2-in-1 Rapid Shutdown Devices SUNGO RSDi-2 & Data Gateway SUNGO GTC Quick Installation Guide

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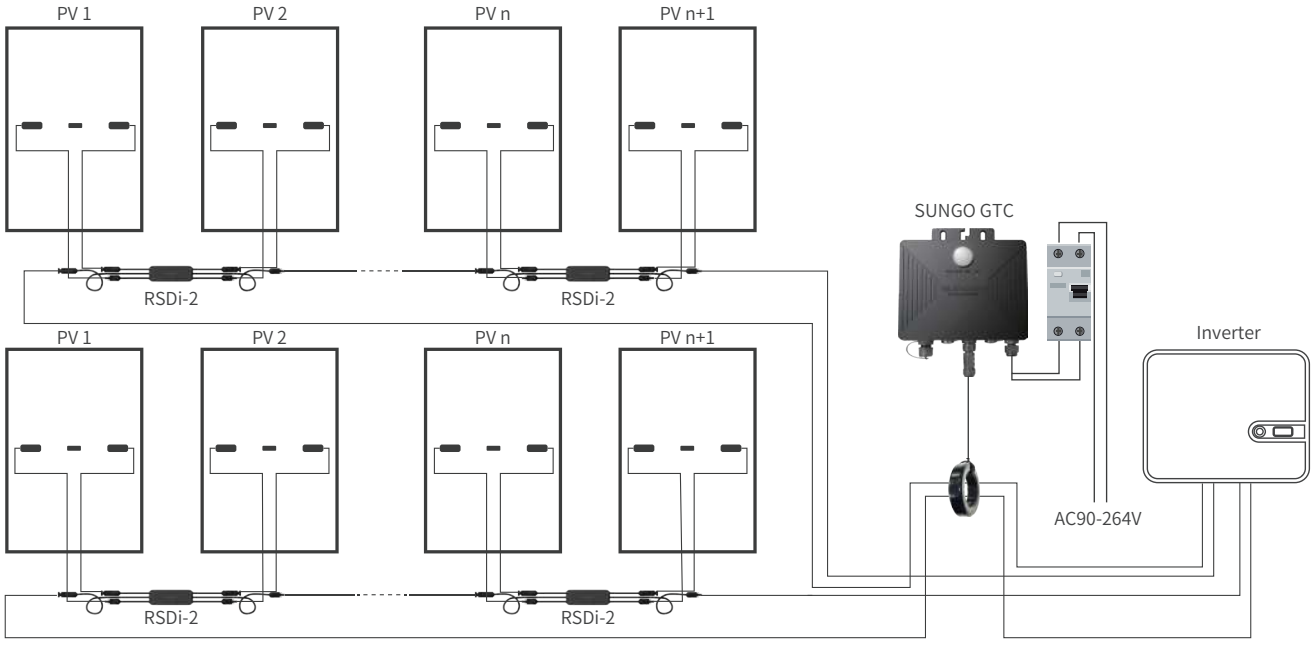
1 Product Overview

2-in-1 Rapid Shutdown Devices
SUNGO RSDi-2

Data Gateway
SUNGO GTC

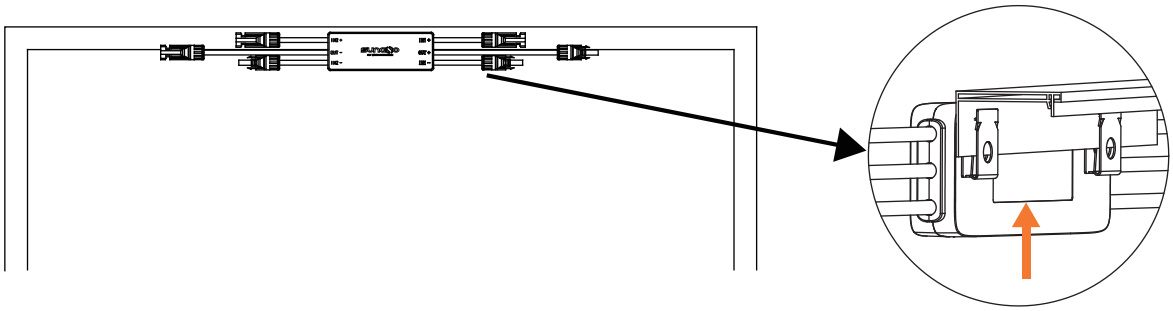
The SUNGO RSDi-2 is a rapid shutdown with data monitoring, matching the data gateway GTC, with a module-level rapid shutdown function that monitors the operating parameters of the PV modules and reports the operating status of the PV modules.



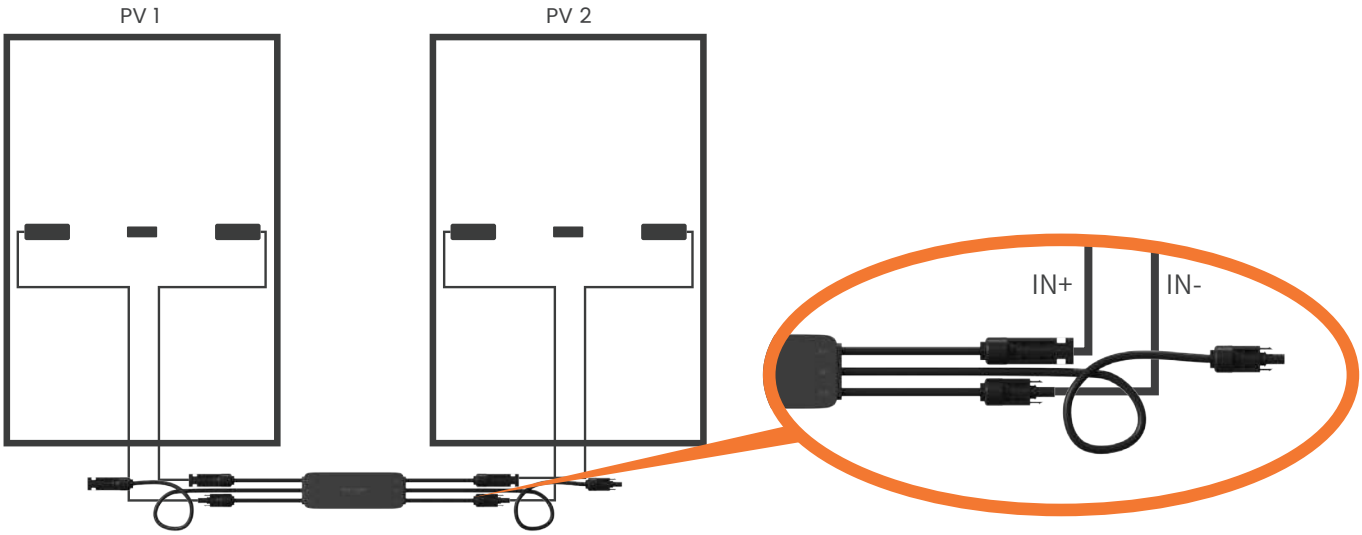
Connection Diagram

2 SUNGO RSDi-2 Product Installation

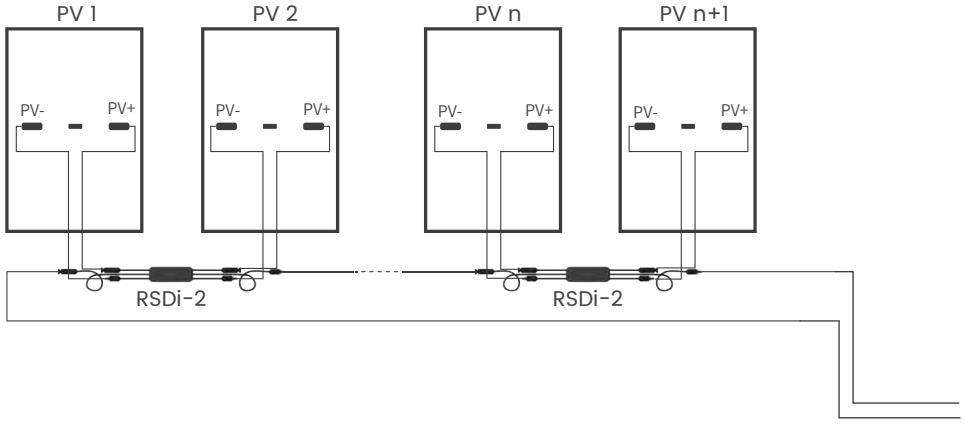
1. Install the RSDi-2 by snapping the RSDi-2 upward onto the PV module frame.



2. Connect IN+ and IN- of RSDi-2 to the positive and negative terminals of the first and second PV module junction boxes respectively, and so on.



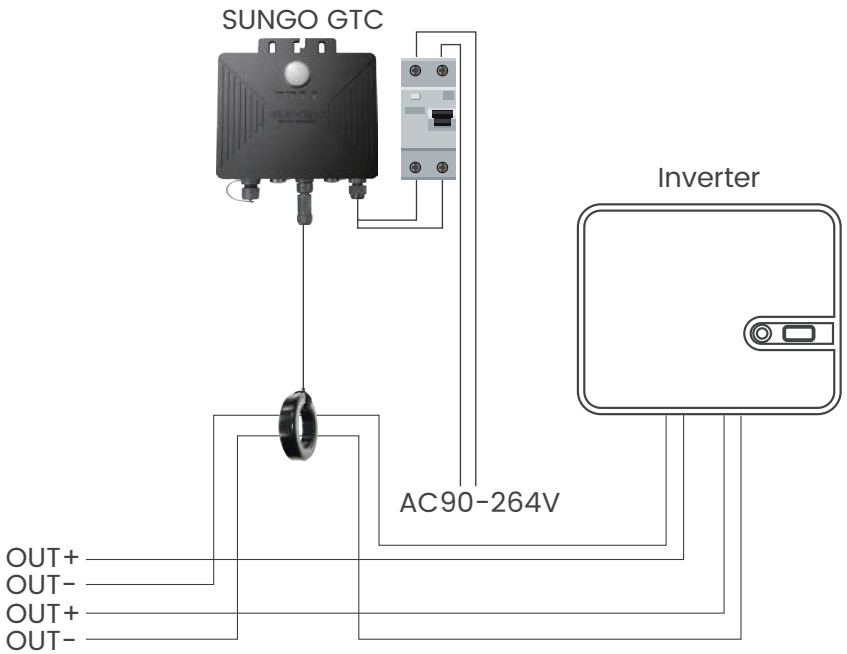
3. Connect two adjacent RSDi-2 output ports in series and then connect them near to the inverters with a homemade DC extension cable.



3 SUNGO GTC Installation

Step 1. Data gateway connectivity

1. Install the GTC near the inverter.
2. Connect the OUT+ of the last rapid shutdown to the PV+ of the inverter.
3. Connect the OUT- of the first rapid shutdown through the magnetic ring of the GTC to the PV- of the inverter.
4. After confirming that the connection is correct GTC connects the MCB and then connects it to the AC.



The GTC itself is IP67 waterproof and can be used without a distribution cabinet.
The AC input line is connected to the AC power using the L16-2 waterproof connector.
-Check that the structural mounts are secure and that all screws are tightened.
-Check that all cables are connected with the correct polarity and that the connections are firm and reliable to ensure that there are no short circuits.
-Confirm that the system is connected correctly, the inverter DC switch is ON, and the inverter is turned on.

Note: One GTC can take up to 50 RSDi-2.

Step 2. Connecting the data gateway to a power source

Connect the data gateway to 90~264V AC power supply. Ensure that the power indicator green light is always on, and the running indicator green light is also always on. Check whether the inverter is working normally.

Step 3. GTC status indication

Four permanently illuminated status indicators from left to right (1, 2, 3, 4)

Note: Indicator status indicates

1, 2, 4 Indicator status schematic: Indicates normally lit Indicates extinguished Indicates blinking **3 Indicator status schematic: Indicates normally lit Indicates extinguished Indicates blinking**	
None of the four indicator lights are lit Wrong or faulty circuit connection	1 on 2 off 3 on 4 on Turn off the RSD, the network is connected normally
1, 2 on 3, 4 off Start RSD, network not connected	1 on 2 blinking 3 blinking 4 blinking Search RSD self-test
1, 2 on 3 off 4 on Start the RSD, the network is connected normally	1 on 2Blinking 3on 4 on or off Search RSD self-test successful
1 on 2 off 3 on 4 off RSD off, network not connected	1 on 2 off 3 blinking 4 on or off Search RSD self-test failed

Step 4. GTC Entry Rapid Shutdown Device

The GTC needs to enter the address of the rapid shutdown devices it manages, otherwise it can't communicate and upload the rapid shutdown device's data normally. There are two ways to enter rapid shutdown devices: automatic and manual. When there is only one GTC in the field, you can use the automatic, but if there are more than one GTC in the field, you must execute the manual.

Auto Entry Rapid Shutdown Device (GTC=1 pcs)

Press the middle button of GTC to let the Running light always on, let the RSD light go out, after 5 seconds and then long press the button, GTC enters into the automatic recording mode, release the button, the indicator light 234 flashes back and forth waiting for about 10 minutes the Running indicator light flashes to indicate the success of the automatic recording, press the button again to the Running indicator light is always on, the rapid shutdown device is working normally. If the indicator light 3 blinking means that this automatic recording failed please check the line and re-execute the step, if three times are not successful please contact the relevant technical personnel.

Manual Entry Rapid Shutdown Device (GTC>1 pcs)

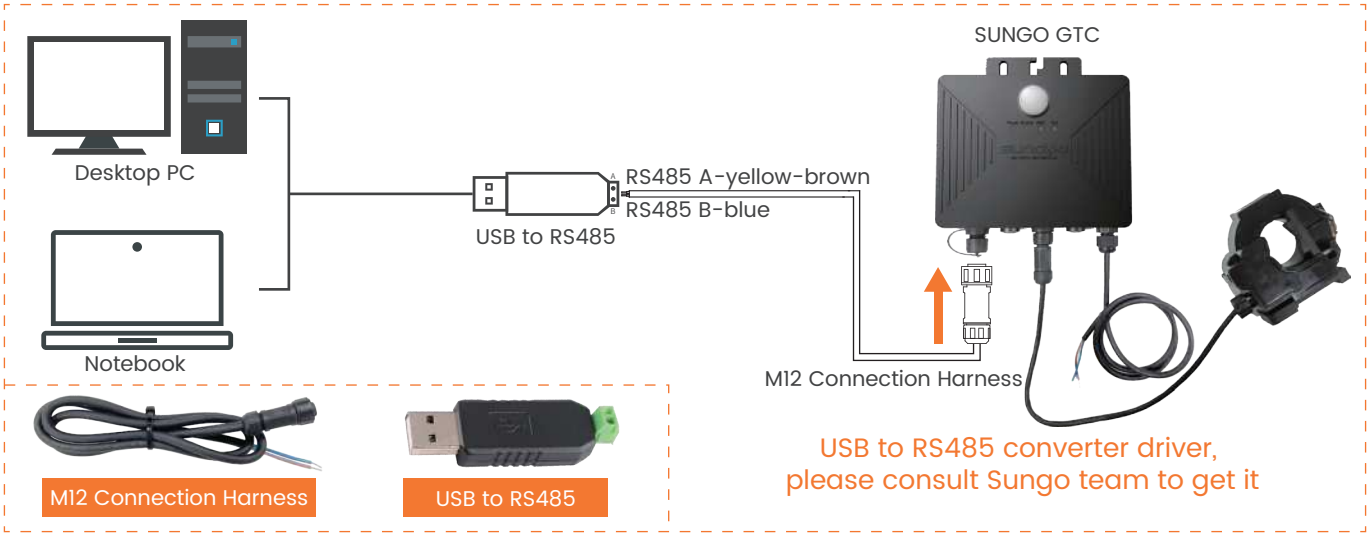
Note: If the automatic entry function is used, it will cause conflicts by duplicating the respective managed rapid shutdown devices in multiple GTCs in the field, and you only need to re-execute the operation of manually entering . (Manual entry of rapid shutdown devices is for recording the field rapid shutdown devices into different GTCs)

I. Process

Recommended application process:
1. First power up the GTC.
2. Use the USB to RS485 cable to connect GTC and the computer
3. Select the corresponding serial port
4. Read MAC Addr and Version, if normal display, represents the current connection is normal, otherwise check whether the cable is properly connected.
5. Enter the RSDi-2 code into the List list, and then click Write to write it to GTC; there are two ways to enter the code as follows
①Through Import button, recognize the selected picture to import.
② Enter the number manually through the keyboard, and note that each number is separated by a comma.
6. Monitor the current status of the rapid shutdown through To Monitor.

II. Wiring

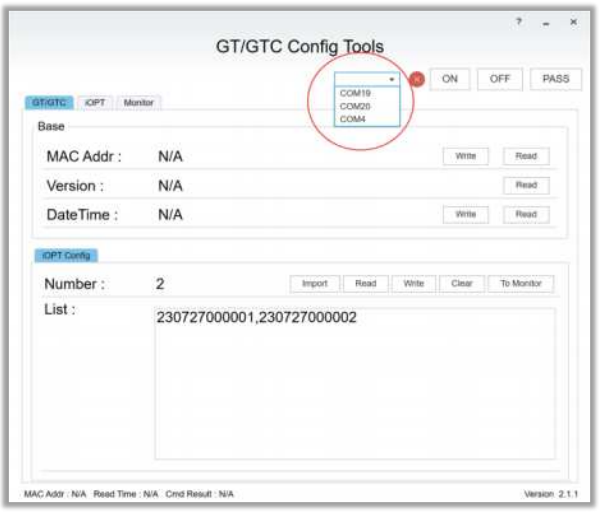
Use USB to RS485 to connect the GTC to the computer, the connection is shown below:



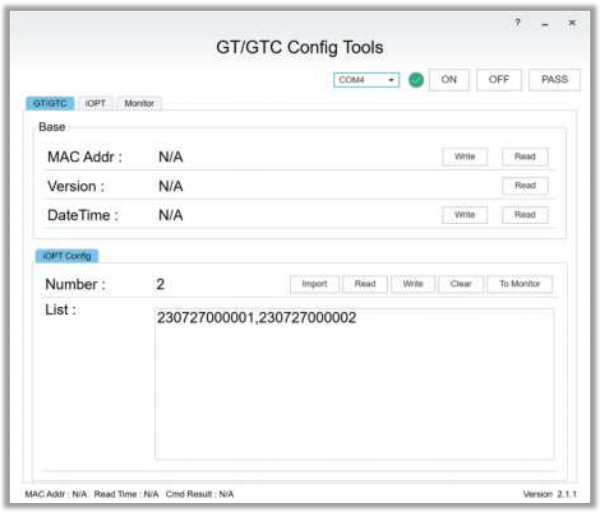
Wiring Diagram

III. Description

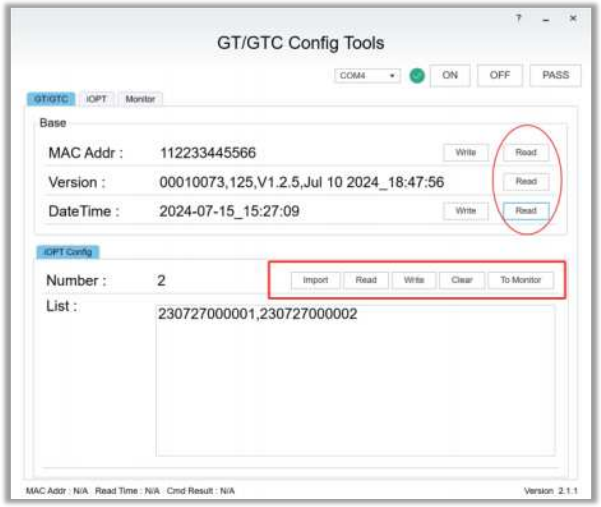
1. Select the corresponding serial port



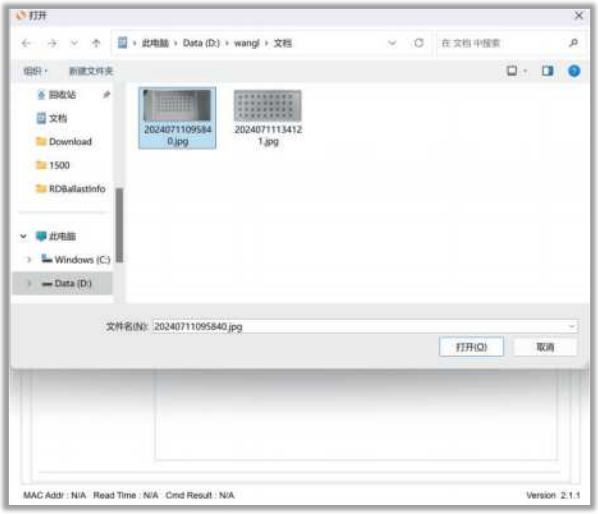
After success, the green circle is displayed as follows



2. Description of GTC functions

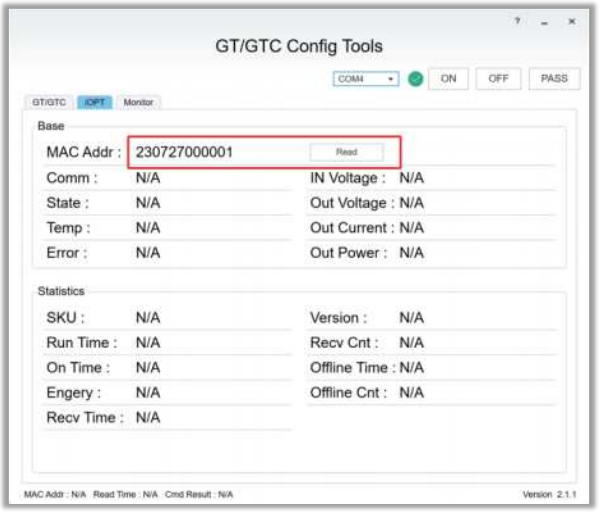


①MAC Addr:
Click Read to read the address of GTC, and click Write to write the address in the left input box to GTC.
②Version
Click Read to read the software version number of GTC.
③DateTime
Click Read to read the time of GTC, and click Write to write the system time into GTC.
④RSDi-2 Config - Import
Click Import to import the RSDi-2 code through the image, as follows
Click Import to import the recognized codes into the List box.



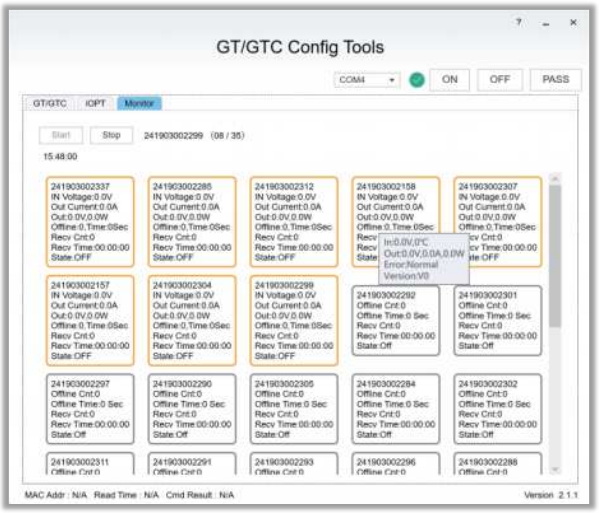
⑤RSDi-2 Config - Read
Click Read to read the RSDi-2 list of the current GTC configuration.
⑥RSDi-2 Config - Write
Click Write to write the RSDi-2 list to GTC.
⑦RSDi-2 Config - Clear
Click Clear to delete all the RSDi-2 in GTC.
⑧RSDi-2 Config - To Monitor
Click Monitor to display the RSDi-2 in List on the Monitor page.

3. Read single RSDi-2 working parameters function description



Input the RSDi-2 number you need to read, click Read to read its current status.
Comm: communication status, Online stands for online, Offline stands for offline.
State: current state, ON working, OFF closed.
Temp: current temperature, Celsius degrees
Error: current fault, Normal stands for normal.
IN Voltage: input voltage
Out Voltage：Output Voltage
Out Current: Output Current
Out Power：Output Power
SKU: Product Model
Run Time：Run Time
On Time: Working Time
Engery: Power Generation
Recv Time: Receive Time

4.Monitor Function Description



Click Start to start monitoring, the software will refresh the status of RSDi-2 in List regularly.

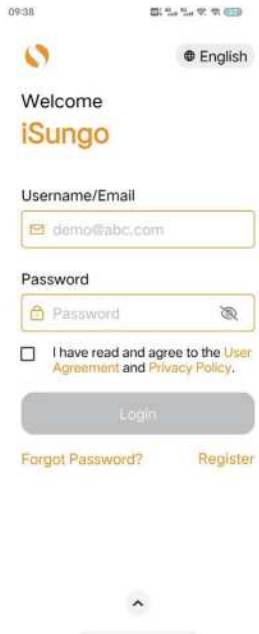
4 GTC distribution network (APP2.0 instructions for use)

Step 1. Download APP and register account

iSungo Android

iSungo iOS

Scan the QR code to download APP

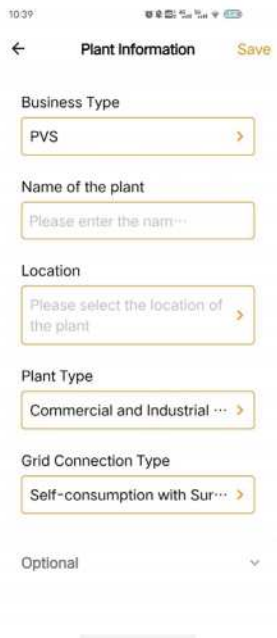


Open the APP to register an account

Step 2. Creation of PV power plants

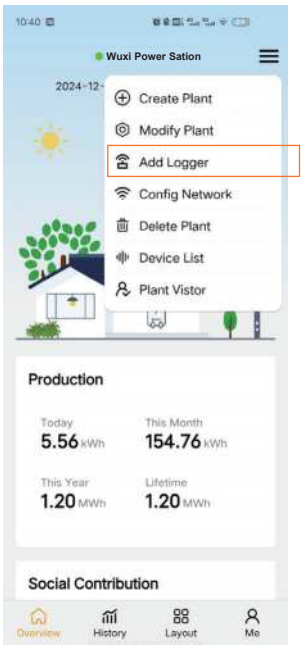
Click to create a power station

Step 3. Filling in power plant information



Just fill in the information according to your own power station

Step 4. Scanning the data collection gateway

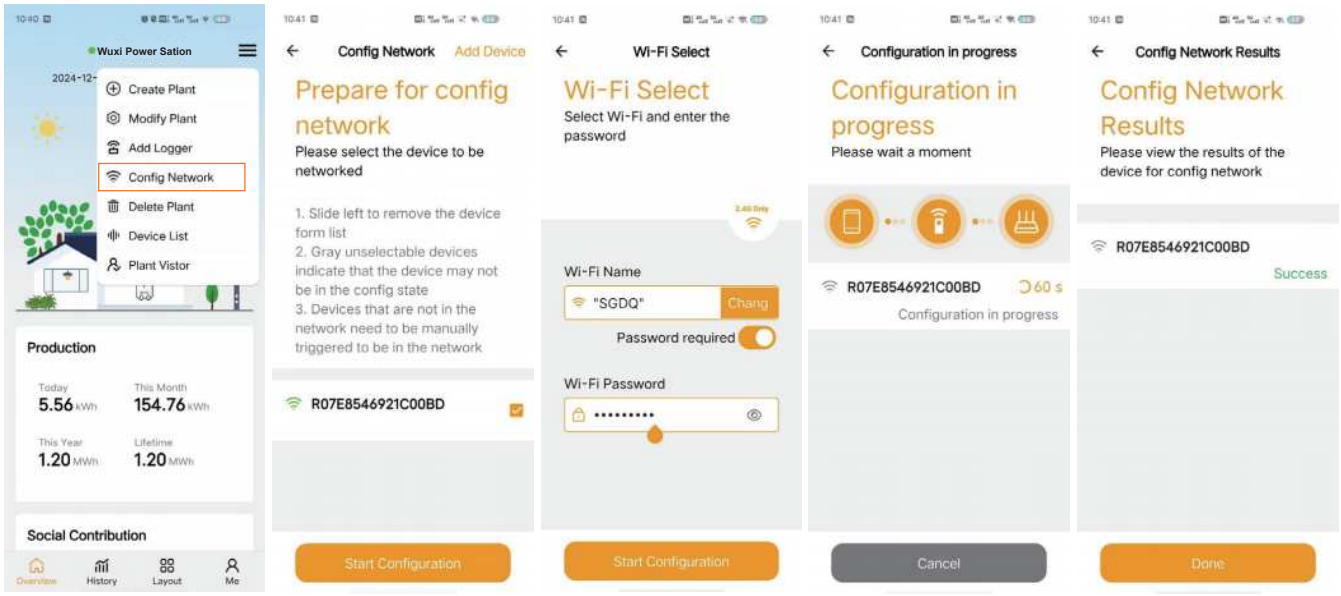


WIFI Serial Number:
XXXXXXXXXXXXXXX

Example of QR code on the left side of GTC

Click the drop-down menu in the upper right corner, click "Add Logger", and scan the QR code of the WIFI serial number on the left side face of the Data Gateway GTC

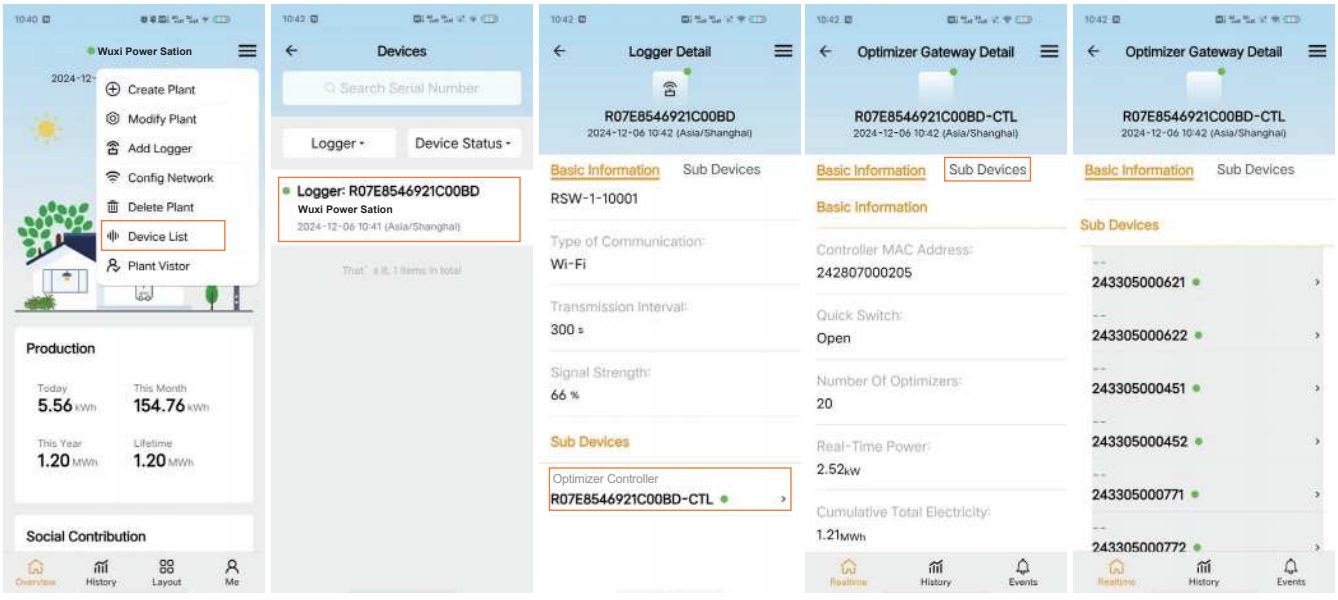
Step 5. GTC WIFI distribution network



1 2 3 4 5

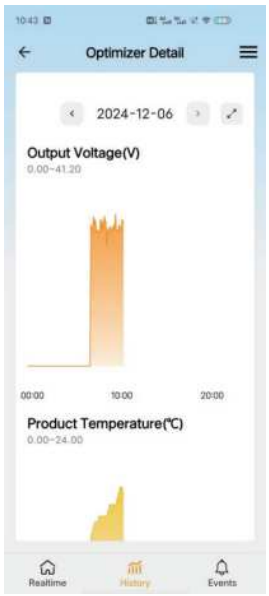
First, click on the drop-down menu in the upper right corner of the "Overview" page, and then click on "Configuring Network". Operate according to the indicated process. It will be okay as long as the successful network configuration is displayed

Step 6. Optimizer(RSD) Details



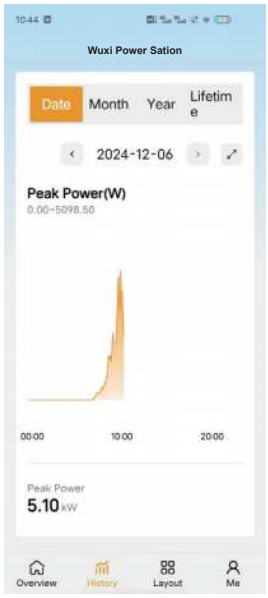
1 2 3 4 5

1.Click on the drop-down menu in the upper right corner on the "Overview" page, and then click on "Device List"
2.Click on the "Logger" column to enter the collector details page
3.Click on the "Optimizer Controller" under "Logger Details" to enter the "Optimizer Gateway Detail" page
4.Click on "Sub Devices" and you can see the optimizer serial number
5.Click on the arrow on the right side of the optimizer serial number to enter the "Optimizer Detail(RSD Detail)" page



6.The device information will be displayed on the "Optimizer Detail(RSD Detail)" page
7.Click on the "History" icon at the bottom to view the graphical display of the "Optimizer Detail(RSD Detail)" (showing input voltage, output voltage, temperature, output current and output power)

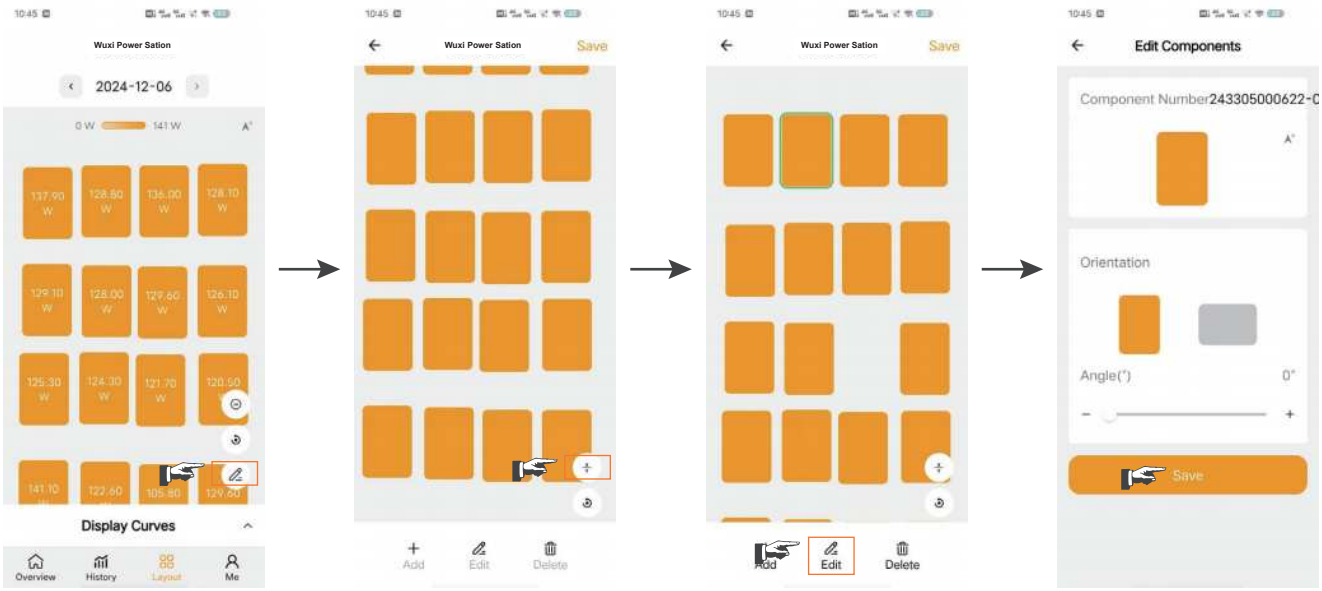
Step 7. Observation of the status of the power station



1 2 3 4 5

1.Return to the "Overview" page and you can see the basic information about the power generation of the power station
2.Click on "History" on the right side of the "Overview" in the APP and you can see the peak power of the power station
3.Click on "Layout" on the right side of "History" in the APP and you can see the status of the photovoltaic modules
4.Click on "Display Curves" and you can see the power curve of the modules
5.Long-press on the "Photovoltaic Module Graph" and the detailed information of the modules will be displayed

Step 8: Layout modifications



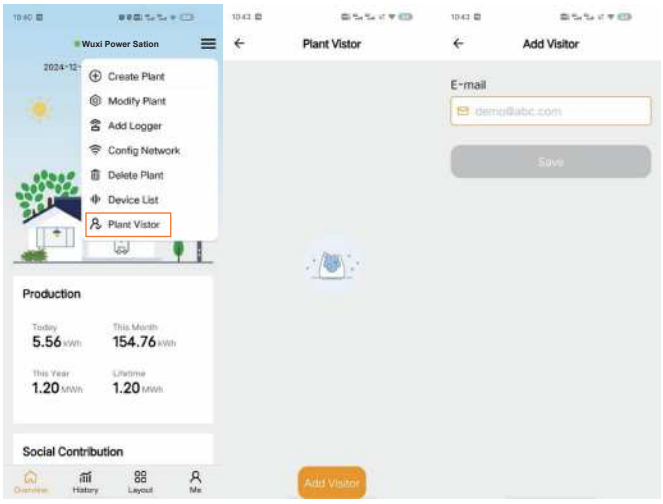
Click on the small icon here to modify the layout

Click on the small icon here. There will be a dotted grid to facilitate the layout

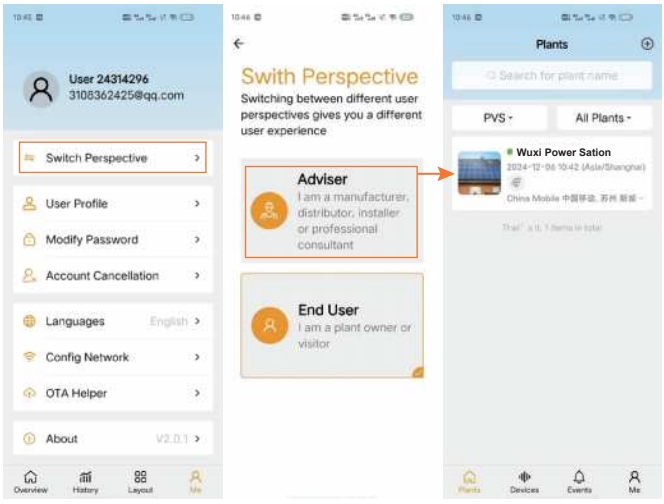
Click on "Edit"

You can modify the angle of the components. Save it after the modification is completed

Other functions



Add visitor's email address



Switch perspectives, that of professional consultants and end users

All the above steps are operated based on end users

Global Headquarters

SUNGO Energy Technology (Jiangsu) Co., Ltd.
Add: 3rd Floor, Building 9-I, Start-up Zone of Yangtze River Delta International R&D Community, No. 286 Qinglonggang Road, High-speed Railway New Town, Xiangcheng District, Suzhou City, Jiangsu Province, China

Europe Headquarters

SUNGO Energy Technology B.V.
Add: Hoofdweg-Noord 9T, 2913LB Nieuwerkerk aan den IJssel, The Netherlands

Optimizer&Energy Storage Production Base

KONKA&SUNGO Smart Energy (Zhejiang) Co., Ltd.
Add: Building 3#, Small and Micro Industrial Park, No. 69 Xingmei Avenue, Chengtan Street, Xinchang County, Shaoxing City, Zhejiang Province, China

Sungo Energy UK

Add: 60 Windsor Avenue, London SW19 2RR, United Kingdom

Sungo Energy DE

SUNGO Energietechnik GmbH
Add: Berliner Str. 300b, 63065 Offenbach am Main, Germany

Sungo Energy USA

SUNGO ENERGY TECHNOLOGY INC.
Add: 5900 Balcones Drive,STE 100 Austin TX 78731

Web: www.sungoess.com
E-mail: sales@sungoess.com
Global Headquarters Tel:+86 (0)512 6512 2036
Europe Headquarters Tel:+31 (0)10 307 21 68
SUNGO Energy UK Tel:+44 (0) 330 122 6559
After-sales e-mail: after-sales@sungoess.com

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