SOLEOS –WIFIKIT User Manual

SOLEOS Solar GmbH

Overview of WIFIKIT Function

SOLEOS-WIFIKIT is developed by SOLEOS as an external communication monitoring device, which integrates WiFi device for users and provides a wireless monitor function.

By connecting with inverters through RS485 interface, the Kit can receive information from inverters and realize cascade of inverters. One side It provides wireless function, another side, it may also use cable to transfer inverter data to the web server.

Users can monitor the runtime status of the device by checking the 4 LEDs on the panel which indicates Power, RS485, Link and Status respectively.

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1. RS485 Card Install SOP

1.1 Disassembly

Picture 1.1.1

Unscrew the four screws on the interface panel with the screwdriver as shown in Picture 1.1.1 and keep the screws aside.

Picture 1.1.2

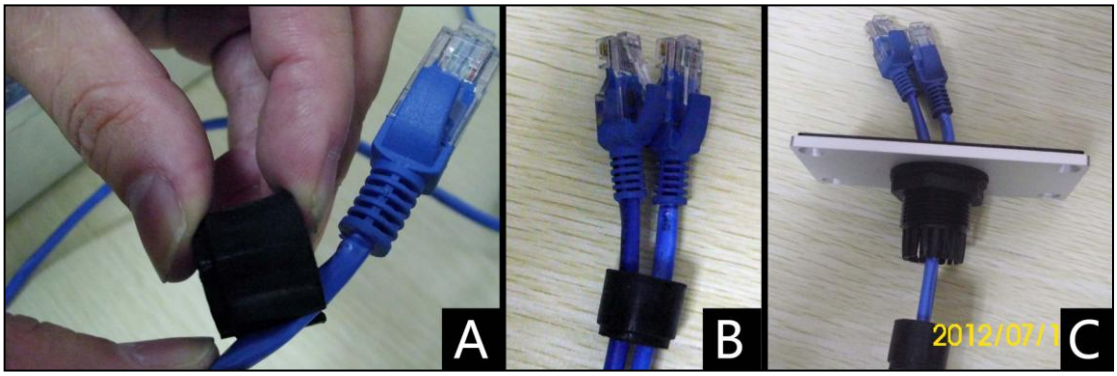
Picture 1.1.3

Unscrew the two-holed water-proofing connector from the interface panel as shown in Picture 1.1.2, 1.1.3.

1.2 Installation

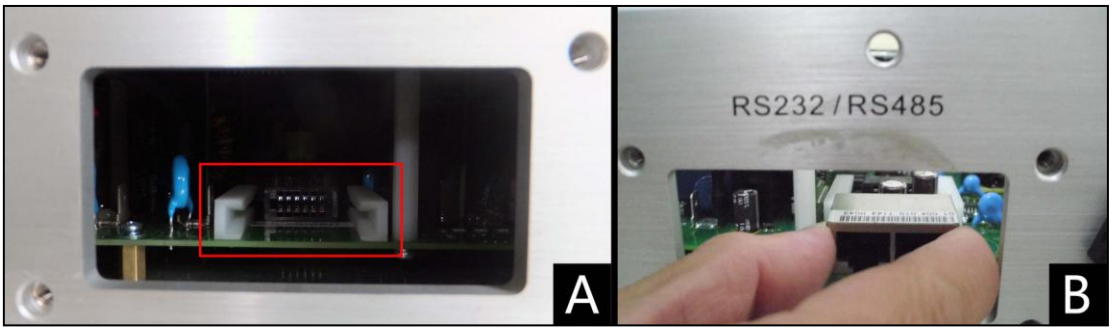
Pick out the net cable and the water-proofing connector from the package and follow the Picture :

A. Put the net cable in from the gap
B. Put the net cable one after another into the kneck of the interface panel



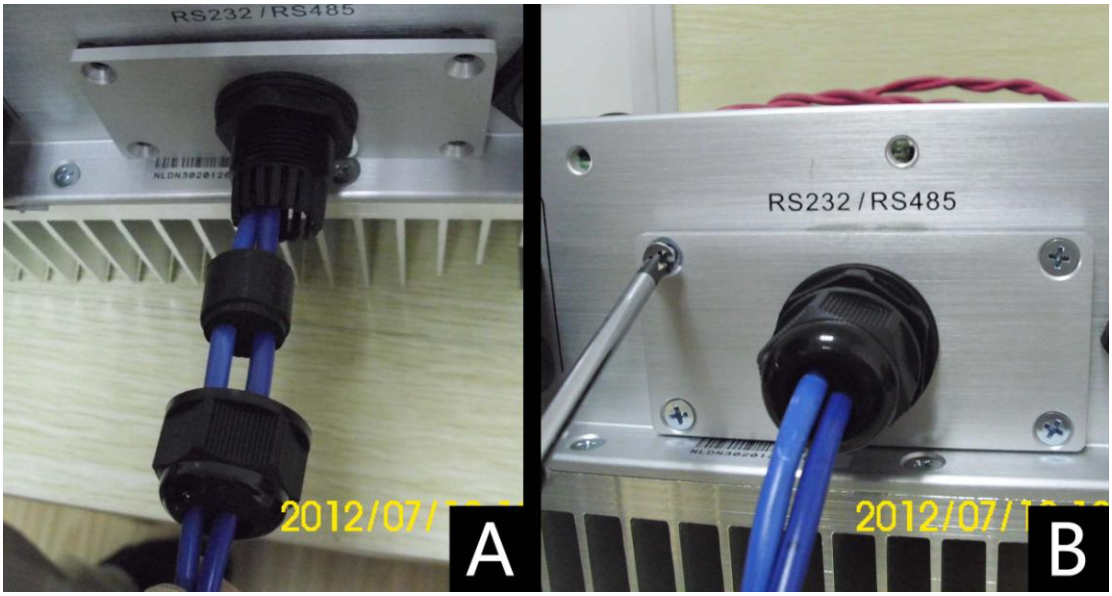
Picture 1.2.1

C. Insert the RS485 card lightly from the position as following picture



Picture 1.2.2

D. Finish the installation, as Picture 1.2.3：



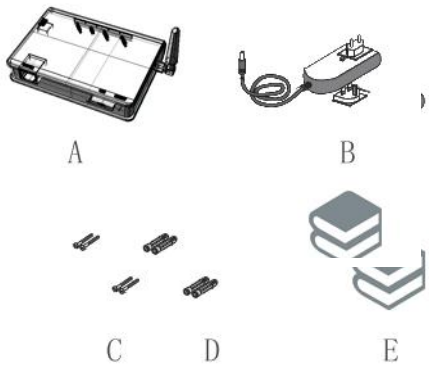
Picture 1.2.3

2. SOLEOS –WIFIKIT User Manual

2.1 Unpack

After unpacking the box, please check the parts according to the below list. Contact the manufacturer immediately if you find any damage, missing or wrong model of the device or any parts.

Serial	Name	Quantity	Model
A	PV data collector	1	WIFIKIT
B	Power supply adapter	1	FY0502000
C	screw	2	--
D	expanded rubber tube	2	--
E	manual	1	--

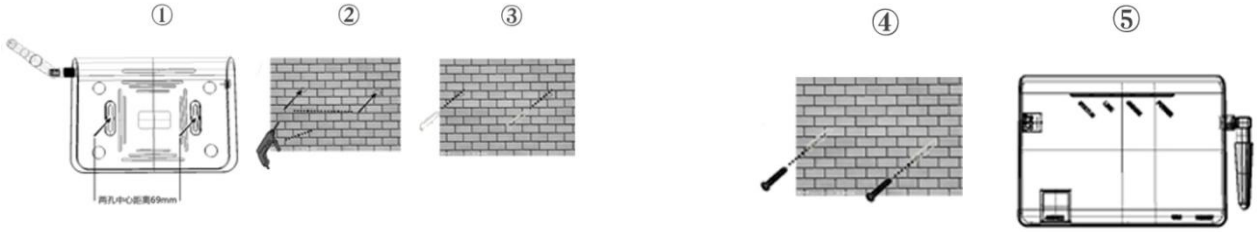


Picture 2.1.1

2.2 Installation of data collector

2.2.1 Wall-mounted installation

1. Mark two horizontal round holes which distance is 69mm in the selected position
2. Drill two φ6mm holes in the marked position, the depth of the hole is not less than 30mm
3. Punch the expanded rubber tubes into the holes lightly with a rubber hammer
4. Wring two screws into the expanded rubber tubes, the screws head exposed wall about 6mm
5. Hang the PV data collector WIFIKIT on the screws，hold the metal part of the antenna and rotate the antenna to a wanted position



Picture 2.2.1

2.2.2 Horizontal data collector installation

Lay the data collector on a flat surface

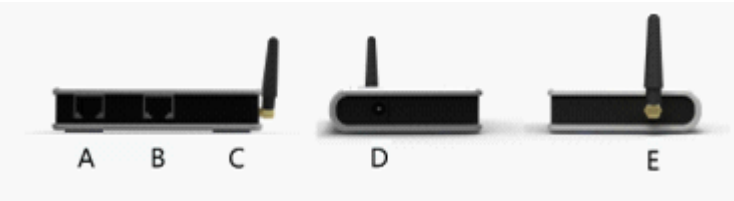
Note1: The protection level of PV data collector WIFIKIT is IP21. It cannot be installed outdoors or in the conditions of damp, dusty or with corrosive steam. Direct sunlight is also avoided, as well as shock and pressure defense. In addition, as metal components have effect on the wireless signals, the antenna of PV data collector (in all direction) should be away from metal components at least 10cm.

Note2: When screw or adjusting the antenna position, please note only the metal part can be screwed, plastic part cannot be screwed, or the antenna will be damaged. In addition, the unusual installation status will affect the usage of data collector, more details please refer to the abnormal condition and dispose during debugging.

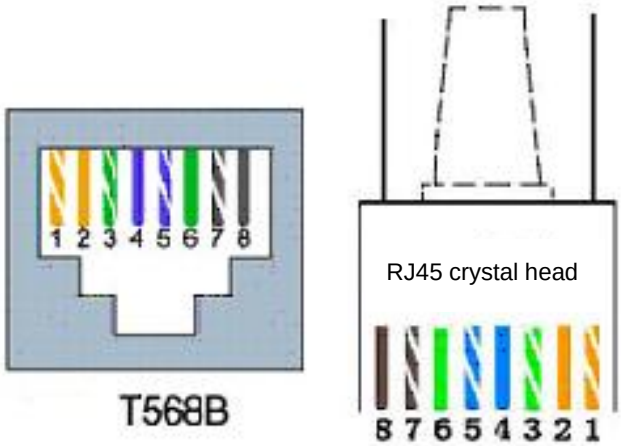
2.3 Connection between data collector and inverter

2.3.1 The instructions of data collector interface and connection line interface

Serial	Instructions
A	RS485/422 interface
B	Ethernet
C	Reset
D	Power supply adapter interface
E	Antenna interface



Picture 2.3.1



Line sequence of T568B

1. orange with white
2. orange
3. green with white
4. blue
5. blue with white
6. green
7. brown with white
8. brown

Picture 2.3.2

Pin NO.	RS485	RS422
1	NC	NC
2	NC	NC
3	NC	RX+
4	A	TX+
5	B	TX-
6	NC	RX-
7	GND	GND
8	GND	GND

2.3.2 Steps of connection

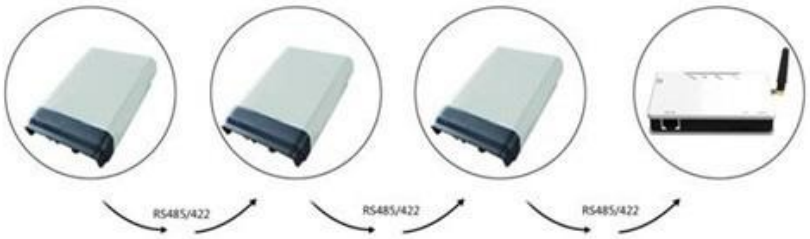
Both ends of the connecting wire are RJ45 network cable connector，all the line sequence are T568B.

A. Single inverter connection

1. Cut off the power supply of the inverter
2. Insert the network cable into anyone RJ45 port on anyone inverter
3. Let the other network cable connects the network interface of PV data collector WIFIKIT
4. Connect the power supply adapter to data collector, then insert into the socket

B. Multiple inverter connection

1. Cut off the power supply of the inverter
2. Insert the network cable into anyone RJ45 port on anyone inverter
3. Insert the other network cable into anyone RJ45 port on second inverter
4. Make the needed monitoring inverters in series in the same way
5. Connect the PV data collector WIFIKIT to a inverter with the bus,（constitute serial LAN）
6. Connect the power supply adapter to data collector, then insert into the socket

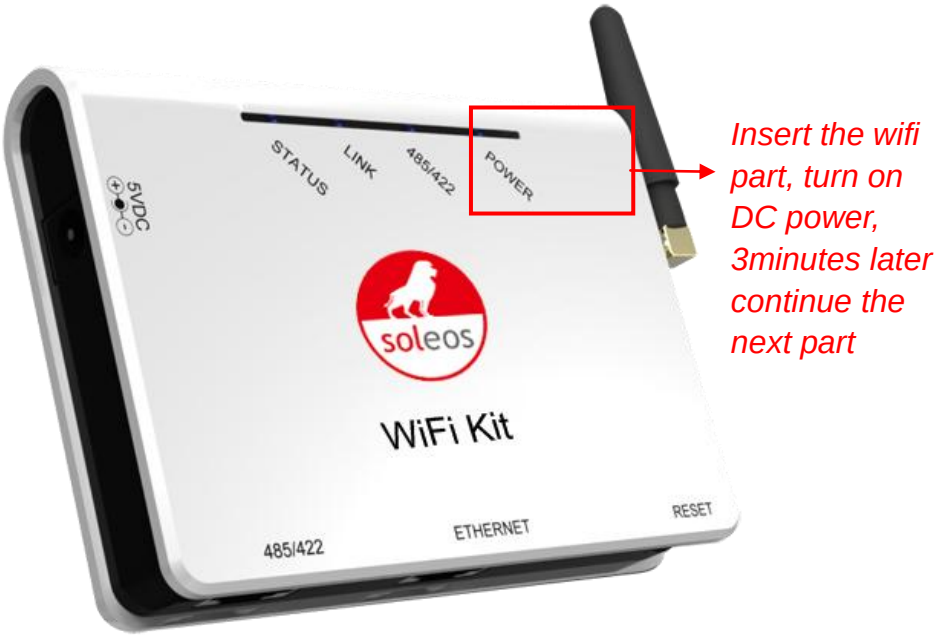


Picture 2.3.3

Note: Must cut off the power supply before connection. Please make sure that all the connections are completed, and then power on the inverters and PV data collectors. Otherwise may cause personal injury or equipment damage.

2.4 WiFi settings

2.4.1 Wireless Network

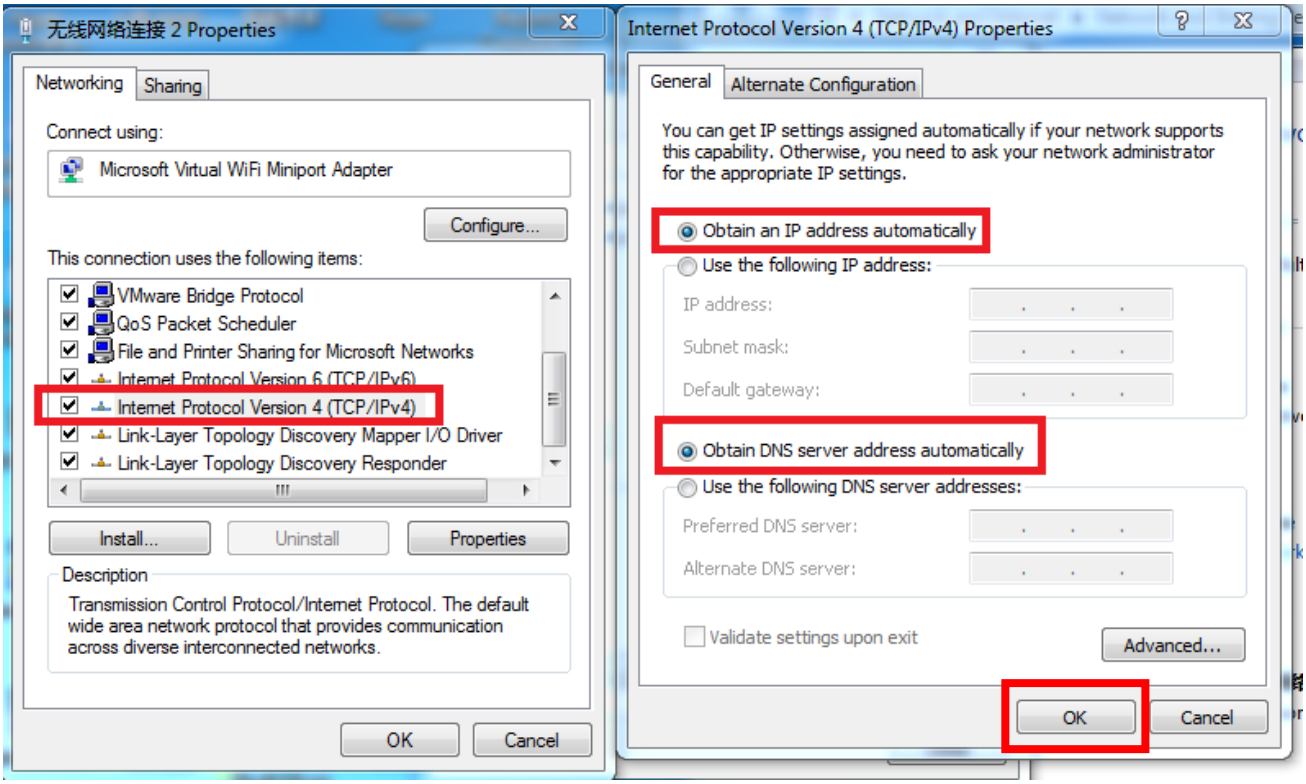


Picture 2.4.1

1. Prepare a computer or device, e.g. tablet PC and smartphone, that enables WiFi.

2. Obtain an IP address automatically

- Open Wireless Network Connection Properties, double click **Internet Protocol Version 4(TCP/IPv4)**
- Select Obtain an IP address automatically, and **click OK**

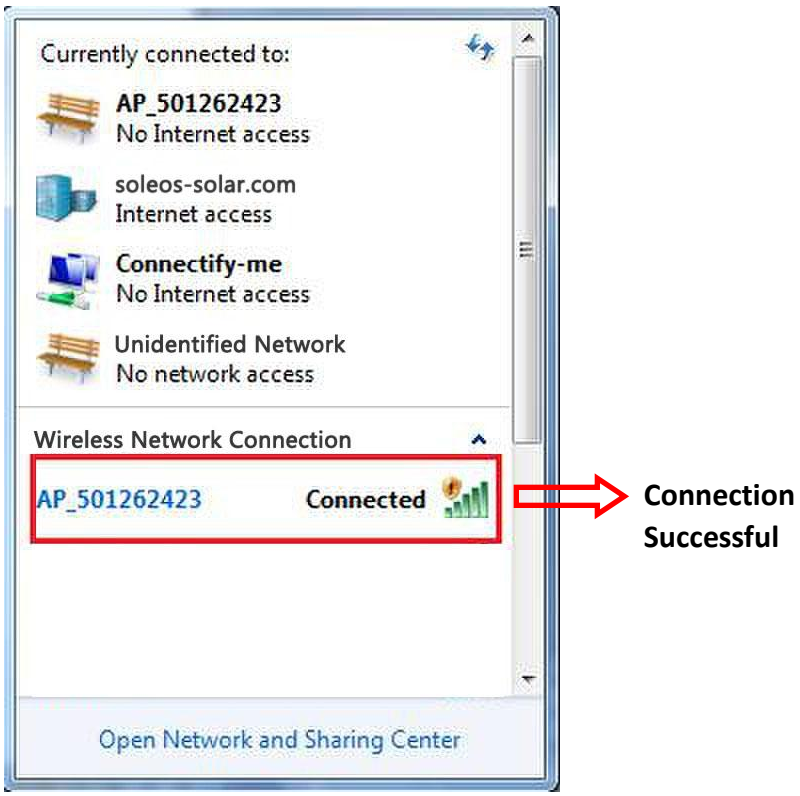


Picture 2.4.2

3. Open wireless network connection and click **View Wireless Networks**

Select wireless network of the data logging module, no passwords required as default. The network name consists of **AP** and the **serial number** of the product. Then click **Connect.**

Picture 2.4.3



Picture 2.4.4

*Notice: If **AP_(serial number of product)** is not available in the wireless network list, there may be problems in the connection or setting of data logging module. Please check if the WiFi had installed ok, and inverter has been powered on.*

Before troubleshooting, please inquire with your inverter installer whether you are allowed to remove the cover of the inverter to trouble shoot the module. If not allowed, please contact customer service.

4. Set parameters of WiFi module

Open a web browser, and enter 10.10.100.254(the Default IP address of WiFi Kit, you may set domain name access, please see the picture 2.4.5), then fill in username: **admin** and password: **admin**, both of which are admin as default.

Recommended browsers: Internet Explorer 8+, Google Chrome 15+, Firefox 10+

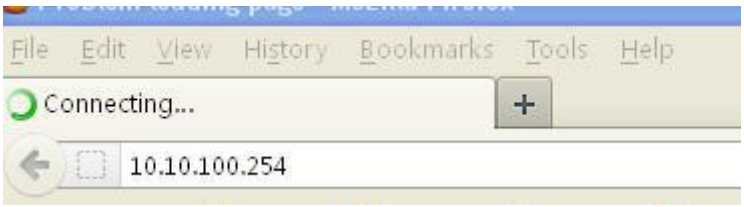
Note:

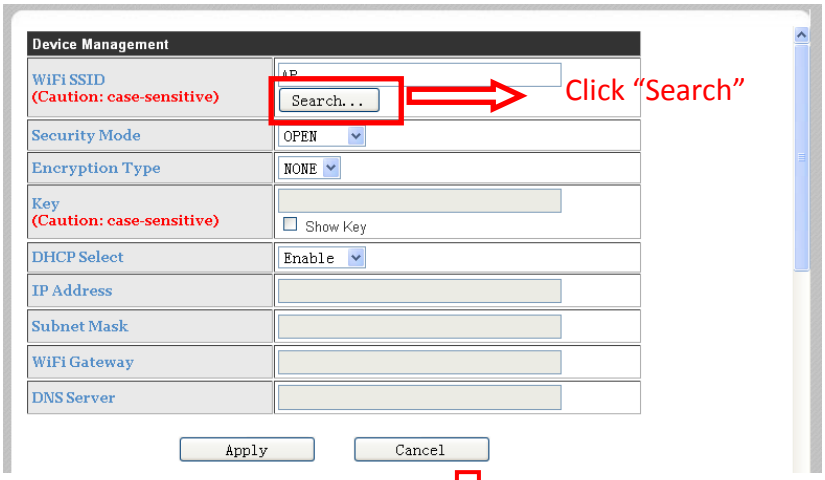
1. In order to make sure the setting goes smoothly, you need check following points:

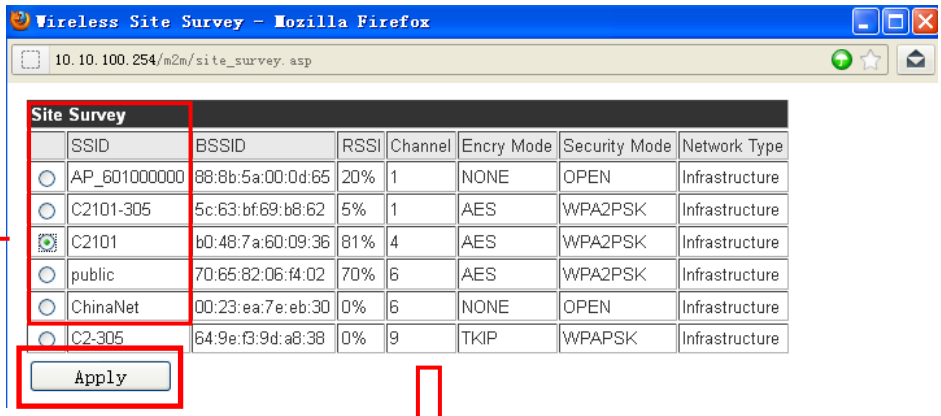
- *Set your WiFi router into DHCP mode*
- *Confirm the RS485 Card installed well and do not loose in the inverter*

2. The default username & password : admin & admin, we suggest modify the username & password:

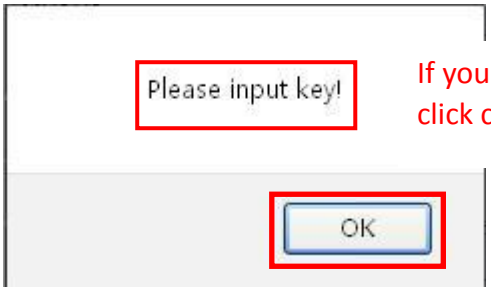
Step: choose "Account" , input your username &password.



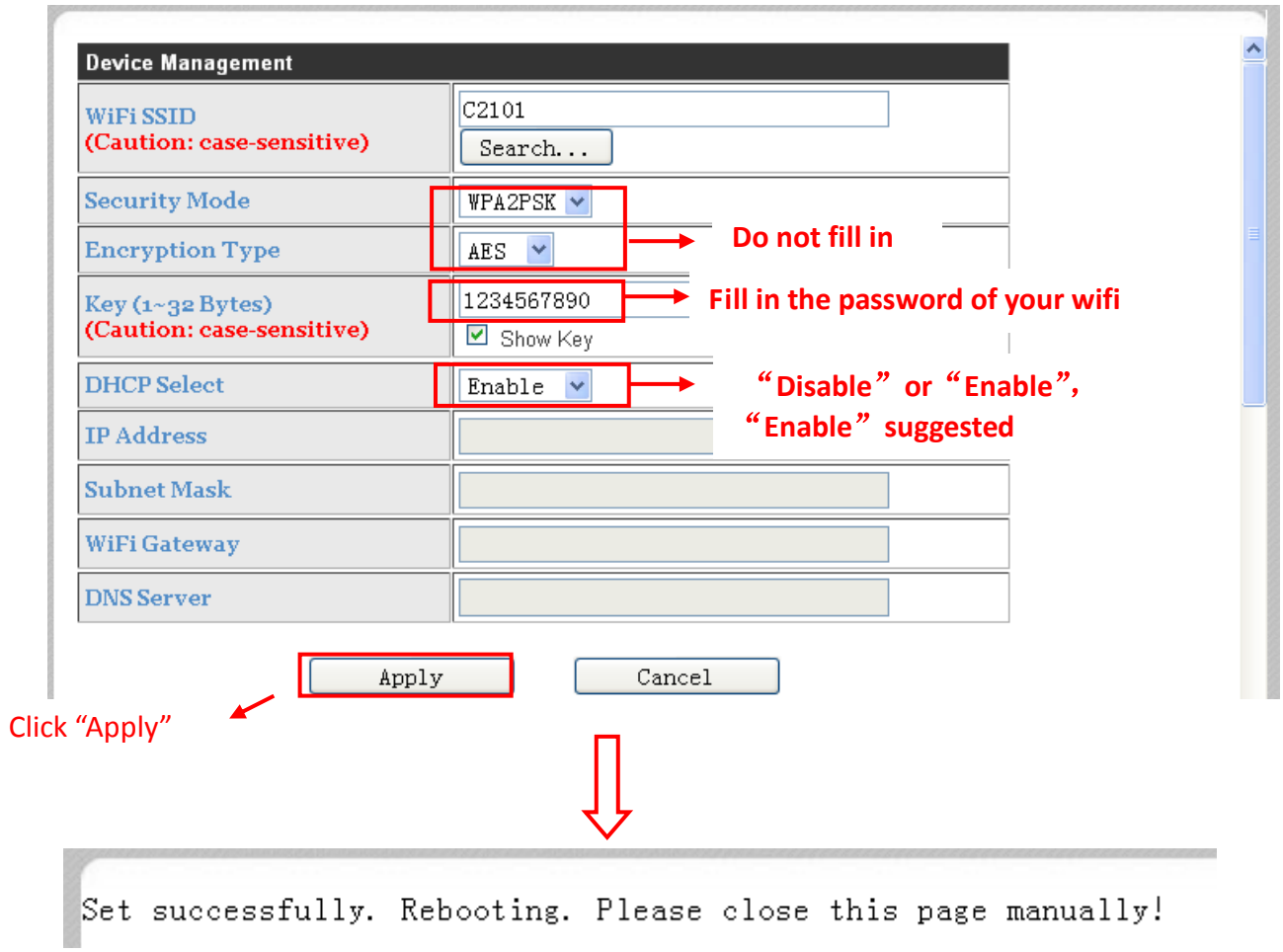




Choose your regional WiFi and click “Apply”



If your WiFi has a password, click confirm



Picture 2.4.5

Note: this default setting is router DHCP on, if you cannot connect to the network, please check if you open the DHCP function.

After your WiFi Kit set ok and get IP address from your router for example: 192.168.16.89.

Input: http://192.168.16.89/ will display the page.

Now we finish the network setting, then you may login www.SOLEOSportal.com to browse your data.

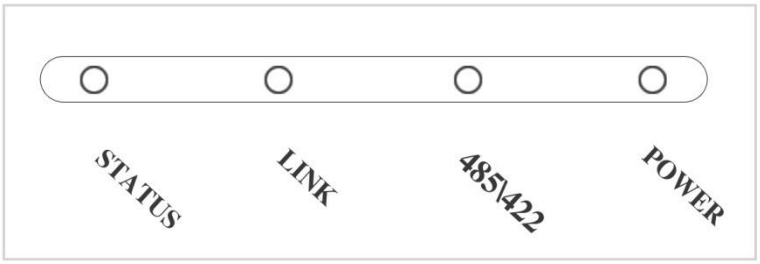
2.4.2 Wired network

As the picture 2.3.1, you can use network cable to connect to the Ethernet port of WiFi Kit and the port of router. Then the inverter info received by WiFi will be directly transferred to the remote server.

Note: the default WiFi Kit is WiFi network, if use the Ethernet port, please restore to the factory default status.

2.5 Debug

LED indicating lamp Introductions



Picture 2.5.1

Name of LED	Status	Description of status
POWER	Light	The power is normal
	Dark	The power is abnormal
485\422	Light	The connection between collector and inverter is normal
	Flashing	Data is transferring between collector and inverter
	Dark	The connection between collector and inverter is abnormal
STATUS Dark	LINK Flashing	Connecting WiFi
STATUS Light	LINK Flashing	Data is transferring of WiFi
	LINK Light	The connection of collector is normal
	LINK Dark	The connection of collector is abnormal
STATUS Flashing	LINK Flashing	Data is transferring of port
	LINK Light	WiFi is in the AP way，a terminal is connecting with the equipment
	LINK Dark	WiFi is in the AP way，no terminal is connecting with the equipment

Trouble shootings with LEDs

phenomenon				Possible reasons	Dealing ways
POWER	485/422	LINK	STATUS		
Dark	Dark	Dark	Dark	Haven't connected to the power	Connect power and ensure that the power supply is good.
Light	Dark	X	X	The connection of inverter is abnormal	Check the connection cable is right and ensure that the order is according to 568-B
					Ensure the stability of RJ-45 connector line
					Confirm the status of inverter and ensure it's working condition is normal
Light	X	X	Flashing	In the AP Mode	Set network settings
Light	X	Flashing	Dark	Collector is not connected with WIFI	Confirm if the antenna is loose or fall off. If so, please screw it.
					Check if the WIFI wanted is covered.
					Restore the factory settings according to the installation manual and reset.
Light	Light	Dark	Light	Fail to connect the remote server	Please confirm that WIFI can be connected with the Internet.
Light	Dark	Dark	Dark	The system is initialized	Please wait. If there is no change in 2min, please reset the collector.

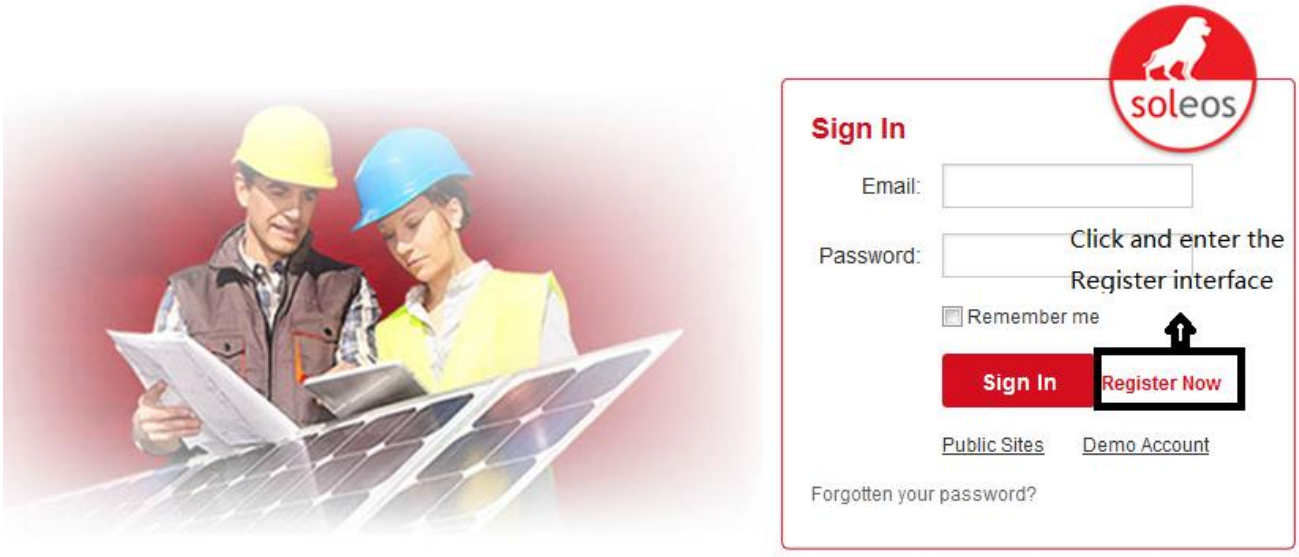
Note1:x means the status is instability
Note 2: when screw or adjusting the antenna position, please note only the metal part can be screwed, plastic part cannot be screwed, or the antenna will be damaged
Note3: If the equipment still cannot work according to the above instructions, please connect your device customer service.

2.6 Register on monitoring website

Our products supported by PV monitoring system Web site browser：IE8，Firefox，Chrome，safari，log into the website **http://www.SOLEOSportal.com**, Click to register, enter the user registration page, follow the requirements for registration, after successful registration, enter the mailbox and activity the account, then complete the registration.

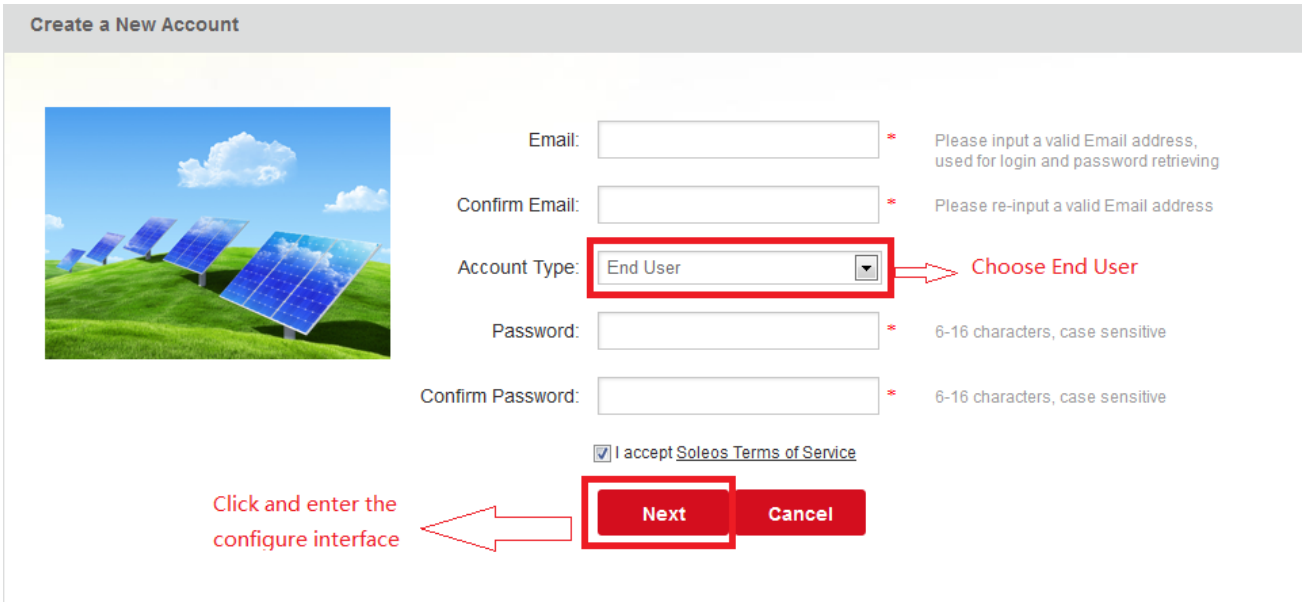
2.6.1 Register new account

Click Register button to go to registering interface for new account



Picture 2.6.1

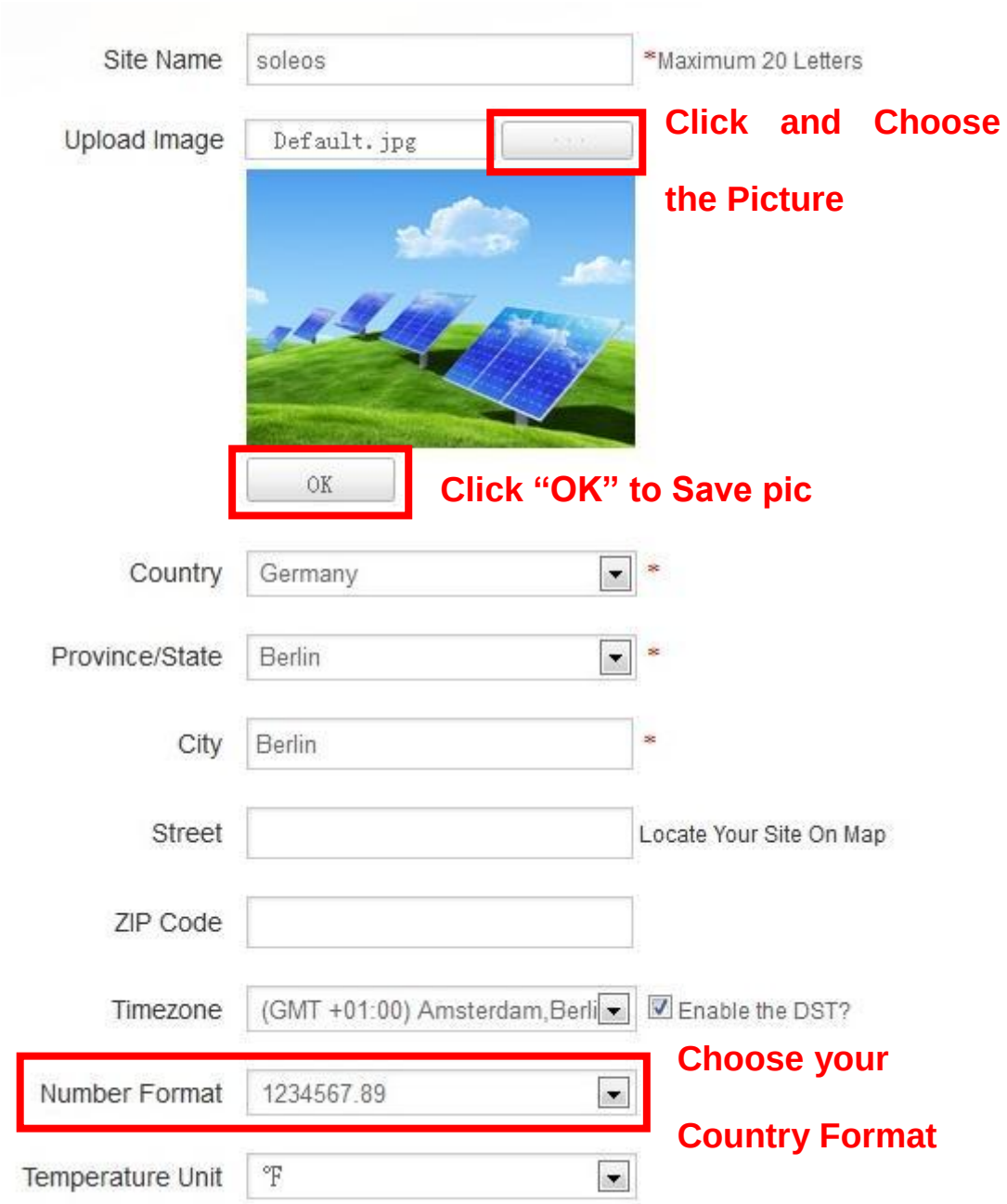
2.6.2 Fill in user's information

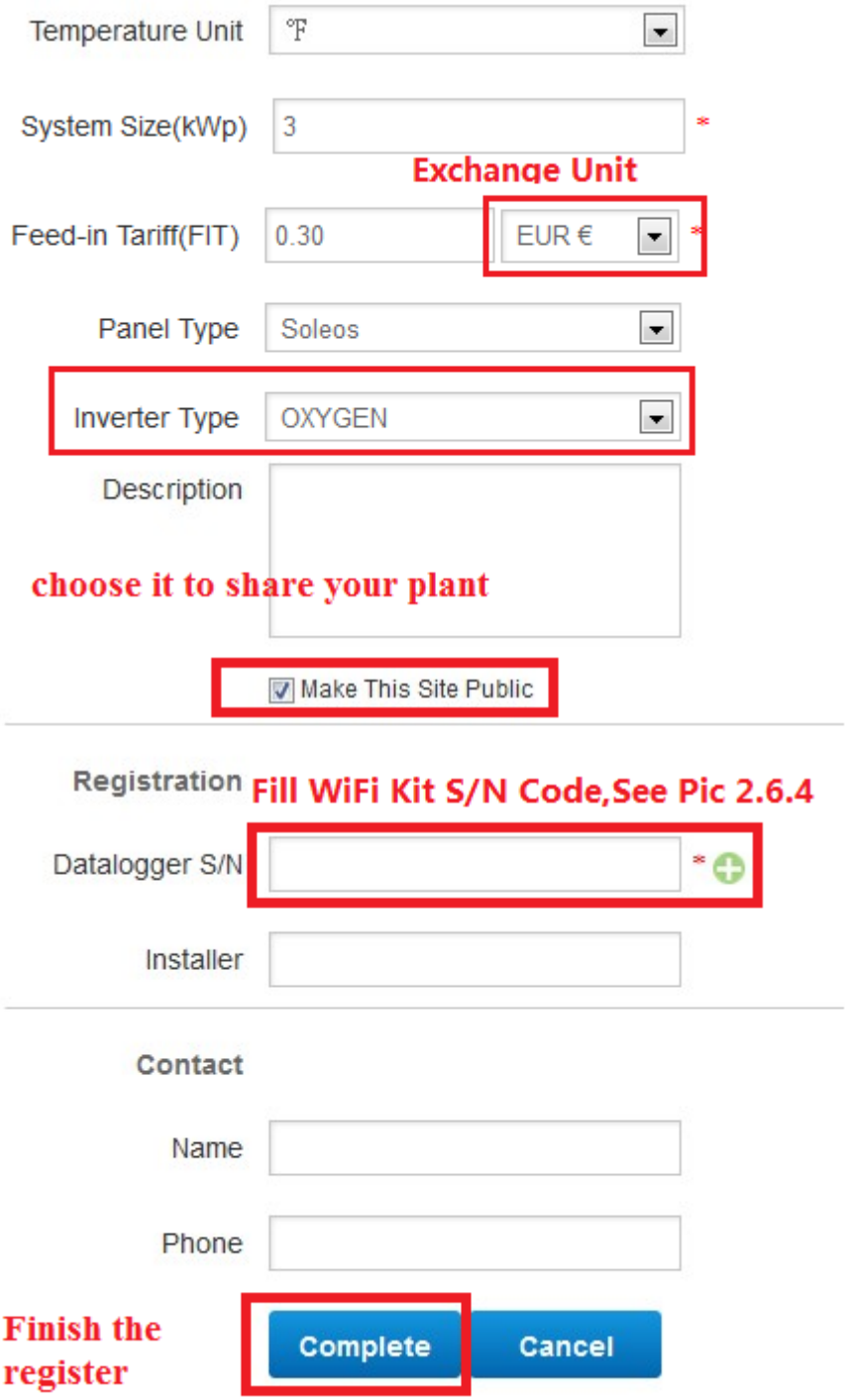


Picture 2.6.2

Remarks: please read the <Soleos service agreement >carefully, the enclosure is the cost list for all the countries, please choose your operators
End User means the final user
"*" you must fill it

2.6.3 "End User" Account



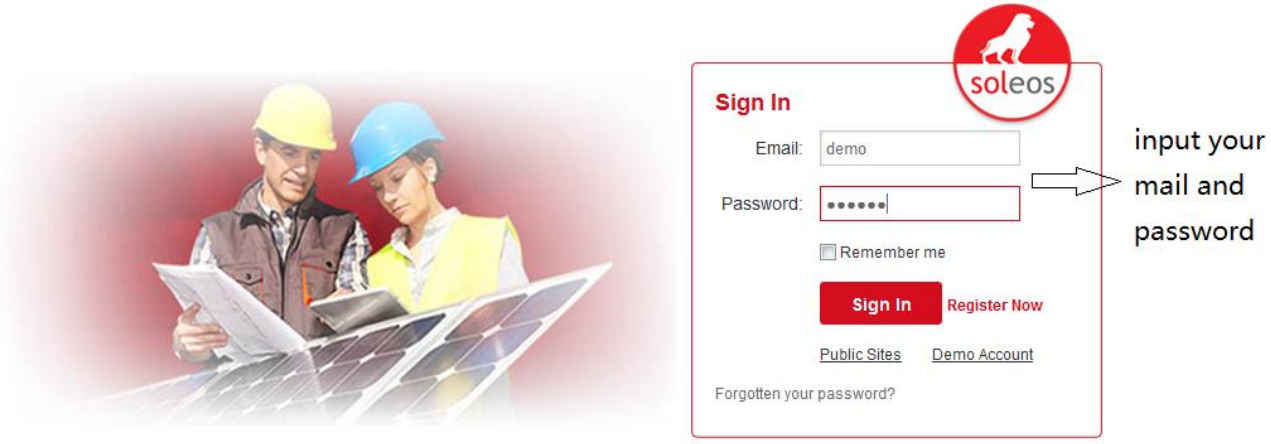

Temperature Unit
°F
System Size(kWp)
3
*
Exchange Unit
Feed-in Tariff(FIT)
0.30
EUR €
*
Panel Type
Soleos
Inverter Type
OXYGEN
Description
choose it to share your plant
Make This Site Public
Registration
Fill WiFi Kit S/N Code,See Pic 2.6.4
Datalogger S/N
*
Installer
Contact
Name
Phone
Finish the register
Complete
Cancel

Picture 2.6.3

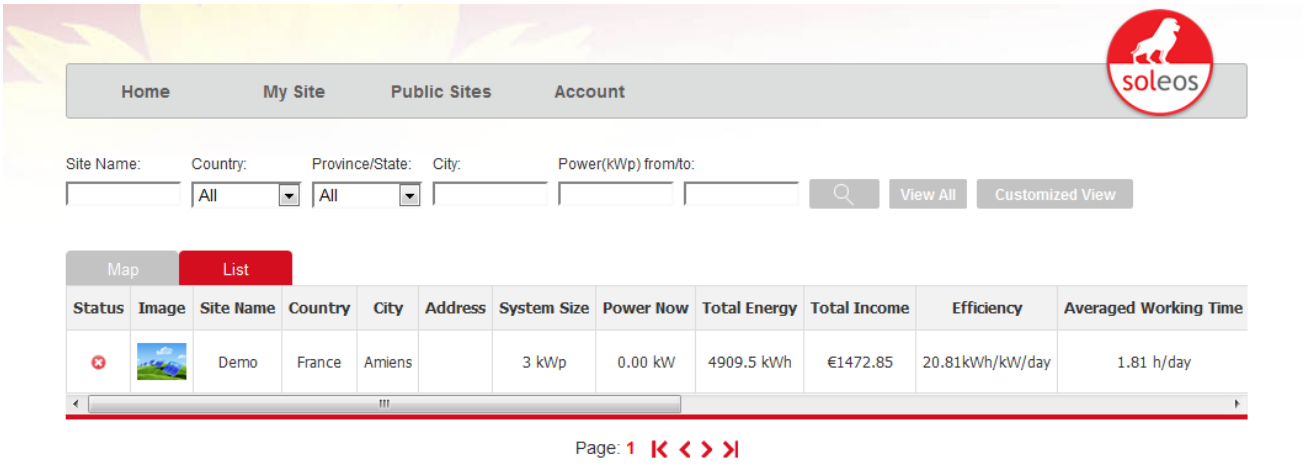
Picture 2.6.4

2.7 Monitoring

After the successful register and account activation，open the login interface as below picture 2.7.1, input the correct email and code and enter the PV monitoring system, then you can monitor and manage the power station.

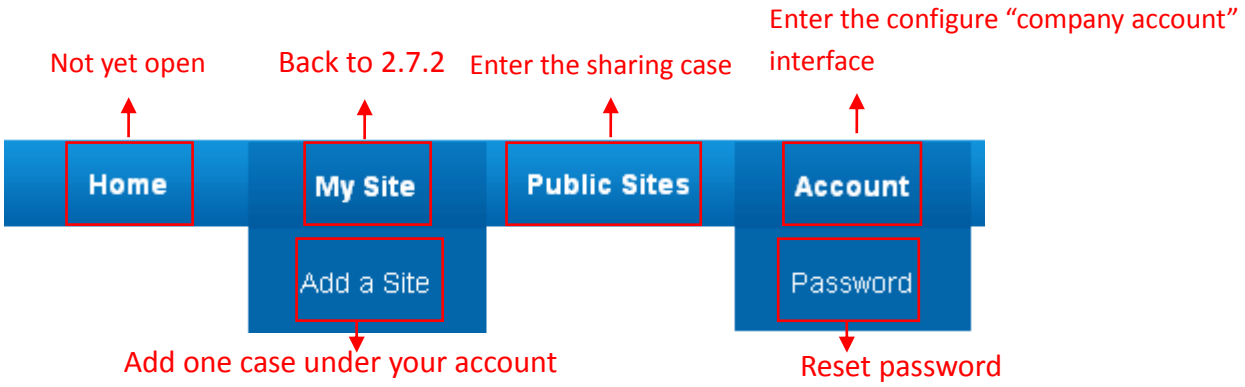


Picture 2.7.1

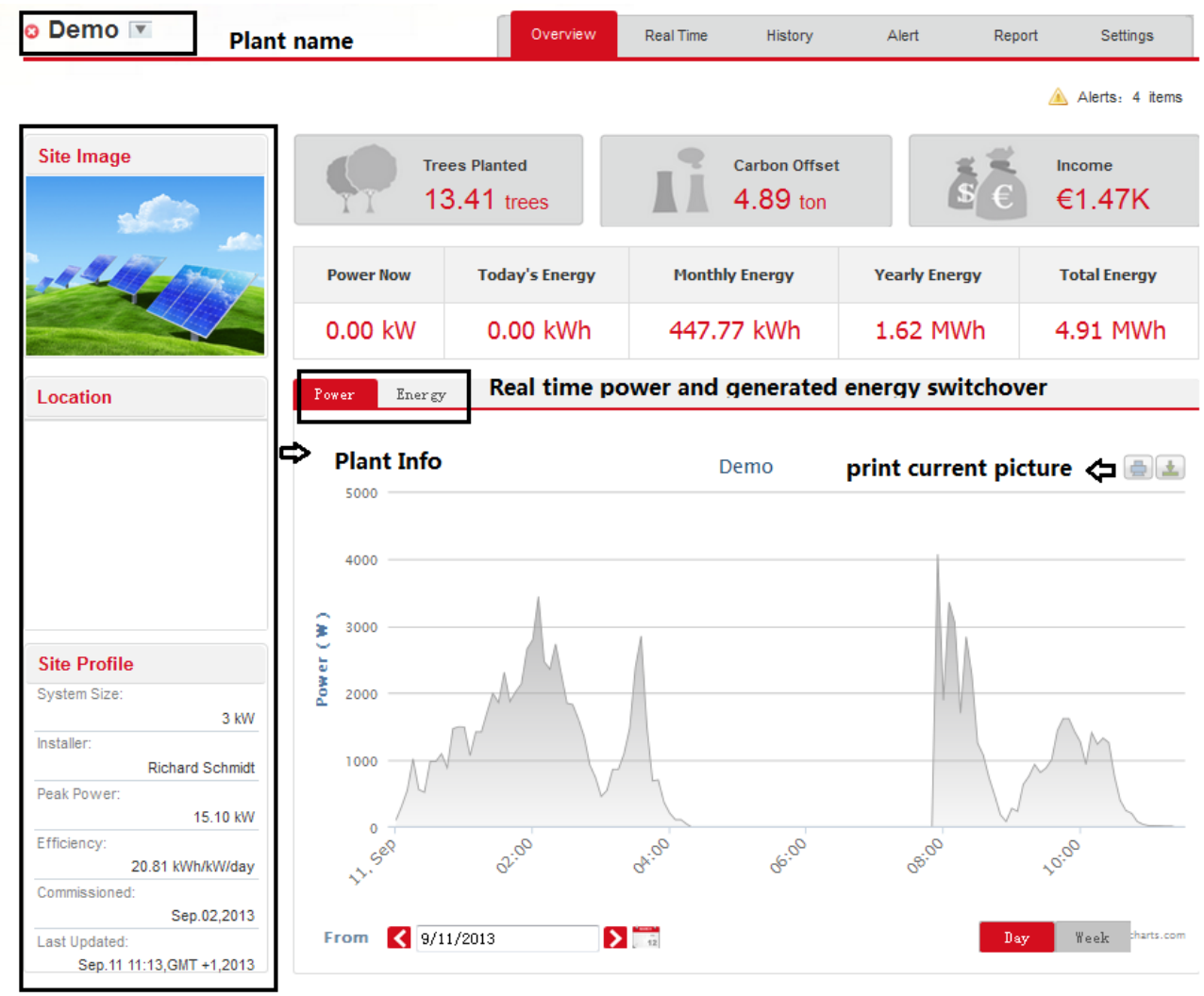


Picture 2.7.2

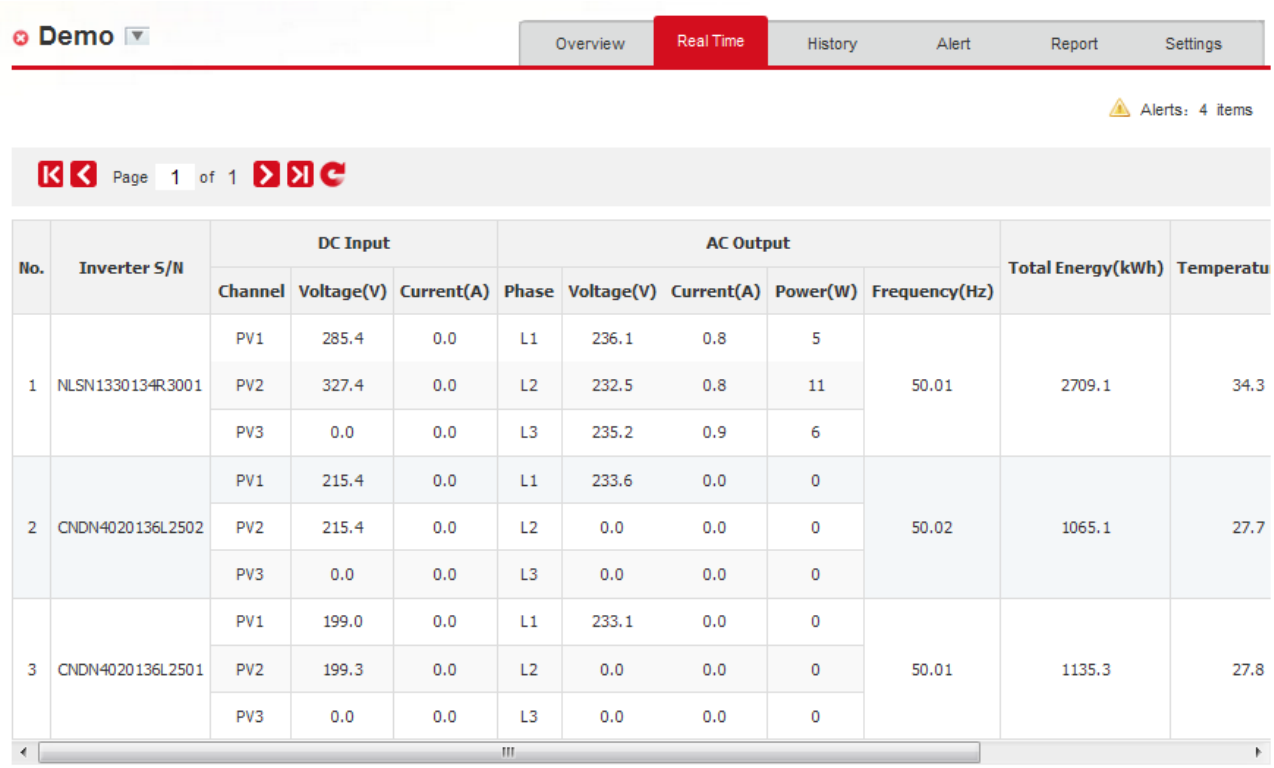
Enter your station:



Picture 7-3 Navigation Bar

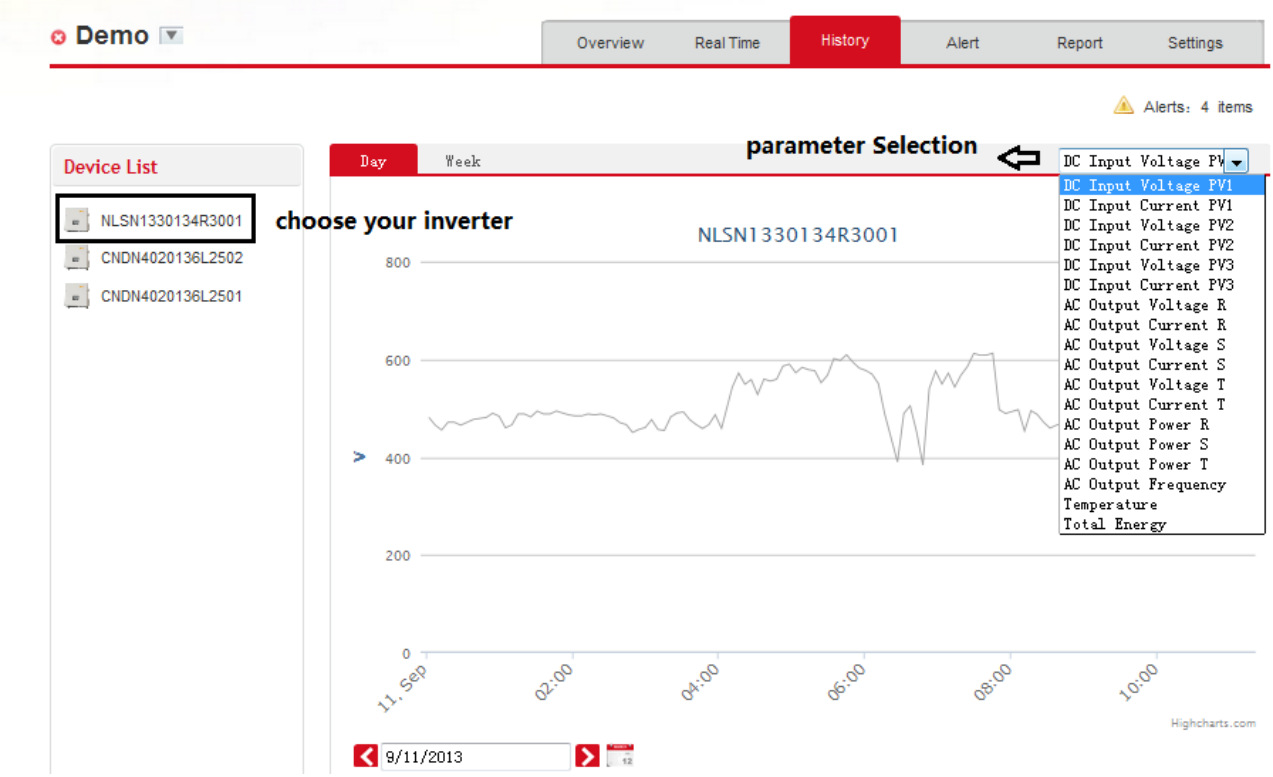


Picture 2.7.4 Main interface of power station

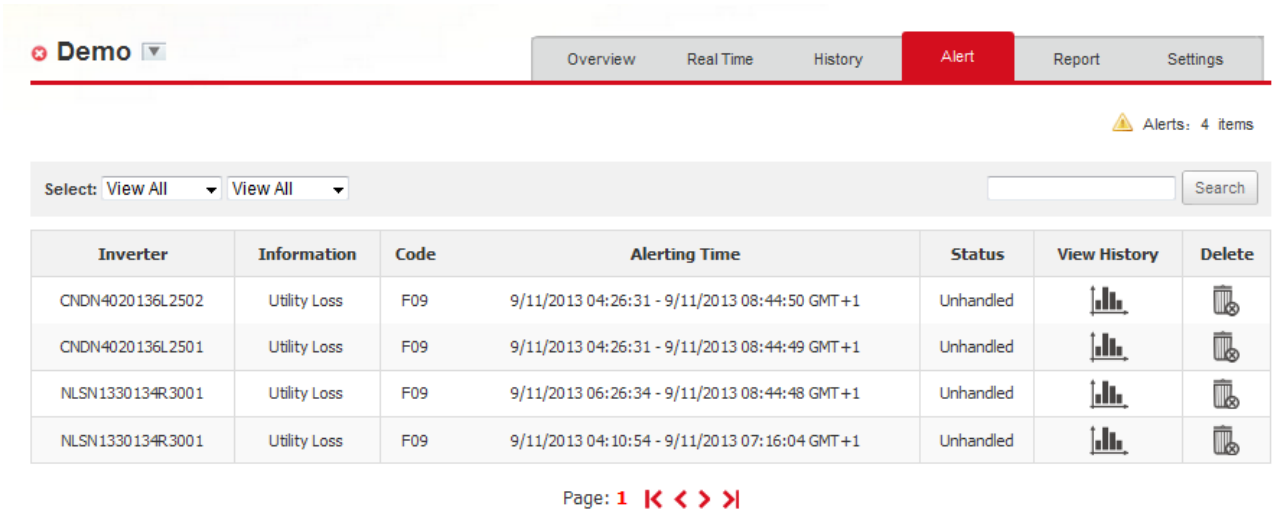


No.	Inverter S/N	DC Input			AC Output					Total Energy(kWh)	Temperatu
		Channel	Voltage(V)	Current(A)	Phase	Voltage(V)	Current(A)	Power(W)	Frequency(Hz)		
1	NLSN1330134R3001	PV1	285.4	0.0	L1	236.1	0.8	5	50.01	2709.1	34.3
		PV2	327.4	0.0	L2	232.5	0.8	11			
		PV3	0.0	0.0	L3	235.2	0.9	6			
2	CNDN4020136L2502	PV1	215.4	0.0	L1	233.6	0.0	0	50.02	1065.1	27.7
		PV2	215.4	0.0	L2	0.0	0.0	0			
		PV3	0.0	0.0	L3	0.0	0.0	0			
3	CNDN4020136L2501	PV1	199.0	0.0	L1	233.1	0.0	0	50.01	1135.3	27.8
		PV2	199.3	0.0	L2	0.0	0.0	0			
		PV3	0.0	0.0	L3	0.0	0.0	0			

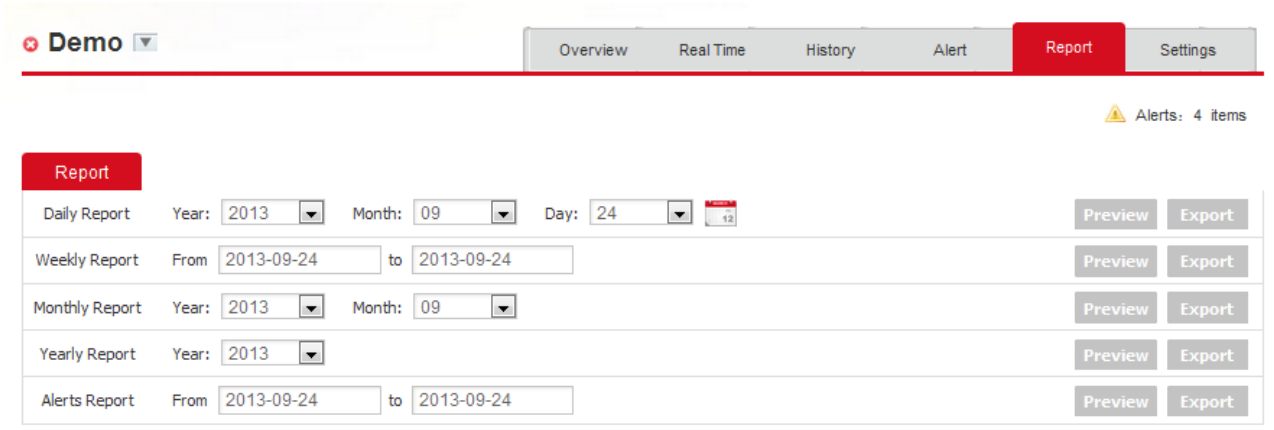
Picture 2.7.5 Real Time Interface



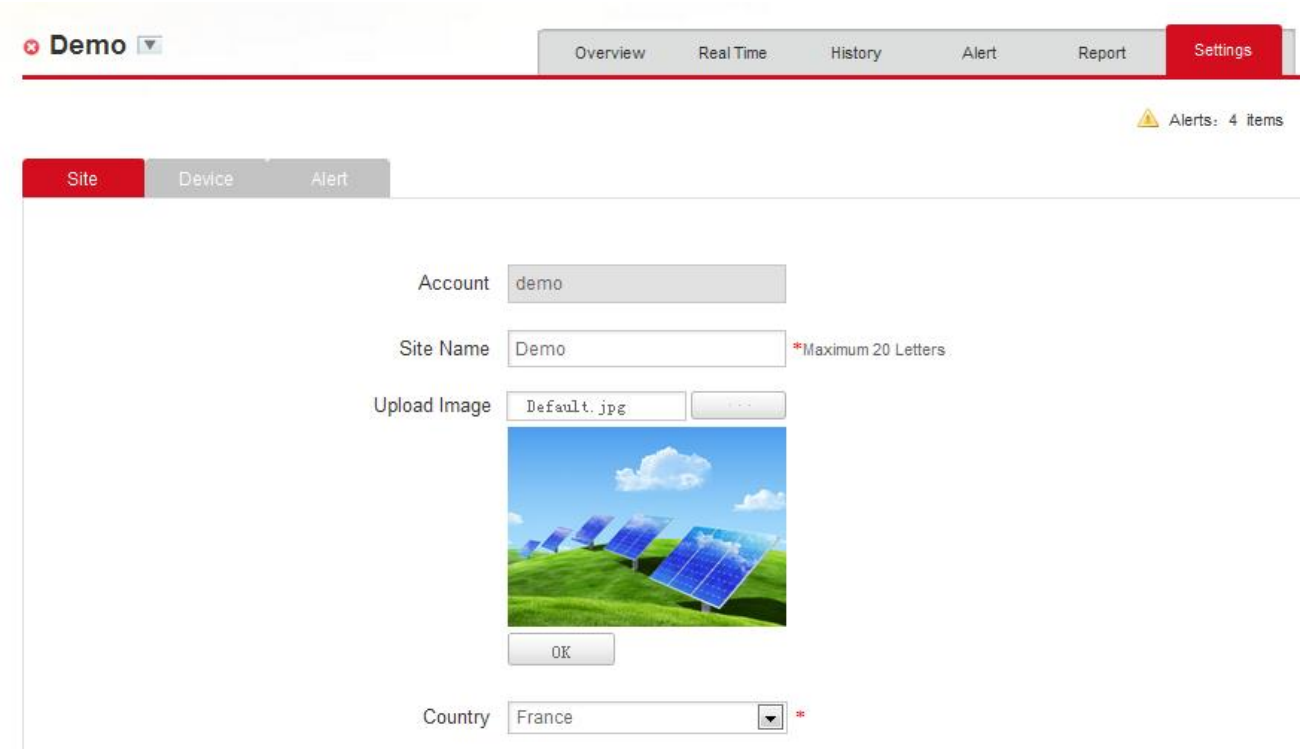
Picture 2.7.6 History Interface



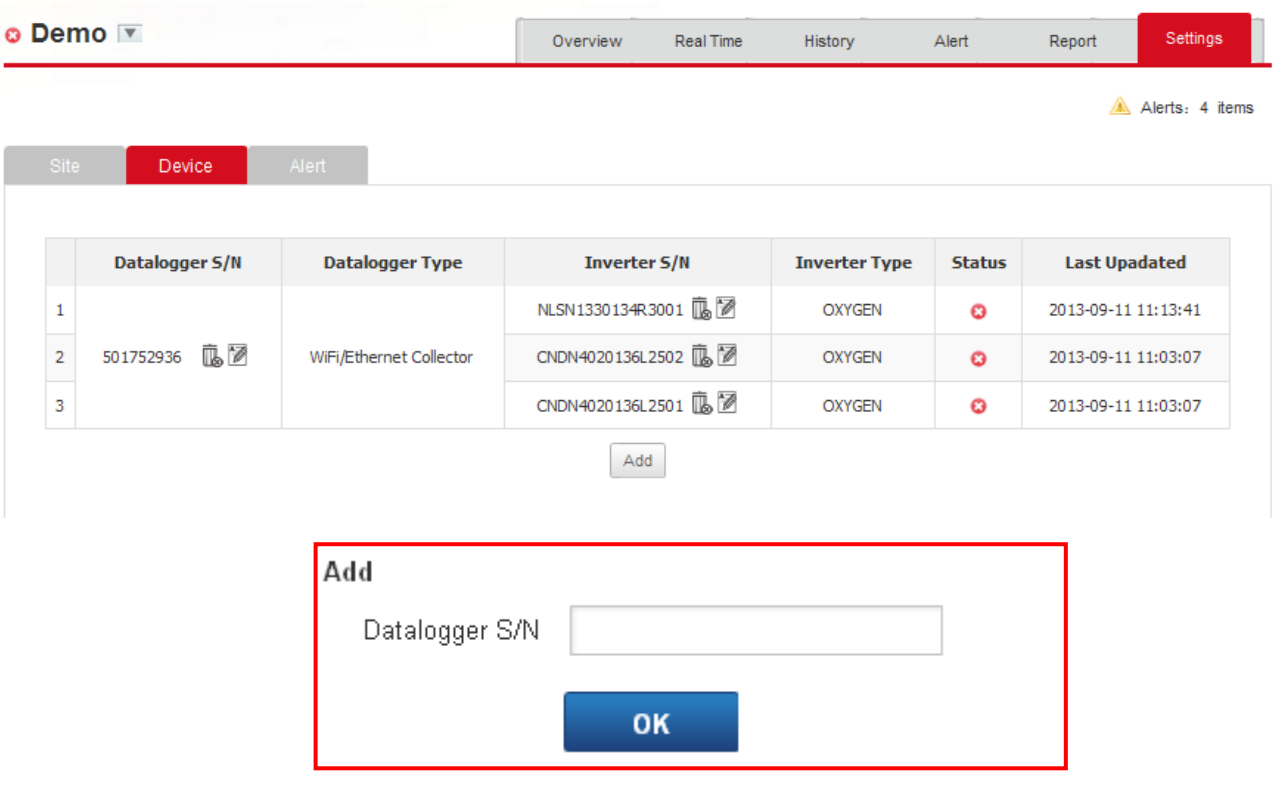
Picture 2.7.7 Alert Interfaces



Picture 2.7.8 Report Interfaces



Picture 2.7.9 System Setting Interface



Picture 2.7.10 System Setting Interface

3. Contact

If you have any technical problems about our products , please contact us , you should confirm the follow things before contact us:

- Device model
- Data collector serial number
- The number of connected inverter

SOLEOS Solar GmbH

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Fax: +49 2227 92 91 22

Mail: info@soleos-solar.de

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