	1.Light off: Connection to the router failed. 2.On 1s/Off 1s(Slow flash): Connection to the router succeeded. 3.Light keeps on: Connection to the server succeeded. 4.On 100ms/Off 100ms(Fast flash): Distributing network fast.
	Communication with inverter	1.Light keeps on: WIFI Module connected to the inverter. 2.Light off: Connection to the inverter failed. 3.On 1s/Off 1s(Slow flash): Communicating with inverter.
	WIFI Module running status	1.Light off: Running abnormally. 2.On 1s/Off 1s (Slow flash): Running normally. 3.On 100ms/Off 100ms(Fast flash): Restore factory settings .

Wi-Fi Connection (Cont.)

The normal operation status of the WIFI Module, when router connected to the network normally:

1. Connection to the server succeeded: NET light keeps on after the WIFI Module powered on.
2. WIFI Module running normally: READY light flashes.
3. Connection to the inverter succeeded: COM light keeps on.

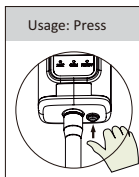
Abnormal State Processing

- If the data on platform is abnormal when the WIFI Module is running please check the table below and according to the status of indicator lights to complete a simple troubleshooting. If it still can not be resolved or indicator lights status do not show in the table below, please contact Customer Support.
- Note: Please using the following table query after power-on for 2mins at least.

NET ● NET	COM ● COM	READY ● READY	Fault Description	Fault Cause	Solution
Any state	OFF	Slow flash	Communication with inverter abnormal	1.Connection between WIFI Module and inverter loosen. 2.Inverter does not match with WIFI Module's communication rate.	1.Check the connection between WIFI Module and inverter. Remove the WIFI Module and install again. 2.Check inverter's communication rate to see if it matches with WIFI Module's. 3.Long press Reset button for 5s, reboot WIFI Module.
OFF	ON	Slow flash	Connection between WIFI Module and router abnormal	1.WIFI Module does not have a network. 2.Antenna abnormal. 3.Router WIFI signal strength weak.	1.Check if the wireless network configured. 2.Check the antenna, if there is any damage or loose. 3.Enhance router WIFI signal strength. 4.Long press Reset button for 10s, reboot WIFI Module and networking again.
Slow flash	ON	Slow flash	Connection between WIFI Module and router normal, connection between logger and remote server abnormal.	1.Router networking abnormal. 2.The server point of WIFI Module is modified. 3.Network limitation, server cannot be connected.	1.Check if the router has access to the network. 2.Check the router's setting, if the connection is limited. 3.Contact our customer service.
OFF	OFF	OFF	Power supply abnormal	1.Connection between WIFI Module and inverter loosen or abnormal. 2.Inverter power insufficient. 3.WIFI Module abnormal.	1.Check the connection, remove the WIFI Module and install again. 2.Check inverter output power. 3.Contact our customer service.
Fast flash	Any state	Any state	SMARTLINK networking status	Normal	1.Exit automatically after 5mins. 2.Long press Reset button for 5s, reboot WIFI Module. 3.Long press Reset button for 10s, restore factory settings.
Any state	Any state	Fast flash	Restore factory settings	Normal	1.Exit automatically after 1mins. 2.Long press Reset button for 5s, reboot WIFI Module. 3.Long press Reset button for 10s, restore factory settings.

Usage Methods and Notices for Reset Button

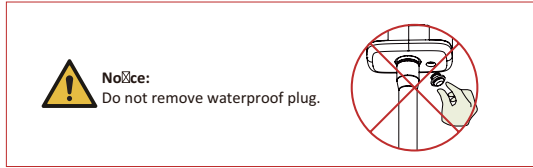
- Usage methods and key-press descriptions for Reset button.



Key-press	Status Description	Light Status
Short press 1s	SMARTLINK rapid networking status.	NET light flashes fast for 100ms.
Long press 5s	Rebooting the WIFI Module.	All lights are extinguished immediately.
Long press 10s	Resetting the WIFI Module.	1.All lights are extinguished after 4s. 2.READY light flashes fast for 100ms.

Wi-Fi Connection (Cont.)

- Notices for Reset button.



Maintenance

Periodic maintenance of this device is required. Please follow the below steps:

- PV connection: twice a year
- AC connection (Grid and EPS): twice a year
- Battery connection: twice a year
- Earth connection: twice a year
- Heat sink: clean with a dry towel once a year

Troubleshooting

The following fault messages are displayed when a fault occurs - please see the corresponding solutions. Please contact our after sales support team for further assistance if necessary.

Type of Fault	Code	Name	Description	Recommended Solution
PV Fault	A01	PvConnectFault	PV connection type different from setup	<ul style="list-style-type: none"> • Check PV modules connection • Check PV Mode setup Ref. Chapter 5.3.
	A02	IsoFault	ISO check among PV panels/ wires and ground is abnormal.	<ul style="list-style-type: none"> • Check PV modules wires, those wires are soaked or damaged, and then carry out rectification. • If the fault occurs continuously and frequently, please ask help for local distributors.
	A03	PvAfcifault	PV current arcing	<ul style="list-style-type: none"> • Check PV modules wires and connectors broken or loose connect, and then carry out rectification. • If the fault occurs continuously and frequently, please ask help for local distributors.
	A04	Pv1OverVoltFault	PV Voltage over	<ul style="list-style-type: none"> • Reconfiguration of PV strings, reduce the PV number of a PV string to reducing inverter PV input voltage. • Suggestion that contacting with local distributors.
	A05	Pv2OverVoltFault		
	A06	Pv3OverVoltFault		
	A07	Pv4OverVoltFault		
	A08	Pv5OverVoltFault		
	A09	Pv6OverVoltFault		
	A10	Pv7OverVoltFault		
	A11	Pv8OverVoltFault		
	A12	Pv9OverVoltFault		
	A13	Pv10OverVoltFault		
	A14	Pv11OverVoltFault		
	A15	Pv12OverVoltFault		
	A16	PV1ReverseFault	PV(+) and PV(-) reversed Connection	<ul style="list-style-type: none"> • Check PV(+) and PV(-) Connect whether reversed or not. • If reversed, make correction.
	A17	PV2ReverseFault		
	A18	PV3ReverseFault		
	A19	PV4ReverseFault		
	A20	PV5ReverseFault		
	A21	PV6ReverseFault		

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution
PV Fault	A22	PV7ReverseFault	PV(+) and PV(-) reversed Connection	<ul style="list-style-type: none"> • Check PV modules partial occlusion or cells damaged. • Check PV module wires and connectors broken or loose connect, then repair it.
	A23	PV8ReverseFault		
	A24	PV9ReverseFault		
	A25	PV10ReverseFault		
	A26	PV11ReverseFault		
	A27	PV12ReverseFault		
	A33	Pv1AbnormalFault		
	A34	Pv2AbnormalFault		
	A35	Pv3AbnormalFault		
	A36	Pv4AbnormalFault		
	A37	Pv5AbnormalFault		
	A38	Pv6AbnormalFault		
	A39	Pv7AbnormalFault		
	A40	Pv8AbnormalFault		
	A41	Pv9AbnormalFault		
	A42	Pv10AbnormalFault		
	A43	Pv11AbnormalFault		
	A44	Pv12AbnormalFault		
	A45	Pv13AbnormalFault		
	A46	Pv14AbnormalFault		
	A47	Pv15AbnormalFault		
	A48	Pv16AbnormalFault		
	A49	Pv17AbnormalFault		
	A50	Pv18AbnormalFault		
	A51	Pv19AbnormalFault		
	A52	Pv20AbnormalFault		
A53	Pv21AbnormalFault			
A54	Pv22AbnormalFault			
A55	Pv23AbnormalFault			
A56	Pv24AbnormalFault			

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution
Battery Fault	B01	PcsBatOverVoltFault	Battery voltage over or under	<ul style="list-style-type: none"> • Check inverters connected battery lines and connectors broken or loose connect. • Carry out rectification if broken or loose. • Checking battery voltage is abnormal or not, then maintenance or change new battery.
	B02	PcsBatUnderVoltFault		
	B03	PcsBatInsOverVoltFault		
	B04P	csBatReversedFault	Bat. (+) and Bat. (-) are reversed.	<ul style="list-style-type: none"> • Check Bat.(+) and Bat.(-)connect reversed or not. • Make correction If reversed.
	B05P	csBatConnectFault	Battery wires loose	<ul style="list-style-type: none"> • Check battery wires and connectors damage or loose connect. • Carry out rectification if break.
	B06P	csBatComFault	Battery communication abnormal	<ul style="list-style-type: none"> • Check battery side communication wires damage or loose connect, and then carry out rectification. • Check battery is off or other abnormal, then Maintenance battery or change new battery.
	B07	PcsBatTempSensorOpen	Battery temperature sensor abnormal	<ul style="list-style-type: none"> • Check battery temperature sensor and connected wires damage or not, then rectification or change new one.
	B08	PcsBatTempSensorShort		
	B09	BmsBatSystemFault	All these faults will be detected or reported by battery BMS.	<ul style="list-style-type: none"> • If specific fault high temperature or low temperature, then should change battery installed environment temperature. • Restart battery, maybe can working as normal. • If this fault occurs continuously and frequently, please ask help for local distributors.
	B10	BmsBatVolOverFault		
	B11	BmsBatVolUnderFault		
	B12	BmsCellVolOverFault		
	B13	BmsCellVolUnderFault		
	B14	BmsCellVolUnbalanceFault		
	B15	BatChgCurOverFault		
	B16	BatDChgCurOverFault		
	B17	BatTemperatureOverFault		
	B18	BatTemperatureUnderFault		
	B19	CellTemperatureOverFault		
	B20	CellTemperatureUnderFault		
	B21	BatIsoFault		
	B22	BatSocLowFault		
	B23	BmsInterComFault		
	B24	BatRelayFault		

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution
Battery Fault	B25	BatPreChault		
	B26	BmsBatChgMosFault		
	B27	BmsBatDChgMosFault		
	B28	BMSVolOVFault		
	B29	BMSVolLFault		
	B30	VolLockOpenFault		
	B31	VolLockShortFault		
	B32	ChgRefOVFault		
	C01G	GridLossFault	Grid lost (islanding)	<ul style="list-style-type: none"> • Inverter will restart automatically when the grid return to normal. • Check inverter connected with grid connectors and cable normal or not.
	C02G	GridUnbalanVoltFault	Grid Voltage unbalanced.	<ul style="list-style-type: none"> • The inverter will restart automatically when the grid three phase return to normal. • Check inverter connected with the grid connectors and wires normal or not. connectors and cable normal or not.
	C03G	GridInstOverVoltFault	Grid instantaneous voltage over	<ul style="list-style-type: none"> • The inverter will restart automatically when the grid three phase return to normal. • Contact with local distributor or required grid company adjust protection parameters.
	C04	Grid10MinOverVoltFault	Grid voltage Over by 10 Minutes	<ul style="list-style-type: none"> • The inverter will restart automatically when the grid three phase return to normal. • Contact with local distributor or required grid company adjust 10 minutes protection voltage parameters.
	C05	GridOverVoltFault	Grid voltage over	<ul style="list-style-type: none"> • The inverter will restart automatically when the grid three phase return to normal. • Contact with local distributor or required grid company adjust voltage protection parameters.
	C06	GridUnderVoltFault	Grid voltage under	
	C07	GridLineOverVoltFault	Grid line voltage over	
C08	GridLineUnderVoltFault	Grid line voltage under		
C09G	GridOverFreqFault	Grid Frequency over	<ul style="list-style-type: none"> • The inverter will restart automatically when the grid three phase return to normal. • Contact with local distributor or required grid company adjust frequency protection parameters. 	
C10G	GridUnderFreqFault	Grid Frequency under		

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution
Off-grid Fault	D01	UpsOverPowerFault	Off-grid load over	<ul style="list-style-type: none"> • Reduce loads. • If sometimes overload, it can be ignored, when generation power enough can be recovery. • If those faults occurs continuously and frequently, please ask help for local distributors.
	D02G	GridConflictFault	Grid connected to BackW-up terminal	<ul style="list-style-type: none"> • Check the off-grid port connection correct, disconnect both off-grid and grid ports.
	D03	GenOverVoltFault	GenOverVoltFault	<ul style="list-style-type: none"> • Adjust generator running parameters, make the output voltage, frequency in allowed range. • If this fault occurs continuously and frequently, please ask help for local distributors.
	D04	GenUnderVoltFault	GenUnderVoltFault	
	D05	GenOverFreqFault	GenOverFreqFault	
	D06	GenUnderFreqFault	GenUnderFreqFault	
DC Fault	E01	Pv1HwOverCurrFault	PV current over, triggered by hardware protection circuit	<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors.
	E02	Pv2HwOverCurrFault		
	E03	Pv3HwOverCurrFault		
	E04	Pv4HwOverCurrFault		
	E05	Pv5HwOverCurrFault		
	E06	Pv6HwOverCurrFault		
	E07	Pv7HwOverCurrFault		
	E08	Pv8HwOverCurrFault		
	E09	Pv9HwOverCurrFault		
	E10	Pv10HwOverCurrFault		
	E11	Pv11HwOverCurrFault		
	E12	Pv12HwOverCurrFault		
	E13	Pv1SwOverCurrFault	PV current over, triggered by Software logic.	<ul style="list-style-type: none"> • Power off, power on then restart. • If those faults occurs continuously and frequently, please ask help for local distributors.
	E14	Pv2SwOverCurrFault		
E15	Pv3SwOverCurrFault			
E16	Pv4SwOverCurrFault			
E17	Pv5SwOverCurrFault			
E18	Pv6SwOverCurrFault			
E19	Pv7SwOverCurrFault			
E20	Pv8SwOverCurrFault			

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommend Solution	
DC Fault	E21	Pv9SwOverCurrFault		<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults continuously and frequently, please ask help for local distributors. 	
	E22	Pv10SwOverCurrFault			
	E23	Pv11SwOverCurrFault			
	E24	Pv12SwOverCurrFault			
	E33	Boost1SelfCheck(boost)Fault	PV boost circuit abnormal when self checking		
	E34	Boost2SelfCheck(boost)Fault			
	E35	Boost3SelfCheck(boost)Fault			
	E36	Boost4SelfCheck(boost)Fault			
	E37	Boost5SelfCheck(boost)Fault			
	E38	Boost6SelfCheck(boost)Fault			
	E39	Boost7SelfCheck(boost)Fault			
	E40	Boost8SelfCheck(boost)Fault			
	E41	Boost9SelfCheck(boost)Fault			
	E42	Boost10SelfCheck(boost)Fault			
	E43	Boost11SelfCheck(boost)Fault			
	E44	Boost12SelfCheck(boost)Fault			
	E45	BusHwOverVoltFault	Bus voltage over		<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults continuously and frequently, please ask help for local distributors.
	E46	BusHwOverHalfVoltFault			
	E47	BusSwOverVoltFault			
	E48	BusSwOverHalfVoltFault			
	E49	BusSwUnderVoltFault	Bus voltage under as running		
	E50	BusUnbalancedFault	DC Bus voltage unbalanced		
	E51	BusBalBridgeHwOver-CurFault	Bus Controller current over		
	E52	BusBalBridgeSwOver-CurFault			
	E53	BusBalBridgeSelf-CheckFault	Bus Controller abnormal when self checking		
	E54	BDCHwOverCurrFault	BiDC current over		<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults continuously and frequently, please ask help for local distributors.
	E55	BDCSwOverCurrFault			
	E56	BDCSelfCheckFault	BiDC abnormal as self checking		
E57	BDCSwOverVoltFault	BiDC voltage over			
E58	TransHwOverCurrFault	BiDC current over			

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommend Solution
	E59	BDCFuseFault	BiDC fuse broken	• Change fuse.
	E60	BDCRelayFault	BiDC relay abnormal	• Power off, then restart (Ref. Chapter8). • If those faults continuously and frequently, please ask help for local distributors.
AC Fault	F01	HwOverFault	All over current/ voltage by protection hardware	• Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors.
	F02	InvHwOverCurrFault	Ac over current by protection hardware	
	F03	InvROverCurrFault	R phase current over	
	F04	InvSOverCurrFault	S phase current over	
	F05	InvTOverCurrFault	T phase current over	
	F06	GridUnbalanCurrFault	On-grid current unbalanced	
	F07	DcInjOverCurrFault	DC injection current over	
	F08	AcOverLeakCurrFault	Ac side leakage current over	• Check AC insulation and ground wires connect ground is well or not, then repair it. • Power off, then restart (Ref. Chapter8).. • If those fault occurs continuously and frequently, please ask help for local distributors.
	F09	PLLFault	PLL abnormal	• Power off, then restart (Ref. Chapter8). • If those fault occurs continuously and frequently, please ask help for local distributors.
	F10	GridRelayFault	Grid relay abnormal	
	F11	UpsRelayFault	Ups relay abnormal	
	F12	GenRelayFault	Generator relay abnormal	
	F13	Relay4Fault	Relay4 abnormal	
	F14	UpsROverCurrFault	Off-grid output current over	• When off-grid the load start impulse current is over, reduce the start impulse current load. • Power off, then restart (Ref. Chapter8). • If those fault occurs continuously and frequently, please ask help for local distributors.
	F15	UpsSOverCurrFault		
	F16	UpsTOverCurrFault		
	F17	GenROverCurrFault	Generator current over	• Check generator output voltage, frequency i s stability, a nd adjust generator. • Power off, then restart(Ref. Chapter8). • If those fault occurs continuously and frequently, please ask help for local distributors.
	F18	GenSOverCurrFault		
	F19	GenTOverCurrFault		
	F20	GenReversePowerFault		

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommend Solution
AC Fault	F21	UpsOverVoltFault	Off-grid output voltage over or under	<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors.
	F22	UpsUnderVoltFault		
	F23	UpsOverFreqFault	Off-grid output frequency over or under	
	F24	UpsUnderFreqFault		
	F25	DclnjOverVoltFault	Off-grid DC injection voltage over	
System Fault	G01	PV1CurAdChanFault	Sampling hardware abnormal	<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors.
	G02	PV2CurAdChanFault		
	G03	PV3CurAdChanFault		
	G04	PV4CurAdChanFault		
	G05	PV5CurAdChanFault		
	G06	PV6CurAdChanFault		
	G07	PV7CurAdChanFault		
	G08	PV8CurAdChanFault		
	G09	PV9CurAdChanFault		
	G10	PV10CurAdChanFault		
	G11	PV11CurAdChanFault		
	G12	PV12CurAdChanFault		
	G13	BDCCurrAdChanFault		
	G14	TransCurAdChanFault		
	G15	BalBrigCurAdChanFault		
	G16	RInvCurAdChanFault		
	G17	SInvCurAdChanFault		
	G18	TInvCurAdChanFault		
	G19	RInvDciAdChanFault		
	G20	SInvDciAdChanFault		
G21	TInvDciAdChanFault			
G22	LeakCurAdChanFault			
G23	VoltRefAdChanFault			
G24	UpsRCurAdChanFault			

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution	
System Fault	G25	UpsSCurAdChanFault			
	G26	UpsTCurAdChanFault			
	G27	GenRCurAdChanFault			
	G28	GenSCurAdChanFault			
	G29	GenTCurAdChanFault			
	G30	UpsRDcvAdChanFault			
	G31	UpsSDcvAdChanFault			
	G32	UpsTDcvAdChanFault			
	G37	TempAdChanFault	All temperature sensors abnormal		
	G38	VoltAdConflictFault	The sample value of PV, battery and BUS voltage inconsistent	<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors. 	
	G39	CPUAdConflictFault	The sample value between master CPU and slaver CPU inconsistent		
	G40	PowerCalcConflictFault	Power value between PV, battery and AC output inconsistent		
	G41	EnvirOverTempFault	Installation environment temperature over or low	<ul style="list-style-type: none"> • Change or improve the installation environment temperature, make running temperature suitable. • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors. 	
	G42	EnvirLowTempFault			
	G43	CoolingOverTempFault	Cooling temperature over or low		
	G44	CoolingLowTempFault			
G45	OverTemp3Fault	Temperature3 over or low			
G46	LowTemp3Fault				
G47	CpuOverTempFault	CPU temperature over			
G48	ModelConflictFaultV	ersion conflict with inverter	<ul style="list-style-type: none"> • Power off, then restart (Ref. Chapter8). • If those faults occurs continuously and frequently, please ask help for local distributors. 		
Inner Warning	I01	InterFanWarning	Fan abnormal		<ul style="list-style-type: none"> • Remove foreign matter logged in fan. • If those faults occurs continuously and frequently, please ask help for local distributors.
	I02	ExterFanWarning			
	I03	Fan3Warning			

Troubleshooting (Cont.)

Type of Fault	Code	Name	Description	Recommended Solution
Inner Warning	I04	EnvirTempAdChan-Warning	Some temperature sensors abnormal	<ul style="list-style-type: none"> The warnings are not matter influence. Power off, then restart (Ref. Chapter8). If those faults occurs continuously and frequently, please ask help for local distributors.
	I05	CoolingTempAdChan-Warning		
	I06	Temp3AdChanWarning		
	I07	ExtFlashComWarning	Flash abnormal	<ul style="list-style-type: none"> Power off, then restart (Ref. Chapter8). If this those faults continuously and frequently, please ask help for local distributors.
	I08	EepromComWarning	Eeprom abnormal	
	I09	SlaveComWarning	Communication between slaver CPU and master CPU abnormal	
	I10	HmiComWarning	HMI abnormal	
	I11	FreqCalcConflictWarning	Frequency value abnormal	
	I12	UnsetModel	Running model is not initial	<ul style="list-style-type: none"> Contact with local distributor.
	Outside Warning	J01	MeterComWarning	Meter/CT abnormal
J02		MeterConnectWarning	Wires connecting type of meter wrong	<ul style="list-style-type: none"> Check Meter/CT connection, installed place, and installed direction. if abnormal, re-installation. Power off, then restart (Ref. Chapter8). If this those faults continuously and frequently, please ask help for local distributors.
J03		SohWarning	Battery SOH low	<ul style="list-style-type: none"> Contact with Battery manufacturer.
J04		GndAbnormalWarning	Earth impedance over by cable loose and so on	<ul style="list-style-type: none"> Check earth line connection or earth connecting impedance. if abnormal, then adjust it. Power off, then restart (Ref. Chapter8). If this those faults continuously and frequently, please ask help for local distributors.
J05		ParallelComWarning	Communication between master inverter and slaver ones abnormal in parallel mode	<ul style="list-style-type: none"> Check parallel connect communication wires damage, connectors loose, connect port correct or not. if not, then adjust it. Power off, then restart (Ref. Chapter8). If this those faults continuously and frequently, please ask help for local distributors.

Other Useful Information

PV Input				
Model Number	AKE-4.6KW-HBI	AKE-5KW-HBI	AKE-5.5KW-HBI	AKE-6KW-HBI
Ppv Max (W)	6900	7500	8300	9000
Vmax PV (Vdc) (absolute Max.)		550		
Min. Operating Voltage (Vdc)		100		
Start-up Voltage (Vdc)		100		
MPPT voltage range (Vdc)		80-500		
Vdc range @ full power (Vdc)	130 - 500	150-500	160-500	170-500
Isc PV (absolute Max.) (A)		26 x 2		
Max. PV input current (A)		18.5 x 2		
Number MPP trackers		2		
Number input strings		1/1		
Battery (charge/discharge)				
Battery type		Li-ion/Lead-acid		
Battery Normal Voltage (Range) (Vdc)		51.2V (40-60V)		
Max charge/discharge Current (A)		80		
Max charge/discharge Power (W)	4600	4800	4800	4800
AC Grid (input and output)				
Normal AC Voltage (V)		L/N/PE, 230 Vac		
Frequency (Hz)		50		
Normal AC Current (A)	20	21.8	24	26.1
Max. cont. input/output current (A)	22	23	26	28
Rated Power (W)	4600	5000	5500	6000
Rated Apparent Power (VA)	4600	5000	5500	6000
Max. cont. Power (W)	4600	5000	5500	6000
Max. cont. Apparent Power (VA)	4600	5000	5500	6000
Power factor		1.0 (- 0.8 - + 0.8 adjustable)		
Max. efficiency (%)		97.6		
AC Load Output (Stand Alone)				
Normal Voltage (V)		L/N/PE, 230 Vac		
Frequency (Hz)		50		
Nominal Current (A) (L x W x H) (mm)	20	21.8	24	26.1
Max. cont. current (A)	22	23	26	28
Max. cont. Power (W)	4600	5000	5500	6000
Rated Apparent Power (VA)	4600	5000	5500	6000
Max. cont. Apparent Power (VA)	4600	5000	5500	6000
Power factor		1.0		
Other				
Ingress protection (IP)		IP65		
Protective class		Class I		
Temperature (°C)		-25°C to +60°C (Derating 45°C)		
Inverter Isolation		Non-isolated (PV-AC-BAT)		
Overvoltage category		OVC III (AC Main), OVC II (PV)		
Maximum altitude (m)		2000		
Weight (kg)		17		
Dimensions (W xHxD) (mm)		370 x 513 x 192		
Firmware		V06		

Installer Notes

Installer Notes

Warranty returns

Should you for any reason need to return this product for a warranty claim, make sure to include all accessories with the product.

Product does not work?

If you encounter problems with this product, or if it fails to perform to your expectations, make sure to contact our After Sales Support Centre on (AU) 1300 886 605 for advice.

For an electronic copy of this manual, please contact our after sales support centre.

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Web Support: tempo.org/support

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After Sales Support

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