

Inverter Operation Guide

SMA-SUNNY ISLAND 4.4M / 6.0H / 8.0H



Contents

01

Scenario

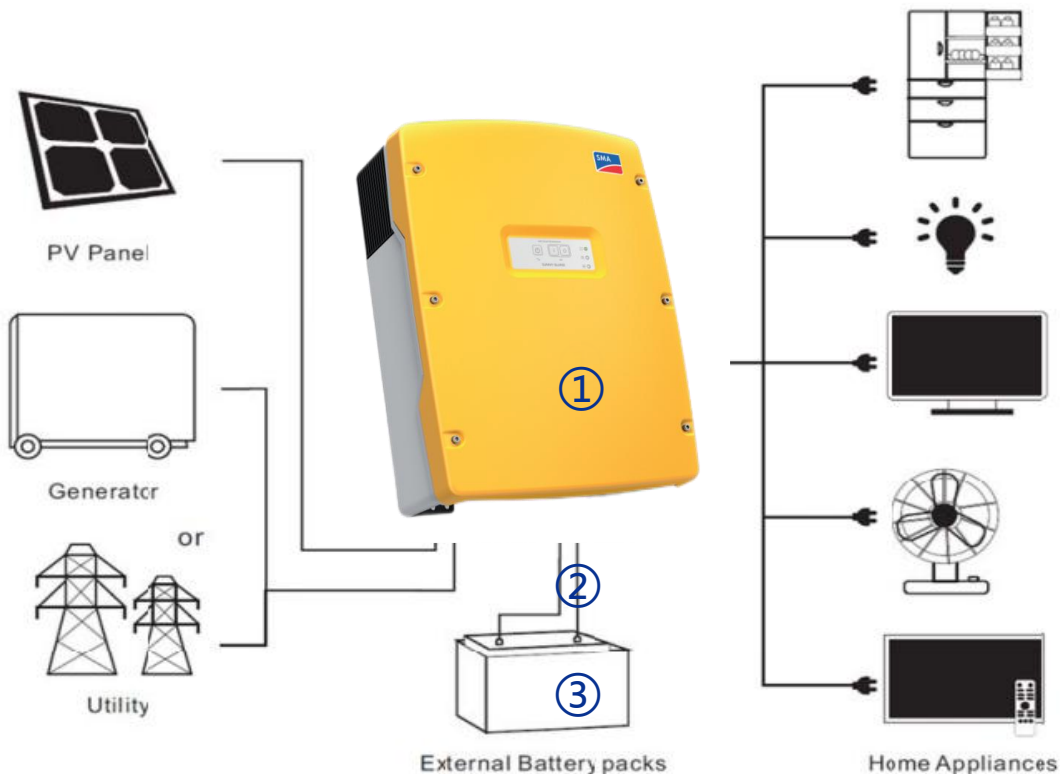
02

Connection

03

Configuration

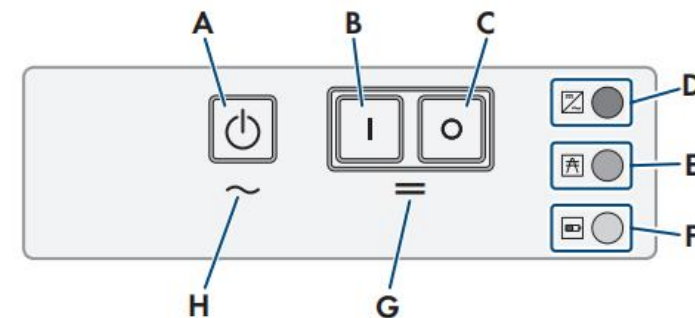
Simple home storage scenario



Key elements

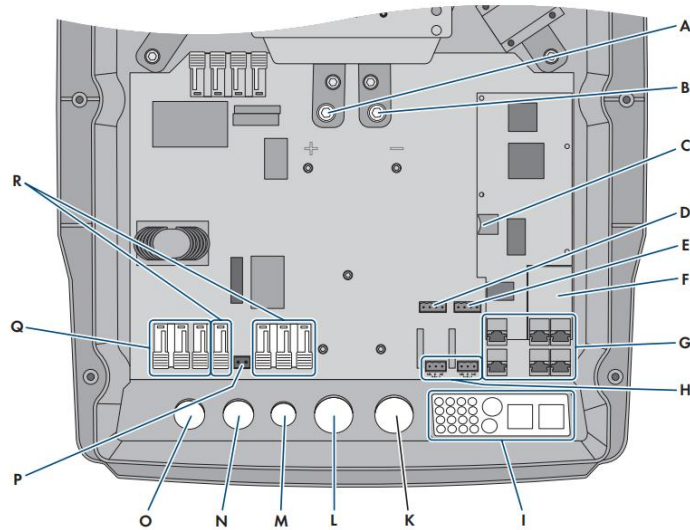
- ① **Inverter** : SMA-SUNNY ISLAND 4.4M / 6.0H / 8.0H
- ② **Interconnection cable**: Customized communication cable
- ③ **Battery**: The Li-ion Battery Pack composed of 16 strings of cells

PCS Control Panel



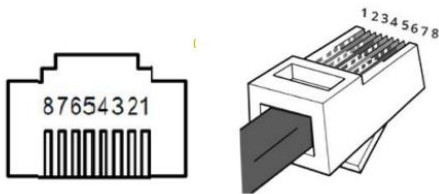
Object	Icon	Description
A		Start-stop button
B		"On" button
C		"Off" button
D		Inverter LED
E		Grid LED
F		Battery LED
G		Standby
H		AC operation

PCS Interfaces



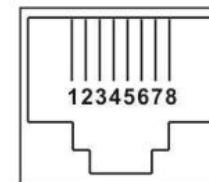
Object	Description	Object	Description
A	DC+ connection	K	Enclosure opening for DC-
B	DC- connection	L	Enclosure opening for DC+
C	Slot for optional micro SD card	M	Enclosure opening ExtVtg
D	BatTmp and BatCur connections	N	Enclosure opening AC2
E	BatVtgOut and DigIn connections	O	Enclosure opening AC1
F	Slot for optional communication interface (SI_x0002_SYSCAN.BGx4)	P	ExtVtg connection
G	Connecting the communication unit	Q	AC1 connection
H	Relay1 and Relay2 connections	R	AC2 connection
I	Cable feed-through plate		

Connection Between PCS and BMS



Inverter pin	Defined declaration
2	Ground
4	CAN-H
5	CAN-L

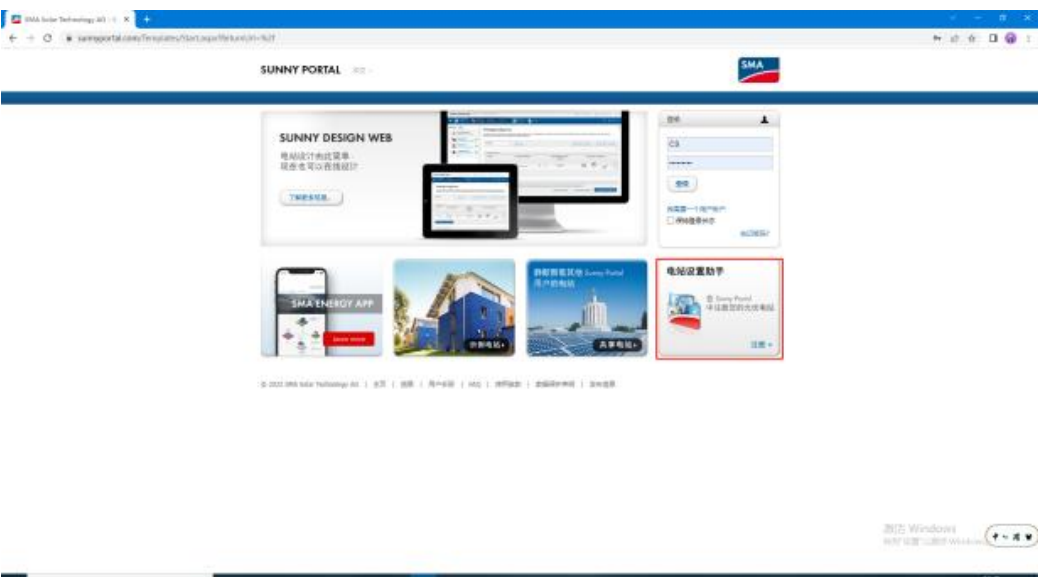
PCS Side



PIN1	RS485-B
PIN2	RS485-A
PIN3	GND
PIN4	CAN-H
PIN5	CAN-L
PIN6	GND
PIN7	RS485-A
PIN8	RS485-B

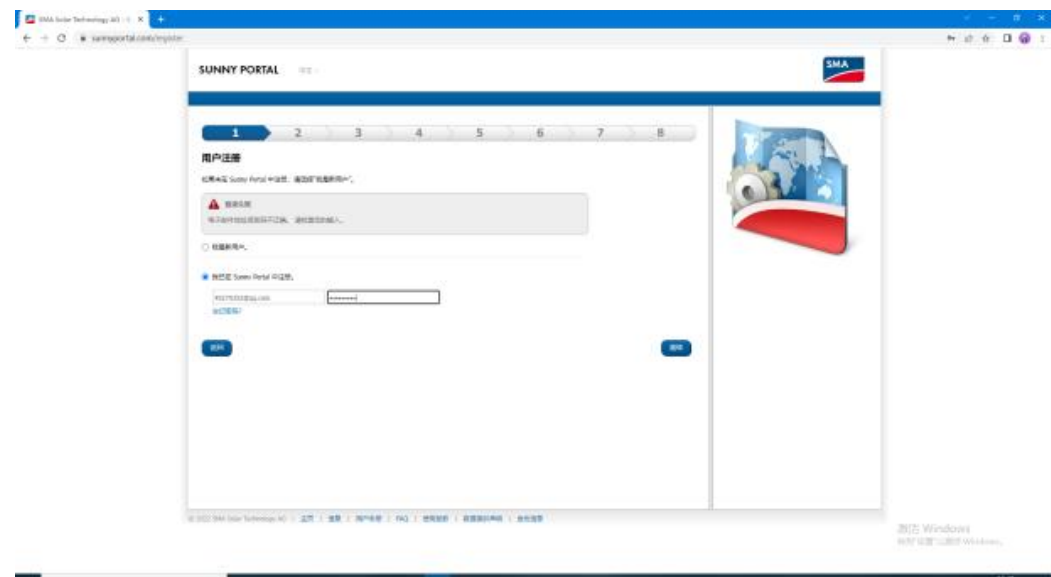
BMS Side

Matching Setting of Inverter and BMS-1



①

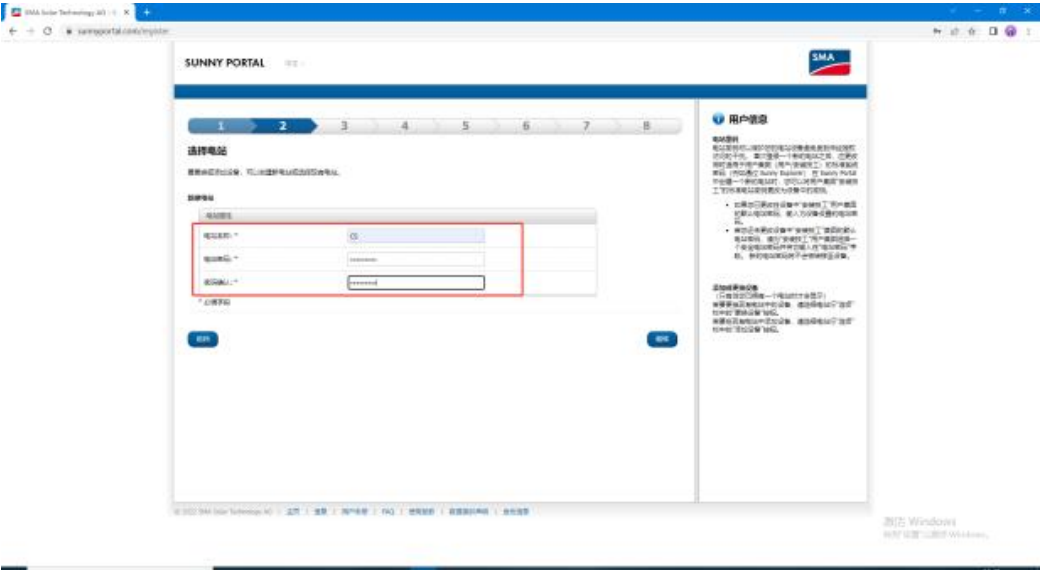
Log in to the website by Google:
<https://www.sunnyportal.com/>



②

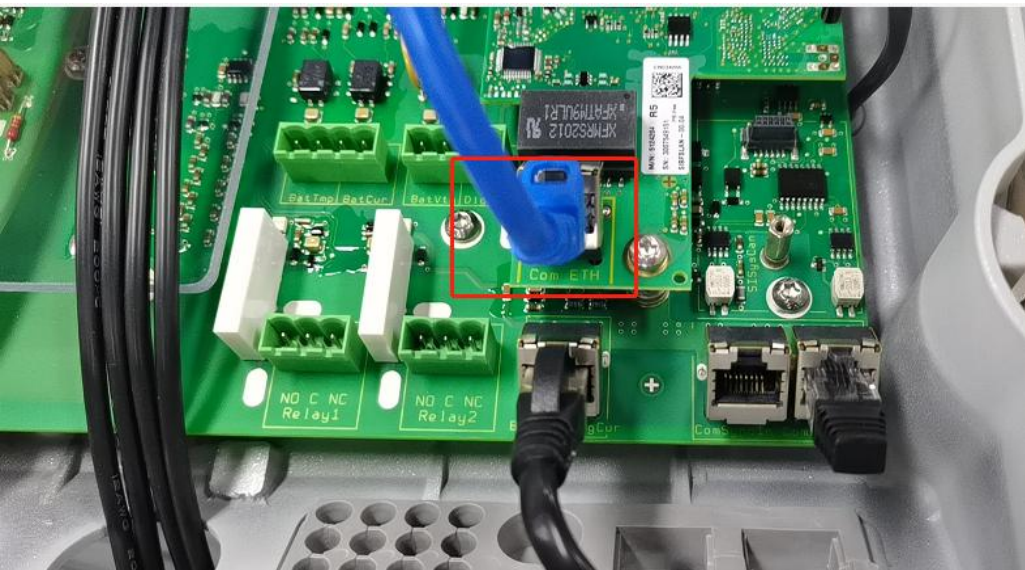
Register an account
 (Account number: xxx@xxx.com Password: xxx)

Matching Setting of Inverter and BMS-2



③

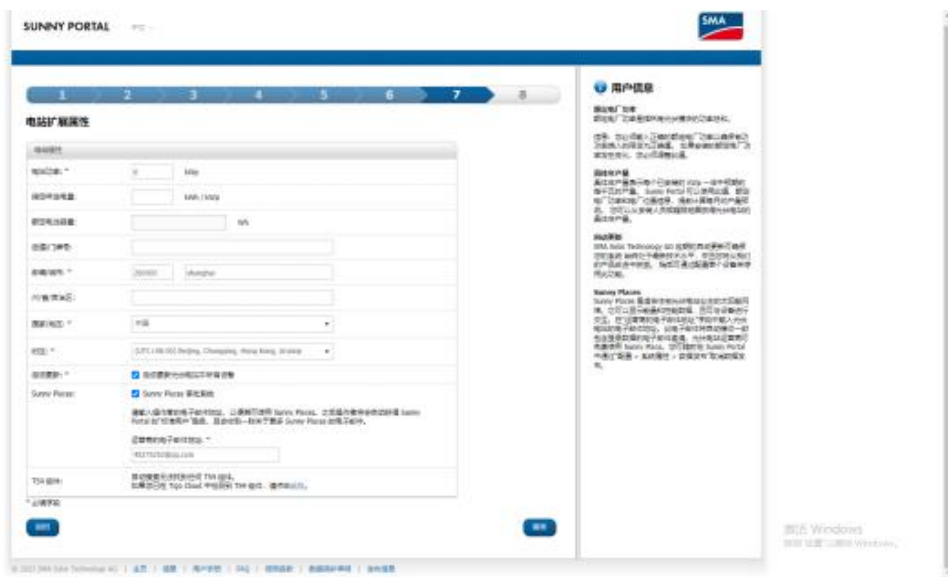
Create a new power station
(Account: xx Password: xx)



④

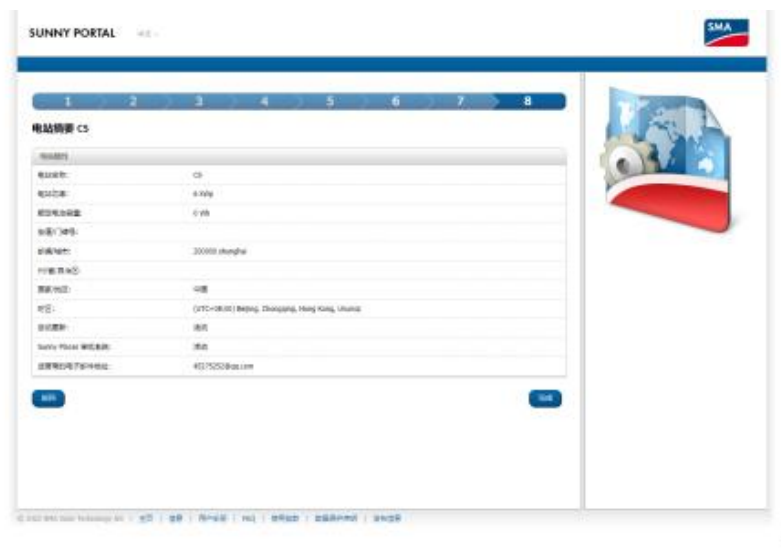
Connect the inverter with a network cable and router

Matching Setting of Inverter and BMS-4



⑦

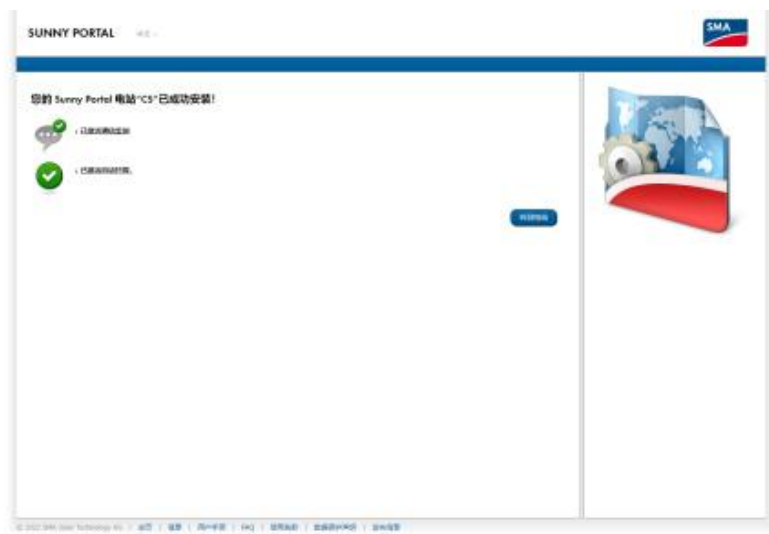
Set power



⑧

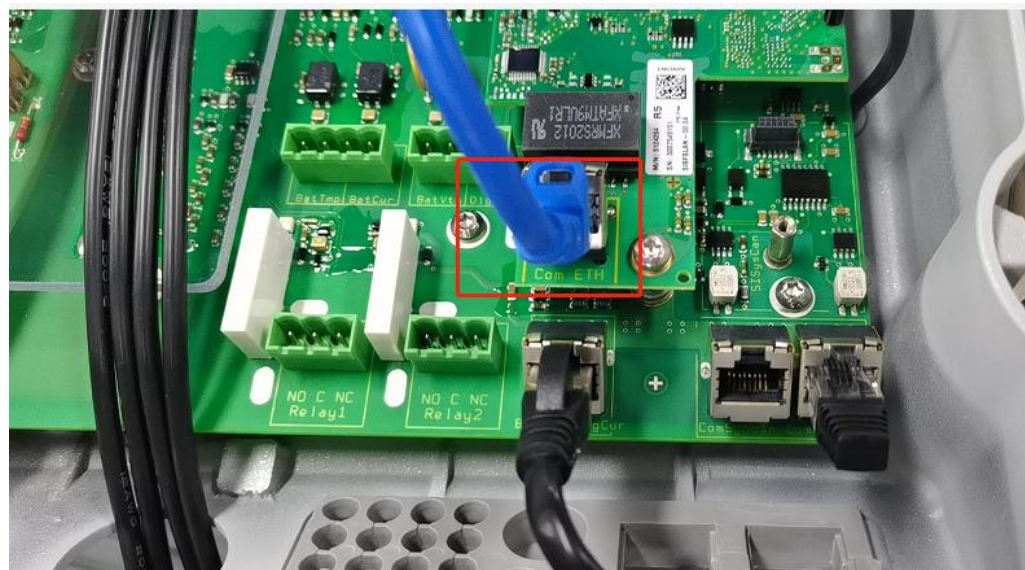
Click Finish

Matching Setting of Inverter and BMS-5



⑨

Complete



⑩

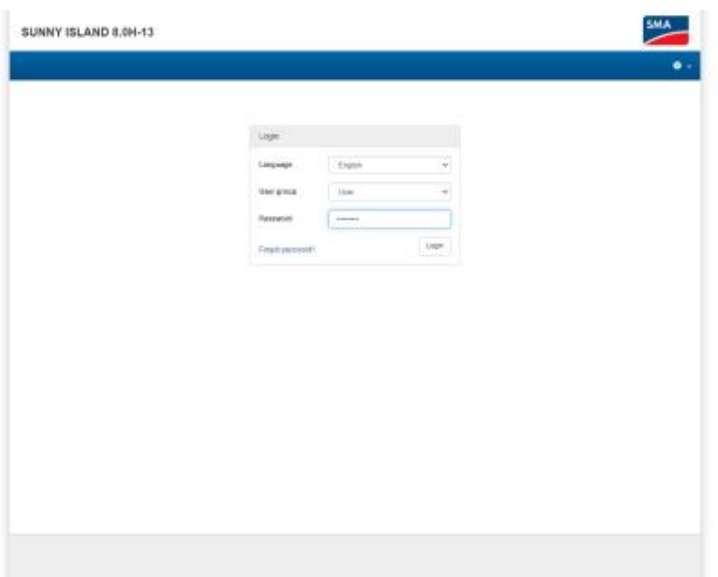
Log in to website 169.254.12.3 and plug the inverter network cable directly into the computer

Matching Setting of Inverter and BMS-6



11

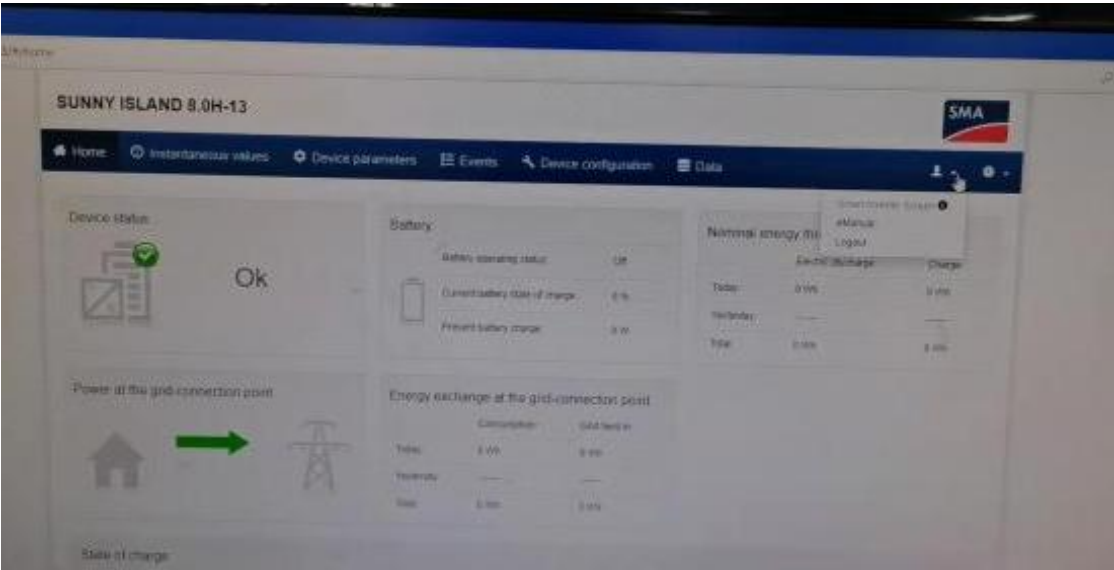
Set password
(xxx, the next duplicate password)



12

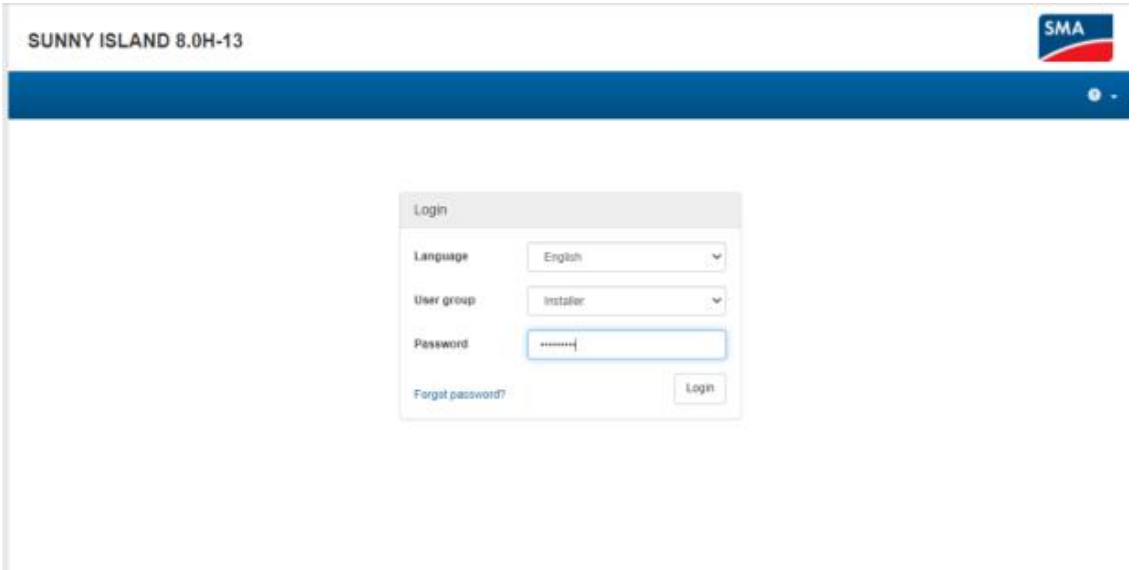
Select a user account with password xxx (as above)

Matching Setting of Inverter and BMS-7



13

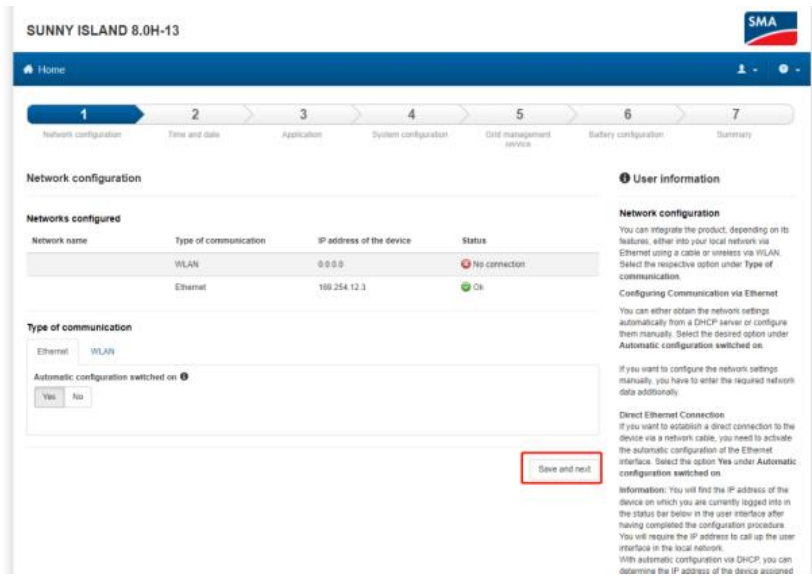
After logging in, there is no data available.
 You need to select 'logout' on the head side and then install 'to log in



14

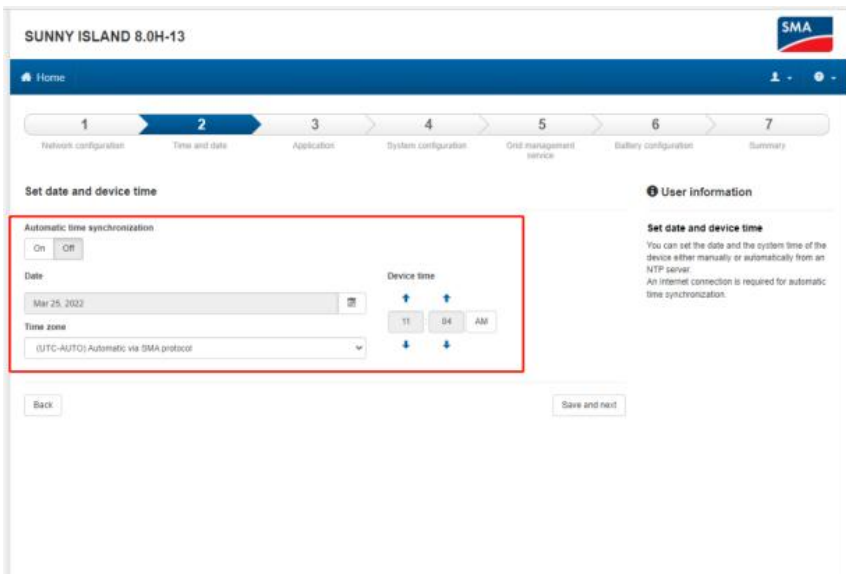
Select the installer account and login password xxx (as above)

Matching Setting of Inverter and BMS-8



15

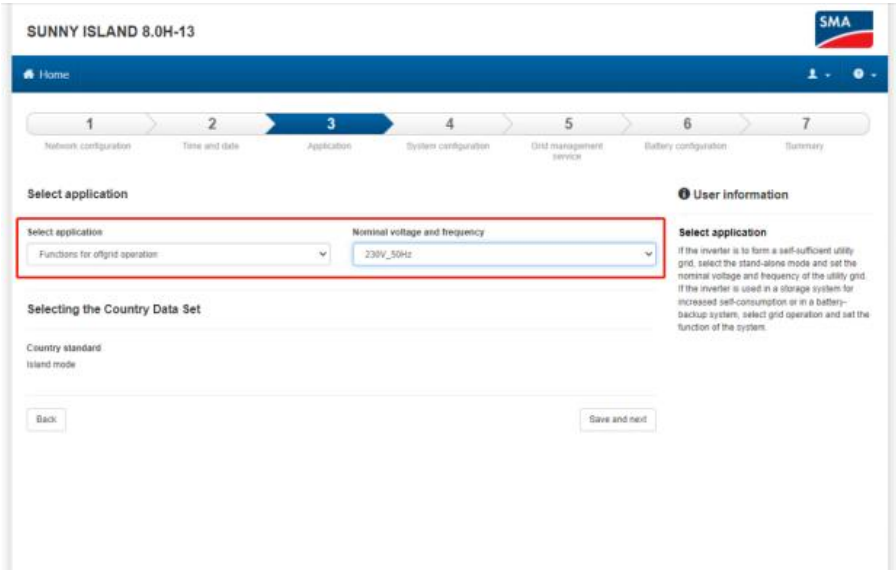
Will enter the settings, select save and next



16

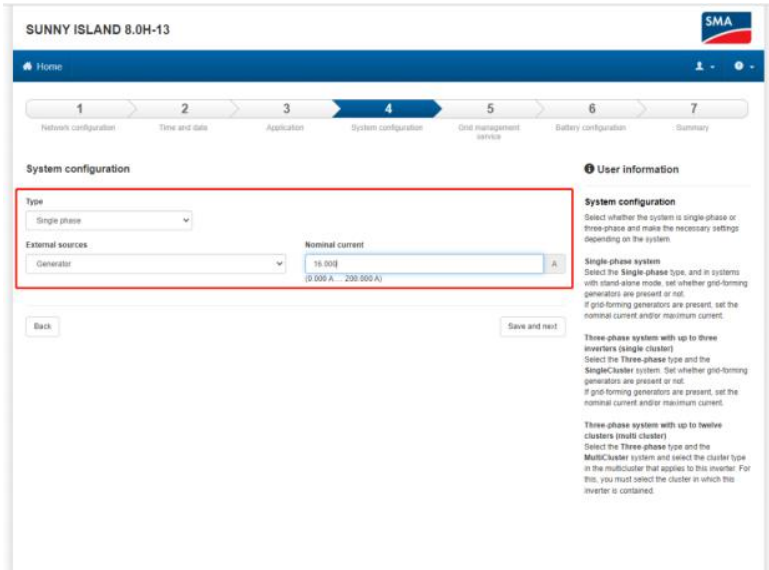
Set date and time

Matching Setting of Inverter and BMS-9



17

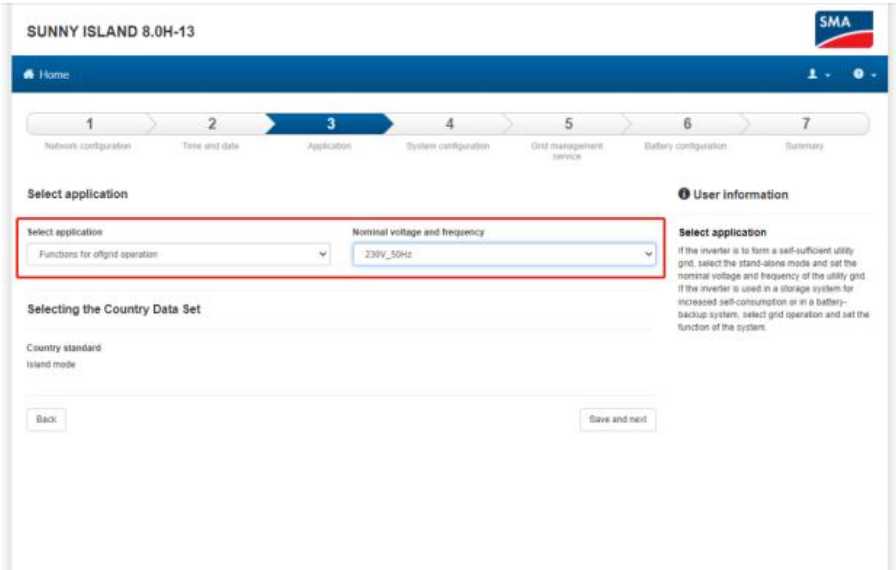
Select Functions for OffGrid operation, 230V/50Hz



18

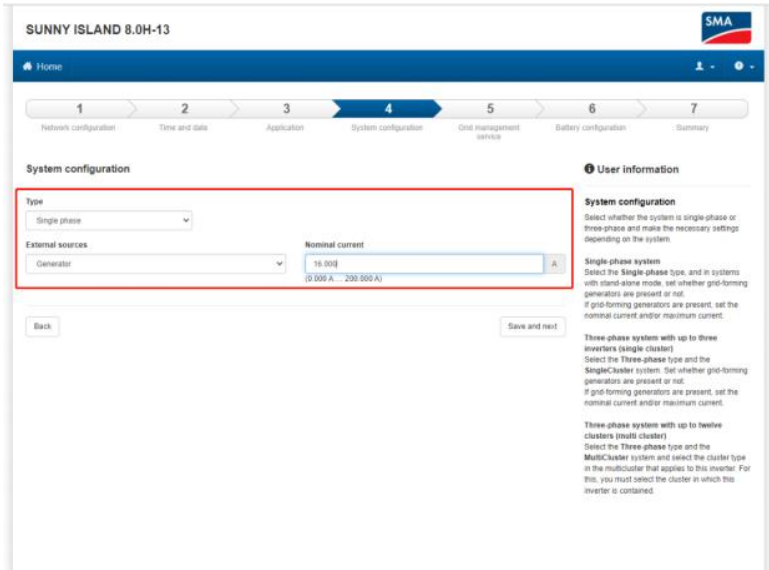
Select Single Phase, External Source can be selected as Generator

Matching Setting of Inverter and BMS-10



19

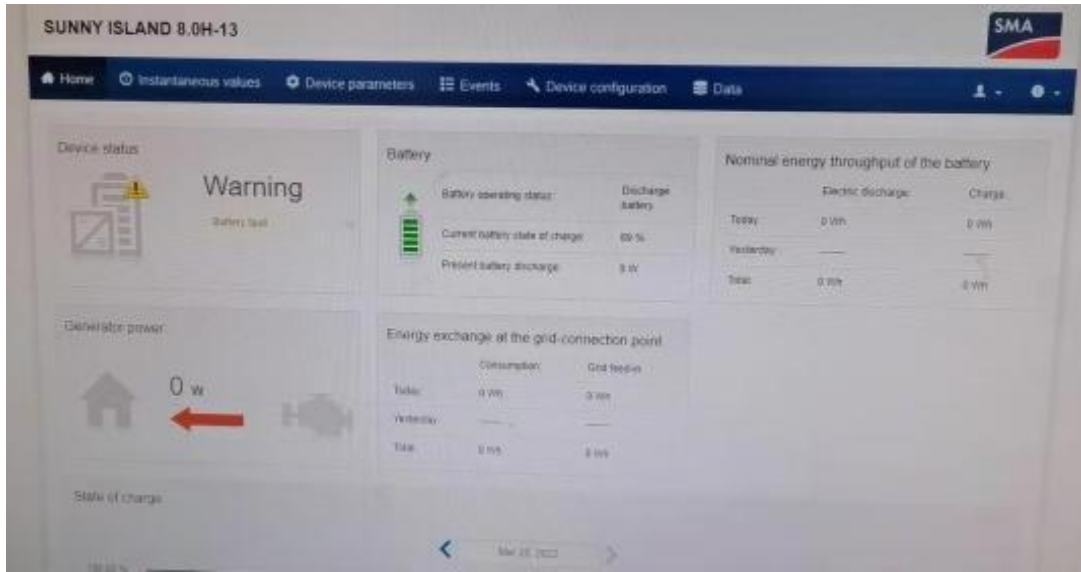
Battery selection Lithium-ion



20

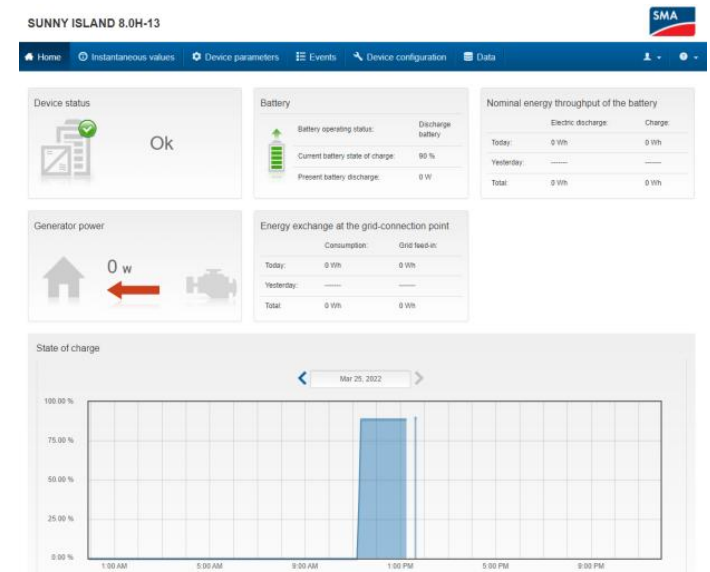
Finally, continue and complete the setup

Matching Setting of Inverter and BMS-11



21

After completion, the data upload is normal



22

APP数据页面

Matching Setting of Inverter and BMS-12



23

Instantaneous values
(Select battery data in Battery)

Battery	
State of charge	90 %
Temperature	25.2 °C
Voltage	53.09 V
Current	0.123 A
Remaining time until full charge	----
Remaining time until equalization charge	----
Remaining absorption time	----
Fault state of charge	----
General operating status	Discharge battery
Control charging via communication available	Information not available
Absorption phase active	Information not available

24

The Battery data in Instantaneous values is uploaded by BMS
(Battery: SOC, temperature, battery voltage, current)

Matching Setting of Inverter and BMS-13



Charge	
Current set charging voltage	56.60 V
Active charging process	Information not available
No. of equalization charges	-----
No. of full charges	-----
Relative battery discharge since last full charge	-----
Relative battery discharge since last equalization charge	-----
Maintenance	
Full and equalization charge	Information not available
Battery charge	
Present battery charge	0 W
Battery charge	0 Wh
Battery discharge	
Present battery discharge	0 W
Battery discharge	0 Wh
Areas of application	
Lower discharge limit for private consumption range	0 %
Status	Information not available

25

The Battery data in Instantaneous values is uploaded by BMS (Charge: request charging voltage -1), and the inverter itself -1

SUNNY ISLAND 8.0H-13

Home | Instantaneous values | Device parameters | Events | Device configuration | Data

Edit parameters | Export all parameters

- Type Label
- Device
- User Rights
- DC Side
- AC Side
- Grid Monitoring
- Generator
- Battery
- System communication
- External Communication
- Device Components
- System and device control
- Grid connection

To the start of the page

26

Device parameters (Select battery data in Battery)

▼ Battery charge	
Process specification battery charge current	30.0 A

▼ Battery discharge	
Process specification battery discharge current	95.0 A

27

The Battery data in Device parameters is uploaded by BMS (Battery charge: charging request current, Battery discharge: discharge request current)