

PV Inverter

H-5.0K-US

H-7.6K-US

User Manual



Contents

- 1. Safety Introductions** 01
- 2. Product instructions** 01-04
 - 2.1 Product Overview
 - 2.2 Product Features
 - 2.3 Basic System Architecture
- 3. Installation** 04-19
 - 3.1 Parts list
 - 3.2 Mounting instructions
 - 3.3 Battery connection
 - 3.4 AC Input/Output Connection
 - 3.5 PV Connection
 - 3.6 CT Connection
 - 3.7 Earth Connection(mandatory)
 - 3.8 WIFI Connection
 - 3.9 Wiring System for Inverter
 - 3.10 Single phase parallel connection diagram
 - 3.11 Split phase parallel connection diagram
 - 3.12 Three phase Parallel Inverter
- 4. OPERATION** 20
 - 4.1 Power ON/OFF
 - 4.2 Operation and Display Panel
- 5. LCD Display Icons** 21-30
 - 5.1 Main Screen
 - 5.2 Solar Power Curve
 - 5.3 Curve Page-Solar & Load & Grid
 - 5.4 System Setup Menu
 - 5.5 Basic Setup Menu

- 5.6 Battery Setup Menu
- 5.7 System Work Mode Setup Menu
- 5.8 Grid Setup Menu
- 5.9 Generator Port Use Setup Menu
- 5.10 Advanced Function Setup Menu
- 5.11 Device Info Setup Menu
- 6. Mode** 30-32
- 7. Fault information and processing** 32-35
- 8. Limitation of Liability** 35-36
- 9. Datasheet** 36-37

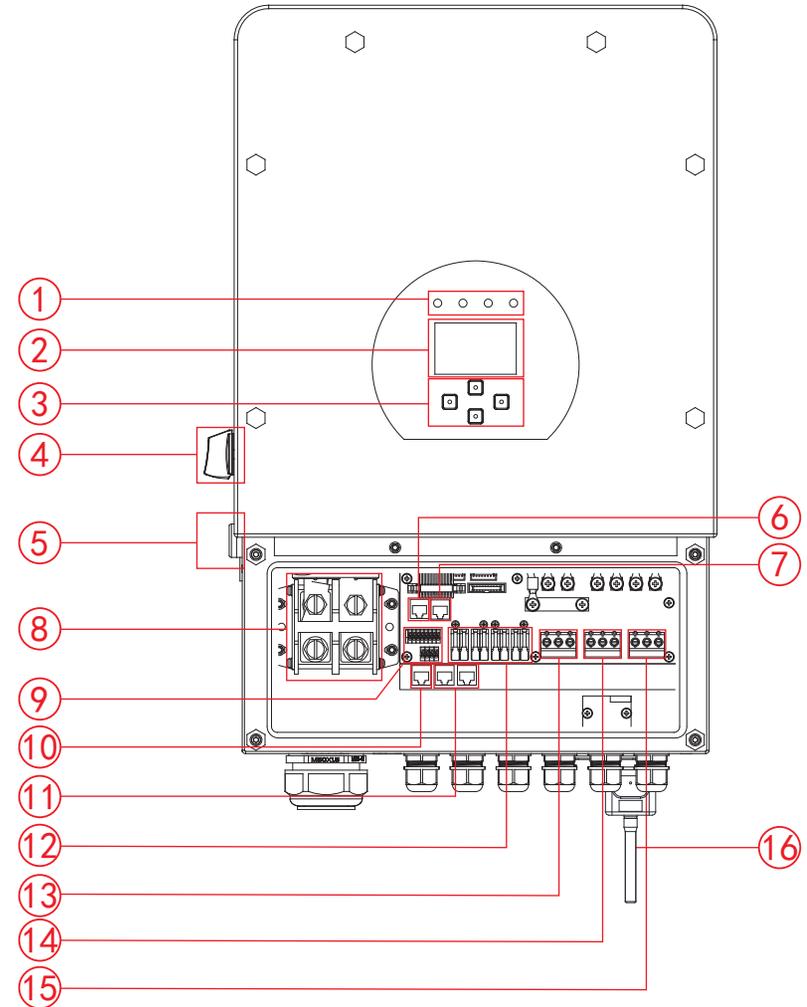
1. Safety Introductions

- This chapter contains important safety and operating instructions. Read and keep this manual for future reference.
- Before using the inverter, please read the instructions and warning signs of the battery and corresponding sections in the instruction manual.
- Do not disassemble the inverter. If you need maintenance or repair, take it to a professional service center.
- Improper reassembly may result in electric shock or fire.
- To reduce risk of electric shock, disconnect all wires before attempting any maintenance or cleaning. Turning off the unit will not reduce this risk.
- Caution: Only qualified personnel can install this device with battery.
- Never charge a frozen battery.
- For optimum operation of this inverter, please follow required specification to select appropriate cable size. It is very important to correctly operate this inverter.
- Be very cautious when working with metal tools on or around batteries. Dropping a tool may cause a spark or short circuit in batteries or other electrical parts, even cause an explosion.
- Please strictly follow installation procedure when you want to disconnect AC or DC terminals. Please refer to "Installation" section of this manual for the details.
- Grounding instructions - this inverter should be connected to a permanent grounded wiring system. Be sure to comply with local requirements and regulation to install this inverter.
- Never cause AC output and DC input short circuited. Do not connect to the mains when DC input short circuits.

2. Product Introduction

This is a multifunctional inverter, combining functions of inverter, solar charger and battery charger to offer uninterruptible power support with portable size. Its comprehensive LCD display offers user configurable and easy accessible button operation such as battery charging, AC/solar charging, and acceptable input voltage based on different applications.

2.1 Product Overview



- | | | |
|------------------------|-----------------------------|---------------------|
| 1: Inverter Indicators | 7: CAN Port | 13: Grid |
| 2: LCD display | 8: Battery input connectors | 14: Generator input |
| 3: Function Buttons | 9: Function Port | 15: Load |
| 4: DC Switch | 10: Parallel Box(master) | 16: WiFi Interface |
| 5: Power on/off button | 11: Parallel port | |
| 6: RS 485 Port | 12: PV input with two MPPT | |

2.2 Product Features

- -220V Single phase,120V/240V Split phase Pure sine wave inverter.
- - Self-consumption and feed-in to the grid.
- - Auto restart while AC is recovering.
- - Programmable supply priority for battery or grid.
- - Programmable multiple operation modes:On grid,off grid and UPS.
- - Configurable battery charging current/voltage based on applications by LCD setting.
- - Configurable AC/Solar/Generator Charger priority by LCD setting.
- - Compatible with mains voltage or generator power.
- - Overload/over temperature/short circuit protection.
- - Smart battery charger design for optimized battery performance
- - With limit function,prevent excess power overflow to the grid.
- - Supporting WIFI monitoring and build-in 2 strings of MPPT trackers
- -Smart settable three stages MPPT charging for optimized battery performance.
- -Time of use function.
- -Smart Load Function.

2.3 Basic System Architecture

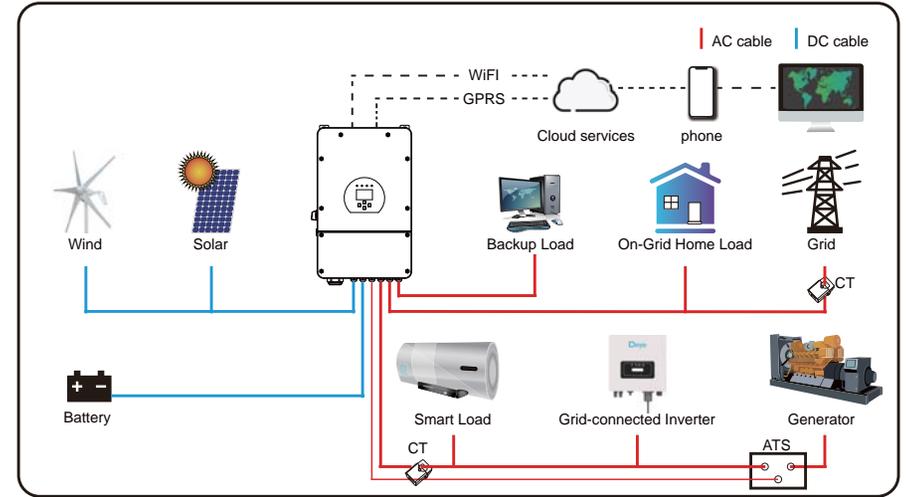
The following illustration shows basic application of this inverter.

It also includes following devices to have a Complete running system.

- Generator or Utility
- PV modules

Consult with your system integrator for other possible system architectures depending on your requirements.

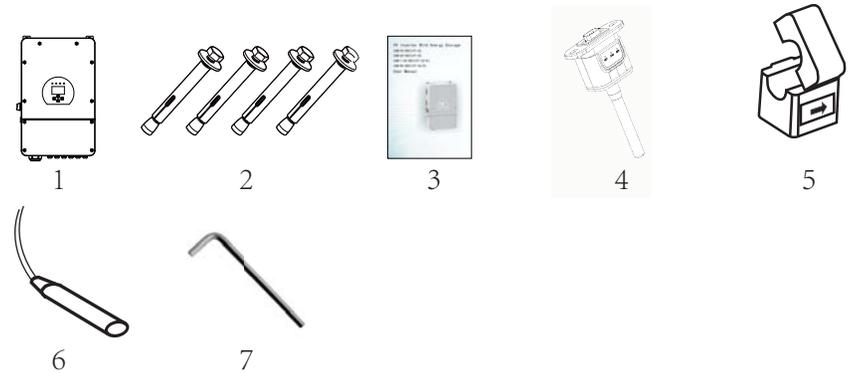
This inverter can power all kinds of appliances in home or office environment, including motor type appliances such as refrigerator and air conditioner.



3. Installation

3.1 Parts List

Check the equipment before installation. Please make sure nothing is damaged in the package. You should have received the items in the following package:



No	Description	Qty
1	H-5.0K-US H-7.6K-US	1
2	Stainless steel expansion bolts M8*80	4
3	User manual	1
4	WiFi plug	1

5	Current transformer (Optional)	2(US)/1(EU)
6	Battery sensor	1
7	L-type Hexagon wrench	1

Chart 3-1 Parts List

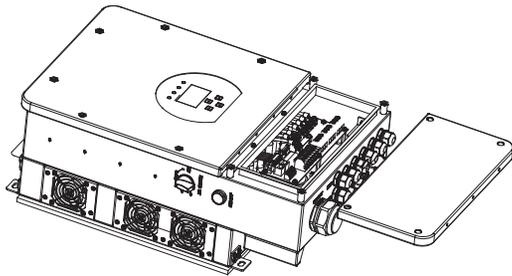
3.2 Mounting instructions

Installation Precaution

This Hybrid inverter is designed for outdoor use(IP65),Please make sure the installation site meets below conditions:

- Not in direct sunlight
- Not in areas where highly flammable materials are stored.
- Not in potential explosive areas.
- Not in the cool air directly.
- Not near the television Antenna or antenna cable.
- Not higher than altitude of about 2000 meters above sea level.
- Not in environment of precipitation or humidity(>95%)

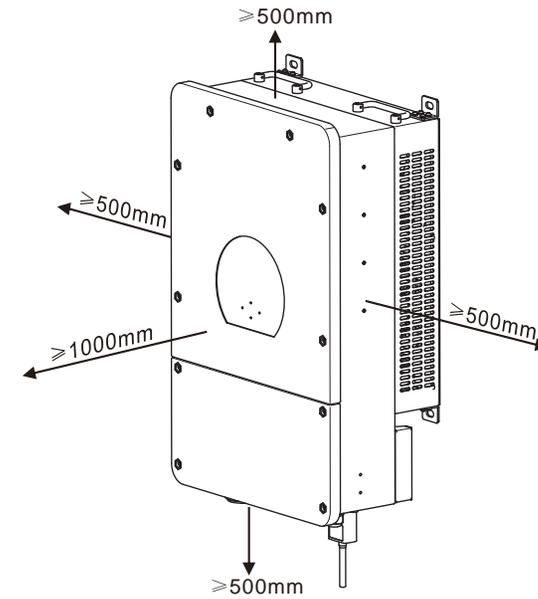
Please AVOID direct sunlight, rain exposure, snow laying up during installation and operation. Before connecting all wires,please take off the metal cover by removing screws as shown below:



Considering the following points before selecting where to install:

- Please select a vertical wall with load-bearing capacity for installation, suitable for installation on concrete or other non-flammable surfaces,installation is shown below.
- Install this inverter at eye level in order to allow the LCD display to be read at all times.

- The ambient temperature should be between -25~60 °C to ensure optimal operation.
- Be sure to keep other objects and surfaces as shown in the diagram to guarantee sufficient heat dissipation and have enough space for removing wires.

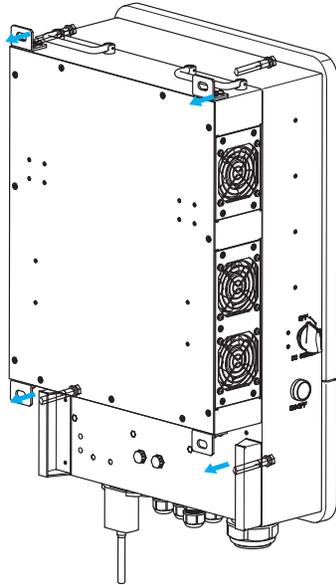
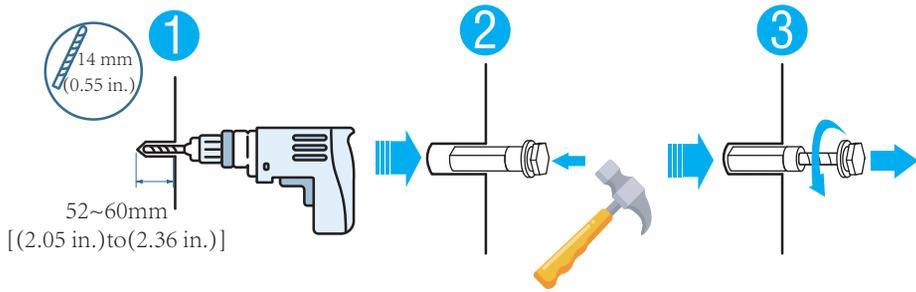


For proper air circulation to dissipate heat, allow a clearance of approx. 50cm to the side and approx.50cm above and below the unit.And 100cm to the front.

Mounting the inverter

Remember that this inverter is heavy!Please be careful when lifting out from the package. Choose the recommend drill head(as shown in below pic) to drill 4 holes on the wall, 52-60mm deep.

1. Use a proper hammer to fit the expansion bolt into the holes.
2. Carry the inverter and holding it,make sure the hanger aim at the expansion bolt,fix the inverter on the wall.
3. Fasten the screw head of the expansion bolt to finish the mounting.



3.3 Battery connection

For safe operation and compliance, a separate DC over-current protector or disconnect device is required between the battery and the inverter. In some applications, switching devices may not be required but over-current protectors are still required. Refer to the typical amperage in the table below for the required fuse or circuit breaker size.

Model	Wire Size	Cable(mm ²)	Torque value (max)
5/6/7.6/8Kw	2AWG	35	24.5Nm

Chart 3-2 Cable size



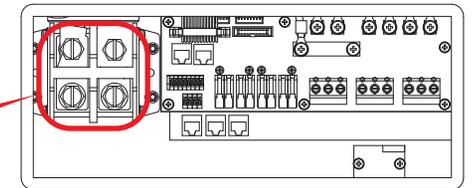
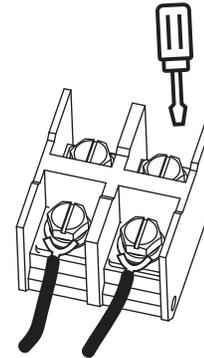
All wiring must be performed by a professional person.



Connecting the battery with a suitable cable is important for safe and efficient operation of the system. To reduce the risk of injury, refer to Chart 3-2 for recommended cables.

Please follow below steps to implement battery connection:

1. Please choose a suitable battery cable with correct connector which can well fit into the battery terminals. 2. Use a suitable screwdriver to unscrew the bolts and fit the battery connectors in, then fasten the bolt by the screwdriver, make sure the bolts are tightened with torque of 24.5 N.M.
2. Nm in clockwise direction, make sure polarity at both the battery and inverter is correctly connected.



3. In case of children touch or insects go into the inverter, please make sure the inverter connector is fastened to the waterproof position by twisting it clockwise.

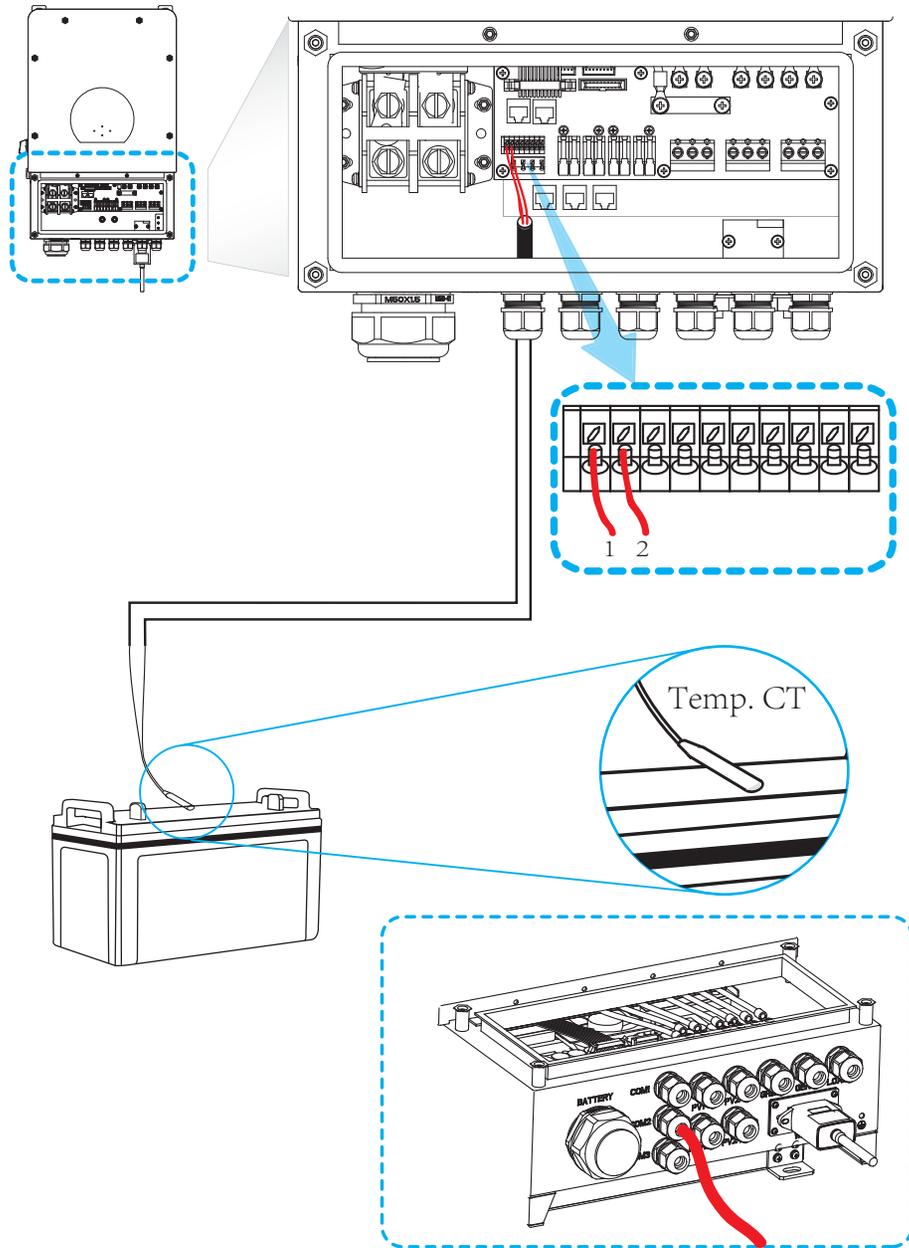


Installation must be performed with care.



Before making the final DC connection or closing the DC breaker/disconnect, be sure positive(+) must be connected to positive(+) and negative(-) must be connected to negative(-). Reverse polarity connection on the battery will damage the inverter.

3.3.2 Battery temperature connection



3.4 AC Input/Output Connection

- Before connecting to AC input power source, please install a separate AC breaker between inverter and AC input power source. This will ensure the inverter can be securely disconnected during maintenance and fully protected from over current of AC input. The recommended of AC breaker is 50A for 5kw and 80A for 8KW.
- There are three terminal blocks with “Grid” “Load” and “GEN” markings. Please do not misconnect input and output connectors.



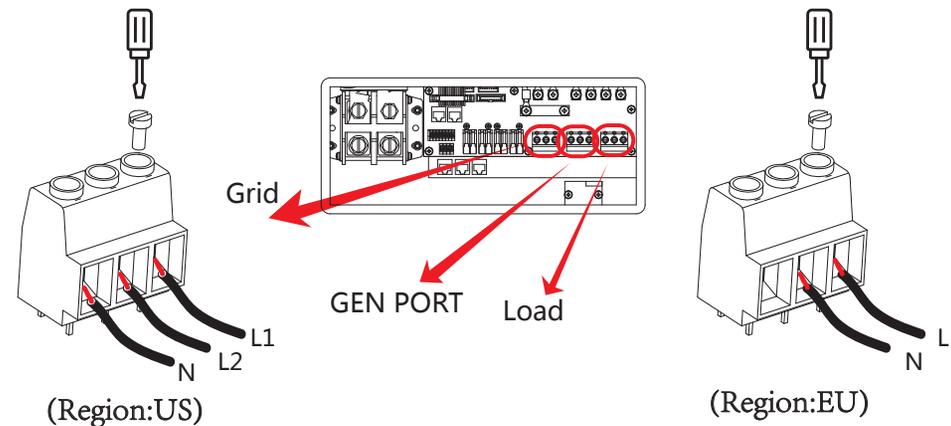
All wiring must be performed by a qualified personnel. It is very important for system safety and efficient operation to use appropriate cable for AC input connection. To reduce risk of injury, please use the proper recommended cable as below.

Model	Gauge	Cable(mm ²)	Torque value
5KW	8AWG	8	1.2Nm
7.6KW	6AWG	13	1.2Nm

Chart 3-3 Recommended Size for AC wires

Please follow below steps to implement AC input/output connection:

1. Before making AC input/output connection, be sure to open DC protector or disconnecter first.
2. Remove insulation sleeve 10mm length, unscrew the bolts, insert the AC input wires according to polarities indicated on the terminal block and tighten the terminal screws. Make sure the connection is complete.





Be sure that AC power source is disconnected before attempting to wire it to the unit.

3. Then, insert AC output wires according to polarities indicated on the terminal block and tighten terminal. Be sure to connect corresponding N wires and PE wires to related terminals as well.
4. Make sure the wires are securely connected.
5. Appliances such as air conditioner are required at least 2-3 minutes to restart because it is required to have enough time to balance refrigerant gas inside of circuit. If a power shortage occurs and recovers in short time, it will cause damage to your connected appliances. To prevent this kind of damage, please check manufacturer of air conditioner if it is equipped with time-delay function before installation. Otherwise, this inverter will trigger overload fault and cut off output to protect your appliance but sometimes it still causes internal damage to the air conditioner

3.5 PV Connection

Before connecting to PV modules, please install a separately DC circuit breaker between inverter and PV modules. It is very important for system safety and efficient operation to use appropriate cable for PV module connection. To reduce risk of injury, please use the proper recommended cable size as below.

Model	Wire Size	Cable(mm ²)	Torque value (max)
5/6/7.6/8KW	1X12AWG	4	1.2Nm

Chart 3-2 Cable size



To avoid any malfunction, do not connect any PV modules with possible current leakage to the inverter. For example, grounded PV modules will cause current leakage to the inverter. When using PV modules, please be sure NO grounding.



It is requested to use PV junction box with surge protection. Otherwise, it will cause damage on inverter when lightning occurs on PV modules.

3.5.1 PV Module Selection:

When selecting proper PV modules, please be sure to consider below parameters:

- 1) Open circuit Voltage (Voc) of PV modules not exceeds max. PV array open circuit voltage of inverter.
- 2) Open circuit Voltage (Voc) of PV modules should be higher than min. start voltage.

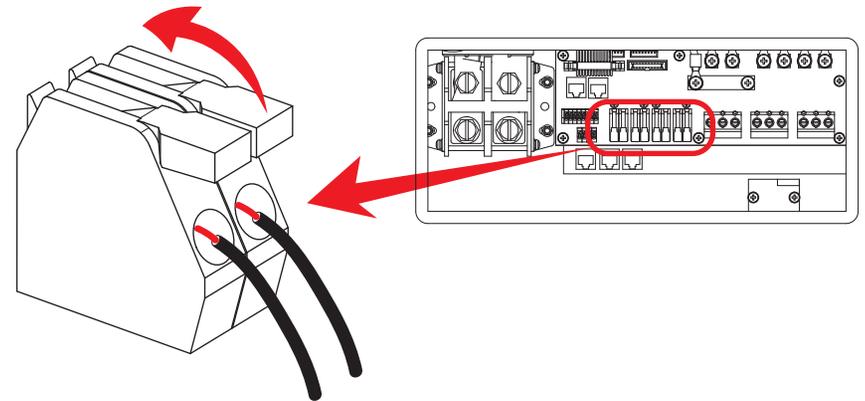
Inverter Model	5KW	7.6KW
PV Input Voltage	370V(100V~500V)	
PV Array MPPT Voltage Range	125Vdc-425Vdc	
No. of MPP Trackers	2	
No. of Strings per MPP Tracker	1+1	2+2

Chart 3-5

3.5.2 PV Module Wire Connection:

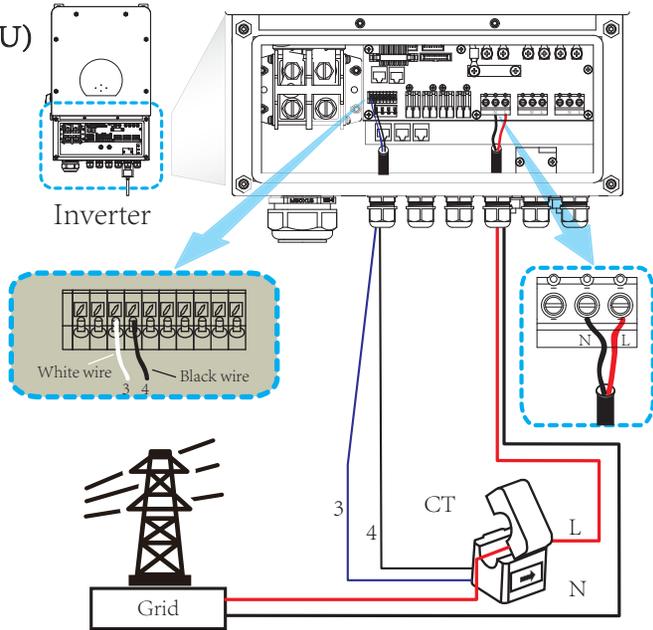
Please follow below steps to implement PV module connection:

1. Remove insulation sleeve 10 mm for positive and negative conductors.
2. Suggest to put bootlace ferrules on the end of positive and negative wires with a proper crimping tool.
3. Check correct polarity of wire connection from PV modules and PV input connectors. Then, connect positive pole (+) of connection wire to positive pole (+) of PV input connector. Connect negative pole (-) of connection wire to negative pole (-) of PV input connector. Close the switch and make sure the wires are tightly fixed.

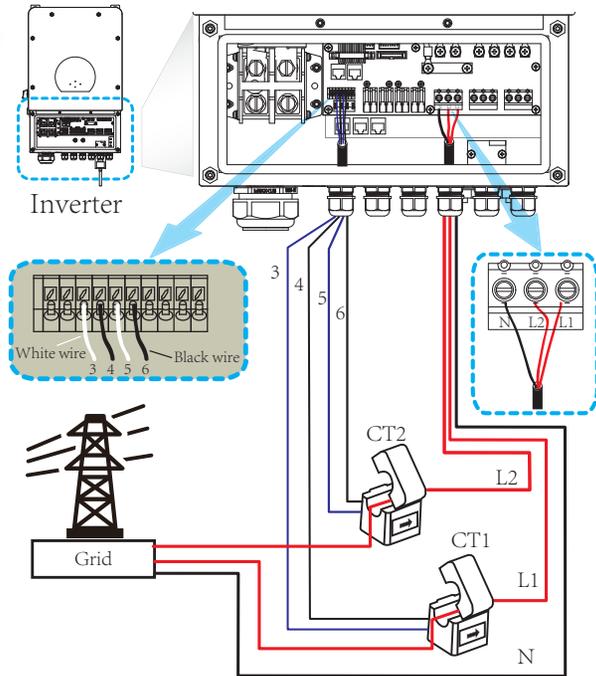


3.6 CT Connection

(Region:EU)



(Region:US)

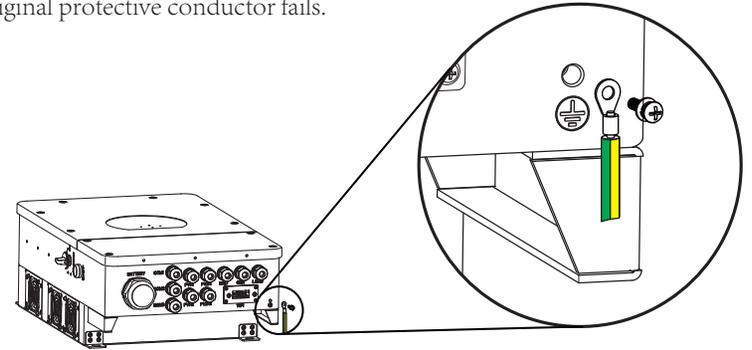


Note:

When the inverter is in the off-grid state, the N line needs to be connected to the earth.

3.7 Earth Connection(mandatory)

Ground cable shall be connected to ground plate on grid side this prevents electric shock if the original protective conductor fails.

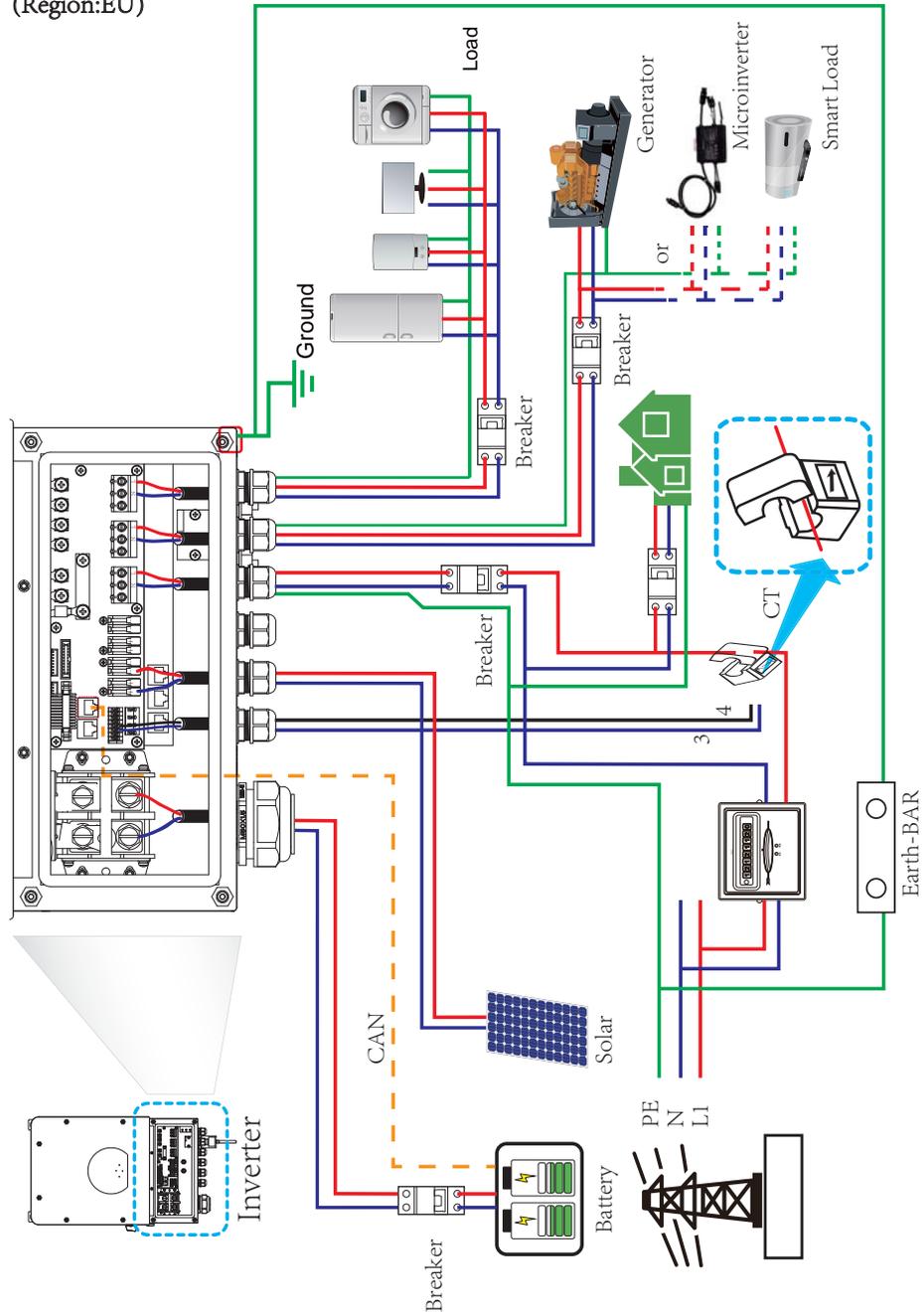


3.8 WIFI Connection

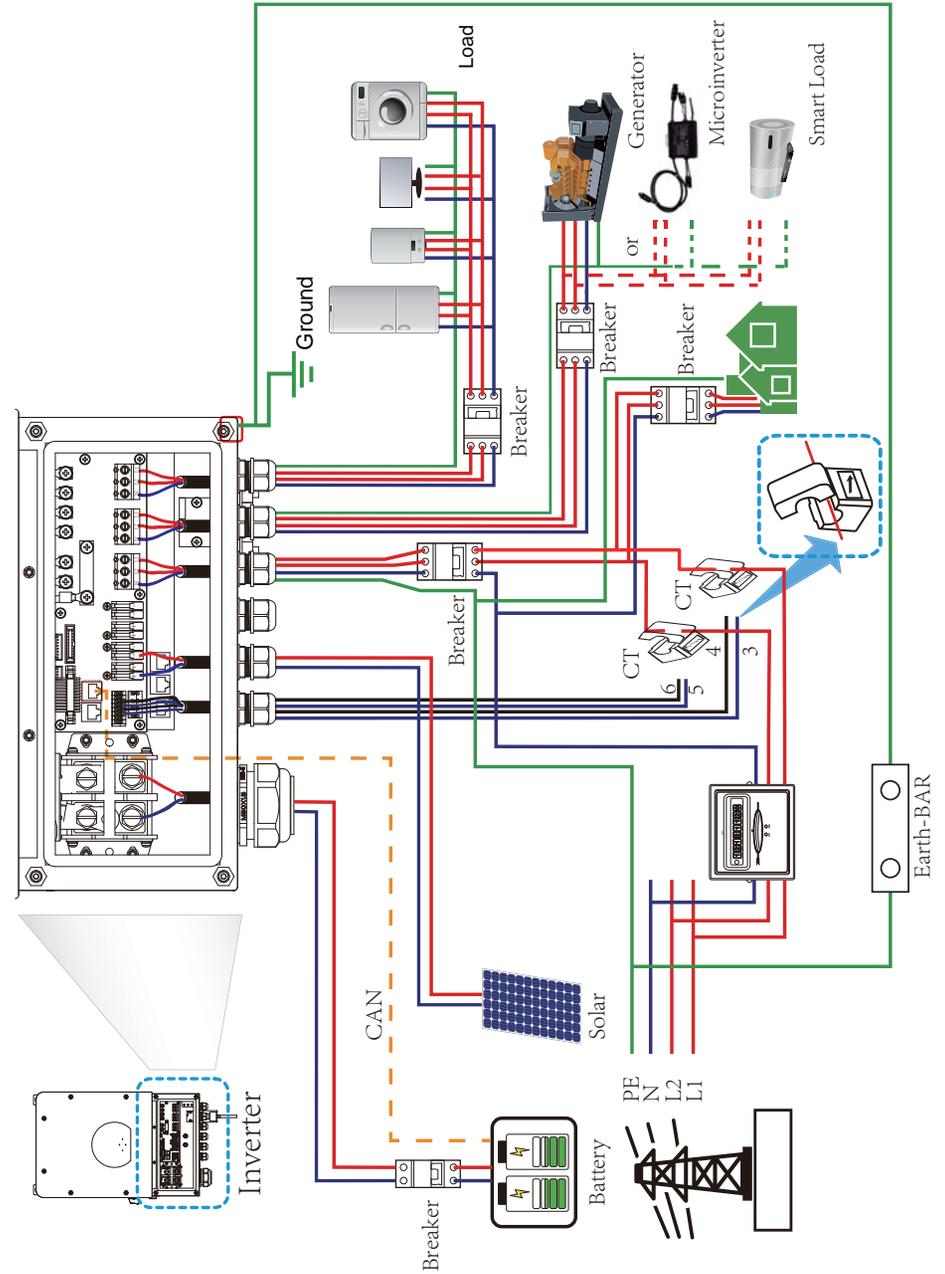
For the configuration of Wi-Fi Plug, please refer to illustrations of the Wi-Fi Plug.

3.9 Wiring System for Inverter

(Region:EU)

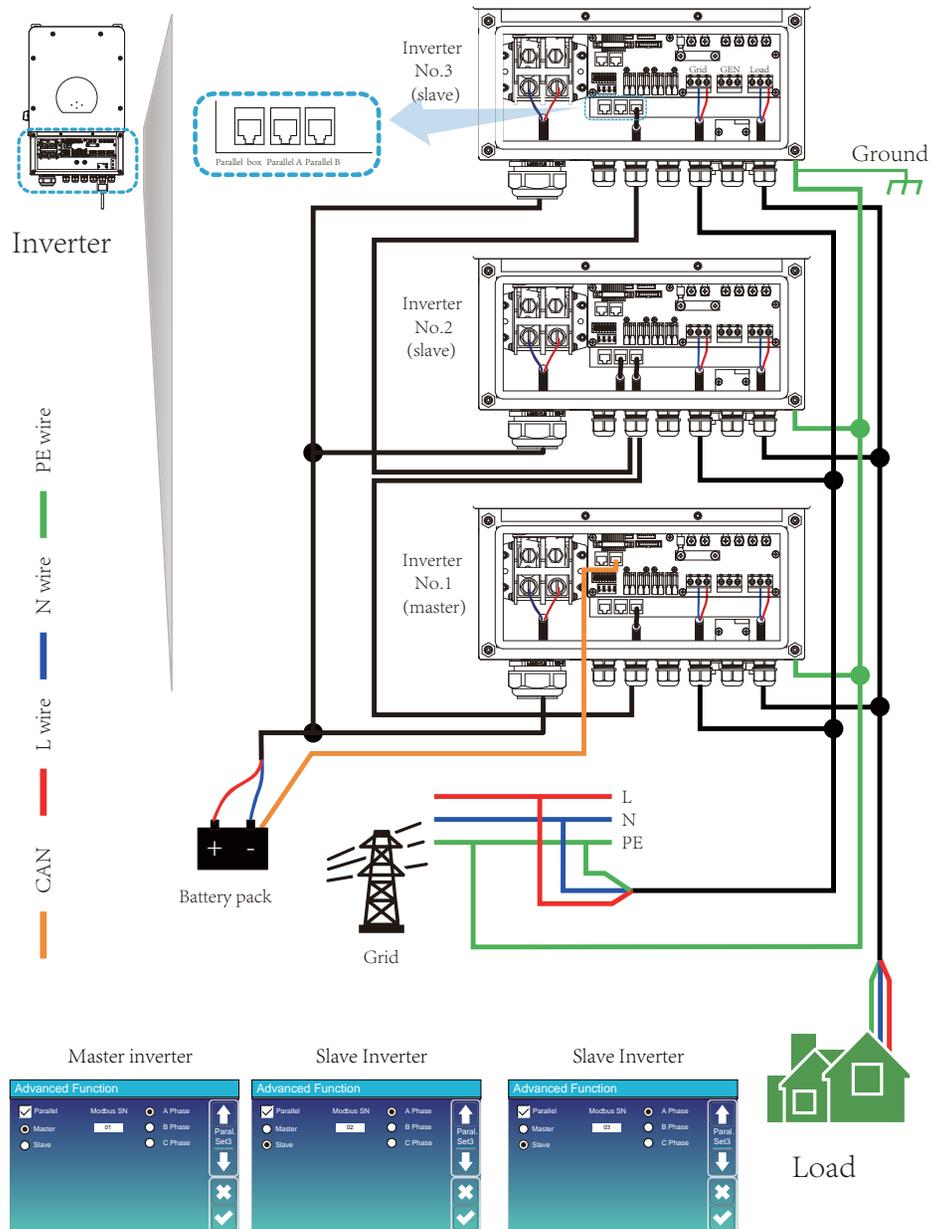


(Region:US)



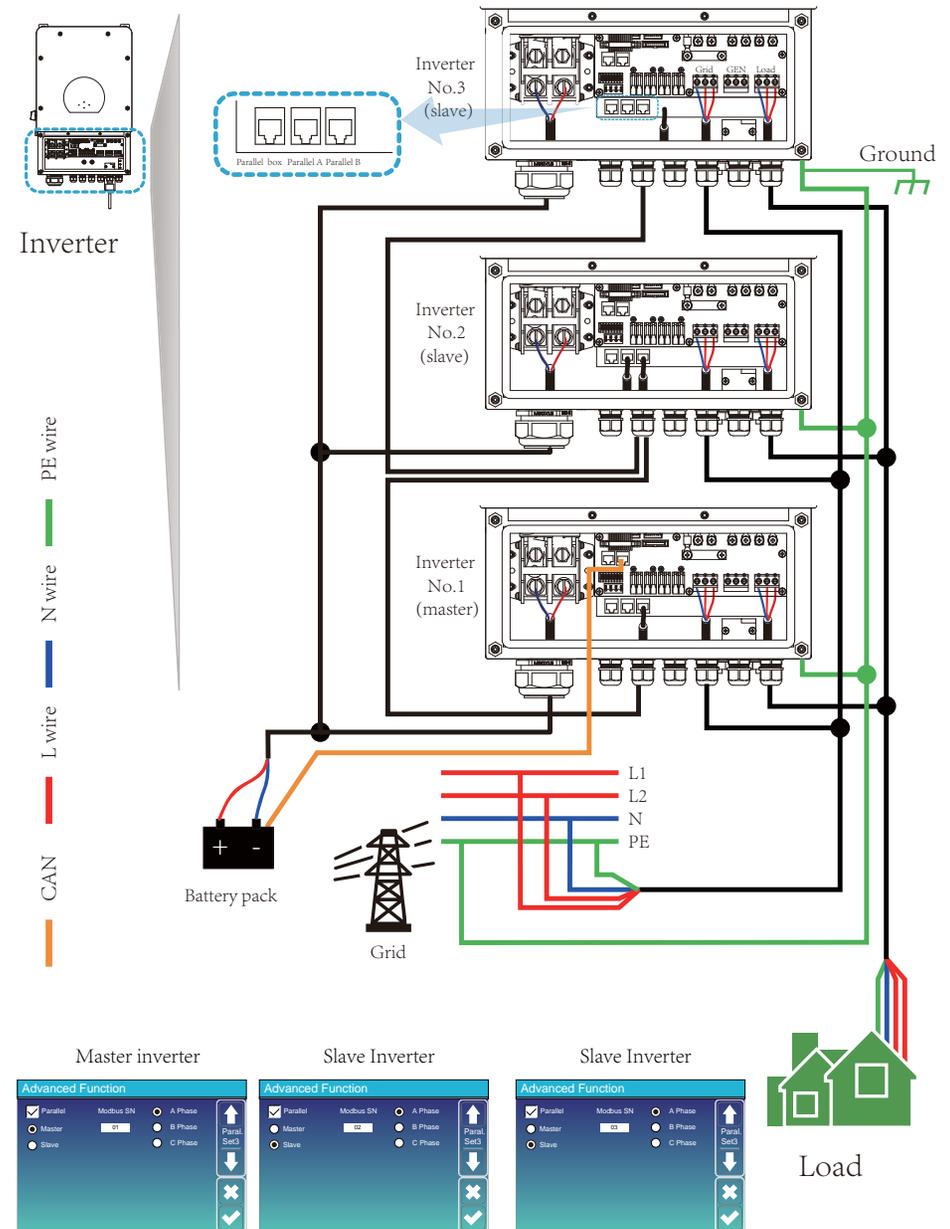
3.10 Single phase parallel connection diagram

(Region:EU)

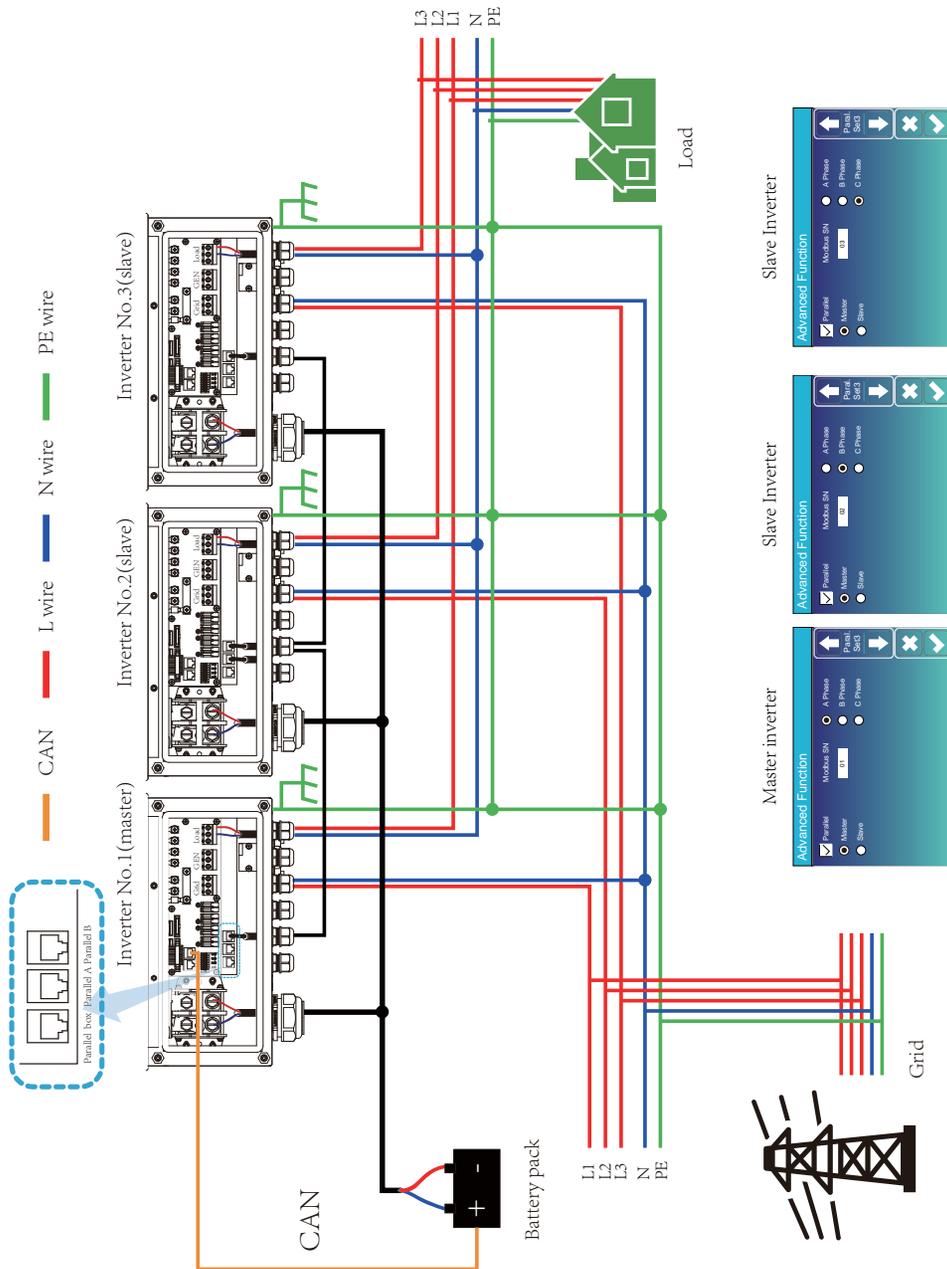


3.11 Split phase parallel connection diagram

(Region:US)



3.12 Three phase Parallel Inverter



4. OPERATION

4.1 Power ON/OFF

Once the unit has been properly installed and the batteries are connected well, simply press On/Off button (located on the left side of the case) to turn on the unit. When system without battery connected, but connect with either PV or grid, and ON/OFF button is switched off, LCD will still light up (Display will show OFF). In this condition, when switch on ON/OFF button and select NO battery, system can still working.

4.2 Operation and Display Panel

The operation and display panel, shown in below chart, is on the front panel of the inverter. It includes four indicators, four function keys and a LCD display, indicating the operating status and input/output power information.

LED Indicator		Messages
DC	Green led solid light	PV Connection normal
AC	Green led solid light	Grid Connection normal
Normal	Green led solid light	Inverter operating normal
Alarm	Red led solid light	Malfunction or warning

Chart 4-1 LED indicators

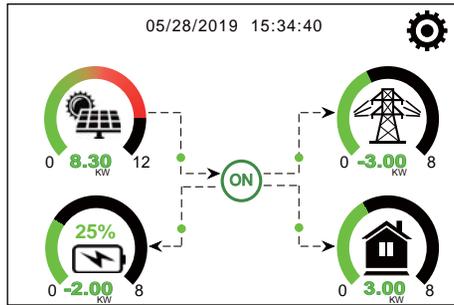
Function Key	Description
Esc	To exit setting mode
Up	To go to previous selection
Down	To go to next selection
Enter	To confirm the selection

Chart 4-2 Function Buttons

5. LCD Display Icons

5.1 Main Screen

The LCD is touchscreen, below screen shows the overall information of the inverter.



1. The icon in the center of the home screen indicates that the system is Normal operation. If it turns into “comm./F01~F64”, it means the inverter has communication errors or other errors, the error message will display under this icon (F01-F64 errors, detail error info can be viewed in the System Alarms menu).

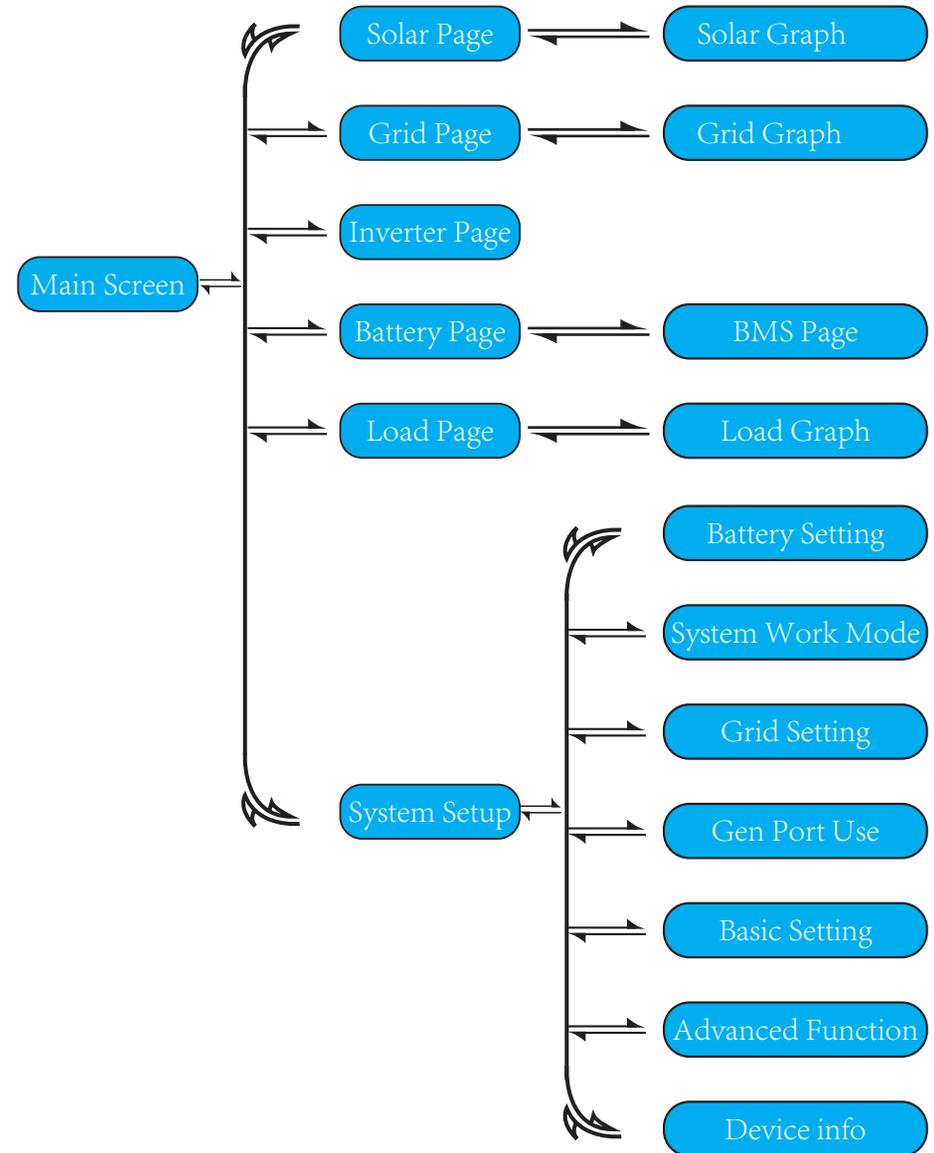
2. At the top of the screen is the time.

3. System Setup Icon, Press this set button, you can enter into the system setup screen which including Basic Setup, Battery Setup, Grid Setup, System Work Mode, Generator port use, Advanced function and Li-Batt info.

4. The main screen showing the info including Solar, Grid, Load and Battery. Its also displaying the energy flow direction by arrow. When the power is approximate to high level, the color on the panels will changing from green to red so system info showing vividly on the main screen.

- PV power and Load power always keep positive.
- Grid power negative means sell to grid, positive means get from grid.
- Battery power negative means charge, positive means discharge.

5.1.1 LCD operation flow chart



5.2 Solar Power Curve

Solar

Power: 1560W ① Today=8.0 KWH ③
 Total =12.00 KWH ③

PV1-V: 286V PV2-V: 45V ②
 PV1-I: 5.5A PV2-I: 0.0A
 P1: 1559W P2: 1W

Energy

This is Solar Panel detail page.

- ① Solar Panel Generation.
- ② Voltage,Current,Power for each MPPT.
- ③ Solar Panel energy for Day and Total.

Press the “Energy” button will enter into the power curve page.

Inverter

Power: 44W ① DC-T:52.6C ③
 AC-T:41.0C ③

L1: 240V L2: 0V ②
 I1:0.6A I2:0.0A

Power1: 0W
 Power2: 0W

Energy

This is Inverter detail page.

- ① Inverter Generation.
- ② Voltage,Current,Power for each Phase.
- ③ DC-T:mean DC-DC temperature, AC-T:mean Heat-sink temperature.

Load

Power: 42W ① Today=0.0 KWH ③
 Total =0.80 KWH ③

L1: 240V L2: 0V ②
 P1: 0W P2: 0W

Forced

Energy

This is Back-up Load detail page.

- ① Back-up Power.
- ② Voltage,Power for each Phase.
- ③ Back-up consumption for Day and Total.

Press the “Energy” button will enter into the power curve page.

Press the “Forced” button will forced open the smart-load(While GEN PORT utilized as Smart-load output).

Grid

Stand-by
 Power: 0W ① BUY
 Today=2.2KWH ③
 Total =11.60 KWH ③

0.0Hz
 L1: 0V L2: 0V ②
 CT1: 0W CT2: 0W
 LD1: 0W LD2: 0W
 SELL
 Today=0.0KWH
 Total =8.60 KWH ③

Energy

This is Grid detail page.

- ① Status,Power,Frequency.
- ② L1&L2:Voltage for each Phase
 CT1&CT2:External Current Sensor Power
 LD1&LD2:Internal Current Sensor Power.
- ③ BUY:Energy from Grid to Inverter,
 SELL:Energy from Inverter to Load.

Press the “Energy” button will enter into the power curve page.

Batt

Stand-by
 SOC: 36%
 U:50.50V
 I:-58.02A
 Power: -2930W
 Temp:30.0C

Li-BMS

This is Battery detail page.

if you use Lithium Battery,you can enter BMS page.

Li-BMS

Mean Voltage:50.34V Charging Voltage :53.2V
 Total Current:55.00A Discharging Voltage :47.0V
 Mean Temp :23.5C Charging current :50A
 Total SOC :38% Discharging current :25A
 Dump Energy:57Ah

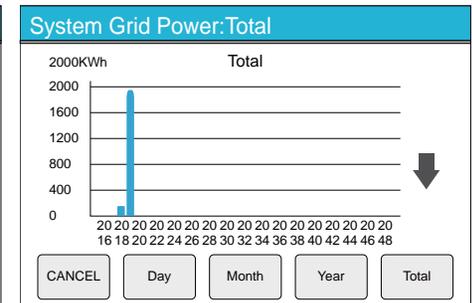
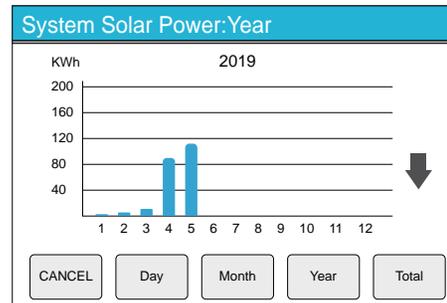
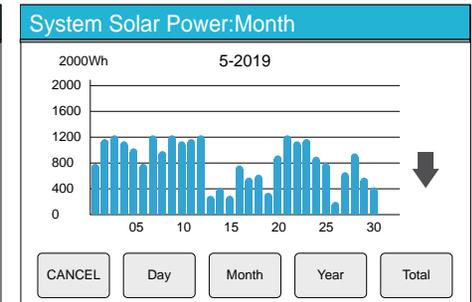
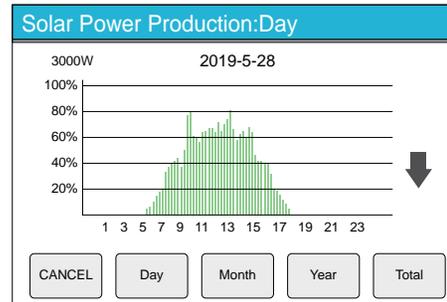
Sum Data
 Details Data

Li-BMS

	Volt	Curr	Temp	SOC	Energy	Charge	Fault
1	50.38V	19.70A	30.6C	52.0%	26.0Ah	0.0V	0.0A
2	50.33V	19.10A	31.0C	51.0%	25.5Ah	53.2V	25.0A
3	50.30V	16.80A	30.2C	12.0%	6.0Ah	53.2V	25.0A
4	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
5	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
6	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
7	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
8	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
9	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
10	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
11	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
12	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
13	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
14	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A
15	0.00V	0.00A	0.0C	0.0%	0.0Ah	0.0V	0.0A

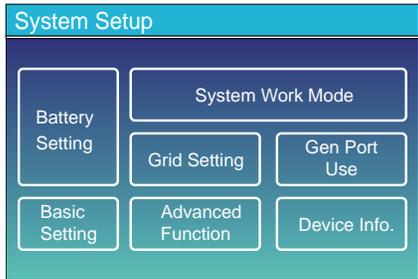
Sum Data
 Details Data

5.3 Curve Page-Solar & Load & Grid



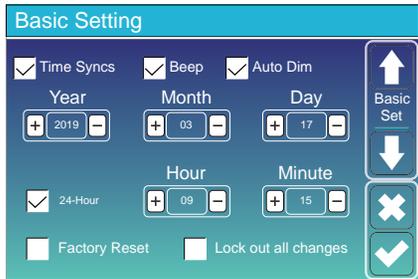
Solar power curve for daily,monthly,yearly and total can be roughly checked on the LCD, For more accuracy power generation,pls check on the monitoring system.Click the up and down arrow to check power curve of different period.

5.4 System Setup Menu



This is System Setup page.

5.5 Basic Setup Menu



This is Basic Setup page.

5.6 Battery Setup Menu



Lithium Battery

Batt Mode----- Lithium
 Max A charge----- 0-185A
 Max A Discharge-----0-185A
 Activate Battery-----Enable

AGM Battery

Batt Mode----- Use Batt V or Use Batt V%
 Batt Capacity----- 50-2000Ah
 Max A charge----- 0-185A
 Max A Discharge-----0-185A
 Activate Battery -----Enable

No Batt --- No need to set other parameters, keep the default value.



This is Battery Setup page. ① ③

Start =30%---It indicates that the Generator will start when the Battery capacity is less than 30% in the condition of Off-grid mode.

A = 40A---It indicates the Current that the Generator charges the Battery after started.

Gen Charge---The Switch that the Generator charges the Battery.

Gen Signal ---It indicates whether the Generator's ATS signal is on.

Max RunTime(x.xhours)Indicates that the generator is the longest in a day,The time x.xhours can be run, and the generator will be turned off when the time is up.
 24.0hours (default) means that It keeps running without shutting down.

DownTime(x.xhours)It indicates the delay of the Generator to shut down after it has reached the run time.

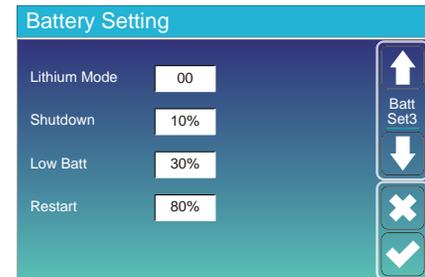
This is Grid Charge, you need select. ②

Start =30%---no use, for customization.

A = 40A--- It indicates the Current that the Grid charges the Battery.

Grid Charge---The Switch that the Generator charges the Battery.

Grid Signal ---Disable.



Lithium Mode--This is BMS protocol.default is 0 please reference the document (Approved Battery-Deye) .

Shutdown 10%--the inverter will shutdown if the SOC is below this.

Low Batt 20% --the inverter will shutdown if the SOC is below this.

Restart 40% --Restart level when inverter shutdown.

Battery Setting

Float V ①	55.2V	Shutdown ③	41.0V
Absorption V	57.6V	Low Batt	45.0V
Equalization V	58.8V	Restart	52.0V
Equalization Days	90 days	TEMPCO(mV/C/Cell)	-5 ②
Equalization Hours	2.0 hours	Batt Resistance	25mOhms

This is Battery 4 tages charge voltage. **①**

This is for professional installers,you can hold default if you do not know. **②**

Shutdown 10%--the inverter will shutdown if the SOC is below this.

Low Batt 20% --the inverter will alarm if the SOC is below this.

Restart 40% --Restart level when inverter shutdown. **③**

5.7 System Work Mode Setup Menu

System Work Mode

Work Mode

Selling First

Zero Export To Load Solar Sell

Zero Export To CT Solar Sell

Max Sell Power

Energy pattern BattFirst LoadFirst

Work Mode

Selling First : It means that the excess energy has priority in grid connection.

Zero Export To Load : It means output power according to it consumed by the load.

Zero Export To CT : It means output power according to the CT position.

Solar Sell : It means that the excess solar energy can be integrated into the grid.

Max Sell Power 0-8000W

Energy Pattern

BattFirst--- It means solar power will charge battery first, when battery is full then feed-out power to the Load or Grid.

LoadFirst-- The solar energy will be used to supply the local load first,then to charge the battery.The redundant power will export to the public grid.

System Work Mode

Grid Charge Gen Time Of Use Batt

<input type="checkbox"/>	<input type="checkbox"/>	01:00 ~ 5:00	80%
<input type="checkbox"/>	<input type="checkbox"/>	05:00 ~ 9:00	80%
<input type="checkbox"/>	<input type="checkbox"/>	09:00 ~ 13:00	80%
<input type="checkbox"/>	<input type="checkbox"/>	13:00 ~ 17:00	80%
<input type="checkbox"/>	<input type="checkbox"/>	17:00 ~ 21:00	80%
<input type="checkbox"/>	<input type="checkbox"/>	21:00 ~ 01:00	80%

Time of use

① Switch for Grid charging the battery.

② Switch for Gen charging the battery.

③ There are six time period can be set, each period must from small to large.

5.8 Grid Setup Menu

Grid Setting

Grid Mode

General Standard

UL1741 & IEEE1547

CPUC RULE21

SRD-UL-1741

Grid Type

220V Single Phase

120/240V Split Phase

120/208V 3 Phase

120V Single Phase

Please select the correct Grid Mode in your local area. If you are not sure, please choose General Standard.

Please select the correct Grid Type in your local area, otherwise the machine will not work or be damaged.

Grid Setting

Grid Frequency 50HZ 60HZ

Reconnection Time PF

Grid HZ High Grid Vol High

Grid HZ Low Grid Vol Low

UL1741&IEEE1547, CPUC RULE21, SRD-UL-1741

No need to set the function of this interface.

General Standard

Please select the correct Grid Frequency in your local area. You can hole this in default value.

Grid Setting

Q(V) FW VW

V1:0.0V Q1:0.00 Fstart:0.00Hz Vstart:0.0V

V2:0.0V Q2:0.00 Fstop:0.00Hz Vstop:0.0V

V3:0.0V Q3:0.00 Normal Ramp rate 0.0%/s

V4:0.0V Q4:0.00 Soft Start Ramp rate 0.0%/s

For California only.

Grid Setting

L/HVRT L/HFRT

HV2:0.0V 0.16S

HV1:0.0V 0.16S HF2:0.00HZ 0.16S

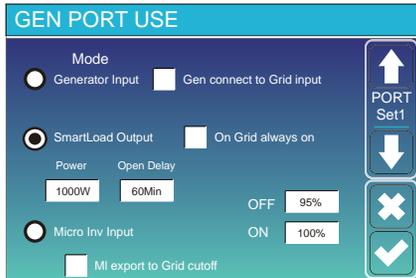
LV1:0.0V 0.16S HF1:0.00HZ 0.16S

LV2:0.0V 0.16S LF1:0.00HZ 0.16S

LV3:0.0V 0.16S LF2:0.00HZ 0.16S

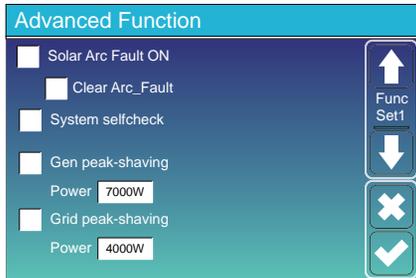
For California only.

5.9 Generator Port Use Setup Menu

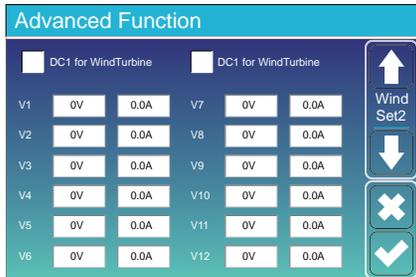


Generator Input:use Generator
 SmartLoad Output: if the SOC is up than “ON” and solar power is high than 1000W. the inverter will open smartload.
 On Grid always on:mean when have Grid,the smartload will always on
 Micro Inv Input:Inverter will open Microinverter.if the SOC if below the “ON” and close if the SOC if up than the “OFF”

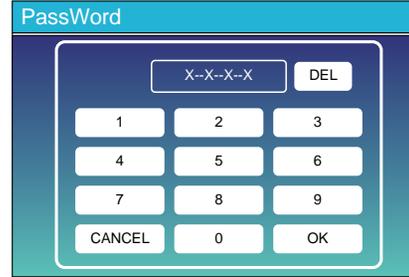
5.10 Advanced Function Setup Menu



Solar Arc Fault ON---This is only for US.
 System selfcheck ---Disable. this is only for factory.
 Gen Peak-shaving---Enable When the power of the generator exceeds the rated value of it, the inverter will provide the redundant part to ensure that the generator will not overload.
 Grid Peak-shaving---Enable When the power of the grid exceeds the set value, the inverter will provide the redundant part to ensure that the grid power does not exceed the set value.

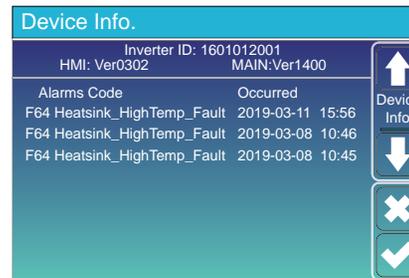


This is for WindTurbine



Factory restart: 9999
 Lock out all changes:7777

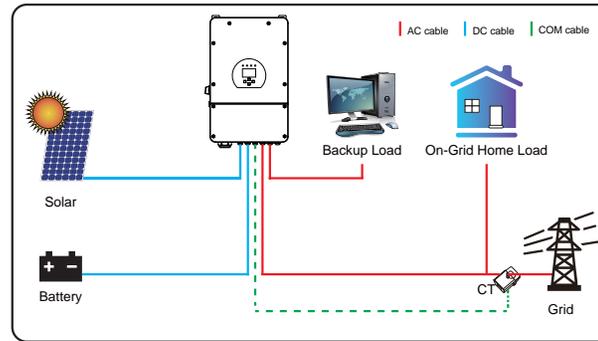
5.11 Device Info Setup Menu



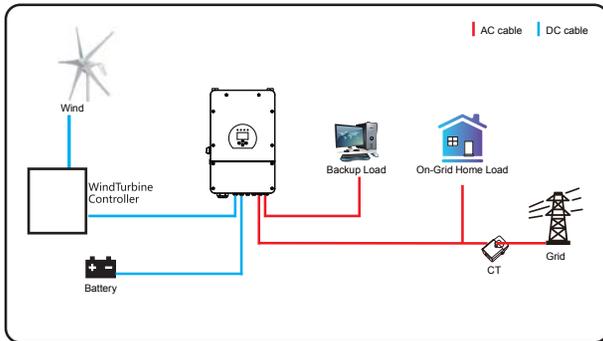
This page show Inverter ID, Inverter version and alarm codes.
 HMI: LCD version
 MAIN: MCU version

6. Mode

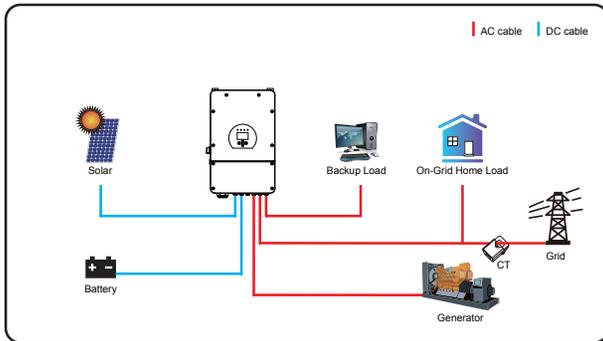
Mode I:Basic



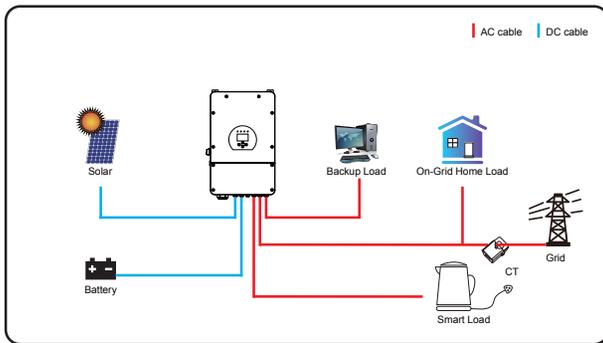
Mode II: With WindTurbine



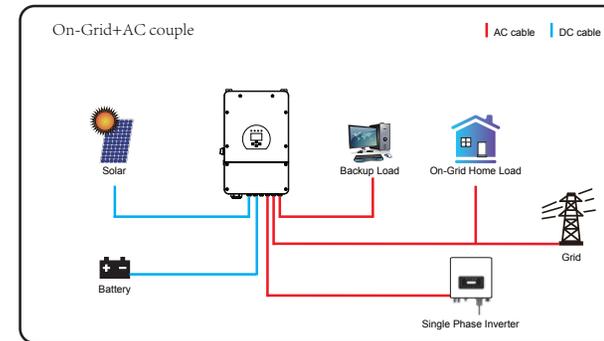
Mode III: With Generator



Mode IV: With Smart-Load



Mode V: With On-Grid Inverter



The 1st priority power of the system is always the PV power, then 2nd and 3rd priority power will be the battery bank or grid according to the settings. The last power backup will be the Generator if it is available.

7. Fault information and processing

The energy storage inverter is designed according to the grid-connected operation standard and meets the safety requirements and electromagnetic compatibility requirements. Before leaving the factory, the inverter undergoes several rigorous tests to ensure that the inverter can operate reliably.



If any of the fault messages listed in Table 6-1 appear on your inverter and the fault has not been removed after restarting, please contact your local dealer or service center. You need to have the following information ready.

1. Inverter serial number;
2. Distributor or service center of the inverter ;
3. On-grid power generation date;
4. The problem description (including the fault code and indicator status displayed on the LCD) is as detailed as possible.
5. Your contact information. In order to give you a clearer understanding of the inverter's fault information, we will list all possible fault codes and their descriptions when the inverter is not working properly.

In order to give you a clearer understanding of the inverter's fault information, we will list all possible fault codes and their descriptions when the inverter is not working properly.

Fault information	Instruction
F01	DC_Inversed_Failure
F02	DC_Insulation_Failure
F03	GFDI_Failure
F04	GFDI_Ground_Failure
F05	EEPROM_Read_Failure
F06	EEPROM_Write_Failure
F07	GFDI_Fuse_Failure
F08	GFDI_Relay_Failure
F09	IGBT_Failure
F10	AuxPowerBoard_Failure
F11	AC_MainContactor_Failure
F12	AC_SlaveContactor_Failure
F13	Working_Mode_change
F14	DC_OverCurr_Failure
F15	AC_OverCurr_Failure
F16	GFCI_Failure
F17	Tz_COM_OC_Fault
F18	Tz_Ac_OverCurr_Fault
F19	Tz_Integ_Fault
F20	Tz_Dc_OverCurr_Fault
F21	Tz_GFDI_OC_Fault
F22	Tz_EmergStop_Fault

F23	Tz_GFCI_OC_Fault
F24	DC_Insulation_Fault
F25	DC_Feedback_Fault
F26	BusUnbalance_Fault
F27	DC_Insulation_ISO_Fault
F28	DCIOver_M1_Fault
F29	AC_AirSwitch_Fault
F30	AC_MainContactor_Fault
F31	AC_SlaveContactor_Fault
F32	DCIOver_M2_Fault
F33	AC_OverCurr_Fault
F34	AC_Overload_Fault
F35	AC_NoUtility_Fault
F36	AC_GridPhaseSeque_Fault
F37	AC_Volt_Unbalance_Fault
F38	AC_Curr_Unbalance_Fault
F39	INT_AC_OverCurr_Fault
F40	INT_DC_OverCurr_Fault
F41	AC_WU_OverVolt_Fault
F42	AC_WU_UnderVolt_Fault
F43	AC_VW_OverVolt_Fault
F44	AC_VW_UnderVolt_Fault
F45	AC_UV_OverVolt_Fault
F46	AC_UV_UnderVolt_Fault
F47	AC_OverFreq_Fault
F48	AC_UnderFreq_Fault
F49	AC_U_GridCurr_DcHigh_Fault
F50	AC_V_GridCurr_DcHigh_Fault
F51	AC_W_GridCurr_DcHigh_Fault
F52	AC_A_InductCurr_DcHigh_Fault
F53	AC_B_InductCurr_DcHigh_Fault

F54	AC_C_InductCurr_DcHigh_Fault
F55	DC_VoltHigh_Fault
F56	DC_VoltLow_Fault
F57	AC_BackFeed_Fault
F58	AC_U_GridCurr_High_Fault
F59	AC_V_GridCurr_High_Fault
F60	AC_W_GridCurr_High_Fault
F61	AC_A_InductCurr_High_Fault
F62	AC_B_InductCurr_High_Fault
F63	ARC_Fault
F64	Heatsink_HighTemp_Fault

Chart 6-1 Fault information

Under the guidance of our company, customers return our products so that our company can provide service of maintenance or replacement of products of the same value.

Customers need to pay the necessary freight and other related costs.

Any replacement or repair of the product will cover the remaining warranty period of the product. If any part of the product or product is replaced by the company itself during the warranty period, all rights and interests of the replacement product or component belong to Ningbo Deye Inverter Technology Co., Ltd.

Factory warranty does not include damage due to the following reasons:

- Damage during transportation of equipment;
- Damage caused by incorrect installation or commissioning;
- Damage caused by failure to comply with operation instructions, installation instructions or maintenance instructions;
- Damage caused by attempts to modify, alter or repair products;
- Damage caused by incorrect use or operation;
- Damage caused by insufficient ventilation of equipment;
- Damage caused by failure to comply with applicable safety standards or regulations;
- Damage caused by natural disasters or force majeure (e.g. floods, lightning, overvoltage, storms, fires, etc.)

In addition, normal wear or any other failure will not affect the basic operation of the product. Any external scratches, stains or natural mechanical wear does not represent a defect in the product.

8. Limitation of Liability

In addition to the product warranty described above, the state and local laws and regulations provide financial compensation for the product's power connection (including violation of

implied terms and warranties). The company hereby declares that the terms and conditions of the product and the policy cannot and can only legally exclude all liability within a limited scope.

9. Datasheet

Technical Data	H-5.0K-US	H-7.6K-US
Battery Input Data		
Battery Type	Lead-acid or Li-Ion	
Battery Voltage Range (V)	40V-60V	
Max. Charging Current (A)	120A	190A
Max. Discharging Current (A)	120A	190A
Charging Curve	3 Stages/equalization	
External Temperature Sensor	Optional	
Charging Strategy for Li-Ion Battery	Self-adaption to BMS	
PV String Input Data		
Max. DC Input Power (W)	6500W	9880W
PV Input Voltage (V)	370V(100V~500V)	
MPPT Range (V)	125V-425V	
Start-up Voltage (V)	125V	
PV Input Current (A)	11A+11A	18A+18A
No. of MPPT Trackers	2	
No. of Strings per MPPT Tracker	1+1	2+2
AC Output Data		
Rated AC Output and UPS Power (W)	5000W	7600W
Max AC Output Power(W)	5500W	8360W
Peak Power(off grid)	2 times of rated power, 10 S	
AC Output Rated Current(A)	20.8A	31.7A/33A
Max. AC Current(A)	24A	36.4A/38A
Max Continuous AC Passthrough(A)	35A	50A
Output Frequency and Voltage	50/60Hz; 120/240Vac(split phase), 208Vac(2/3 phase),230Vac(single phase)	
Grid Type	Split phase、2/3 phase、Single Phase	
Current Harmonic Distortion	THD<3%(Linear loading<1.5%)	

Efficiency	
Max. Efficiency	97.60%
Euro Efficiency	97.00%
MPPT Efficiency	99.90%
Protection	
PV Arc Fault Detection	Integrated(Except European Type)
PV Input Lightning Protection	Integrated
Anti-islanding Protection	Integrated
PV String Input Reverse Polarity Protection	Integrated
Insulation Resistor Detection	Integrated
Residual Current Monitoring Unit	Integrated
Output Over Current Protection	Integrated
Output Shorted Protection	Integrated
Output Over Voltage Protection	Integrated
Certifications and Standards	
Grid Regulation	UL1741,IEEE1547,RULE21,VDE 0126,AS4777,NRS2017,G98,G99
Safety Regulation	IEC62109-1, IEC62109-2
EMC	EN61000-6-1, EN61000-6-3, FCC 15 class B
General Data	
Operating Temperature Range (C)	-25~60 C , >45 C Derating
Cooling	Fan
Noise (dB)	<30
Communication with BMS	RS485; CAN
Weight (Kg)	32Kg
Size (Width*Height*Depth mm)	680×420×233mm
Protection Degree	IP65
Installation style	Wall-mounted
Warranty	5 years