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SUNGROW POWER SUPPLY CO., LTD.

Sungrow EyeM4 and Logger1000 install and commissioning (C&I Inverter commissioning)

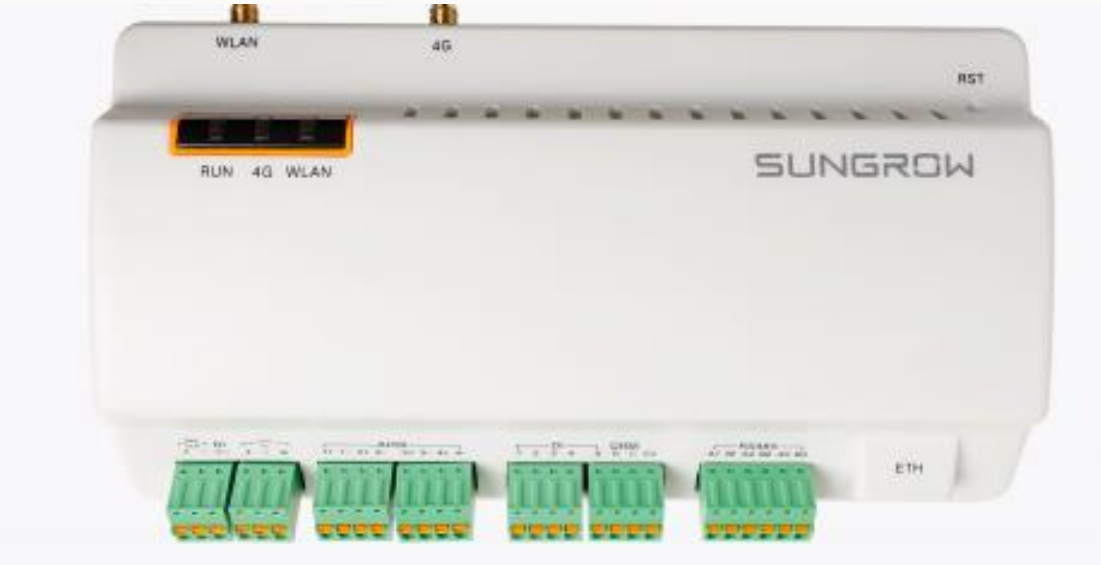
Presenter: Graham Smith

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.

EyeM4 and Logger1000 - Overview

The Sungrow EyeM4 WiFi dongle is supplied with all Premium range CX inverters and can communicate with up to 10 devices (9 inverters + 1 meter)
The Sungrow Logger1000 is an optional extra and can communicate with up to 30 devices.
They can connect all devices to the iSolarCloud from one source.
They are used for Export Control.

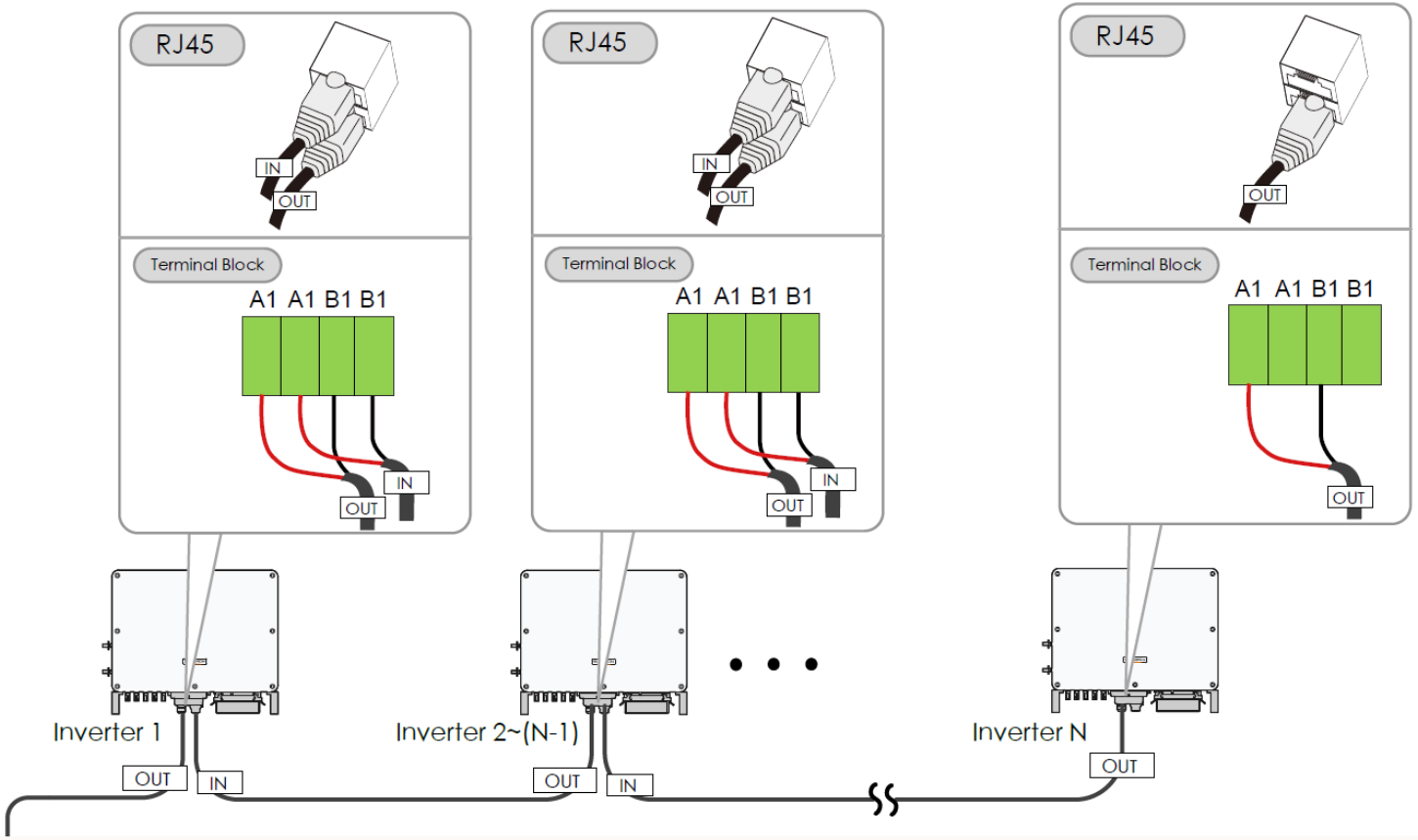


Topics covered

1. Connection and wiring (RS485)
    1. EyeM4
    2. Logger1000
2. Commissioning
3. CT Ratio and Export Control
4. Remote Maintenance (iSolarCloud)

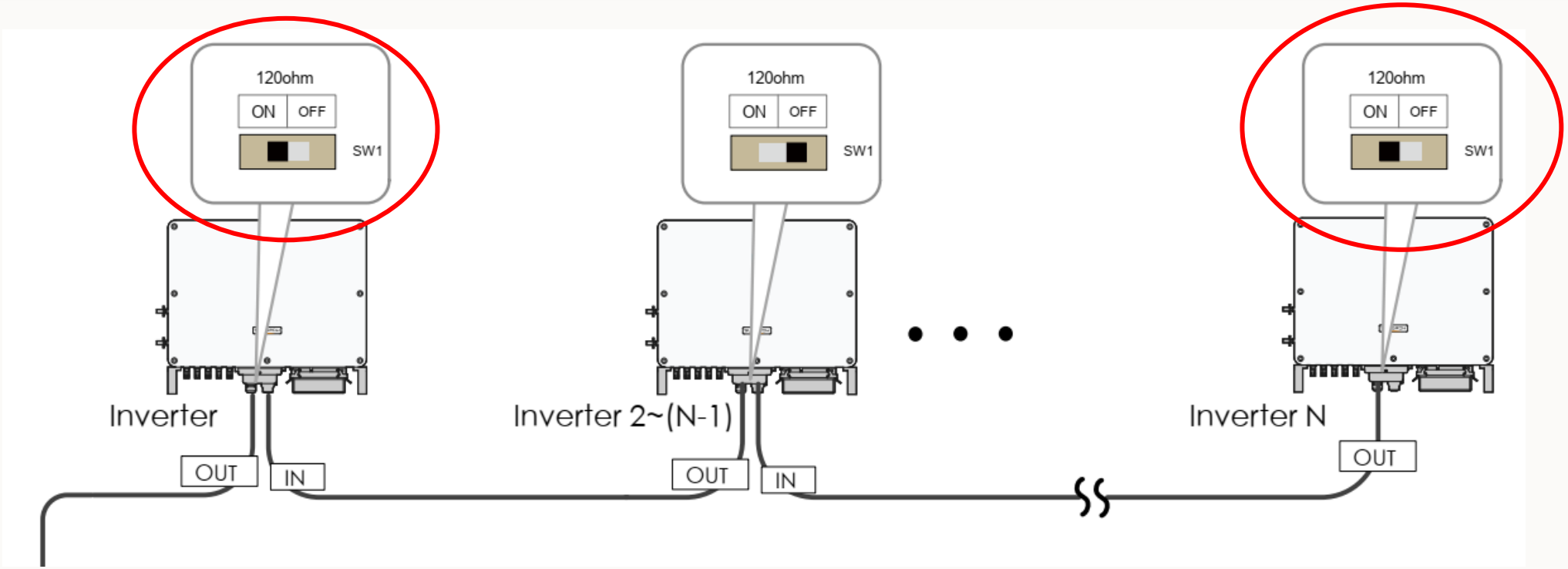
Connection and wiring (RS485)

Daisy-Chain wiring - Inverters



The A1 / B1 channel is used for inverter communication

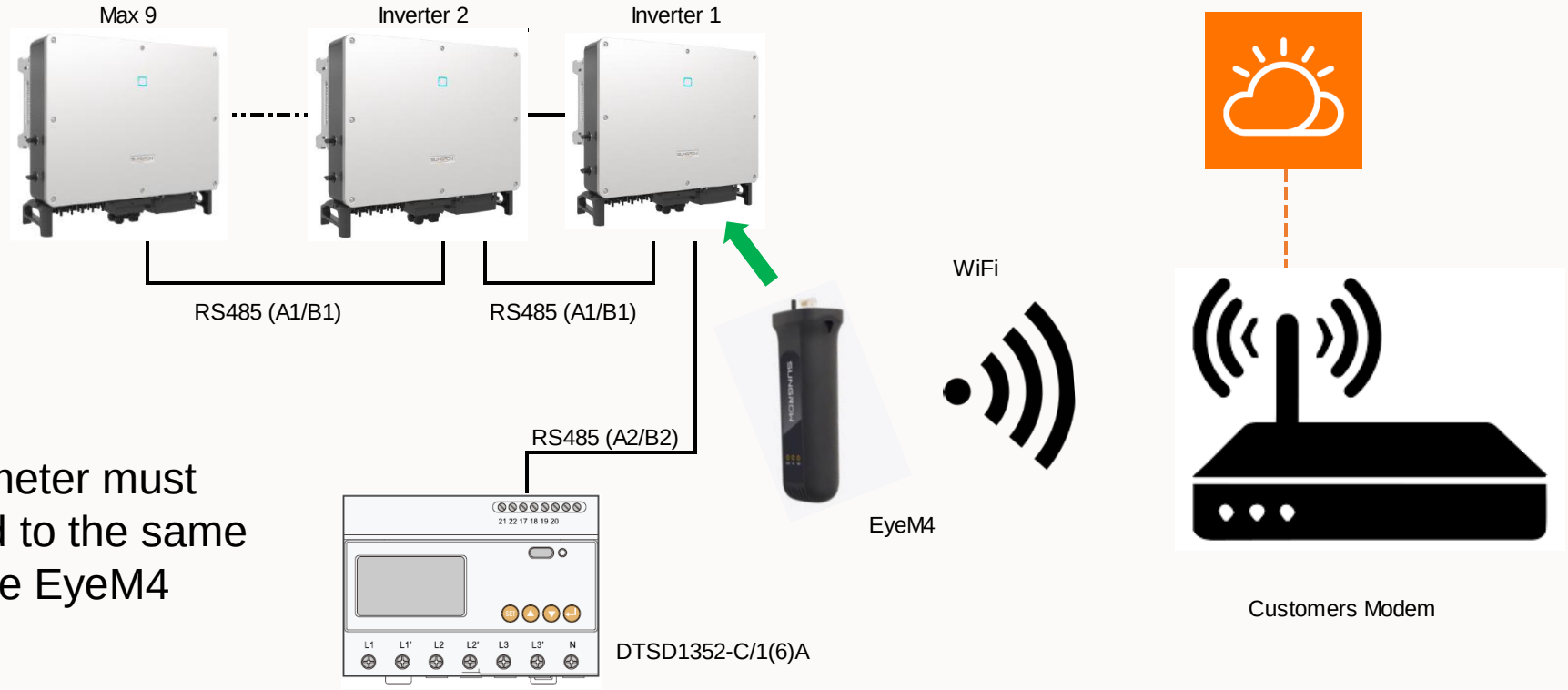
Sungrow recommend shielded twisted pair with a minimum cross section area of 0.75mm



If there are more than 15 inverters on the same RS485 channel (Logger1000 only), enable the 120 Ohm termination DIP switches on the first and last inverter in the daisy-chain.

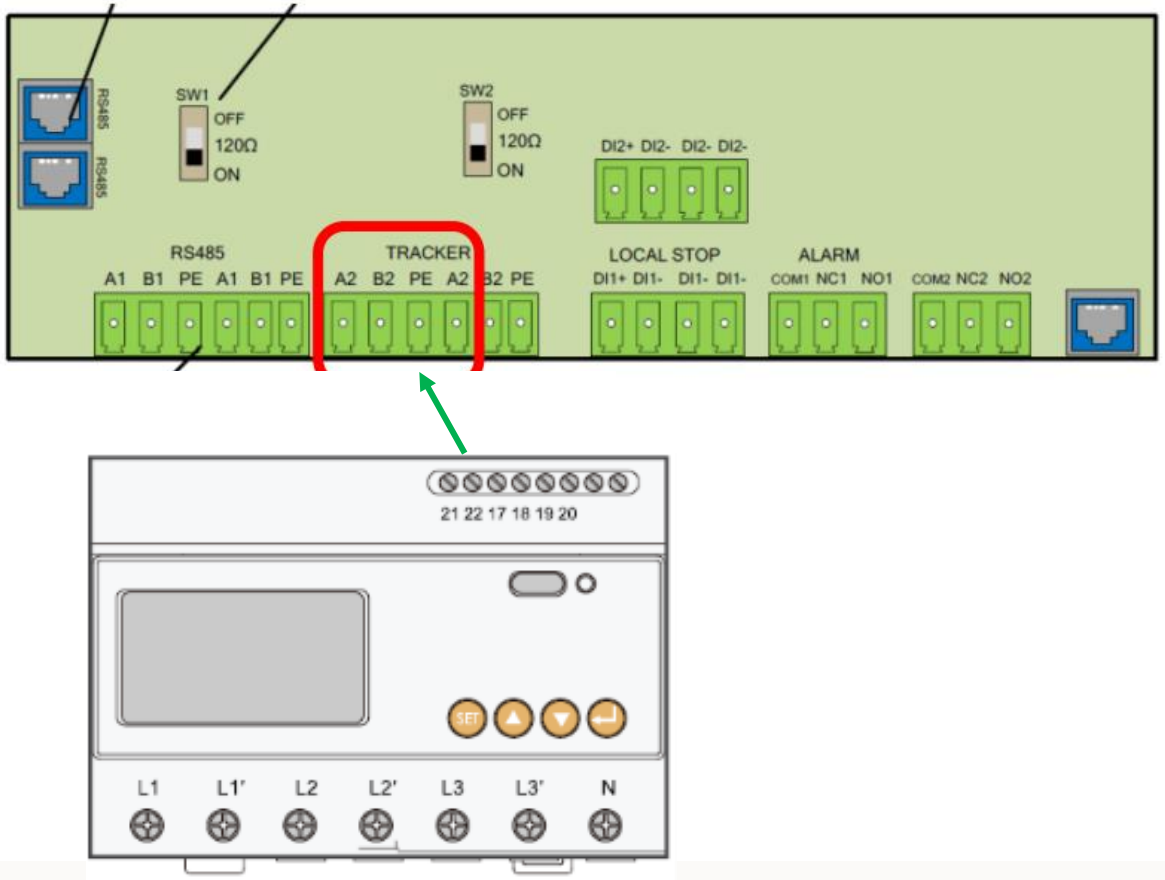
Connection and wiring (RS485) – EyeM4

When connecting the EyeM4, it is plugged into the Dongle port on either of the end inverters.



The energy meter must be connected to the same inverter as the EyeM4 dongle

Important: Connect the energy meter RS485 to A2/B2 (TRACKER) terminals in the inverter that has the EyeM4 dongle.



Important: Enable RS485 Port for Inverter via iSolarCloud App

Access the iSolarCloud App via Bluetooth, once clicking Bluetooth, you will be prompted to select the Bluetooth device (Inverter SN). Click on the SN you wish to connect to and then login to the inverter. Please put in “admin” as the account and the password (pw8888).

Click "More" > "Settings" > “Operation Parameters” > “Other Parameters” > Enable” transparent transmission via standby RS485 port.

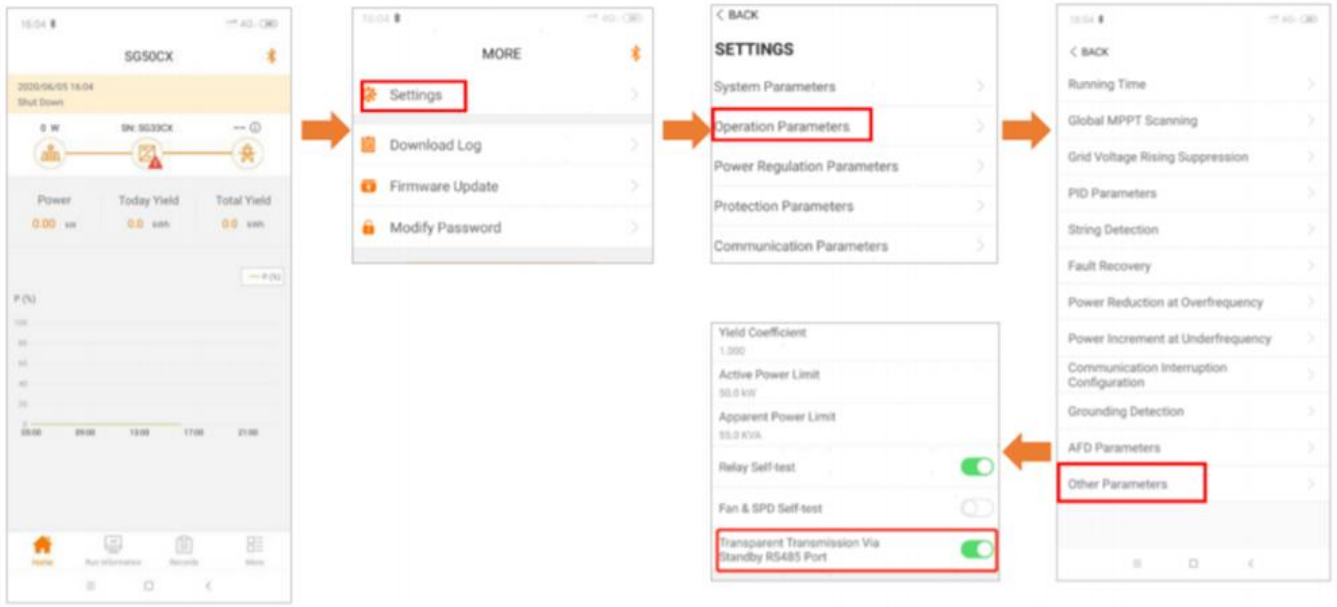
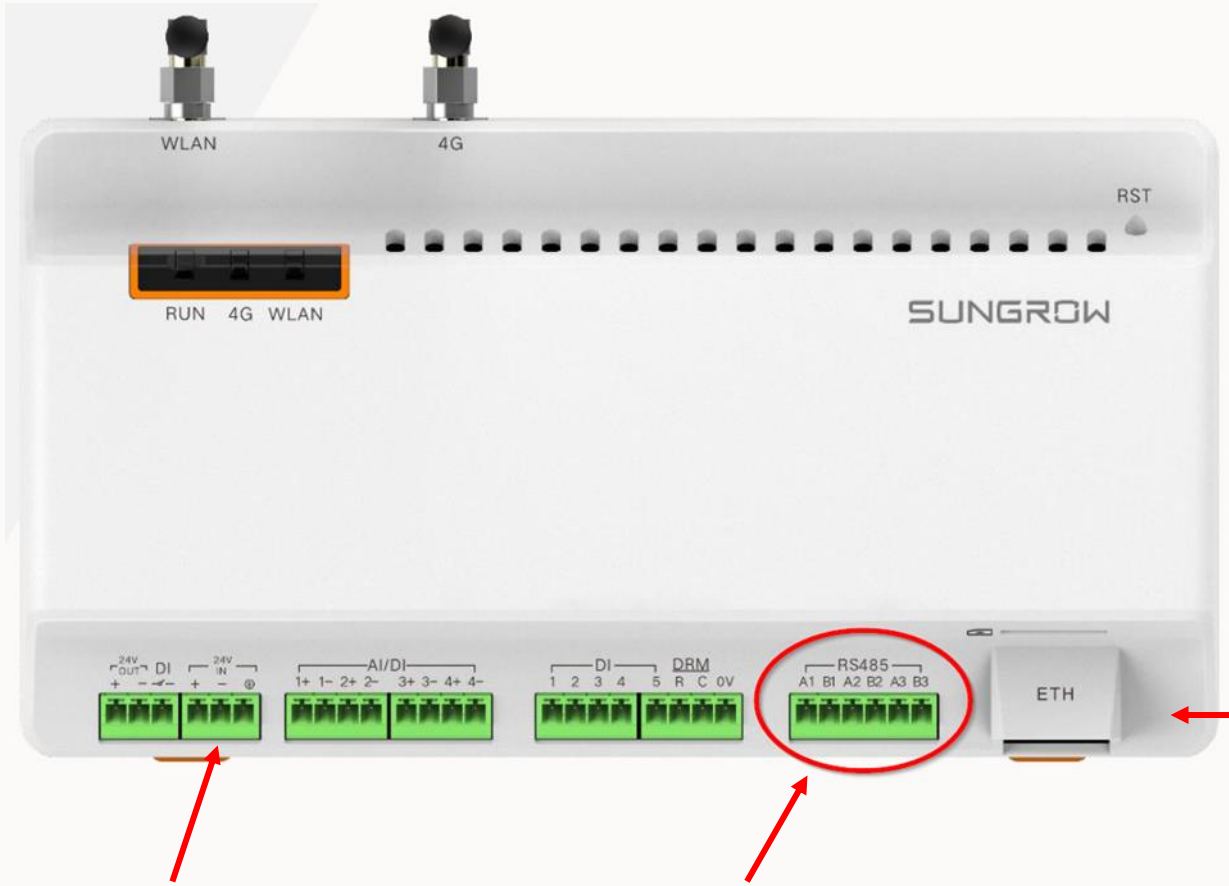


Figure 6 Enable RS485 Port

The A2/B2 RS485 needs to be enabled by using your iSolarCloud App and logging into the inverter using Bluetooth*

Connection and wiring (RS485) – Logger1000



Ethernet to connect to iSolarCloud

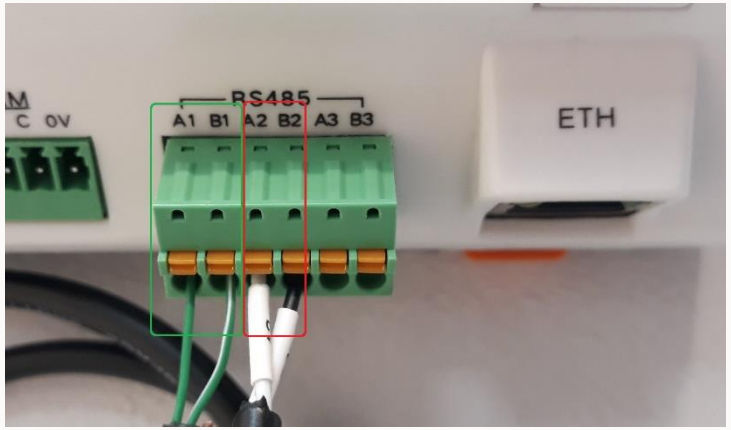
24VDC Power supply

RS485 Inputs COM 1 – COM 3 (A1/B1, A2/B2, A3/B3)

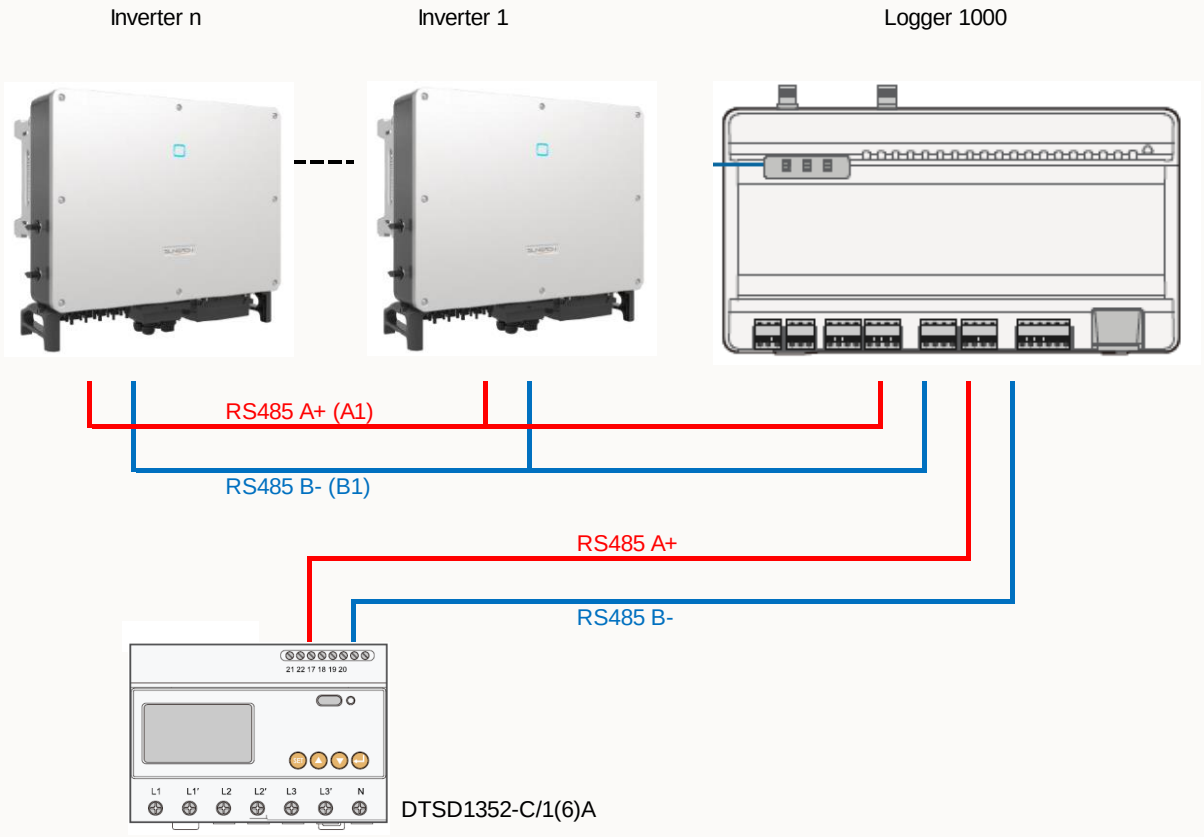
Connecting Inverters to the Logger1000

Option 1: Daisy-chain
In this configuration, all inverters are connected in parallel into one of the RS485 inputs.

Meter always connected to a different RS485 channel

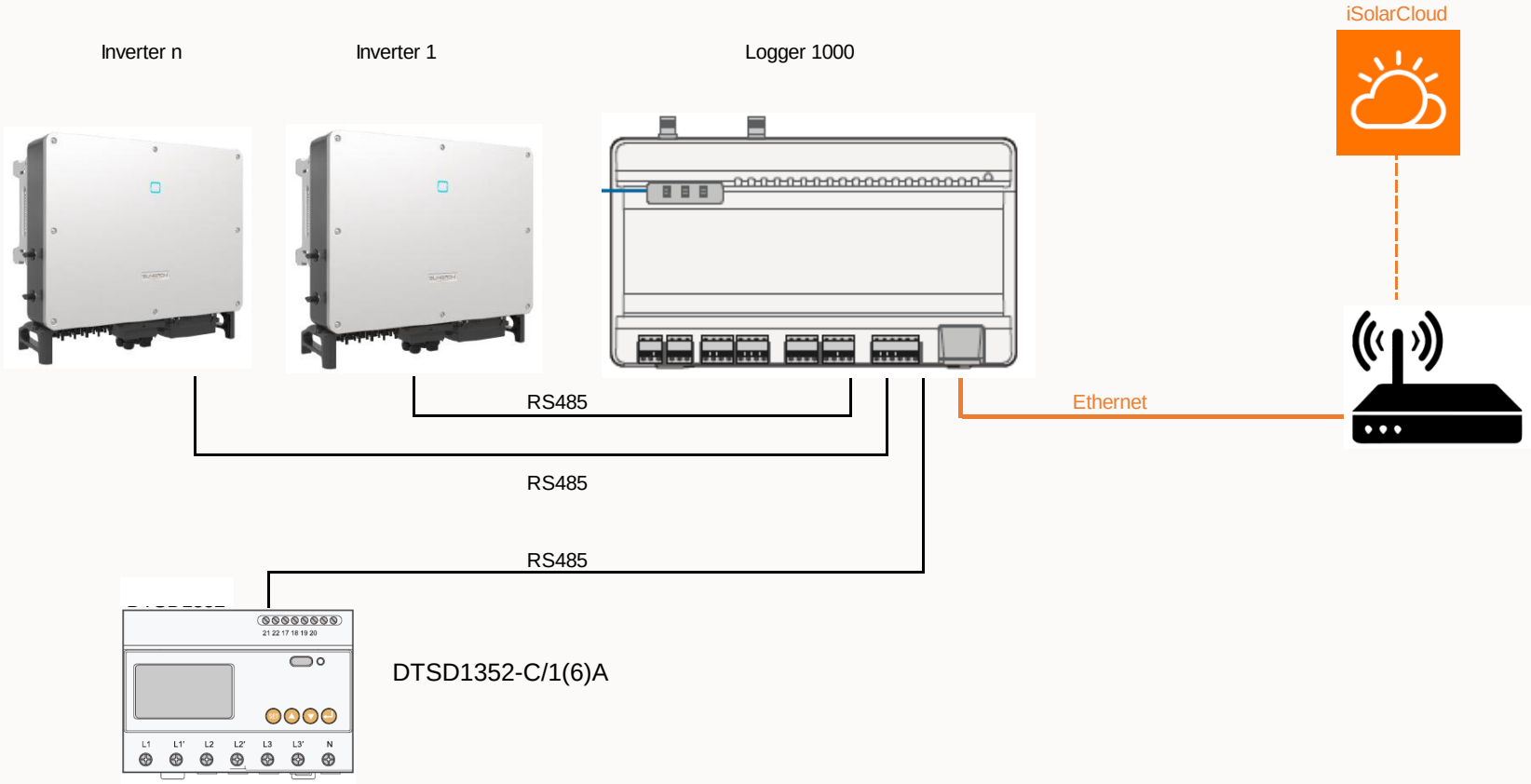


Multiple inverters connected to COM1



Alternative option

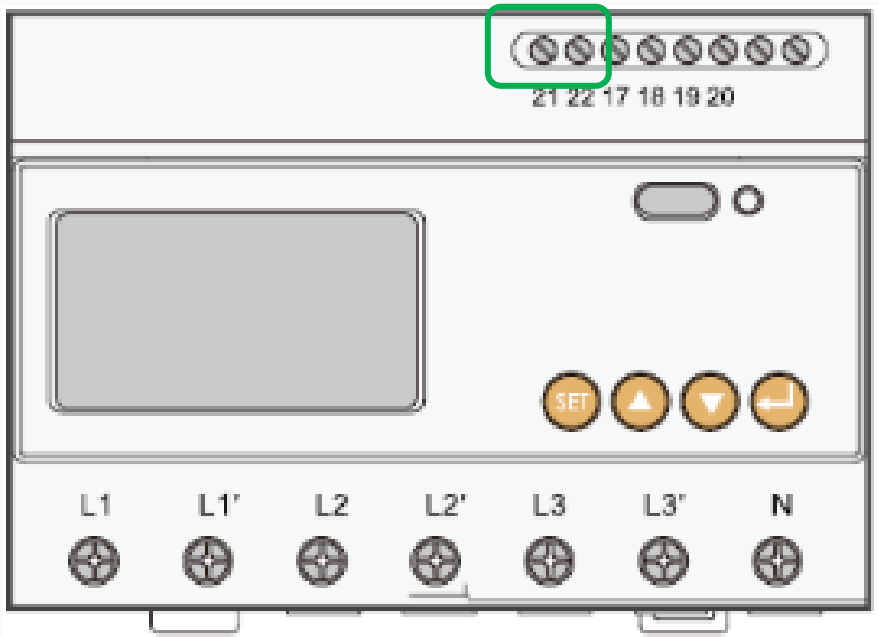
Option 2:
As there are three RS485 channels in the Logger1000, the Inverters can be connected into different RS485 inputs
This gives flexibility for the installer i.e. different buildings



Energy Meter connection – Logger1000

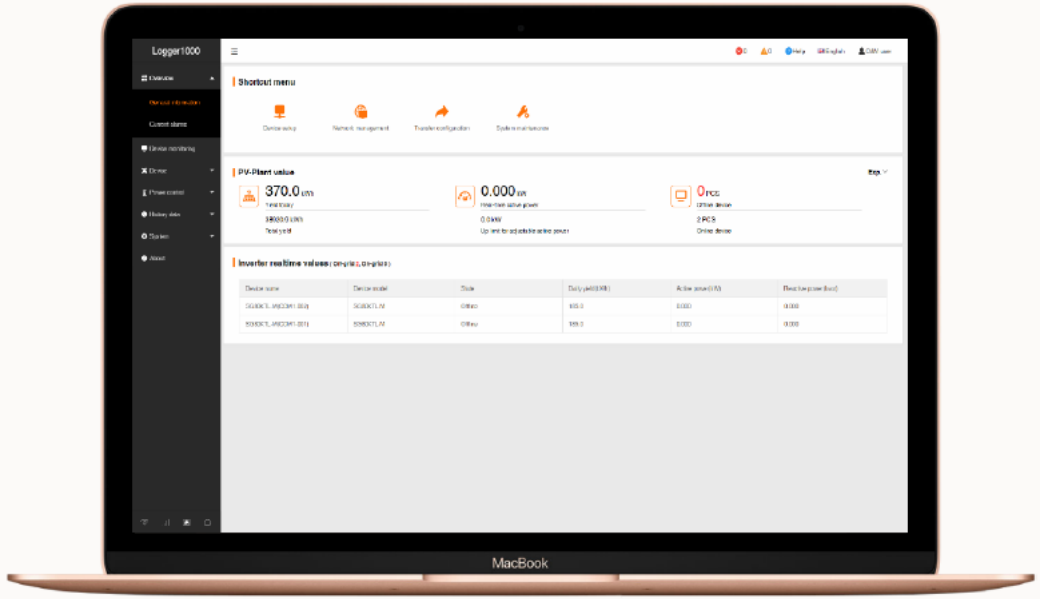
Energy meter is simply RS485A+ (connection 21) and RS485B- (connection 22) to any available RS485 channel

DTSD1352-C/1(6)A

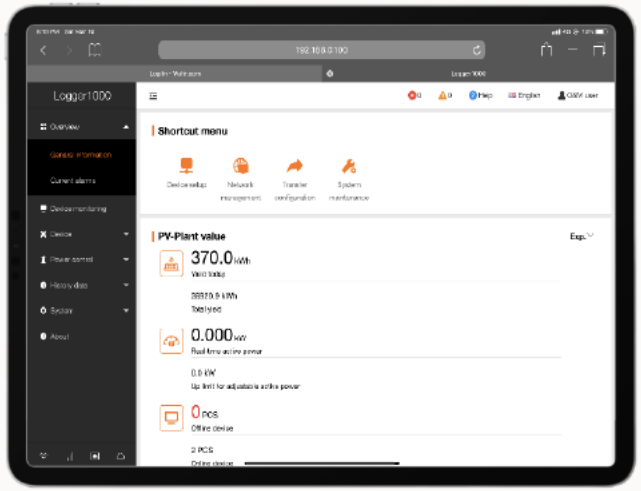


Step 2: Commissioning

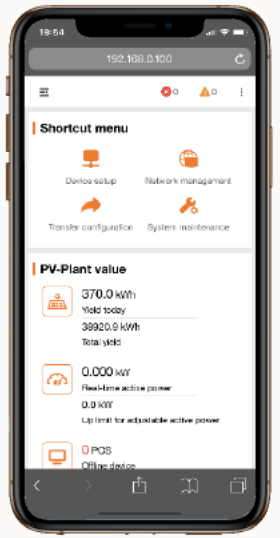
Sungrow recommend you use a Laptop to commission the EyeM4 / Logger1000, but a tablet or smart phone can also be used. Connection is achieved via WiFi



PC



iPad

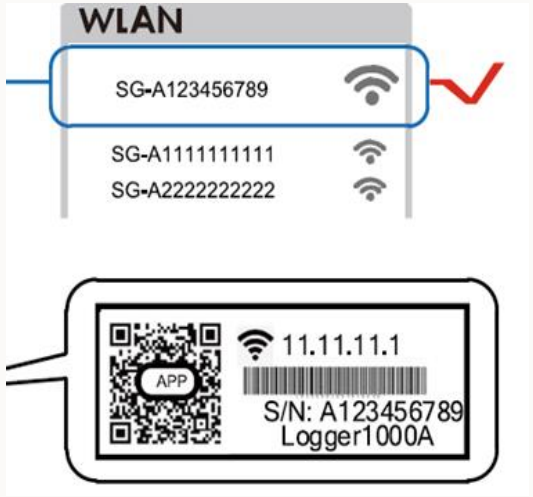


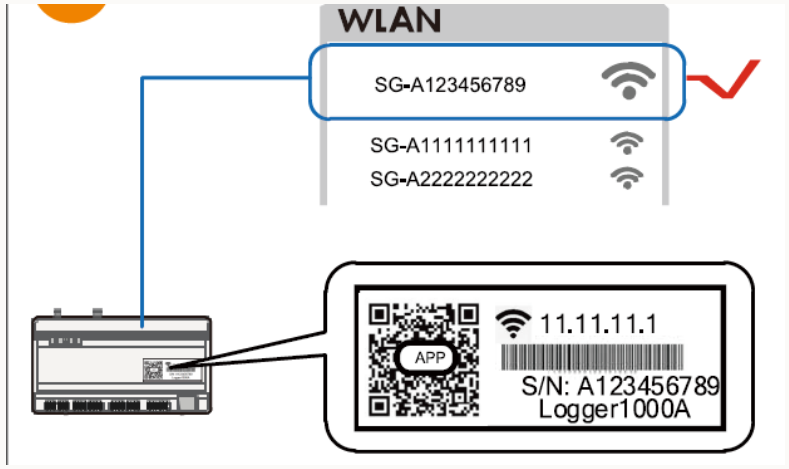
Smart Phone

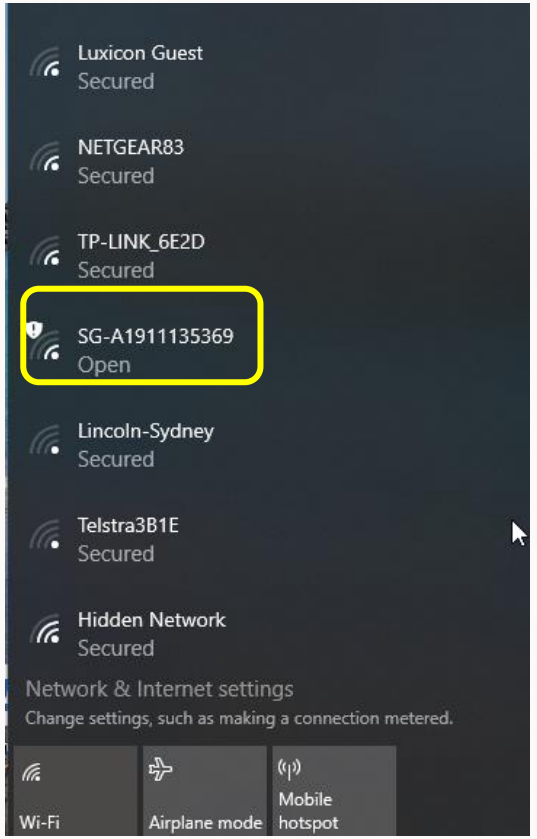
Commissioning – Logging in

Connect to the device's WiFi and search for the devices SG********** network and connect

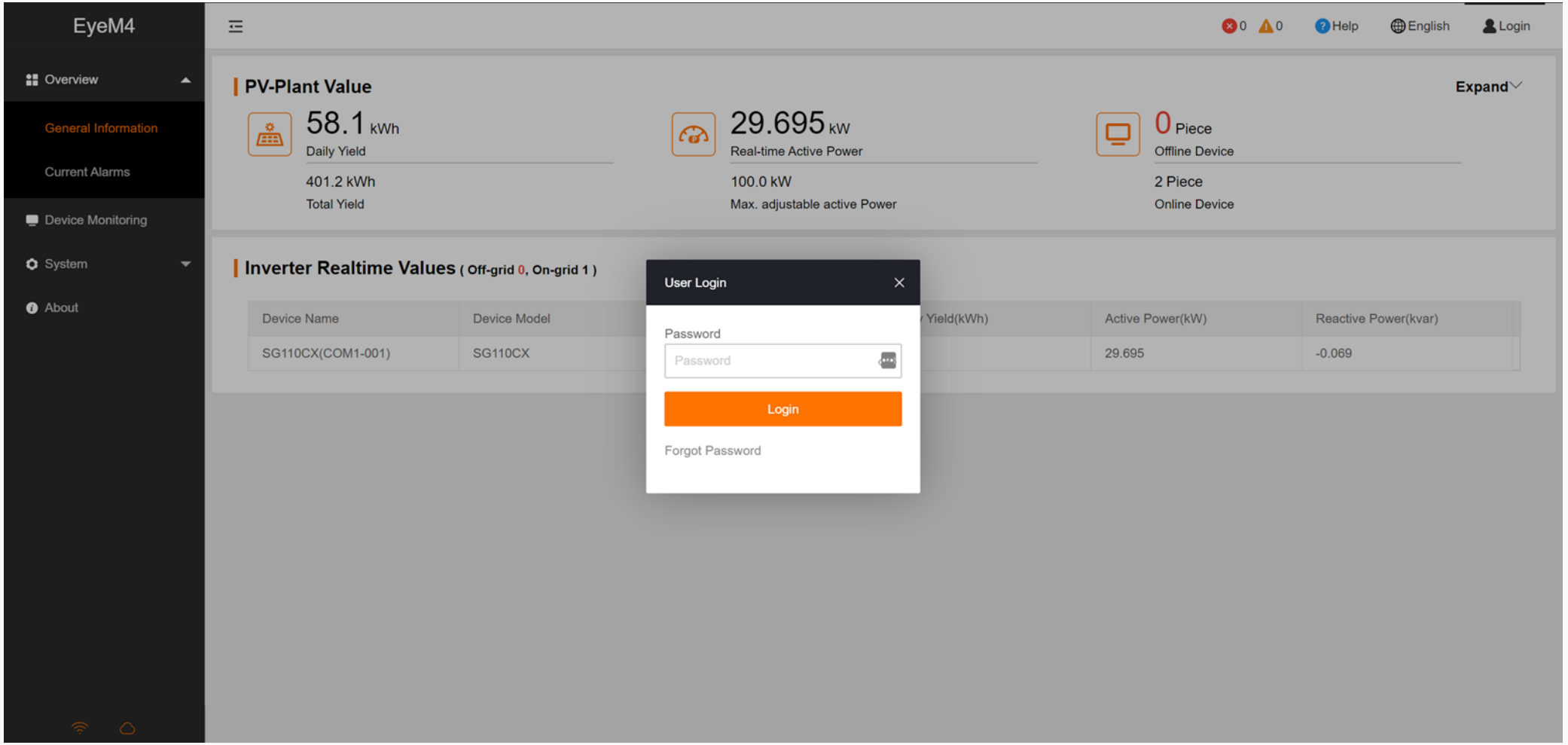
Open a browser and type in 11.11.11.1 in the address bar



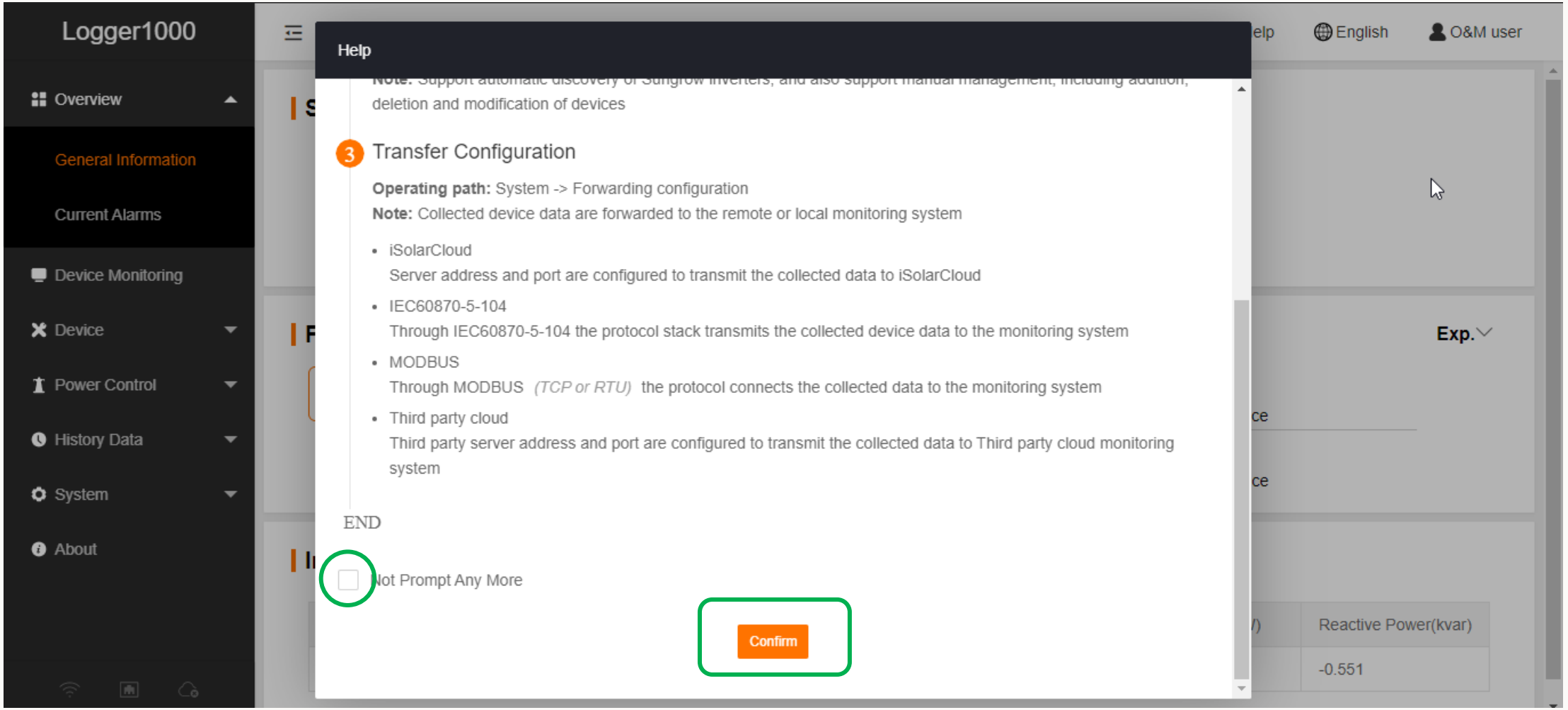




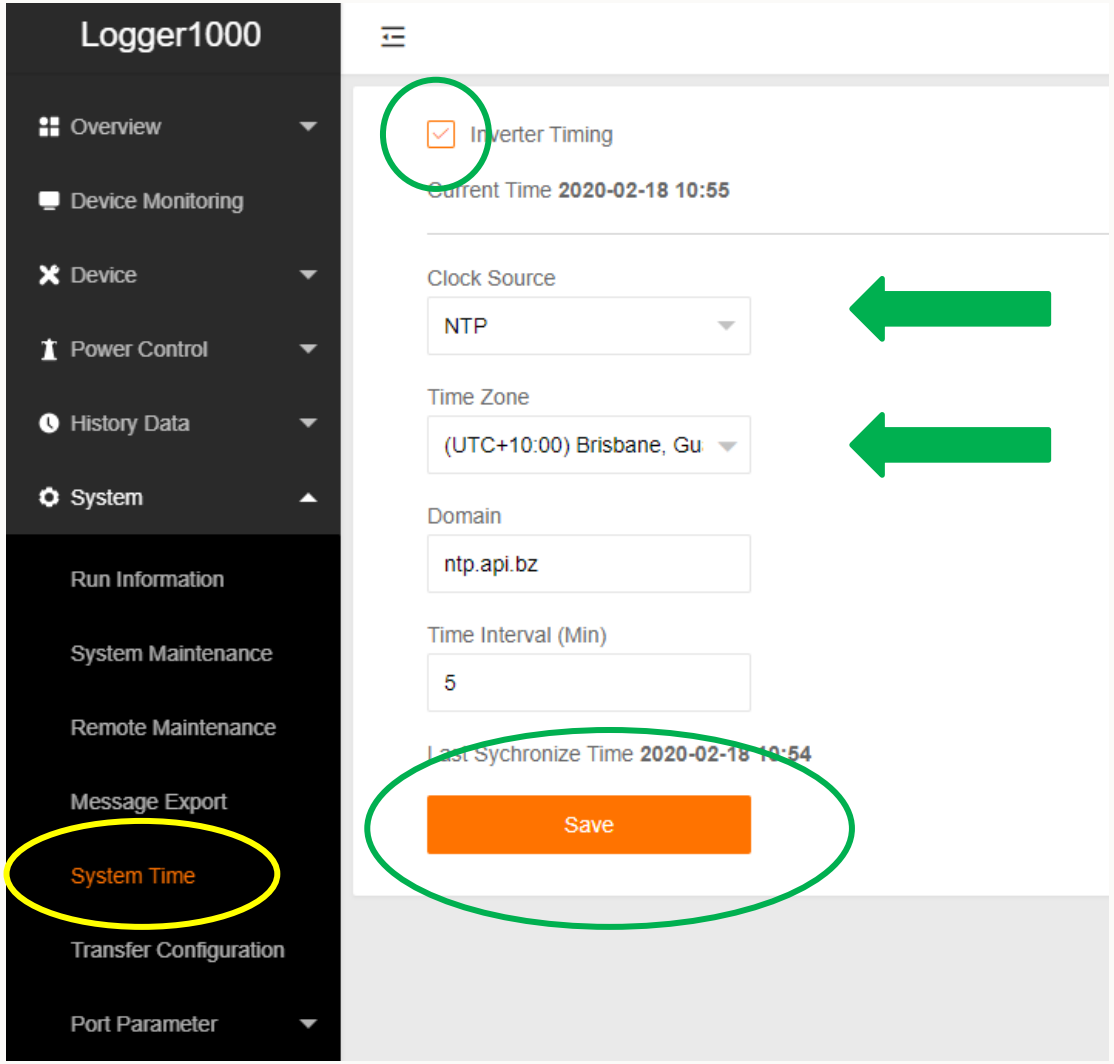
Log in to EyeM4 interface



Initialisation screen



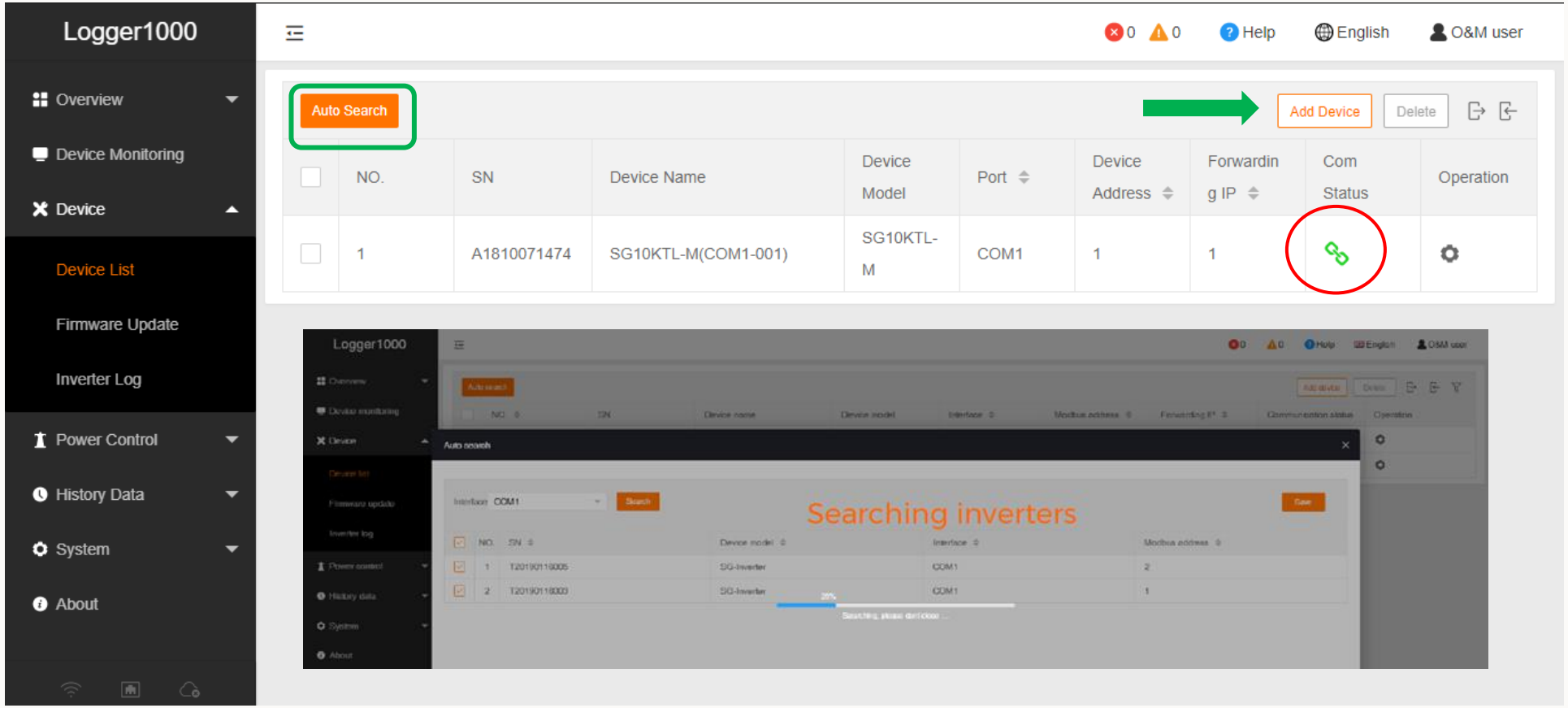
Step 1: Setting the Time (Logger1000 only)



Select “System Time”
Clock source – NTP
Select time zone
SAVE

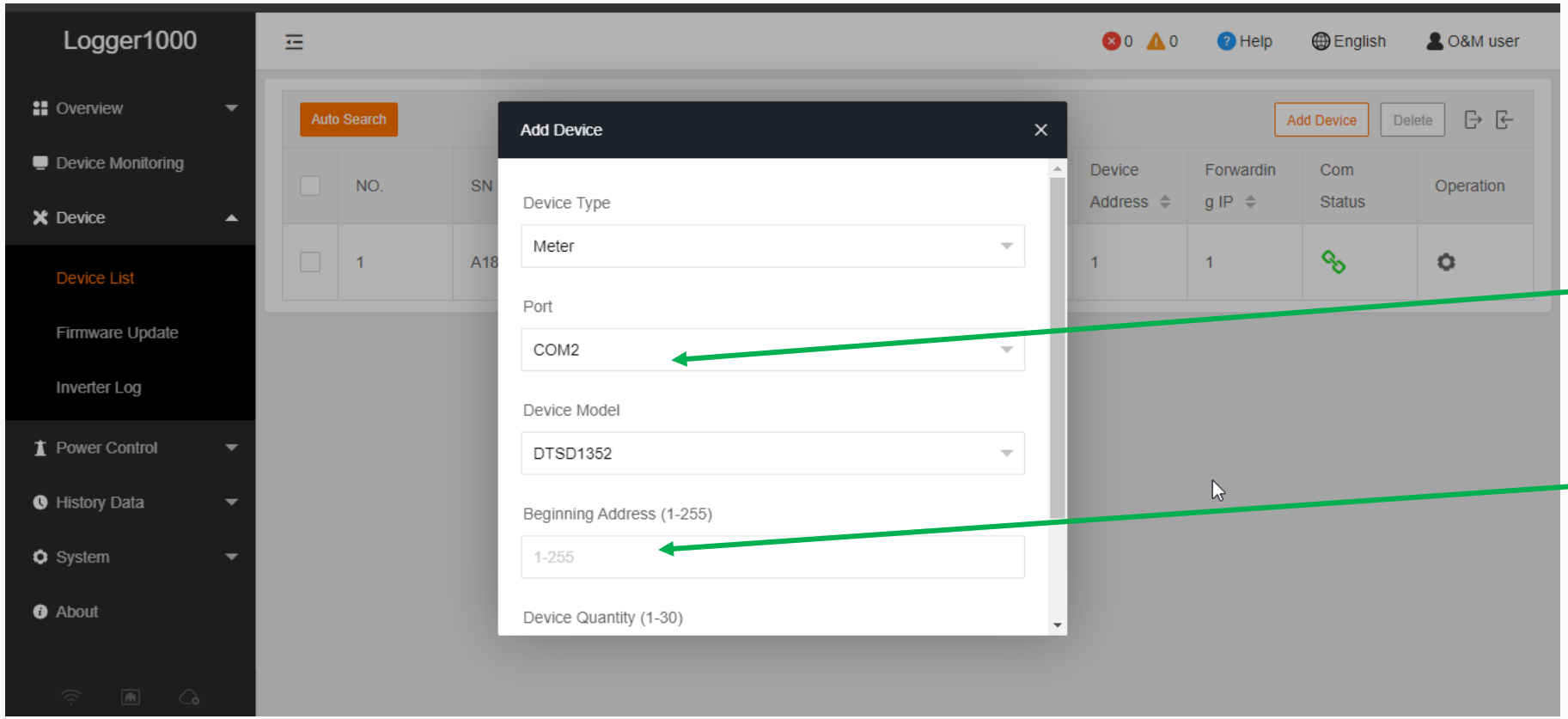
Step 2: Scan for devices

Simply select “Auto search” and it will scan for inverters
Confirm all inverters are connected
Next, scan for meter by selecting “Add Device”



Step 3: Add Device (Meter)

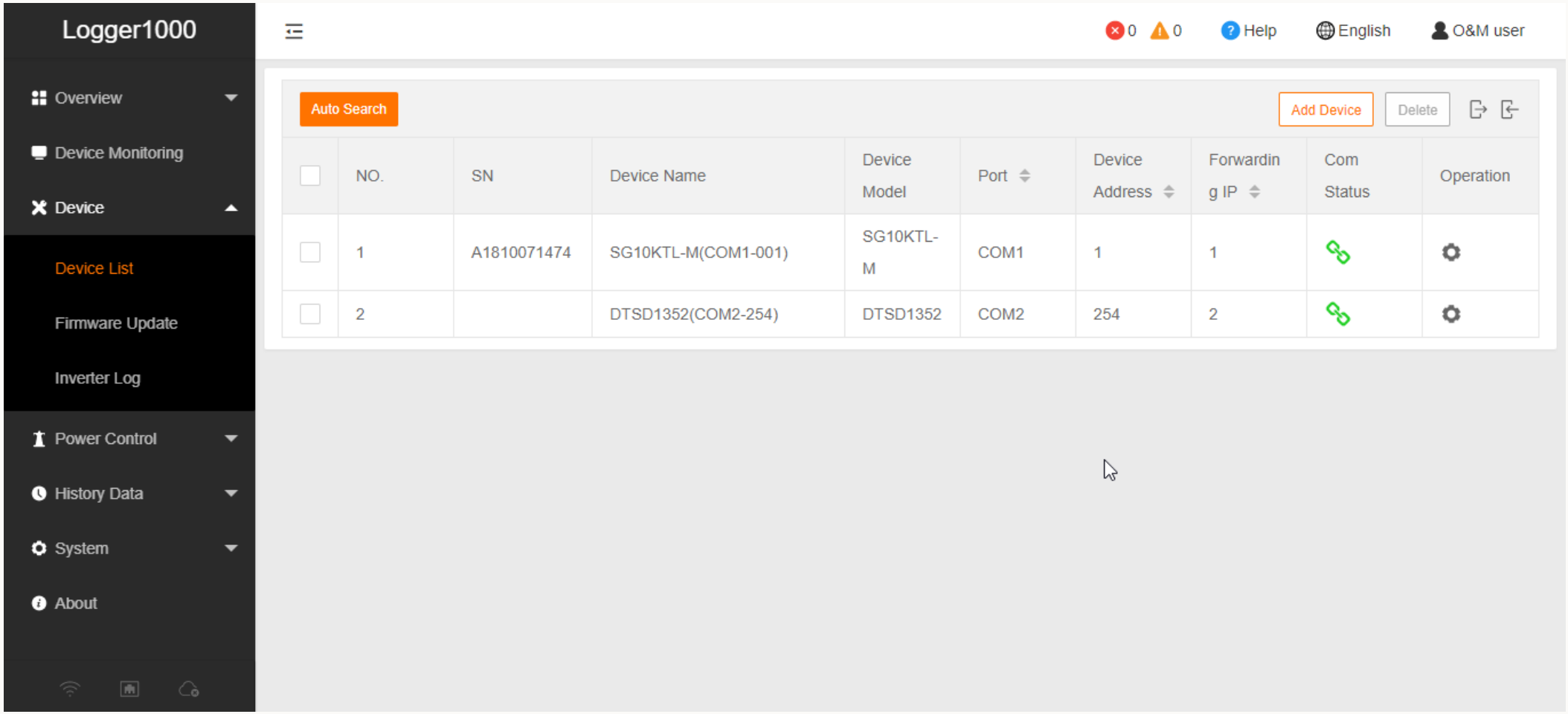
As energy meters are 3rd party equipment, they need to be added manually. Tap ‘Add Device’ then enter parameters.



Ensure correct COM port is selected **(Com 1 for EyeM4)**

Address for Sungrow meter is 254

Meter detected

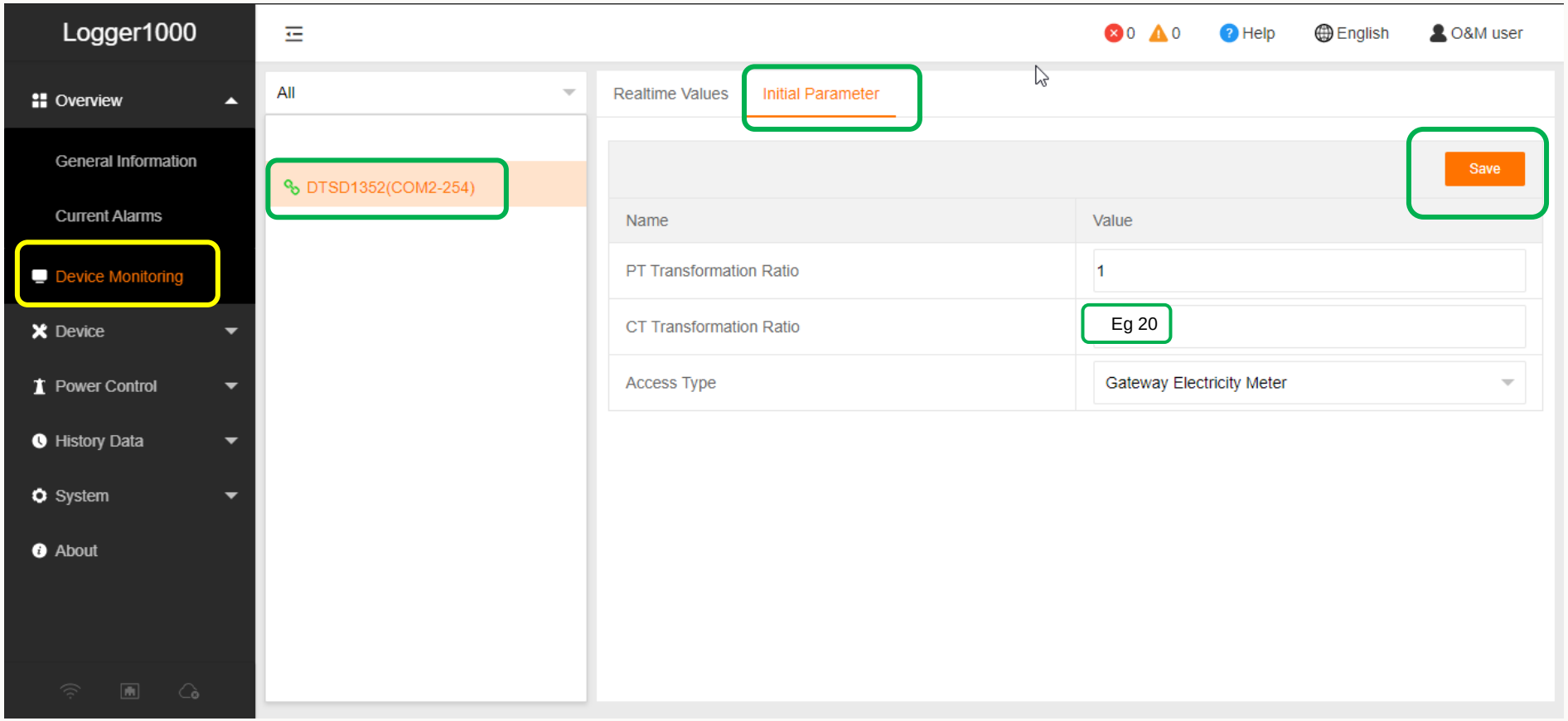


Step 3: Setting the Export Control and CT ratio

CT Ratio setting

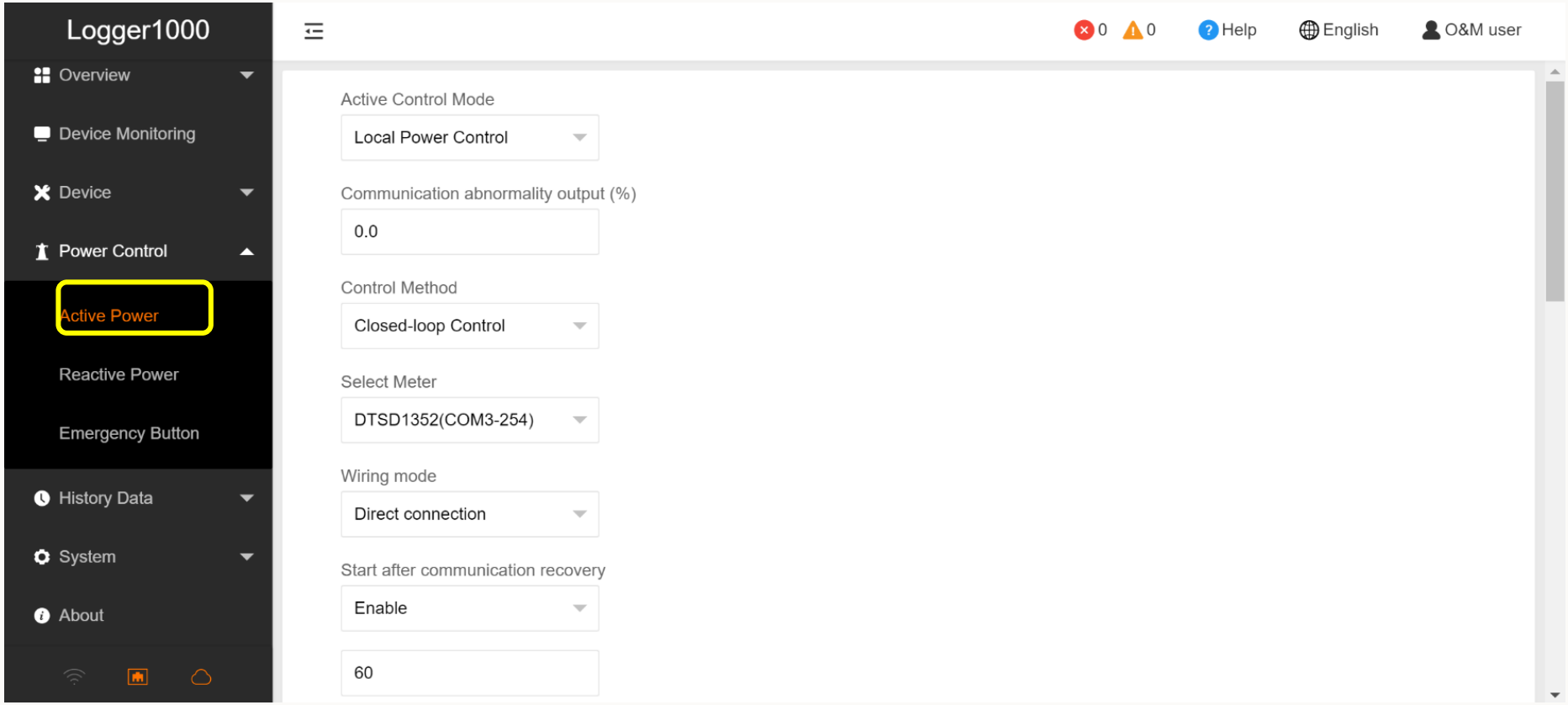
If you have a CT meter and you need to set the ratio, go into ‘Device Monitoring’

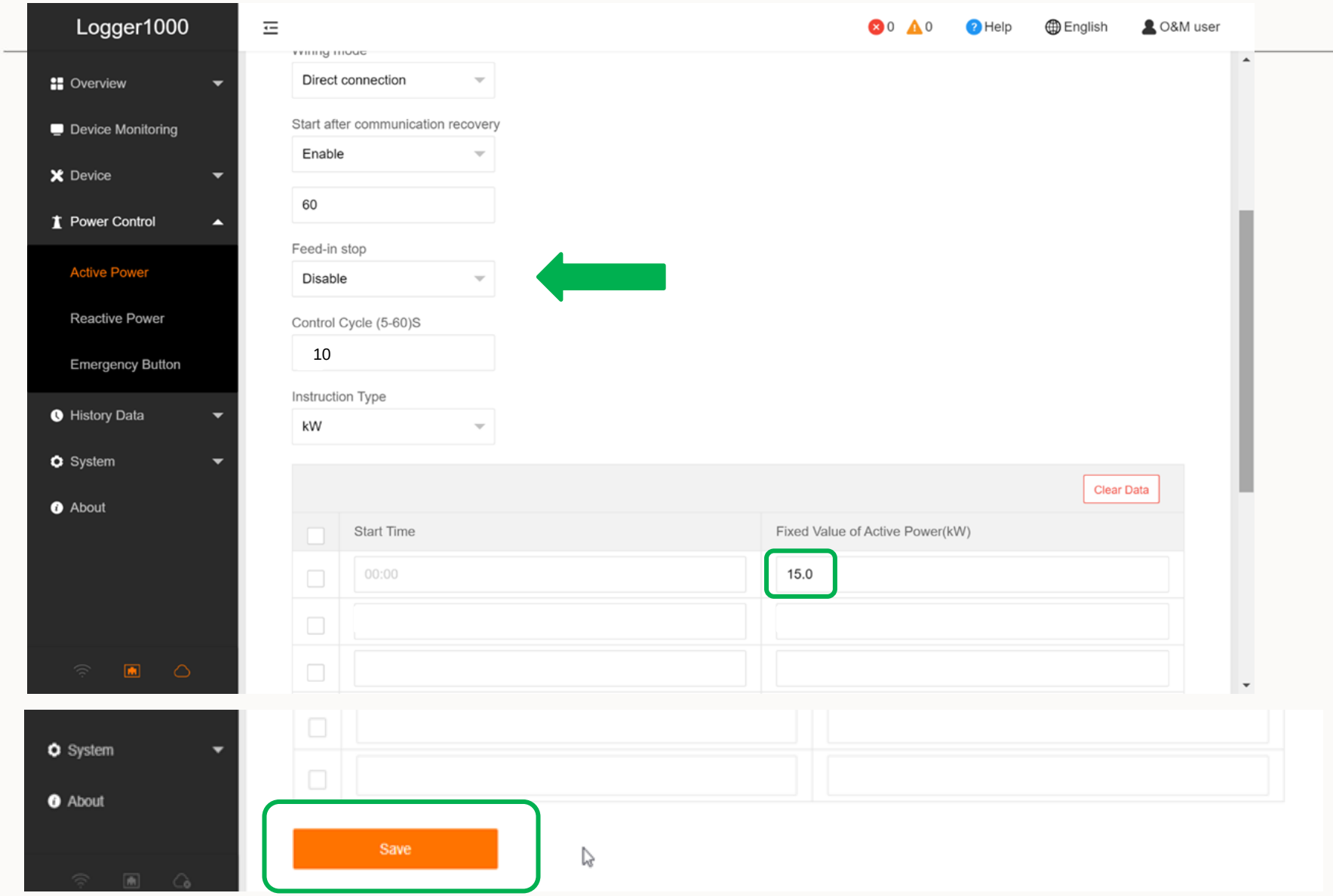
Select the device and set the ratio



Setting Export Limit

Select **POWER CONTROL** then **ACTIVE POWER** then set as per the following two diagrams





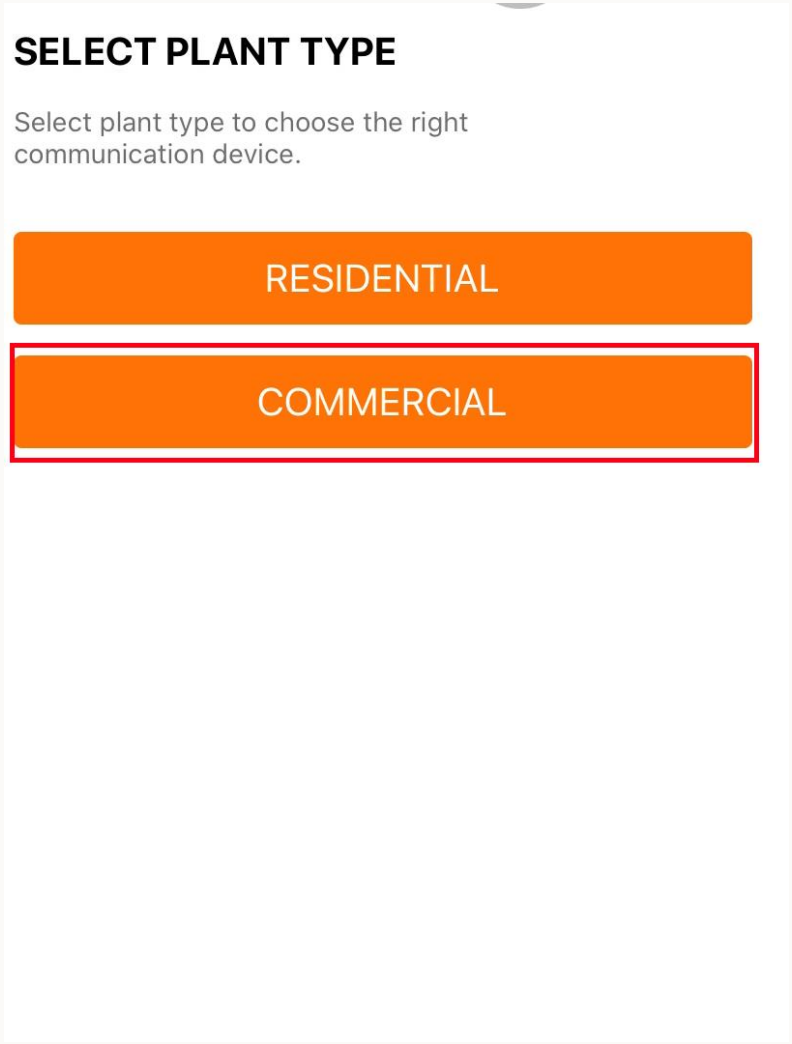
Disable ‘Feed-In Stop

Enter the Export limit

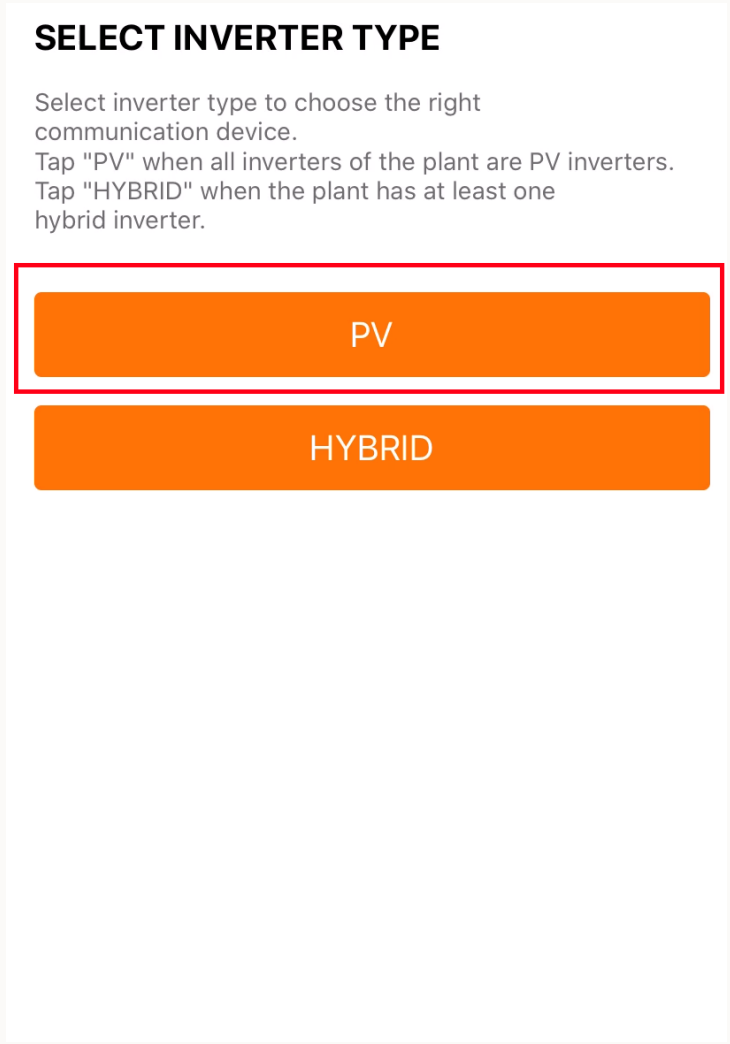
Scroll down and save

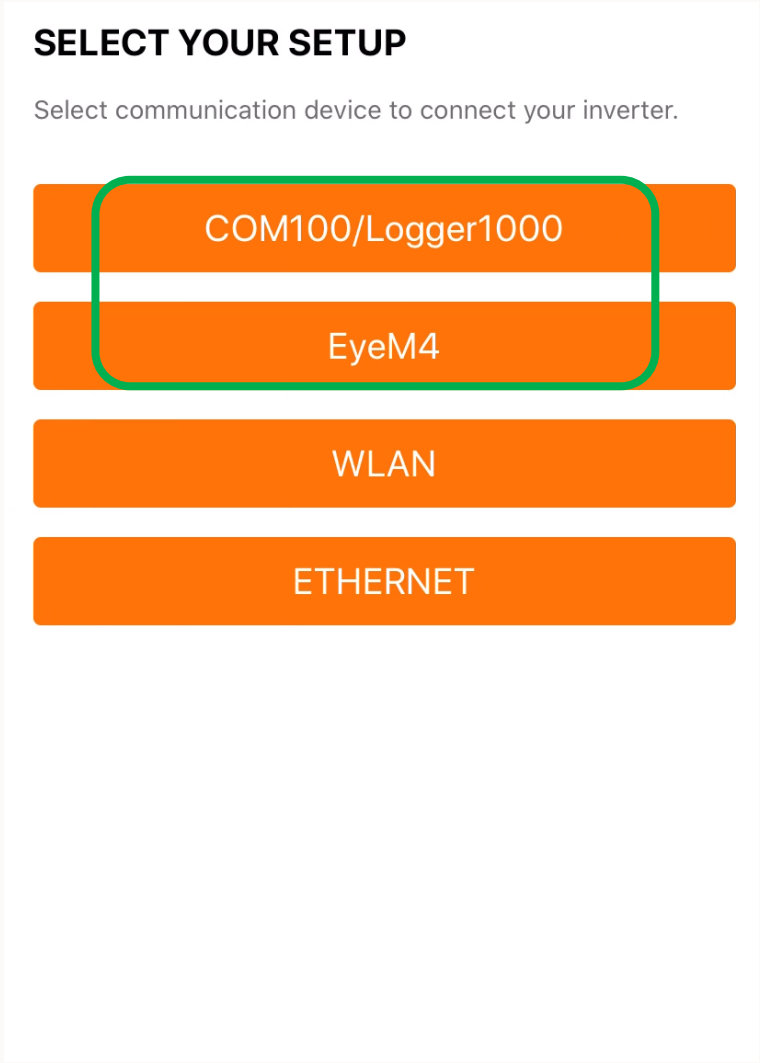
Remote Maintenance / iSolarCloud – EyeM4

Create Plant on iSolarCloud

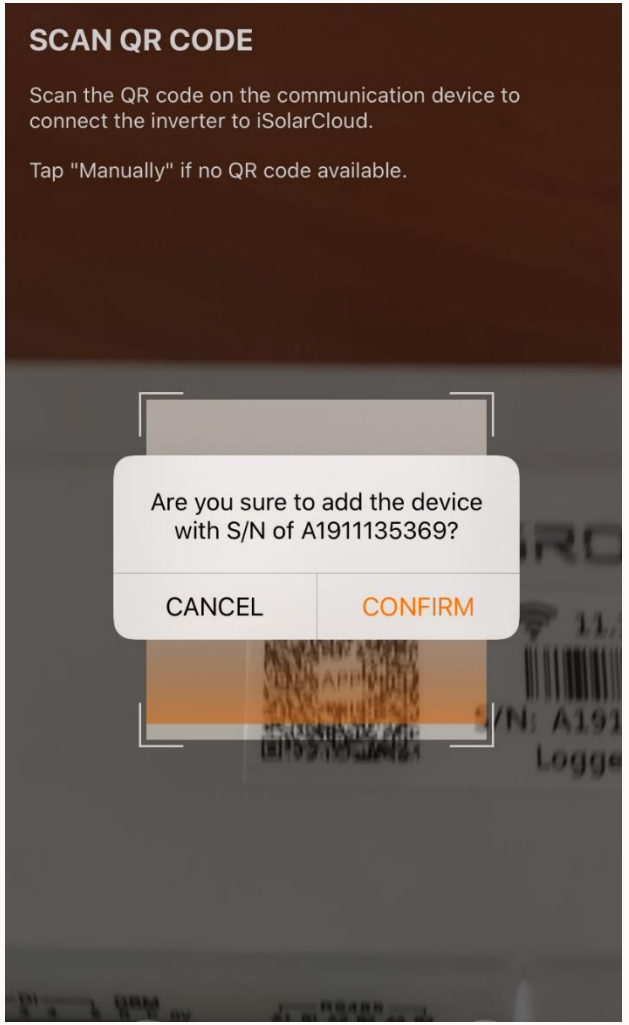


Using the Smart Phone App



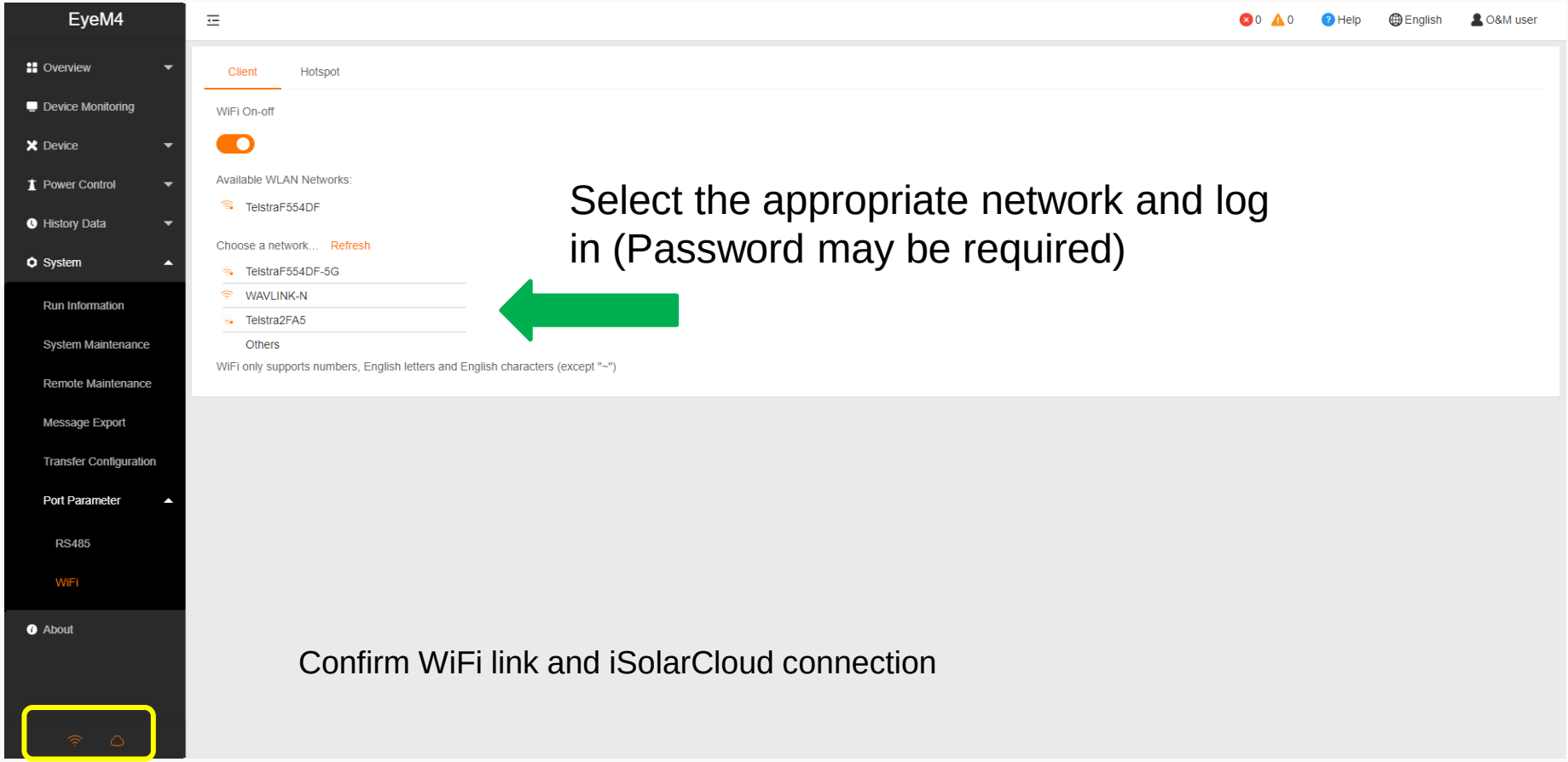


Select Logger1000 or EyeM4, scan QR code, then follow the prompts



Remote Maintenance – EyeM4

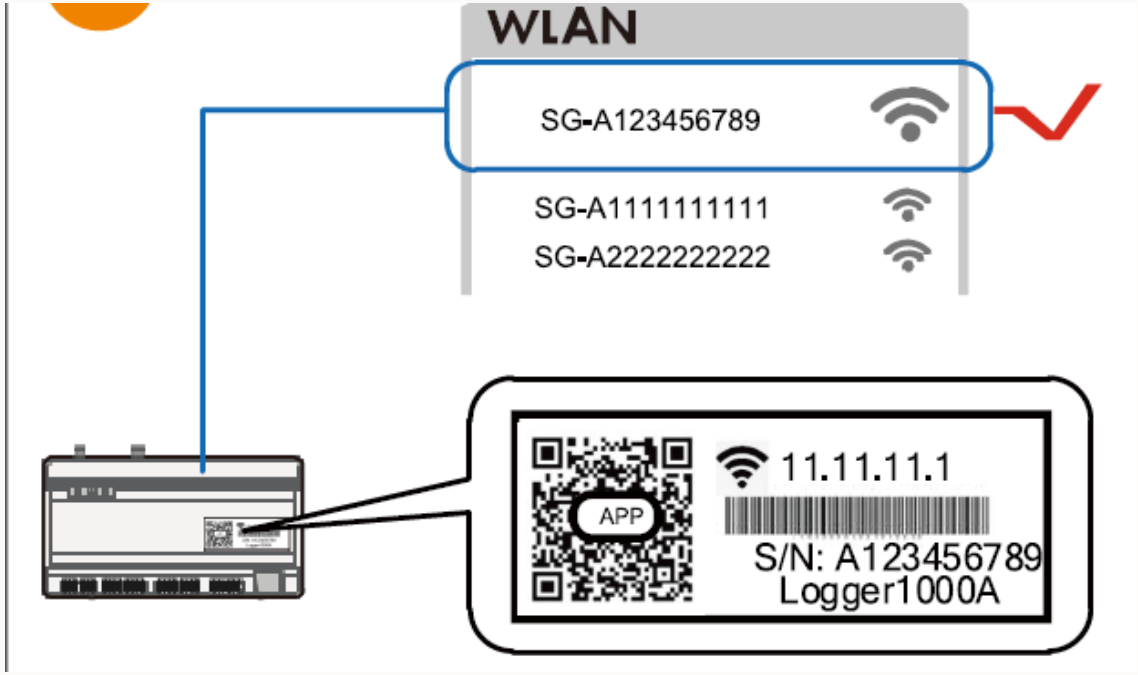
Setting the ‘Remote Maintenance’ on the EyeM4 is done via the WiFi connection to the customer’s modem.



Remote Maintenance / iSolarCloud - Logger1000 (Ethernet)

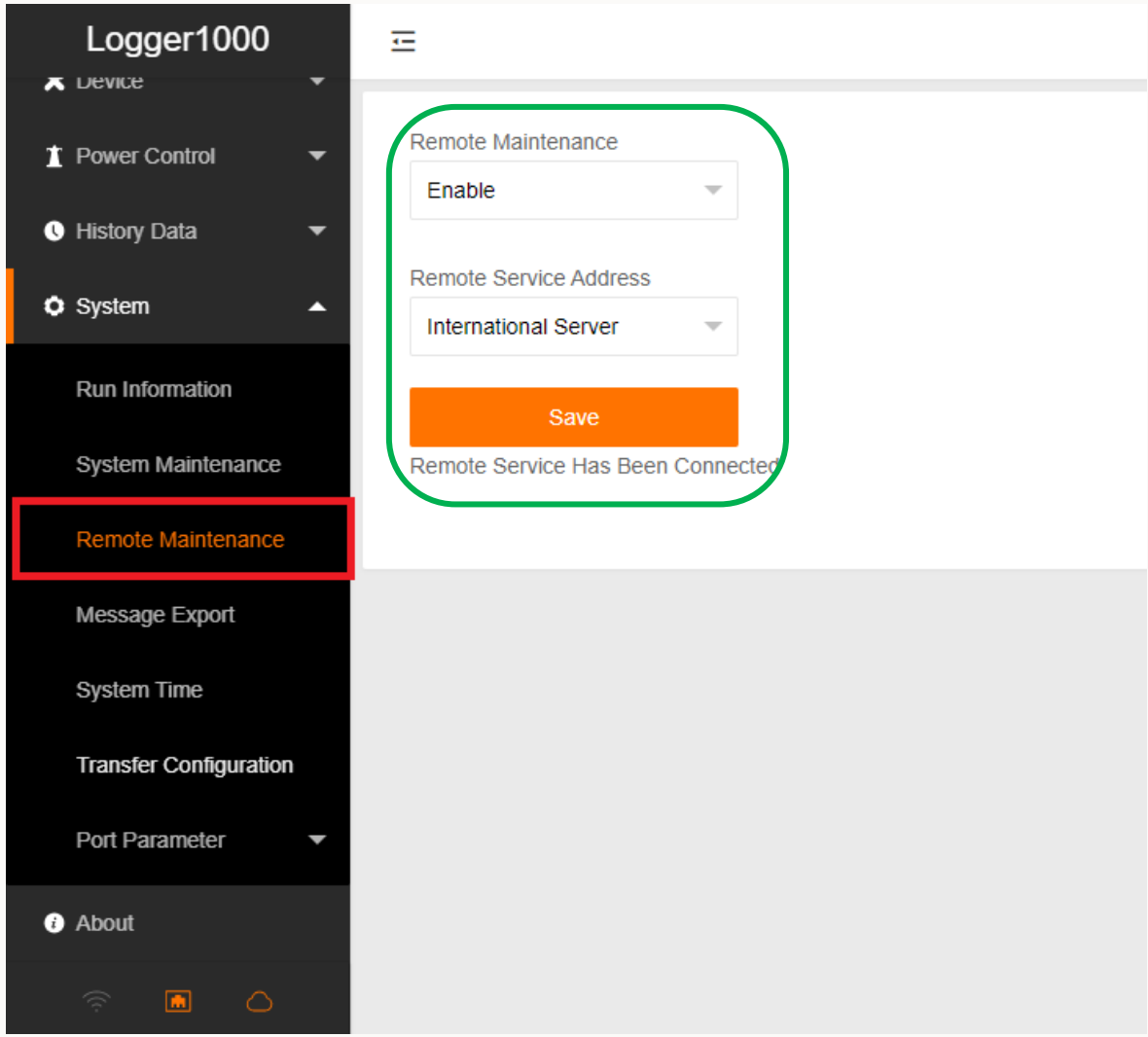
Remote Maintenance (Connecting to the internet and iSolarCloud) – Logger1000

The Logger 1000 connects to the internet via Ether net to the end user's modem or Cisco switch.
Log into the Logger 1000 from your device using WiFi as before
Open a browser and type 11.11.11.1 into the address bar



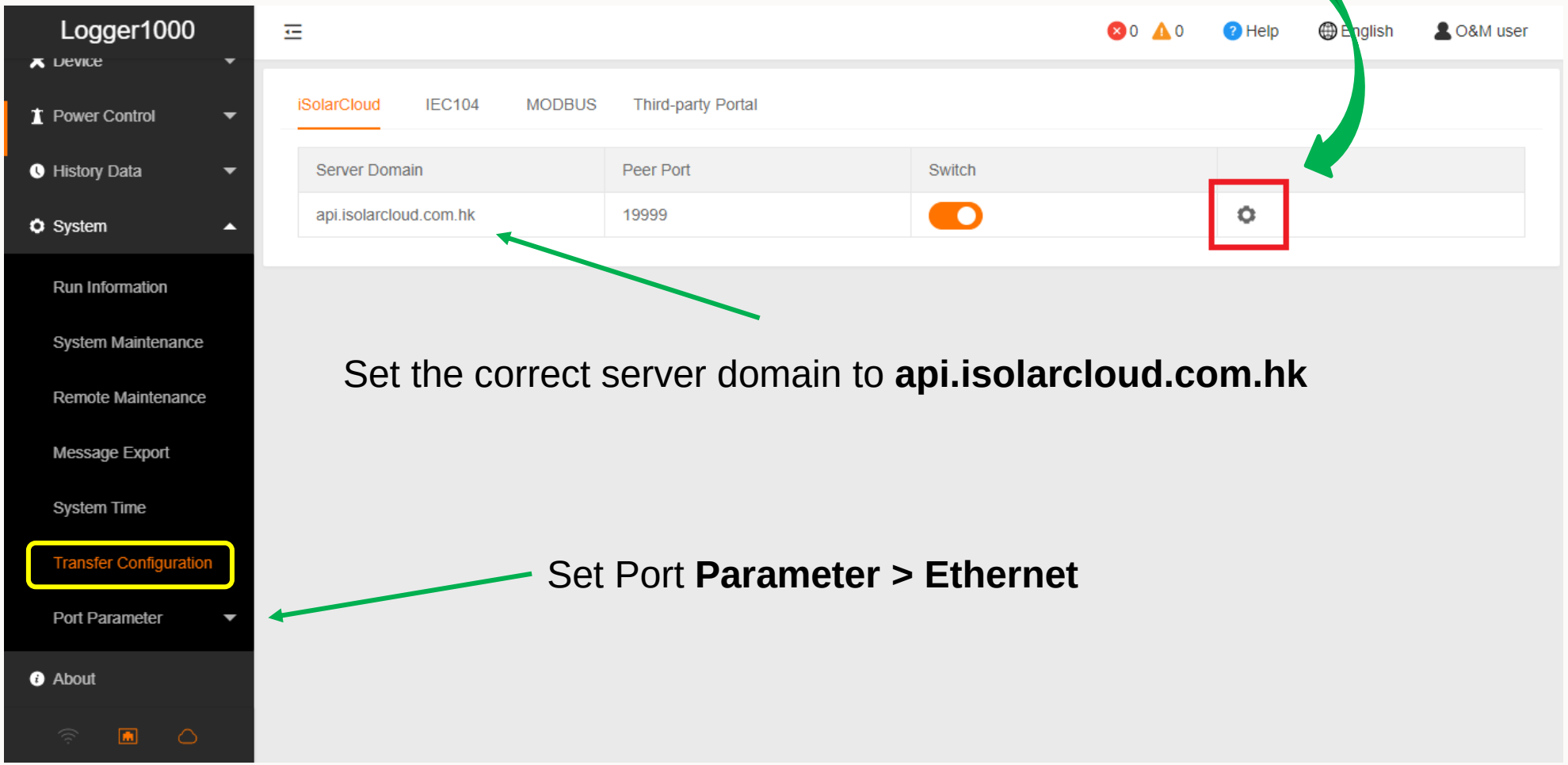
Select **System Maintenance > Remote Maintenance**
Select **Enable**

Save



iSolarCloud connection – Logger1000

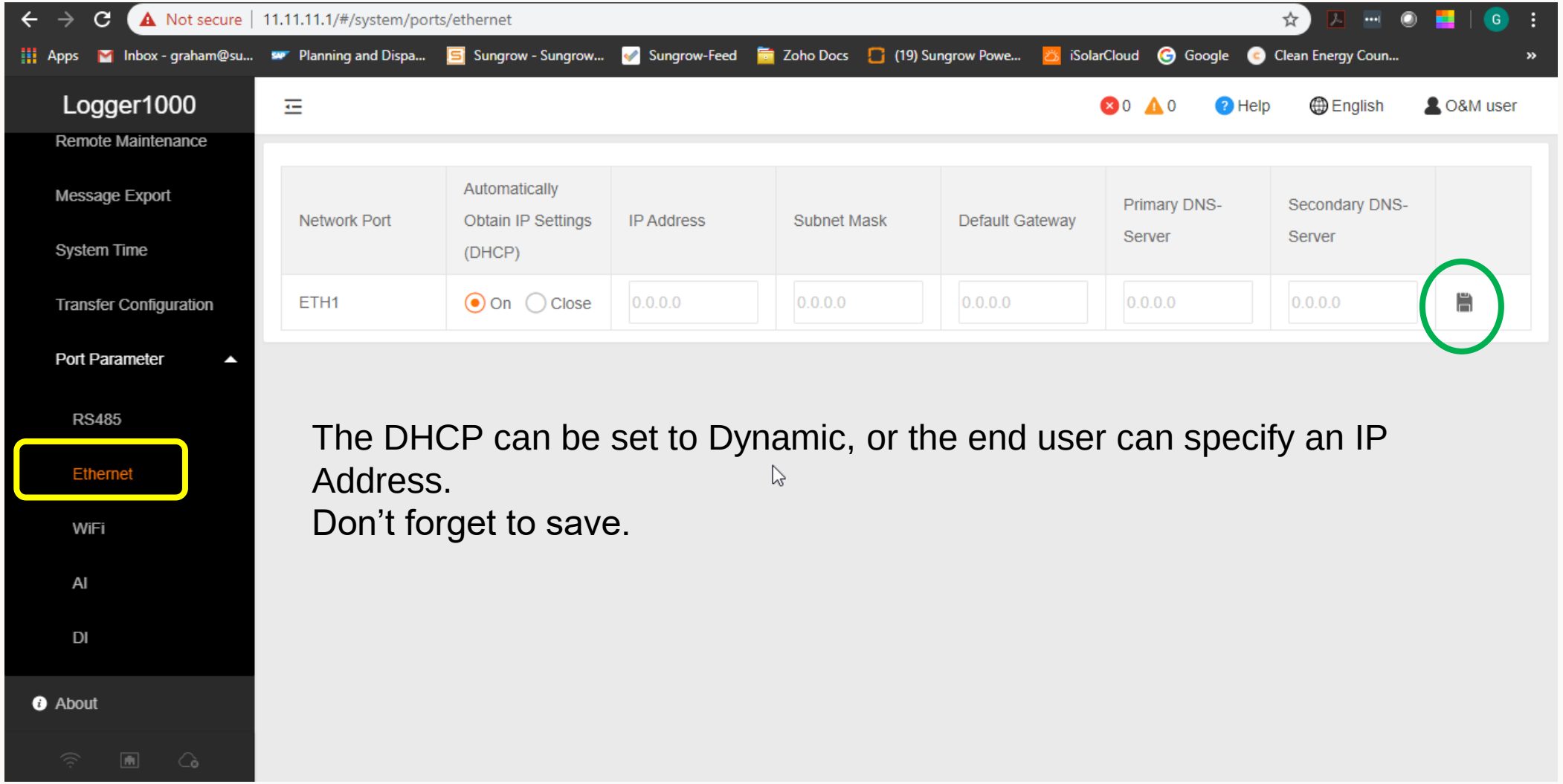
Select **System > Transfer Configuration** and click the settings gearwheel



Set the correct server domain to **api.isolarcloud.com.hk**

Set Port **Parameter > Ethernet**

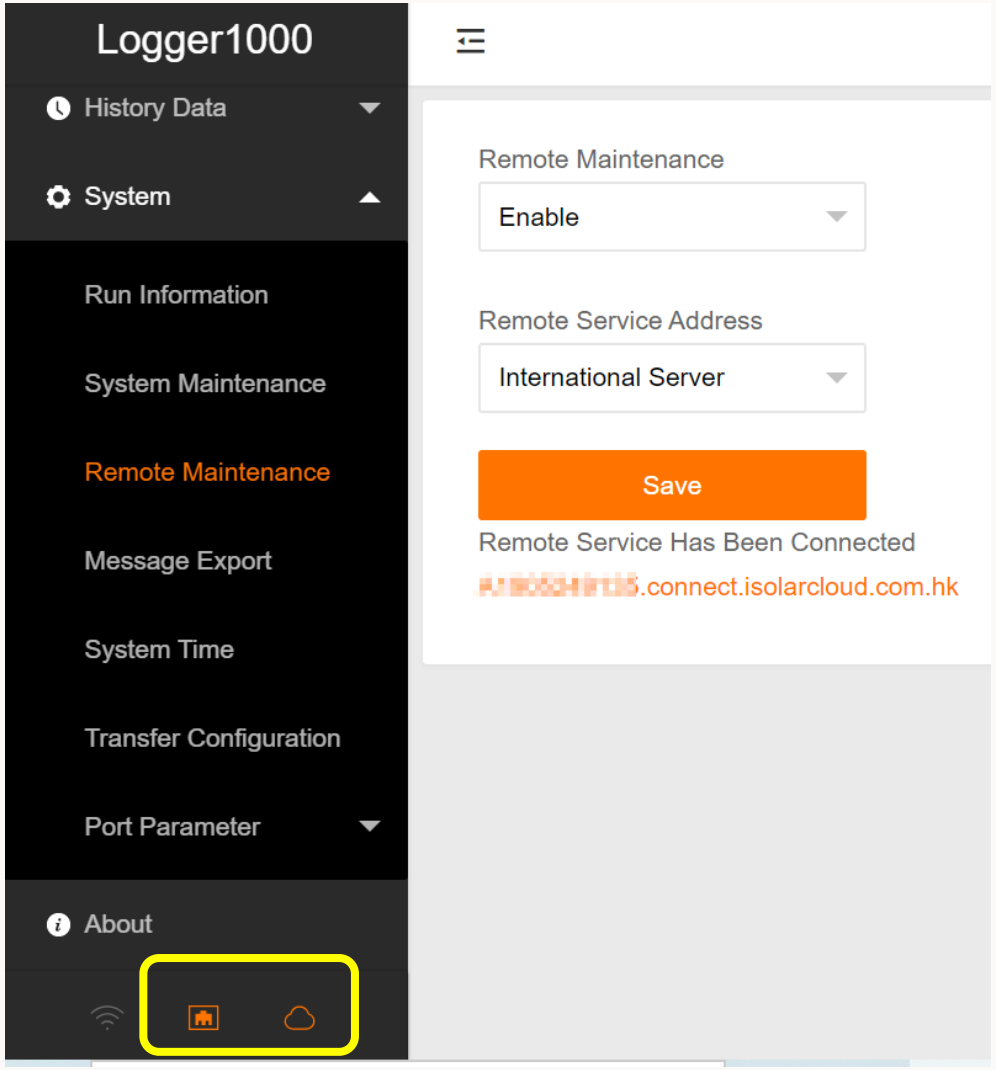
Setting the IP address



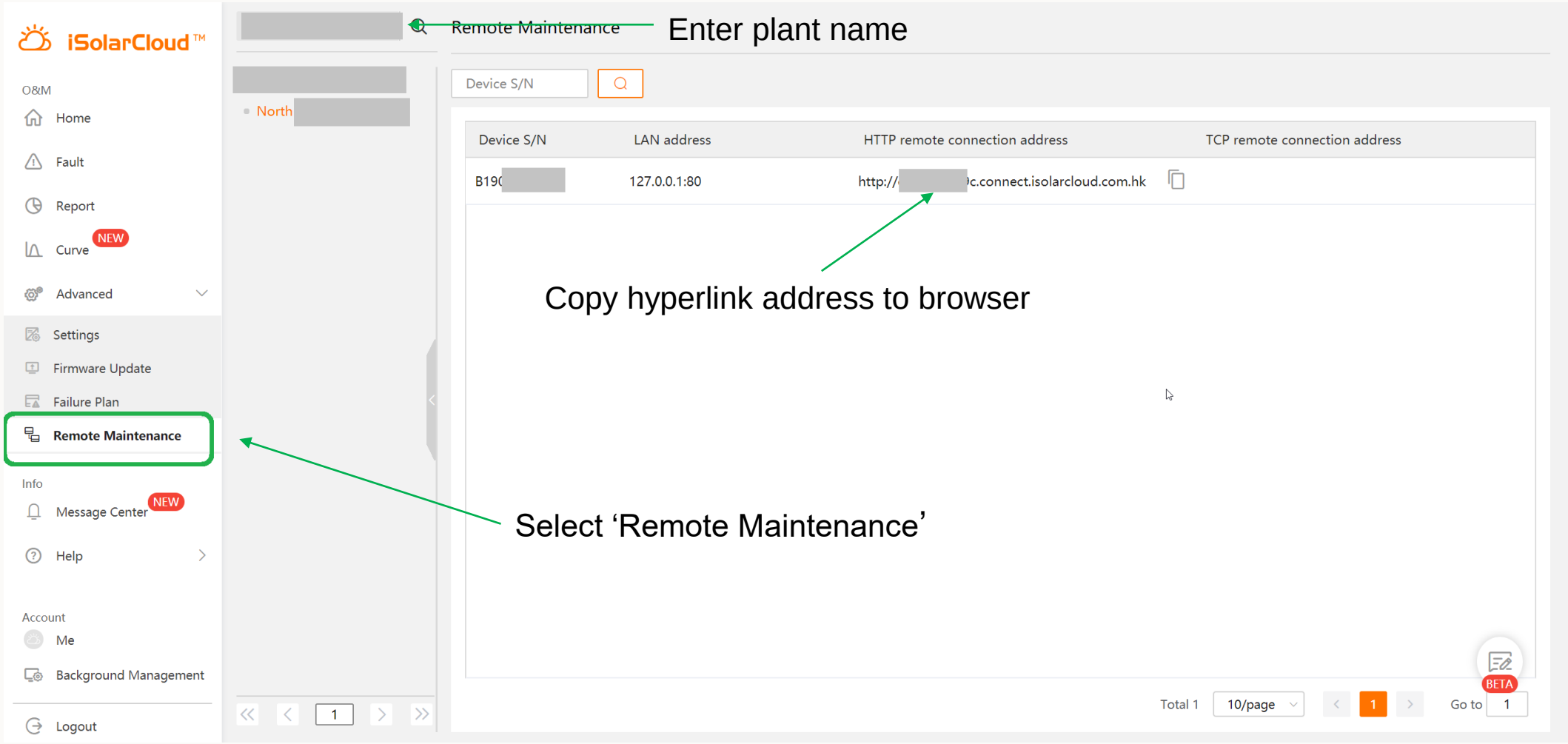
The DHCP can be set to Dynamic, or the end user can specify an IP Address.
Don't forget to save.

Final check

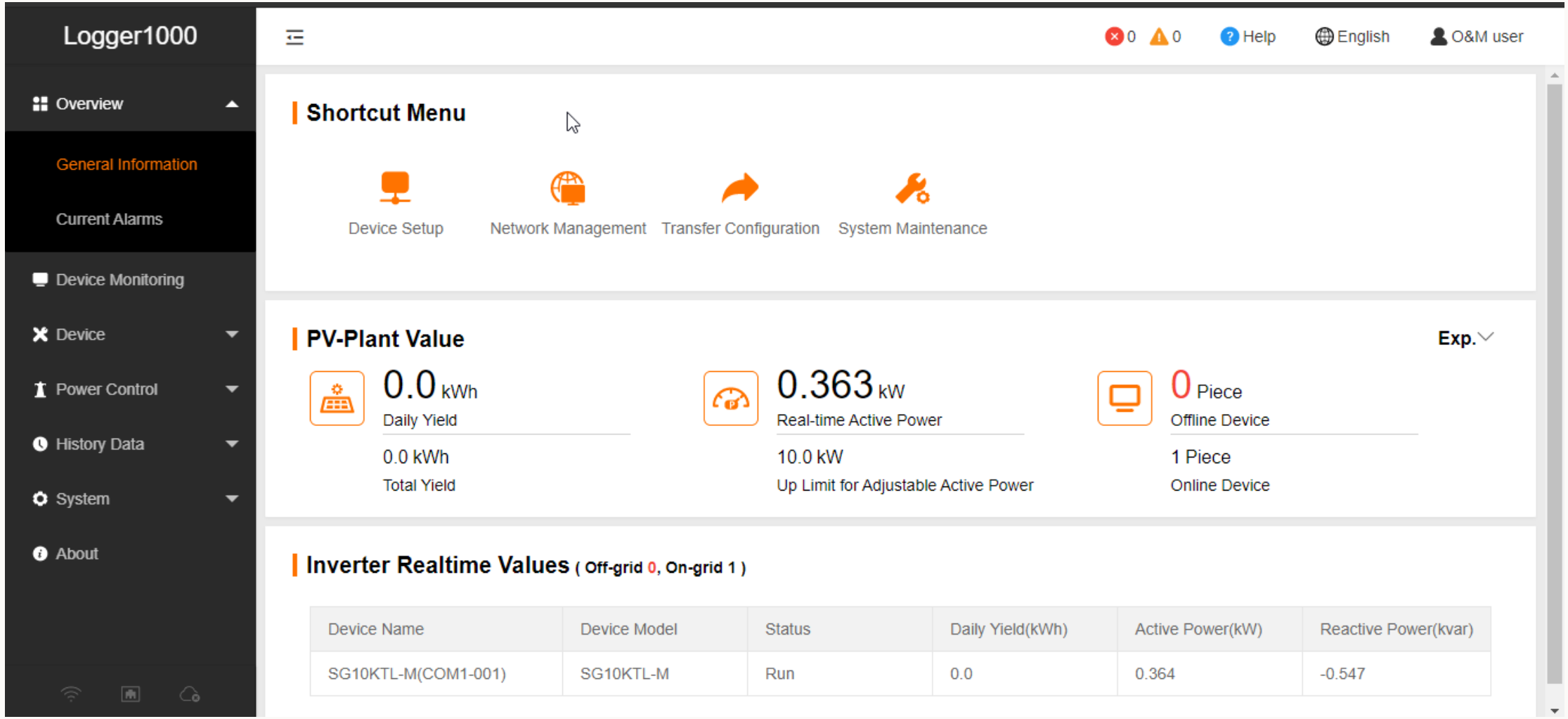
As a final check, you can go back to **Remote Maintenance** and check the connection



Remote access via iSolarCloud



Remote connection to Logger



THANK YOU!