Logger1000 Connection and Commissioning Quick Guide for C&I Inverters

Disclaimer

The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

Applicability: SG30CX, SG50CX and SG110CX; DTSD1352.

Notes:

This quick guide is to be read in conjunction with the Sungrow's User Manuals and SG30/50/110CX inverters as example for demonstration.

When more than one inverter is installed, all the commissioning is done via the Logger1000.

All of the components are connected via daisy-chain RS485 as per standard RS485 topology.

For export control and load consumption, an energy meter needed to be connected.

Default baud rate is 9600 of the energy meter and this can be changed if necessary, by entering "System/Interface/RS485" in the Logger1000.

Shielded twisted pair with a minimum CSA of 0.75mm should be used, and the maximum total length of the cable is 1,200m (120 Ohm resistor should be terminated).

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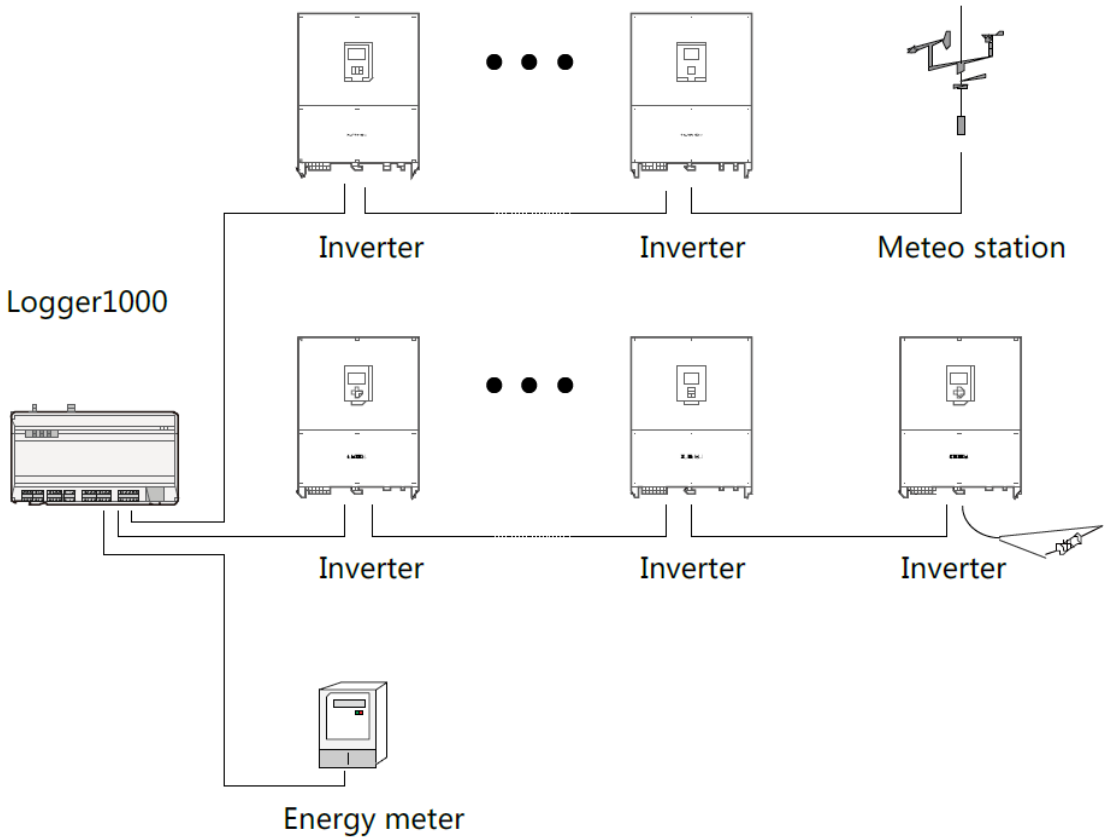
Overview

Schematic layout of equipment to the logger1000.



Note: 120 Ohm termination resistors are integral to the Sungrow range of inverters and the last item in the chain should be terminated with a 120 Ohm resistor (6 supplied).

Cable	Type	Recommended cross-section
RS485 communication cable	Shielded twisted pair	0.75mm^2~1.5mm^2

NOTICE

The RS485 communication cable must be the shielded twisted pair with the shielding layer single-point grounded.

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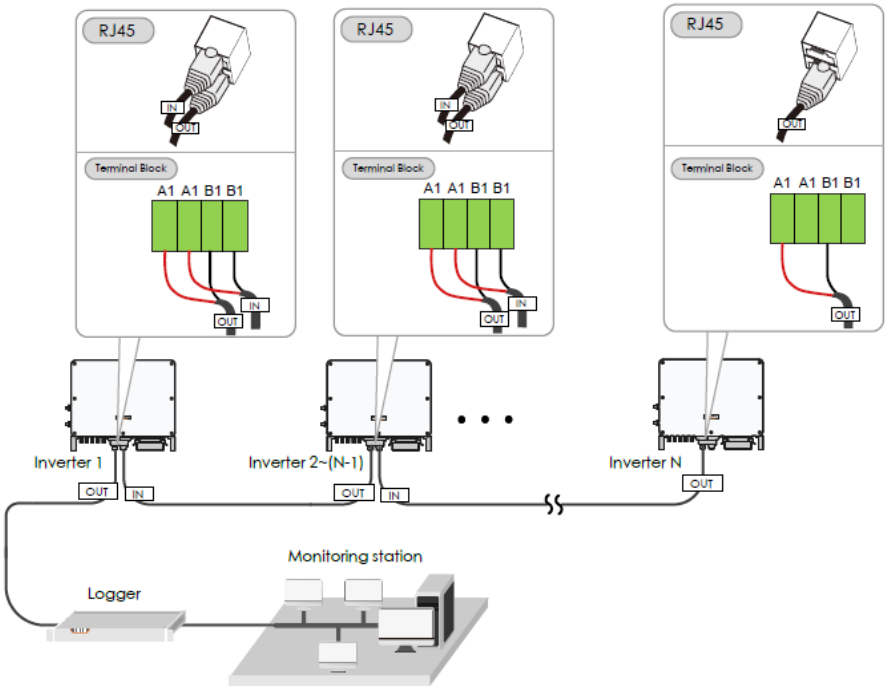
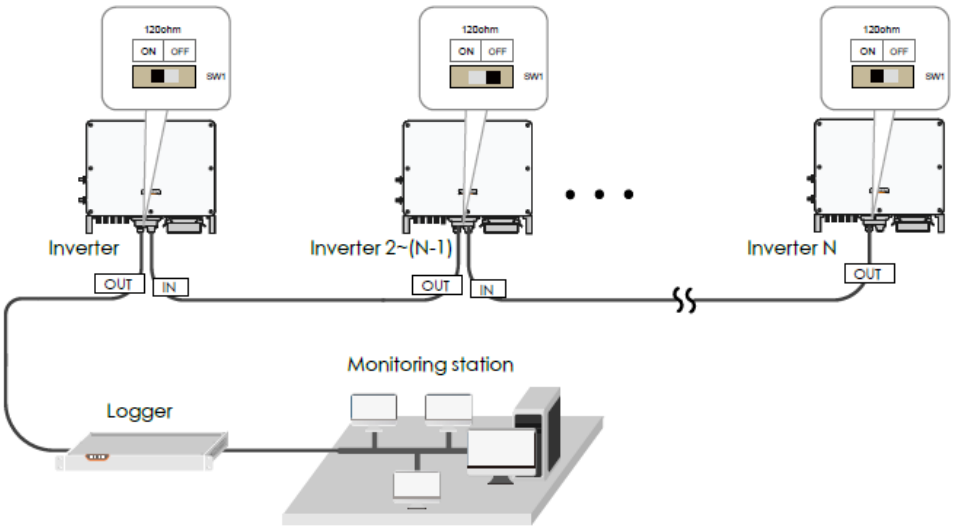
RS485 Topology

The RS485 can be connected either by direct cable connection or RJ45 plugs.

Please note SG15/20KTL-MT inverters connection is different as SG30/50/110CX inverters.



Ensure the termination resistors are enabled at each end of the RS485 in the inverter line.



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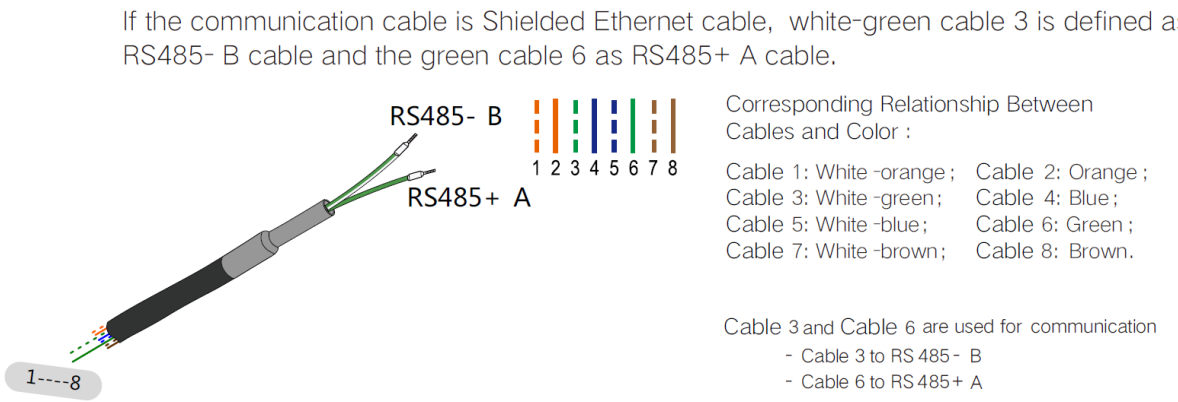
Energy Meter Connection

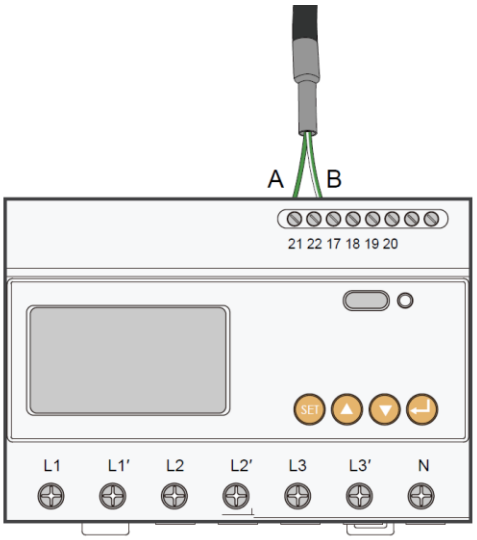
The site electrician will need to calculate the CT ratio required as per the installation. The CT ratios can be set by accessing the DTSD1352 energy meter menu. Please refer Meter Selection Guide for reference.

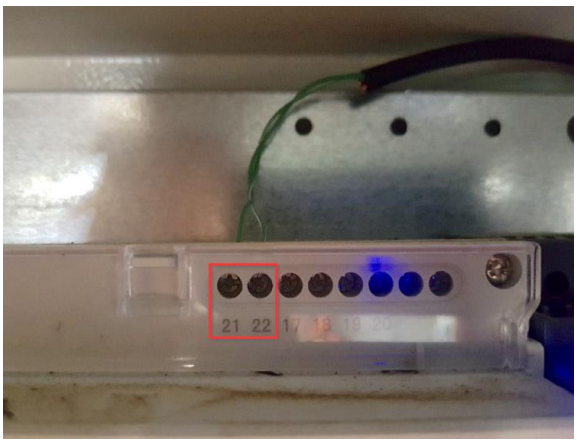
Default Modbus address is 1 and the secondary current of CT should be 5A.

The corresponding pinouts to RJ45 are Pin 3 (White-green) to RS485- B and Pin 6 (Green) to RS485+ A:



Terminal 21 to Green cable (RS485+ A) and terminal 22 to White-green cable (RS485- B) on the DTSD1352 energy meter side. The following figures shows the meter cable connection on the eneryg meter side.





Connect to Logger1000 via the RS485 cable from the energy meter on RS485 port A2 and B2.

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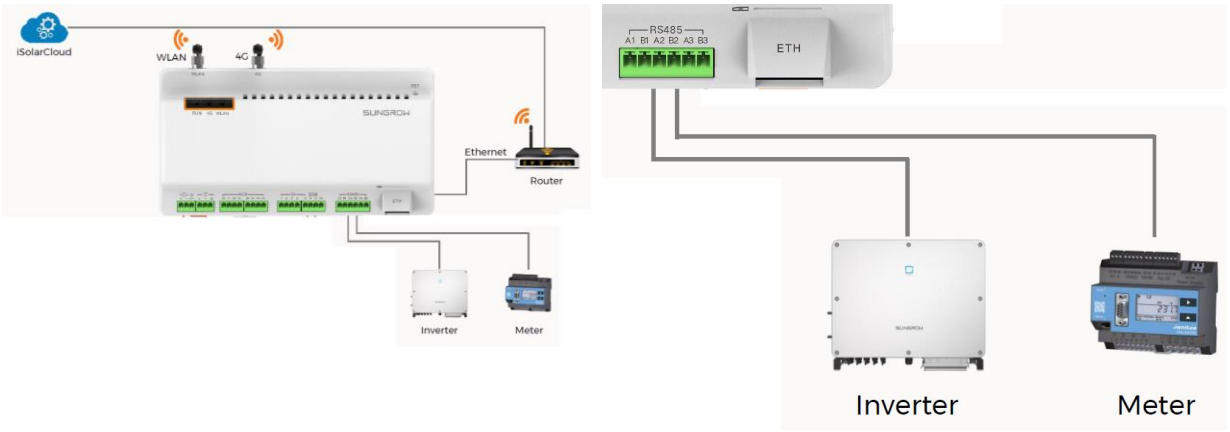

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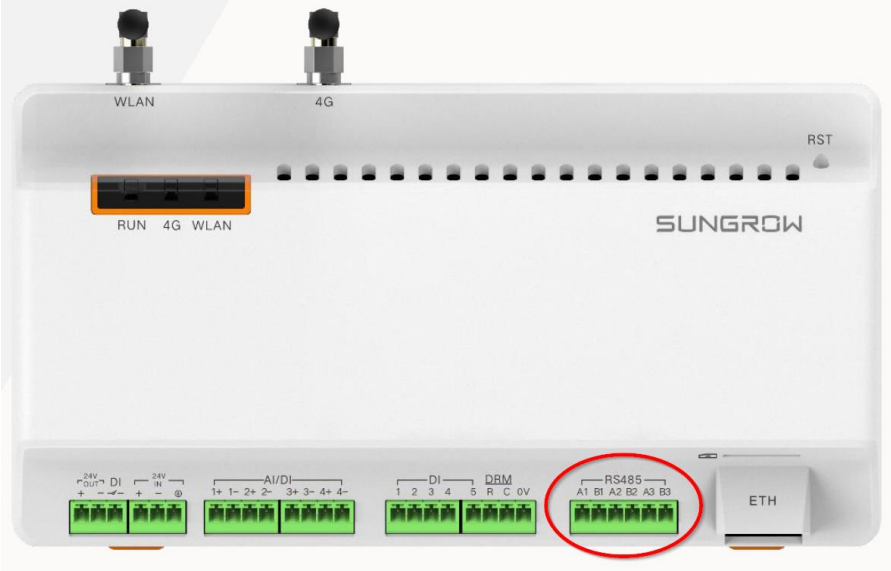
Inverter connection to Logger1000

Connect the RS485 comms from the inverter(s) via A1/B1 and the energy meter via A2/B2 to the Logger1000.



On the logger1000 side, A1 and B1 are terminals to connect with the inverter which display as **com1** on the Logger1000 web portal; A2 and B2 are the terminals to connect with the energy meter, they are shown as **com2** on the portal.

On the inverter SG30/50/110CX side, the RS485 cable should be plugged into the terminal shown in the following figure which highlighted in red circle.

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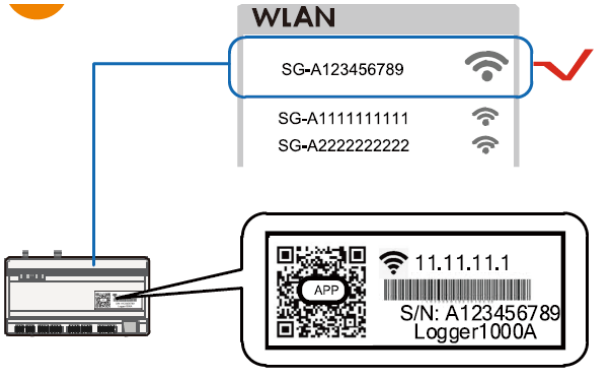
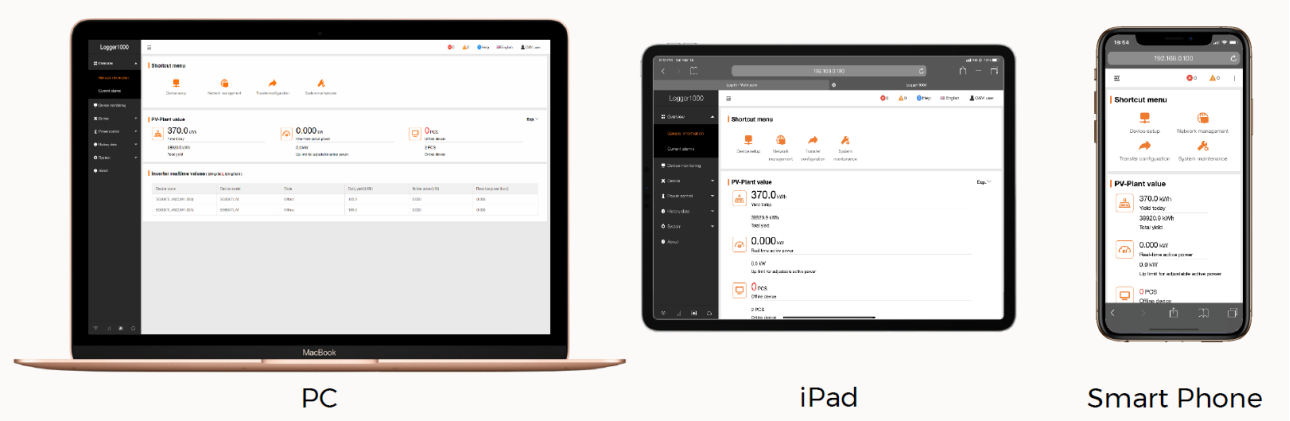
Logger1000 Commissioning via WLAN

Access Logger1000 web portal

Use a smart device or laptop under Wi-Fi function to search for the *SG*********** (10 digits number) network that corresponds to the Logger1000 serial number.



Open a web browser and enter IP address (11.11.11.1) to access below Logger1000 web page.



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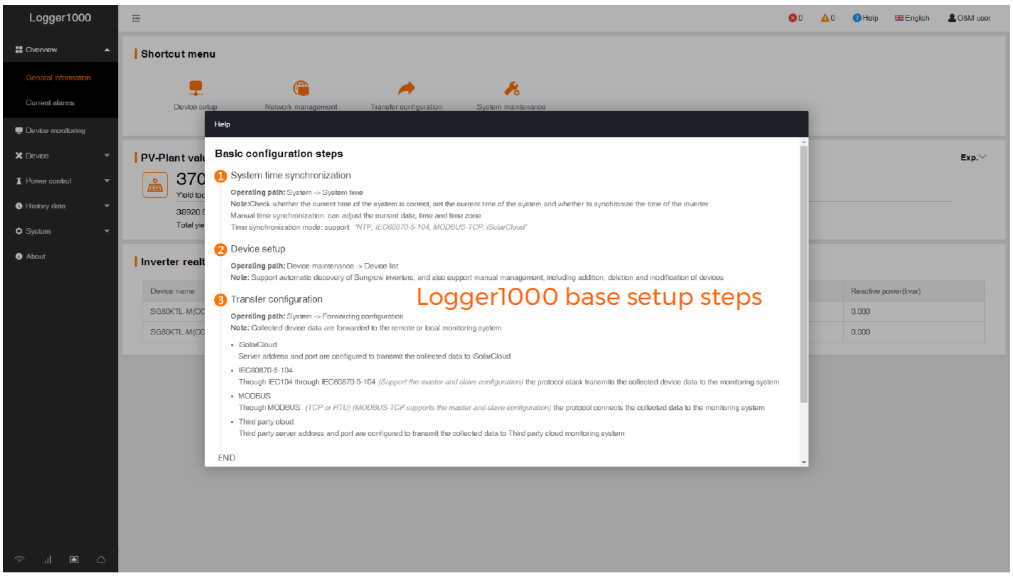
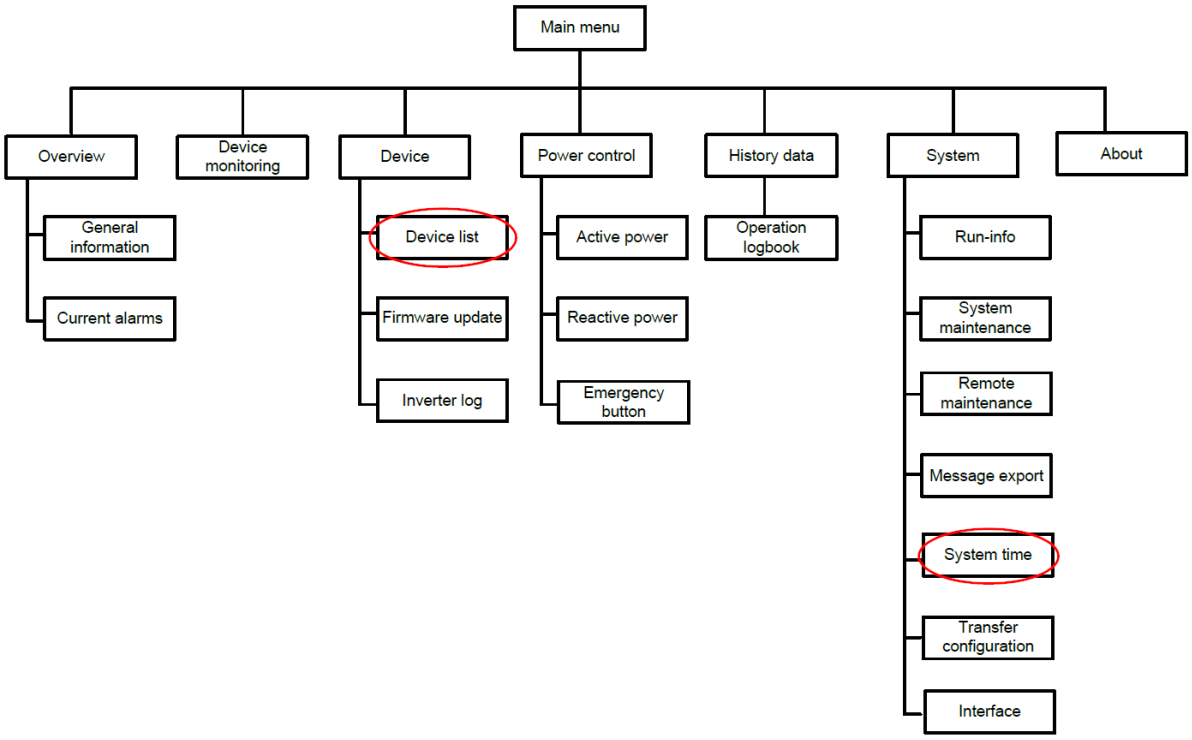
Then you can log in the account (please contact Sungrow for password) via the right top corner login button. When you log in for the first time, a help window will pop up for instruction.



Overview of main menu



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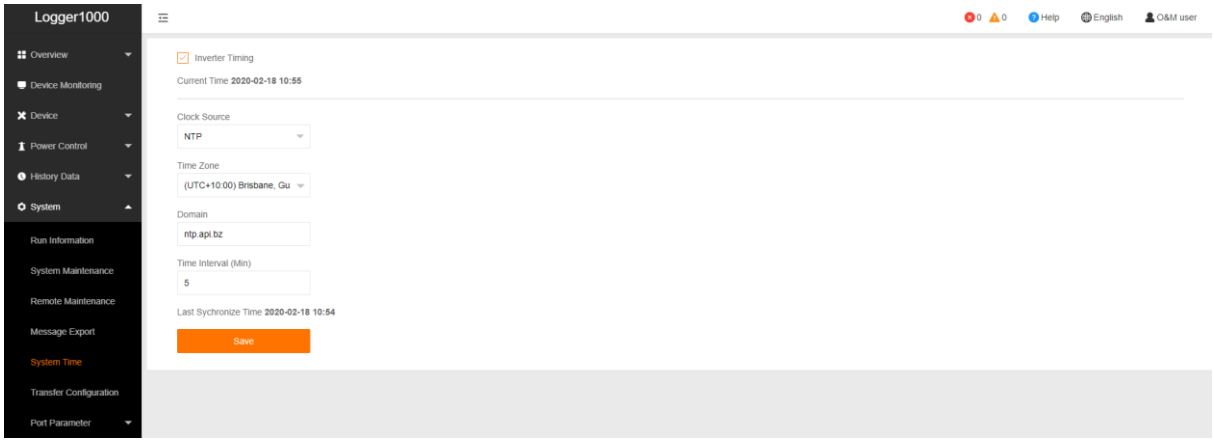
Set date and time

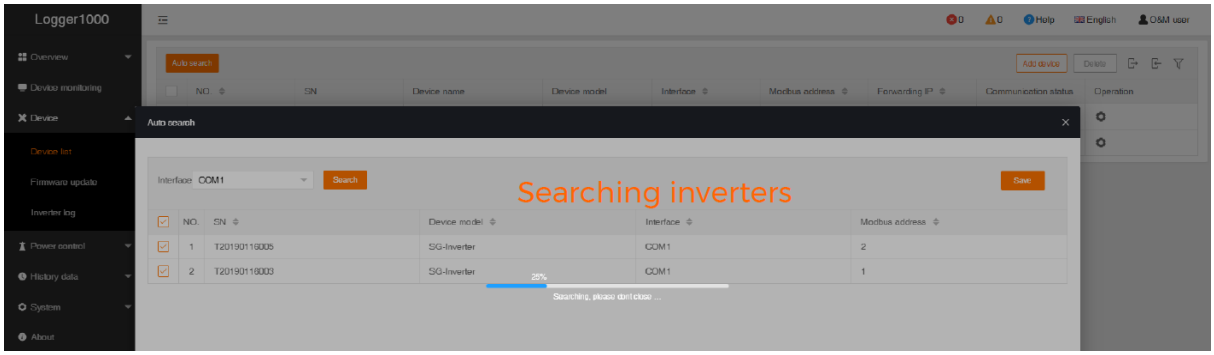
Select Clock Source to '**NTP**' and Time Zone to '**UTC+10:00**' and make sure to **Save**

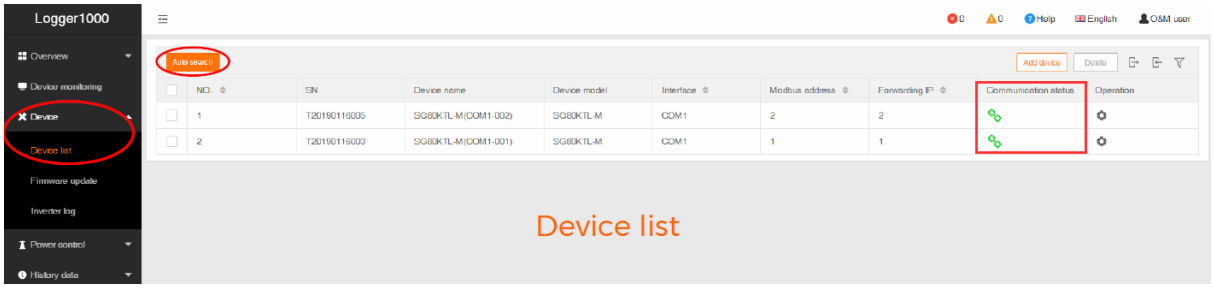


Device list

Navigate to **'Device'** section and click **'Auto search'**; the connecting devices will be display under 'Device List' section if connection is correct. Sungrow's inverters will be automatically detected as long as they are correctly connected and energised.

Meanwhile, you can confirm the communication status for each device under **Communication status** section. Green icon indicates the connection works and red icon means no connection between Logger1000 and other device.





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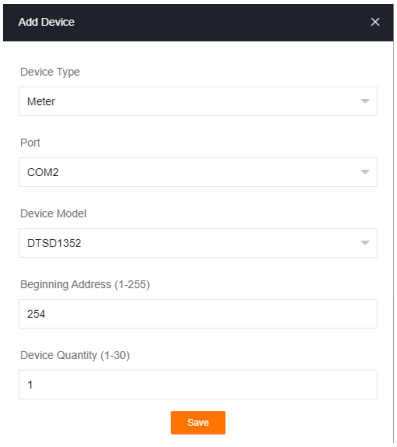
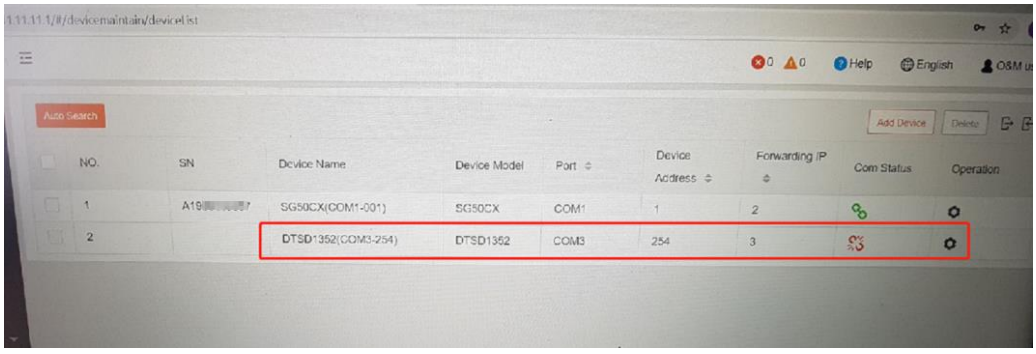
Add energy meter

The energy meter needs to be manually added which is same as any other 3rd party equipment.

To add the energy meter, click '**Add device**' and select a device type in the pop-up window and fill in the required information (Add device for DTSD1352 energy meter and device address: 254)



If the energy meter's status (DTSD1352) is disconnected on the portal, please double check the com port number. Take the following figure as a sample, if the meter connected with **A2** and **B2** on the Logger1000, we need to make sure the port number on the portal is **com2.** Otherwise, it will show disconnect.



Go into the settings to select the grid standard and any other variations or protection parameters.

Individual inverters can be accessed by clicking on the inverter serial number.

Add CT Transformation Ratio.

If the ratio is 200/5, then enter value 40.

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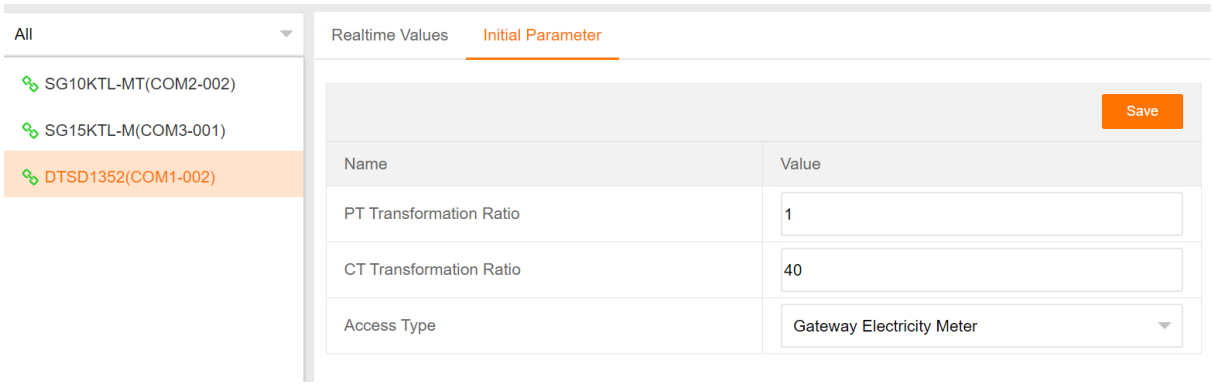
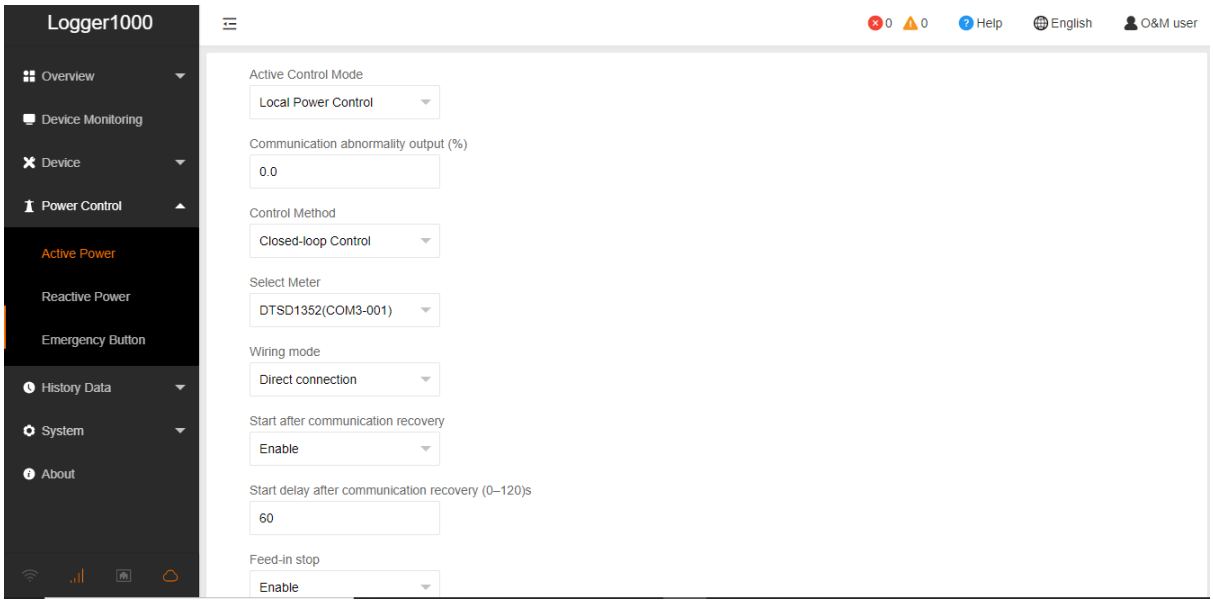
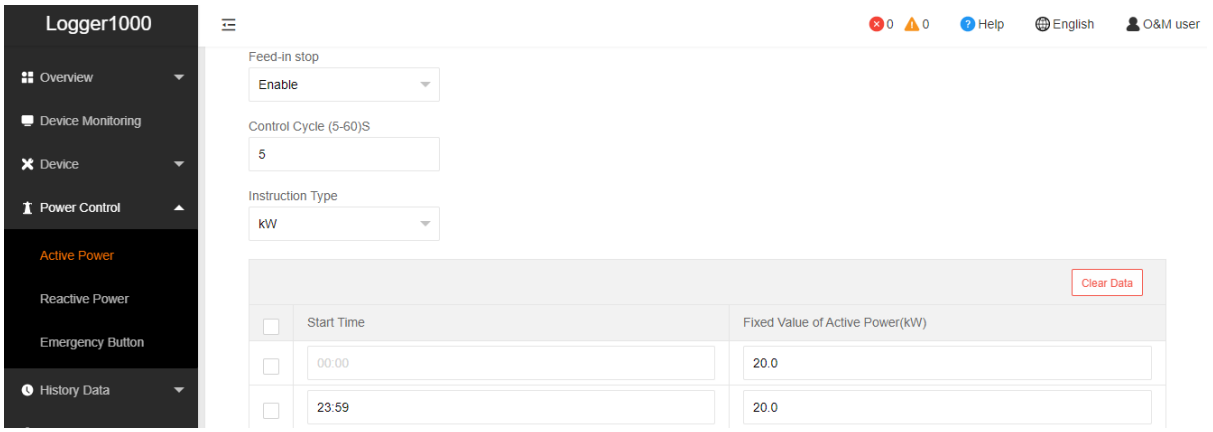


How to set the export limit

After login the web portal, select the **Power Control -> Active Power.** Then you can set all the parameters as following figures. The **Fixed Value of Active Power** is the part to set the power limit.





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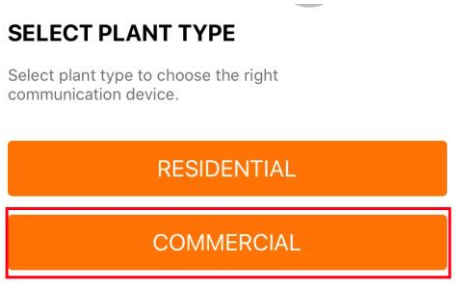
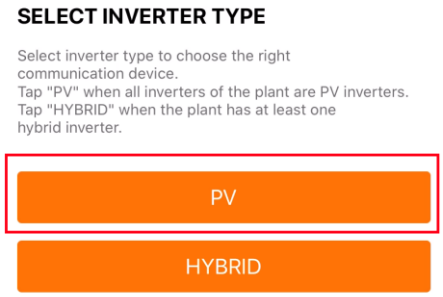
Set up online monitoring

The iSolarCloud is available for the Logger1000 online monitoring. You need to create an iSolarCloud account first, then you can create a plant to link with Logger1000 via the mobile APP.

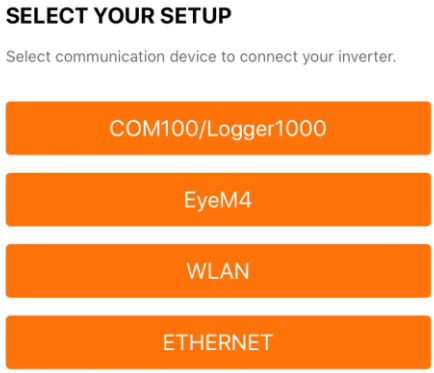
Create Plant -> Commercial -> PV->Com100/Logger100 -> Scan the QR Code



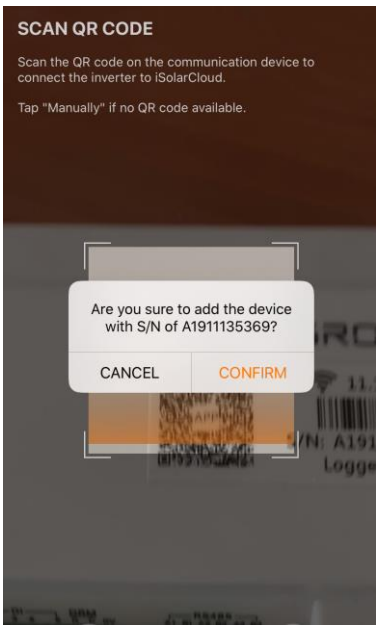
Step 1



Step 2



Step 3



Step4

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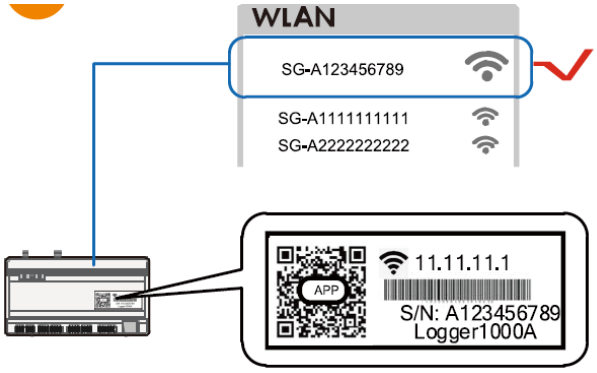
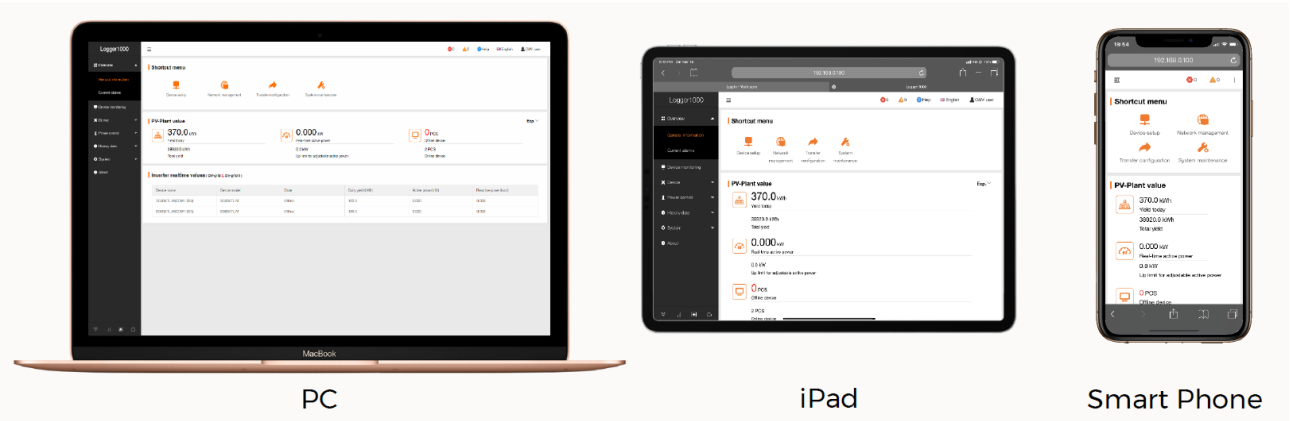
Then you only need to enter the customer's basic information, and the plant will be created in a few minutes.

After you connect the Logger1000 with the customer's router via the ethernet cable, you also need to adjust parameter settings on the Logger1000 via WLAN.

Use a smart device or laptop under Wi-Fi function to search for the *SG*********** (10 digits number) network that corresponds to the Logger1000 serial number.



Open a web browser and enter IP address (11.11.11.1) to access below Logger1000 web page.



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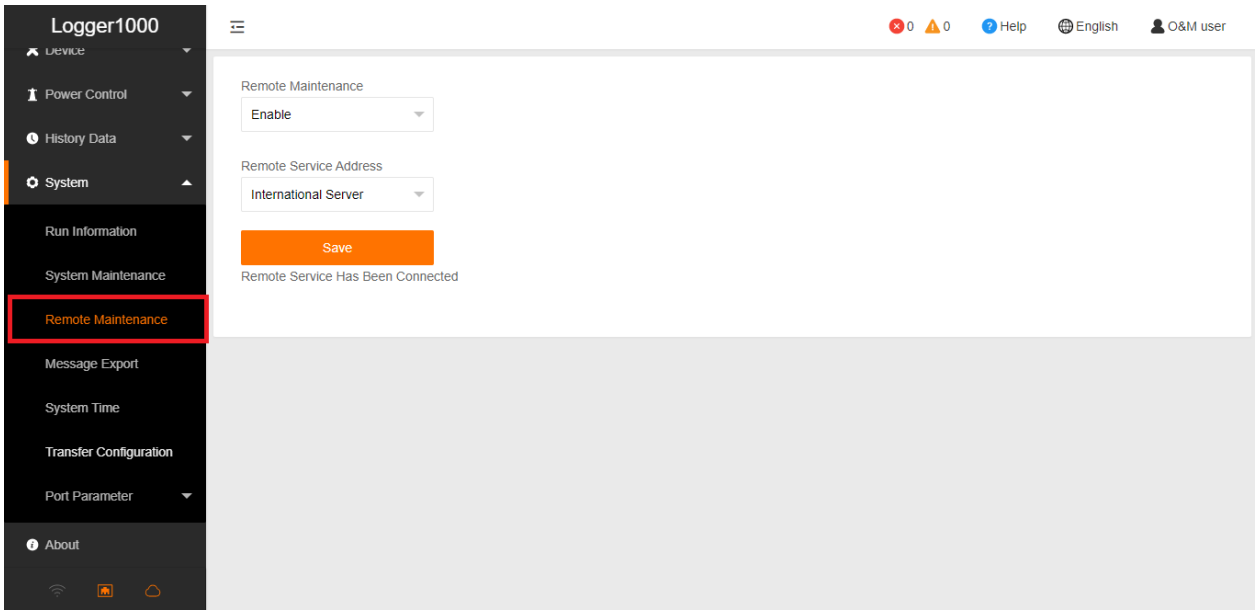
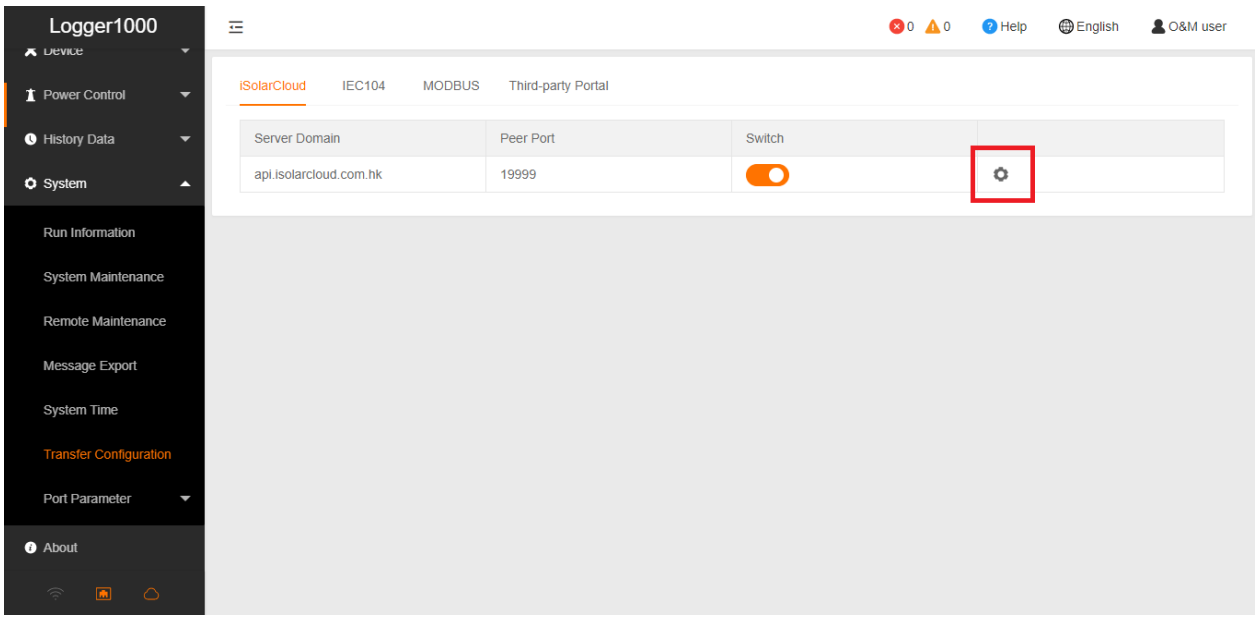
Select **System**-> **Remote maintenance**, enable the function and make sure the **Remote Service Address** is selected as **International Server**



Then go to **System**-> **Transfer Configuration**, click the **Setting gear** highlighted in red to change the **Server Domain**. Please make sure the domain address is **api.isolarcloud.com.hk**



After this, Select **Port Parameter**-> **Ethernet**. You can select **On** for the DHCP setting and the home router could allocate a random IP address to Logger1000.

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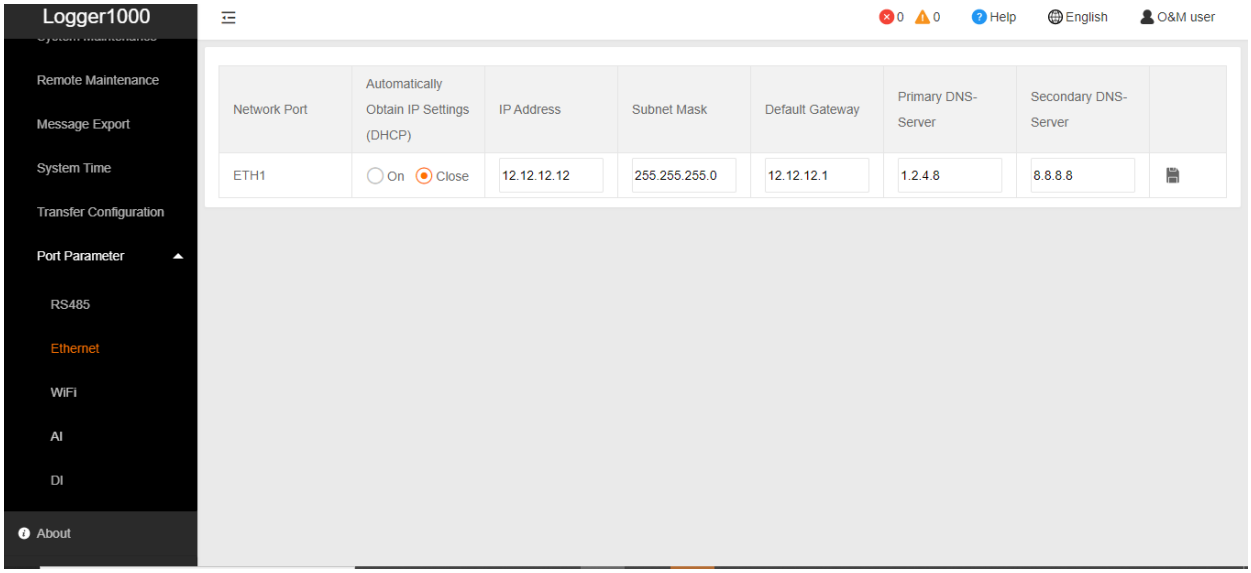
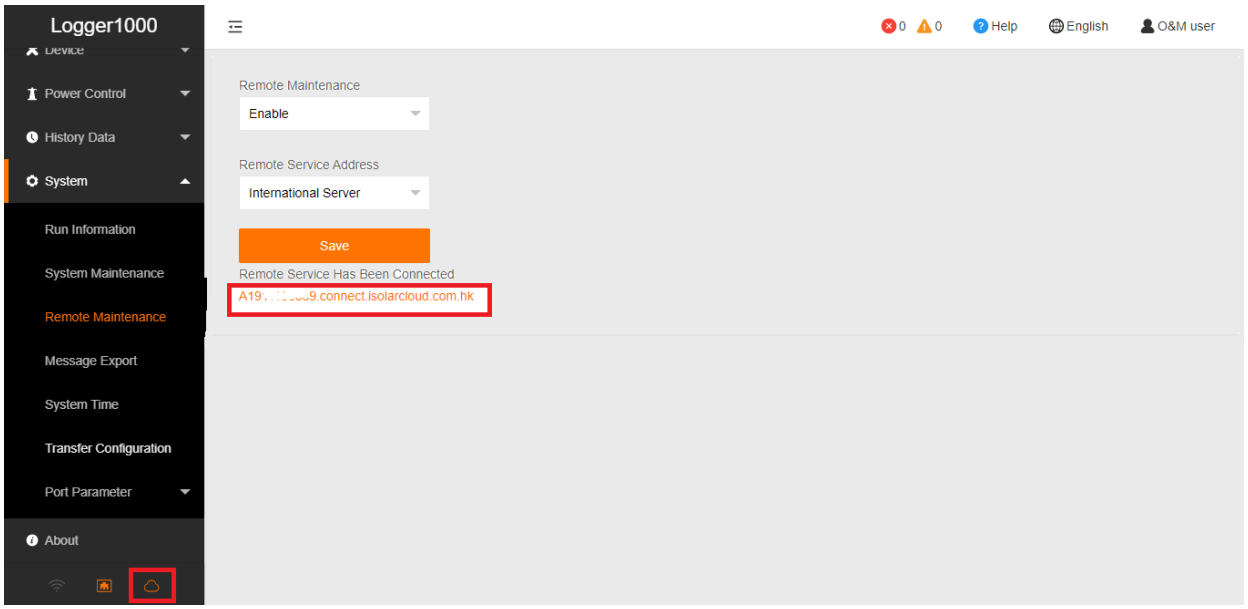


After the above settings are finished, you can go back to the Remote Maintenance and check if there is an information indicating the Logger1000 connect with iSolarcloud server. Meanwhile, you can find a cloud icon at the bottom left corner, it means the Logger1000 is on iSolarcloud when the icon lights up.



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