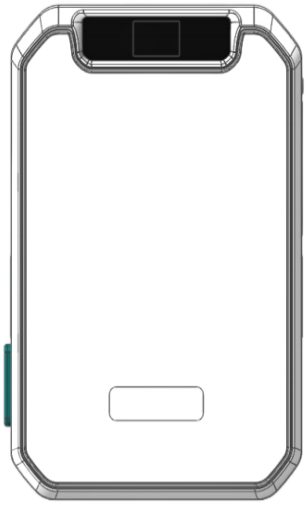
User Manual

MODEL 3（230V）

Off grid photovoltaic energy storage power station



Contents

1. Introduction

1.1 Important Safety Instructions

Danger!

- Danger to life due to high voltages in the inverter!
- All work must be carried out by qualified electrician.
- The appliance is not to be used by children or persons with reduced physical sensory or mental capabilities, or lack of exrerience and knowledge, unless they have been given supervision or instruction.
- Children should be supervised to ensure that they do not play with the appliance.

Caution!

- Danger of burn injuries due to hot enclosure parts!
- During operation, the upper lid of the enclosure and the enclosure body may become hot.
- Only touch the lower enclosure lid during operation.

Caution!

- Possible damage to health as a result of the effects of radiation!
- Do not stay closer than 20 cm to inverter for any length of time.

Note!

- Grounding the PV generator.
- Comply with the local requirements for grounding the PV modules and the PV generator. It is recommends connecting the generator frame and other electrically conductive surfaces in a manner which ensures continuous conduction and ground these in order to have optimal protection of system and persons.

Warning!

- Ensure input DC voltage ≤Max. DC voltage .Over voltage may cause permanent damage to inverter or other losses, which will not be included in warranty!

Warning !

- Authorized service personnel must disconnect both AC and DC power from inverter before attempting any maintenance or cleaning or working on any circuits connected to inverter.
- Risk of electric shock!

- Accesories only together with the inverter shipment are recommanded here.Other wise may result in a risk of fire, electric shock, or injury to person.
- Make sure that existing wiring is in good condition and that wire is not undersized.
- Do not disassemble any parts of inverter which are not mentioned in installation guide. It contains no user-serviceable parts. See Warranty for instructions on obtaining service. Attempting to service the inverter yourself may result in a risk of electric shock or fire and will void your warranty.
- Keep away from flammable, explosive materials to avoid fire disaster.
- The installation place should be away from humid or corrosive substance.
- Authorized service personnel must use insulated tools when installing or working with this equipment.
- PV modules shall have an IEC 61730 class A rating.
- Never touch either the positive or negative pole of PV connecting device. Strictly prohibit touching both of them at the same time.
- The unit contains capacitors that remain charged to a potentially lethal voltage after the MAINS , battery and PV supply has been disconnected.
- Hazardous voltage will present for up to 5 minutes after disconnection from power supply.
- CAUTION-RISK of electric shock from energy stored in capacitor, Never operate on the inverter couplers, the MAINS cables, Battery cables, PV cables or the PV generator when power is applied. After switching o ffthe PV , battery and Mains, always wait for 5minutes to let the intermediate circuit capacitors discharge before unpluging DC , battery inplug and MAINS couplers.
- When accessing the internal circuit of inverter, it is very important to wait 5 minutes before operating the power circuit or demounting the electrolyte capacitors inside the device. Do not open the device before hand since the capacitors require time sufficiently discharge!

1.2 Explanation of Symbol
This section gives an explanation of all the symbols shown on the inverter and on the type label.Symbols on the Type Label

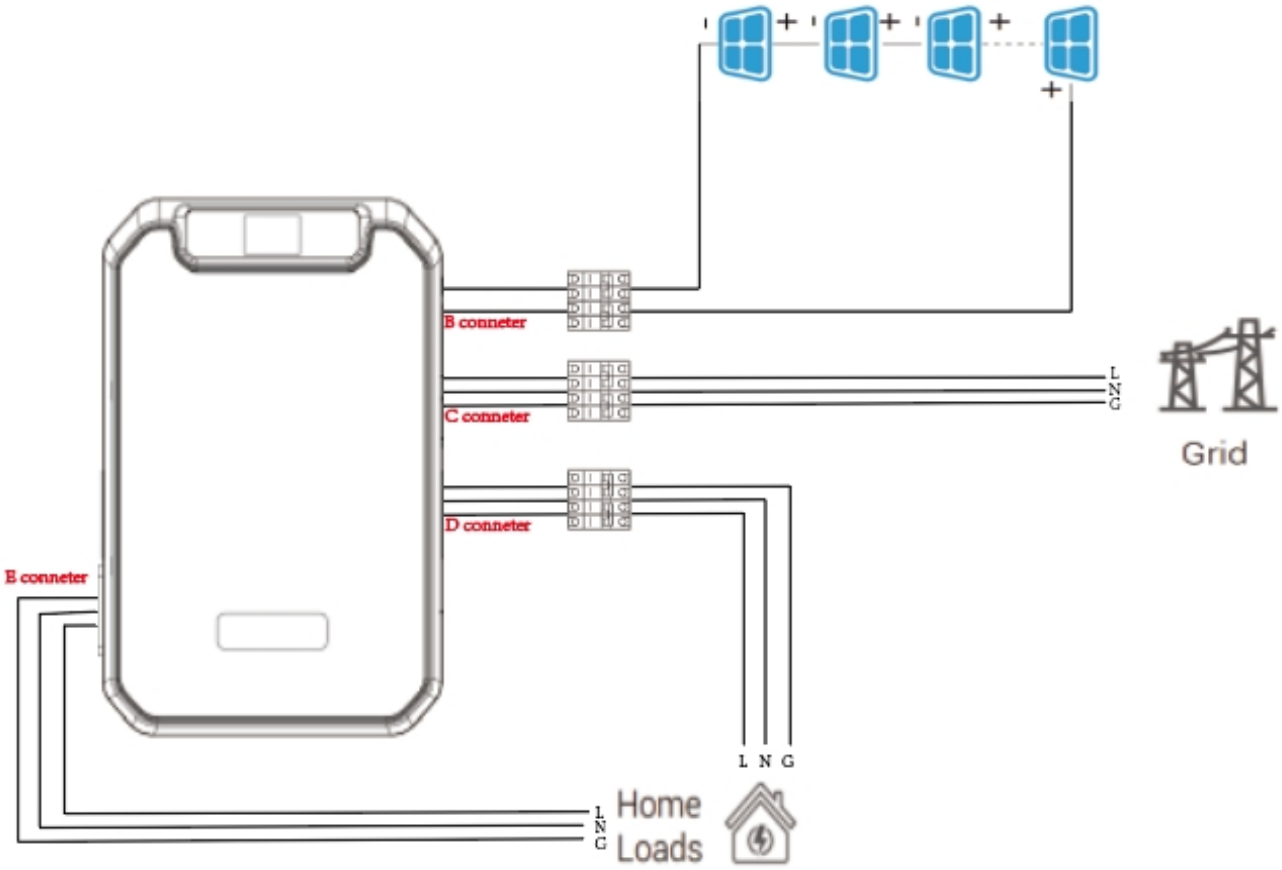
Symbol	Explanation
	Beware of hot surface. The inverter can become hot during operation. Avoid contact during operation.
	Danger of high voltages. Danger to life due to high voltages in the inverter!
	Danger. Risk of electric shock!
	Observe enclosed documentation.
	The inverter can not be disposed together with the household waste. Disposal information can be found in the enclosed documentation.
	Do not operate this inverter until it is isolated from battery,mains and on-site PV generation suppliers.
	Danger to life due to high voltage. There is residual voltage existing in the inverter after powering off, which needs 5 min to discharge. • Wait 5 min before you open the upper lid or the DC lid.

1.3 Basic features

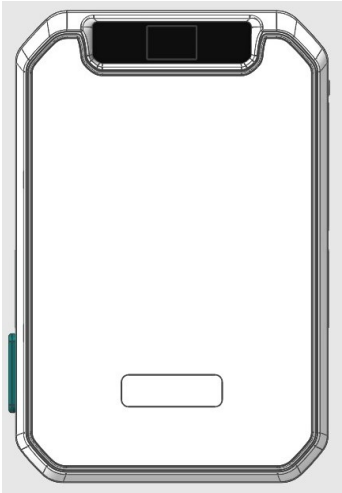
Model3 Inverter is a high quality inverter which can convert solar energyto AC energy and store energy into battery.

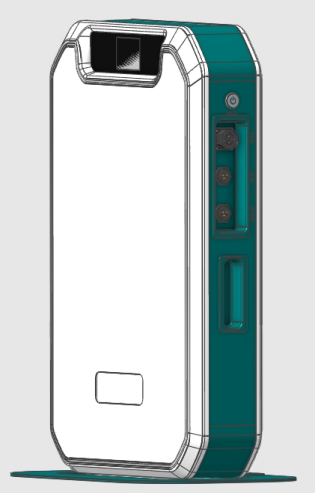
The inverter can be used to optimize self consum ption , store in the battery for future use . Work mode depends on PV energy and user′ s preference. It can provide power for emergency use during the grid lost by using the energy from battery and inverter generated

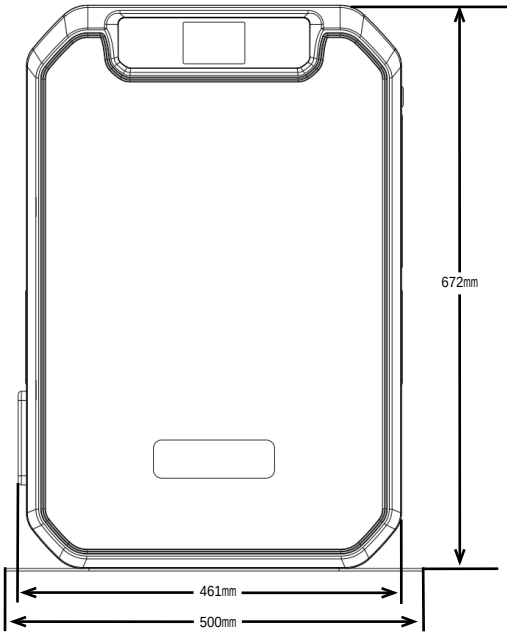
System Diagram 1 (applies to most countires)

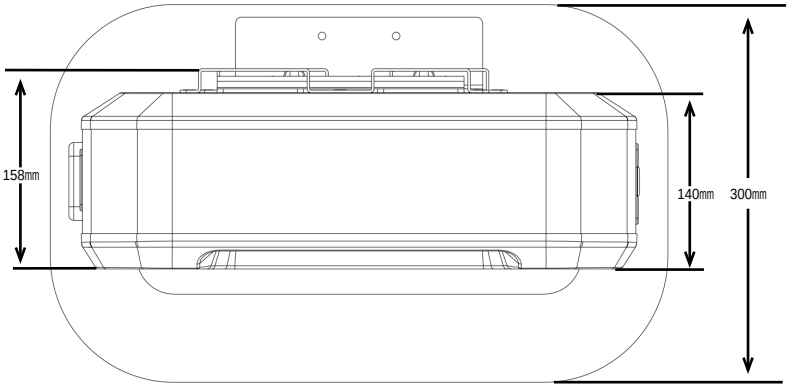


1.4 Dimension



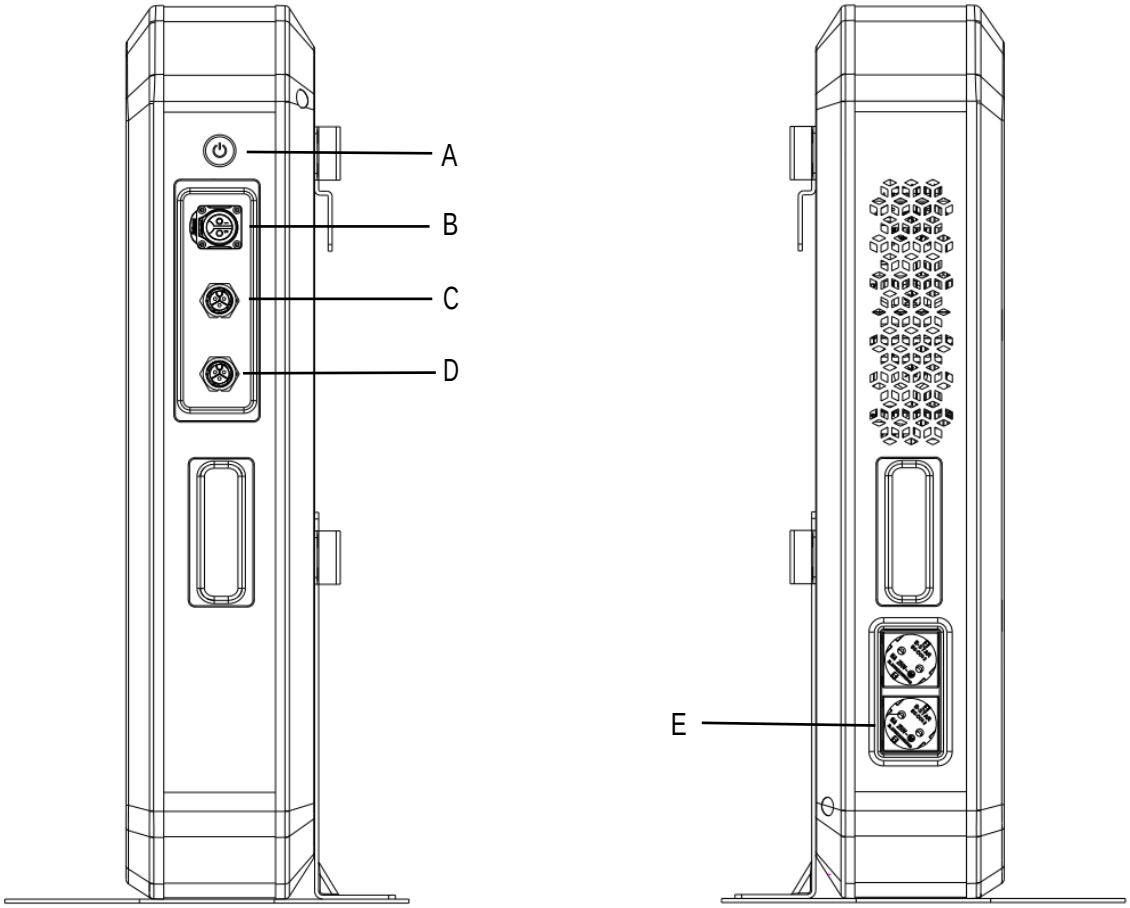






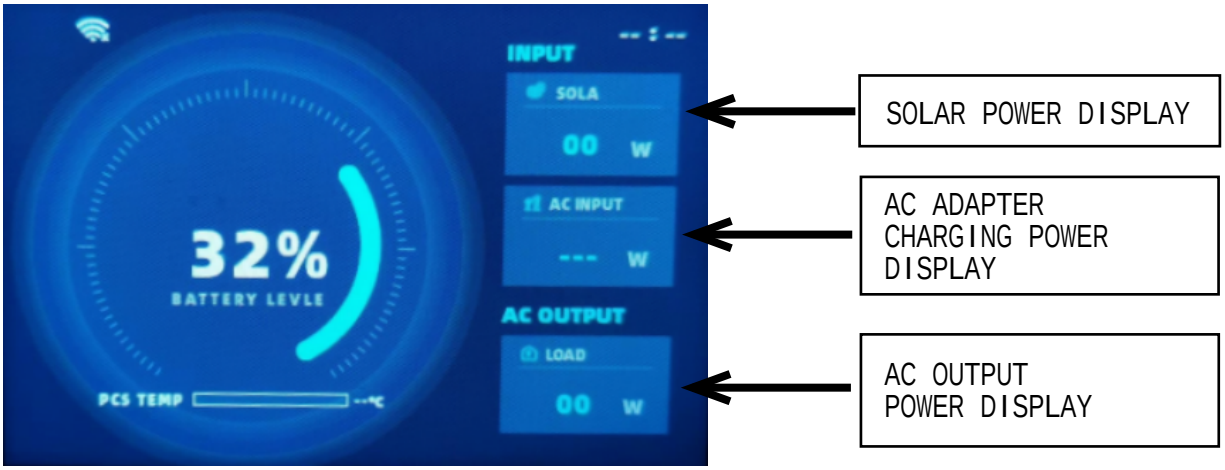
2. Interface definition and Technical Data

2.1 Interface definition



Object	Description
A	POWER
B	PV IN
C	AC IN
D/E	AC OUTPUT

2.2 Display panel



2.3 Technical Data

Model	3KW
	PV input
Max. recommended DC power [W]	1500
Max. DC voltage[V]	145
MPPT voltage range [V]	30-120
Max. input current [A]	25±0.5
Start input voltage [V]	>30
	AC output
Norminal AC power[VA]	3000
Max. apparent AC power[VA]	3000
Inverted voltage[V]	230
Inversion frequency[Hz]	50±1
Max.AC current[A]	26±0.5
Load control	optional
	AC input
Norminal AC power[VA]	3000
AC voltage range[V]	170-280
Rated AC voltage[V]	230
Communication frequency (Hz)	47-63
Max.AC current[A]	26±0.5
Overvoltage protection point[V]	280±3
	Battery parameter
Battery type	8S100Ah lithium iron phosphate battery
Battery capacity[Wh]	2560Wh
Rated voltage[V]	25.6
Max. charging Voltag[V]	28.8V±0.5V
Reverse connect protection	Yes
	Efficiency
MPPT efficiency	92%
Max efficiency of bypass	95%
Max efficiency of MPPT	92%
Max. Battery charge efficiency	92%

2.4 Basic Data and Safety

Model	3KW
Dimension [W/H/D](mm)	672*140*461
Net weight [kg]	38
Installation	Wall mounted
Protective Class	IP21
cooling	Forced air cooling
Safety & Protection	
Over/under voltage protection	YES
DC isolation protection	YES
Monitoring ground fault protection	YES
Grid protection	YES
DC injection monitoring	YES
Back feed current monitoring	YES
Residual current detection	YES
Anti-islanding protection	YES
Over load protection	YES
Over heat protection	YES
Max. output fault current	120A
Max. output over current	120A

3. Installation

3.1 Check for Physical Damage

Make sure the inverter is intact during transportation. If there is any visible damage,such as cracks, please contact your dealer immediately.

3.2 Packing List

Open the package and take out the product, please check the accessories first.
The packing list shown as below.

Object	Description
1	Inverter X1
2	Bracket X1
3	Base set X1
4	Base set M6 screw X5
5	Expansion screw X6
6	Expansion rubber plug screw X6
7	AC in connecting cable X1
8	AC out connecting cable X1
9	PV connecting cable X1

3.3 Tools required for installation.

Installation tools : crimping pliers for binding post and RJ 45, screwdriver,manual wrench etc.

3.4 Mounting

➢ Space Requirement

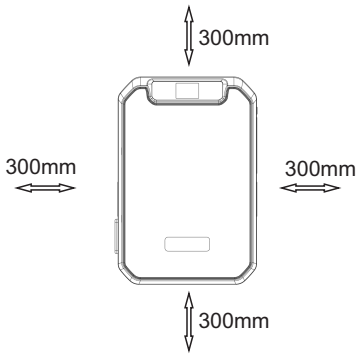


Table Available Space Size

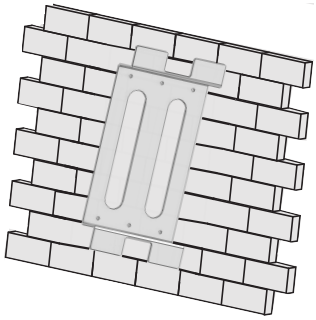
Position	Min.size
Left	300mm
Right	300mm
Top	300mm
Bottom	300mm
Front	300mm

Step 1: Screw the wall bracket on the wall

1.1 Place the bracket on the wall and mark down the position of the 4 holes.

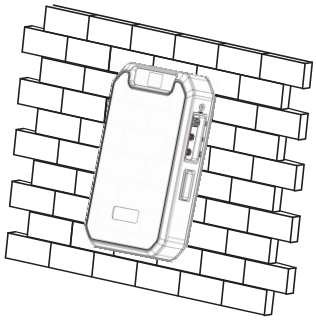
1.2 Drill holes with driller, make sure the holes are deep enough (at least 60mm) to support the inverter.

1.3 Install the expansion tubes in the holes, and tighten them. Then install the wall bracket with the expansion screws.

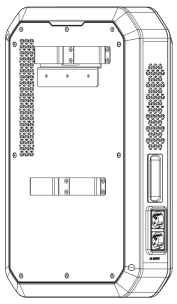


Step 1

Step 2: Place the inverter on the wall mounted bracket by holding the handle on the side.



Step 2



4. Electrical Connection

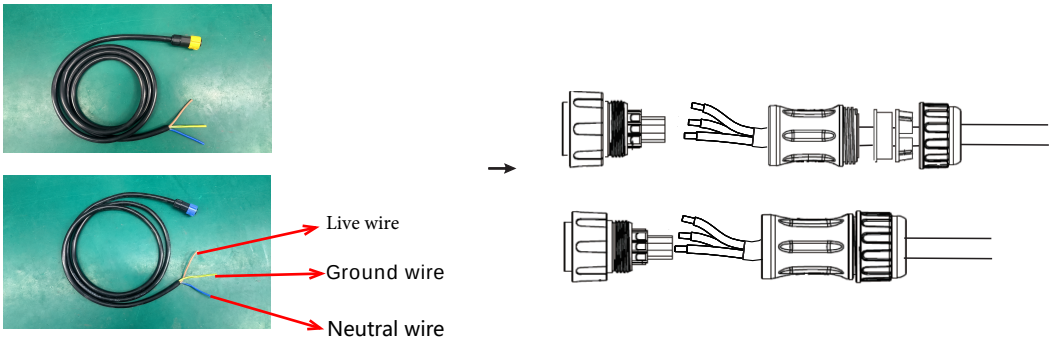
4.1. AC input

Choose the appropriate wire(Cable size: refer to Table 1).

Reserve about 60mm of conductor material sectional area and remove 10mm of insulation from the end of wire.

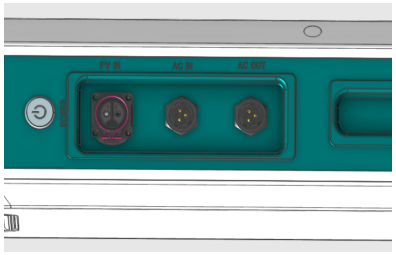
Separate the docking screw cap of the AC terminal from the housing portion and insert stripped wires into AC terminal and tighten the screws with a hexagonal wrench.

Tighten the docking screw cap and housing portion of the AC terminal.



Connect the AC connector to the GRID port of the inverter and tighten the screw cap .

Connect the LOAD connector to the EPS port of the inverter and tighten the screw cap .

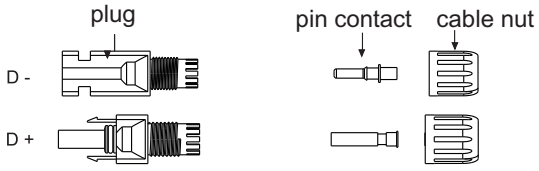


4.2 PV connection

Connection Steps:

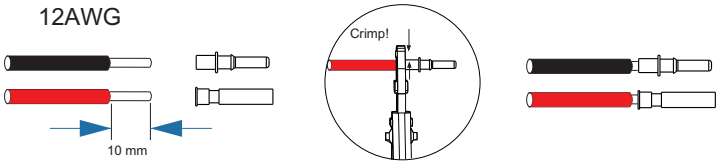
Step1. Checking PV module to ensure PV is in open circuit state and ensure the PV+ and PV- ports of the PV string are correct.

Step2. Separating the DC connector.

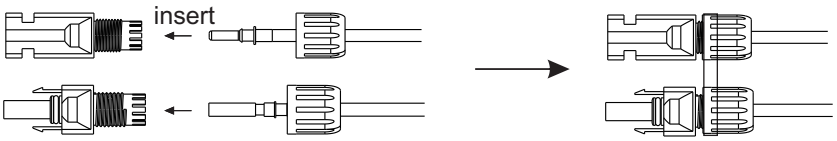


Step3. Wiring

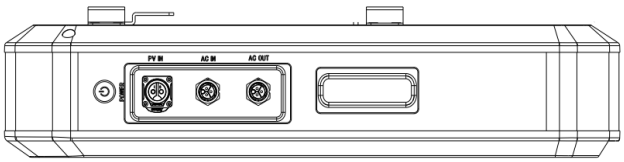
3.1 Choose the 12 AWG wire to connect with the cold-pressed terminal.
3.2 Remove 10mm of insulation from the end of wire.
3.3 Insert the insulation into pin contact and use crimping plier to clamp it.



Step4. Insert pin contact through the cable nut to assemble into back of the male or female plug. When you feel or heard a “click” sound the pin contact assembly is seated correctly.

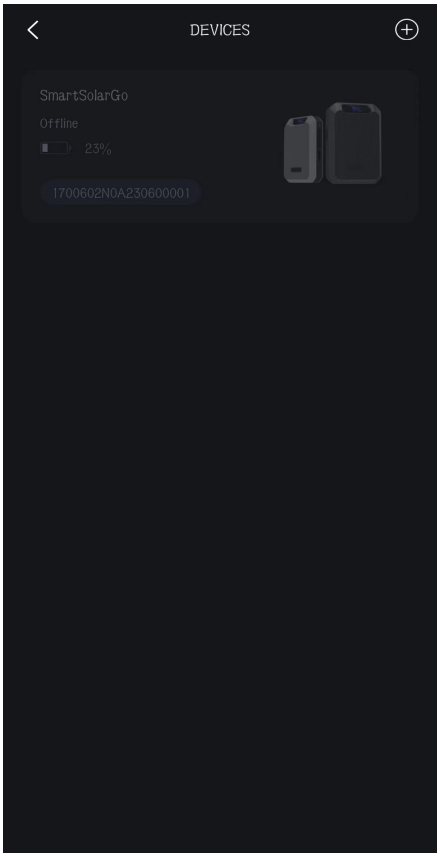


Step5. Plug the PV conntector into the corresponding PV connector on inverter.



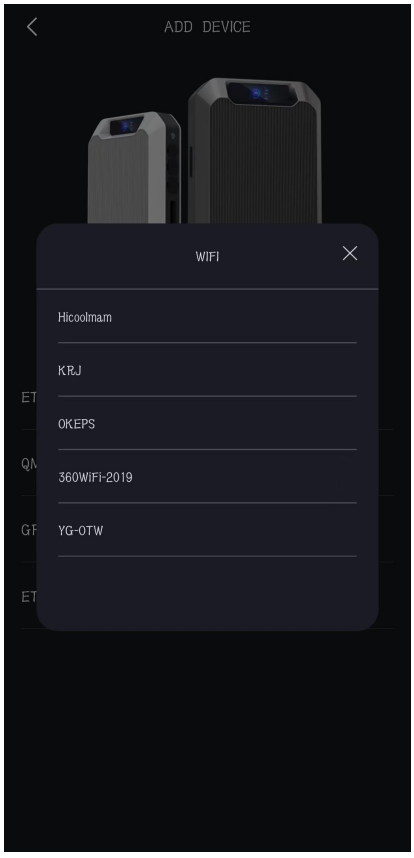
APP Bluetooth connection tutorial

1.Enter DEVICES interface

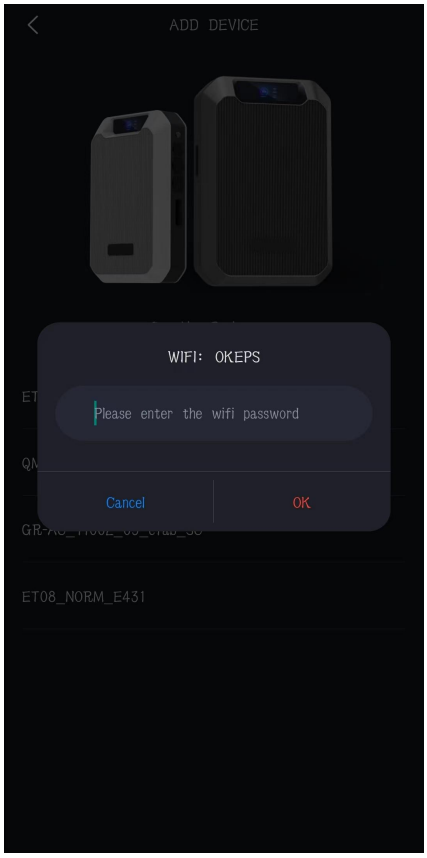


2.Click the plus sign in the upper right corner

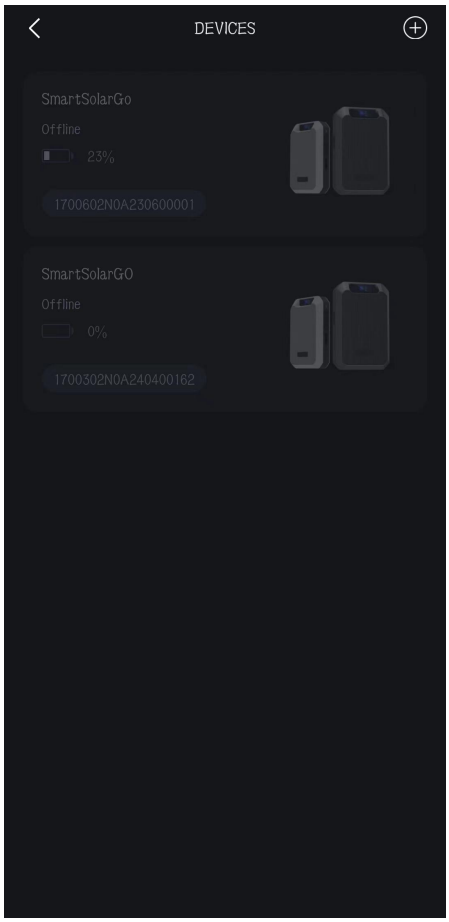
3.Click on the corresponding name



4.Click on the corresponding WIFI



5.enter password



6.Device addition completed

Download method:

一：Please search for SmartSolarGo in Google Play and Appstore

二：Scan the QR code below

V1.0