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晟高中&英文安装指导

Installation Guide for SUNGO (CN & EN)

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与阳光同行，优化不停

GO WITH SUNSHINE, ALWAYS OPTIMIZED

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

Document version: SUNGO-RSDi-2>C[™]-V1-2024 EN
 Release Date: 2024.7

1 Product Overview

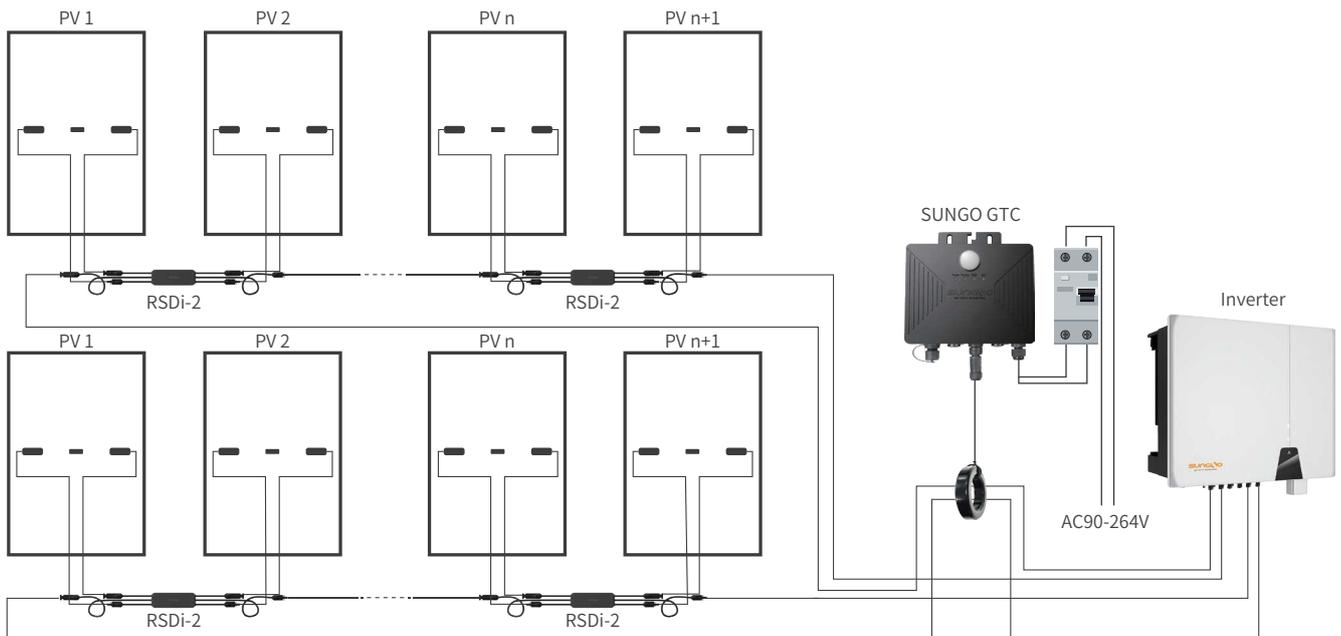


**2-in-1 Rapid Shutdown Devices
 SUNGO RSDi-2**



**Data Gateway
 SUNGO GTC**

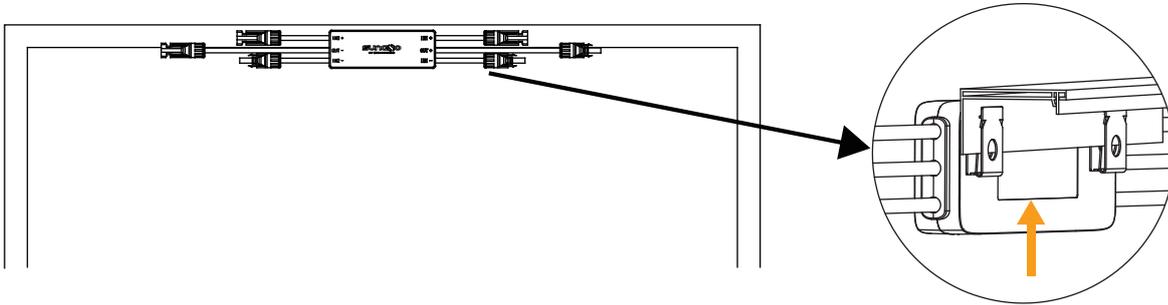
The SUNGO RSDi-2 is a rapid shutdown with data monitoring, matching the data gateway GTC, with a module-level rapid shutdown function that monitors the operating parameters of the PV modules and reports the operating status of the PV modules.



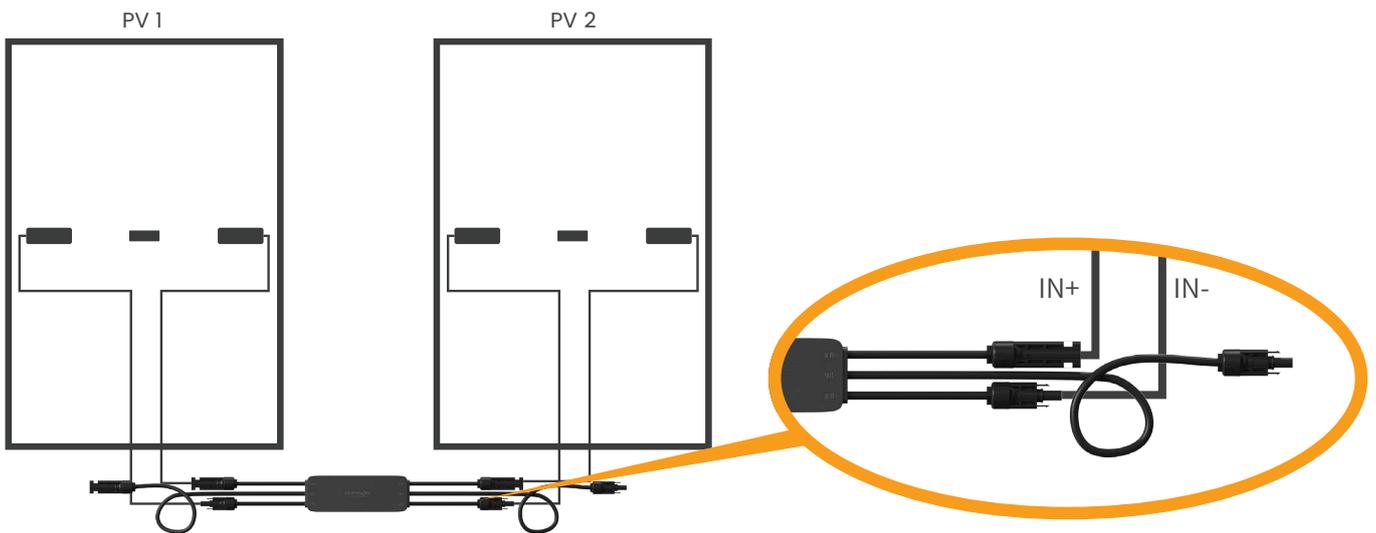
Connection Diagram

2 SUNGO RSDi-2 Product Installation

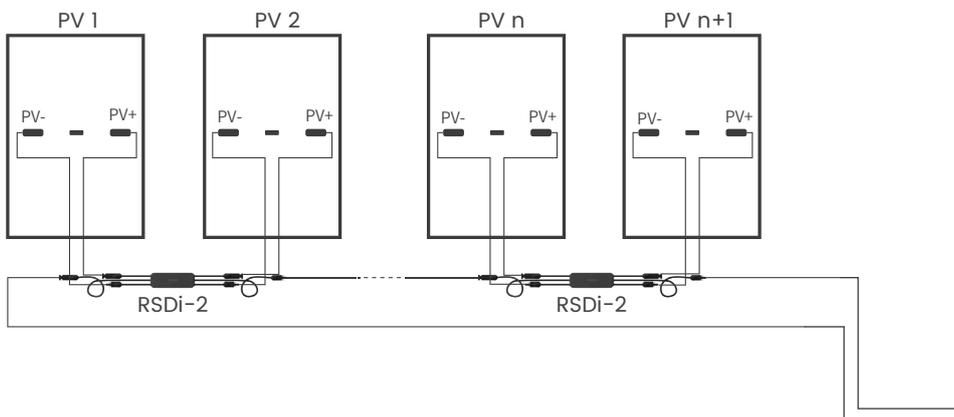
1. Install the RSDi-2 by snapping the RSDi-2 upward onto the PV module frame.



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.



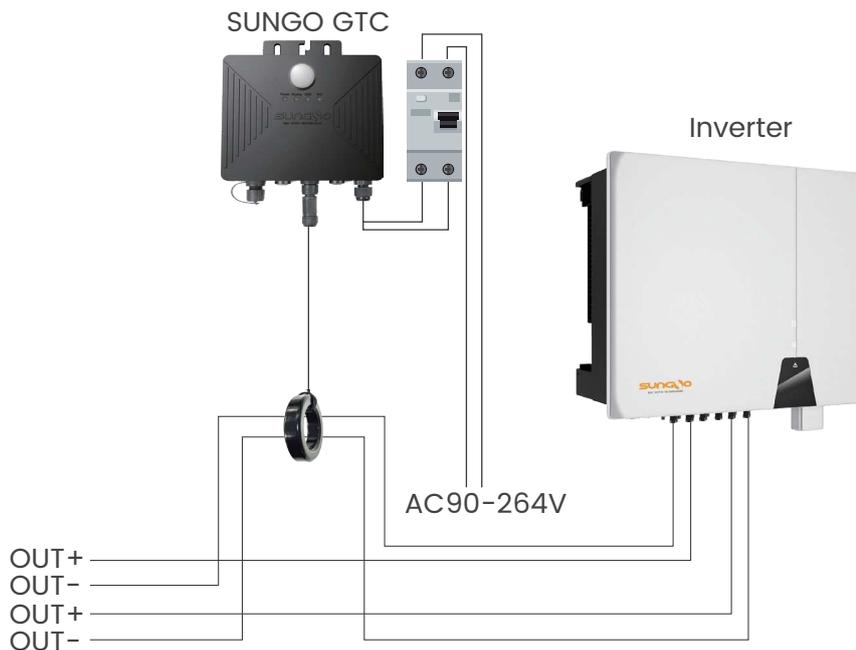
3. Connect two adjacent RSDi-2 output ports in series and then connect them near to the inverters with a homemade DC extension cable.



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	
<p>None of the four indicator lights are lit Wrong or faulty circuit connection</p>	<p>1 on 2 off 3 on 4 on Turn off the RSD, the network is connected normally</p>
<p>1, 2 on 3, 4 off Start RSD, network not connected</p>	<p>1 on 2 blinking 3 blinking 4 blinking Search RSD self-test</p>
<p>1, 2 on 3 off 4 on Start the RSD, the network is connected normally</p>	<p>1 on 2 blinking 3 on 4 on or off Search RSD self-test successful</p>
<p>1 on 2 off 3 on 4 off RSD off, network not connected</p>	<p>1 on 2 off 3 blinking 4 on or off Search RSD self-test failed</p>

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)

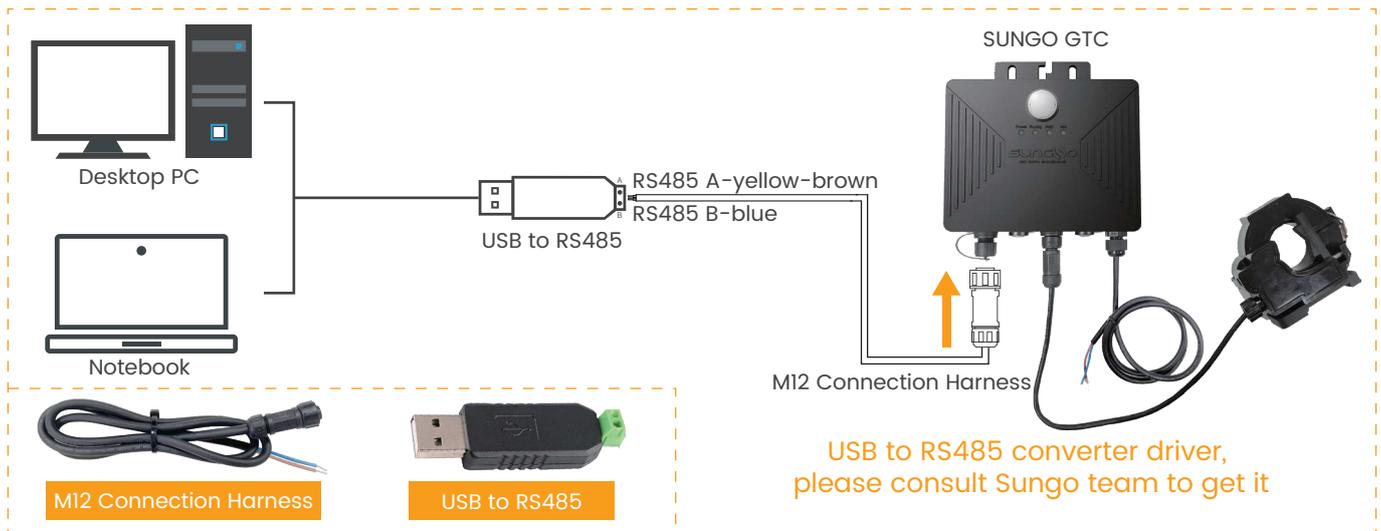
I. Process

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
 - ① Through 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:

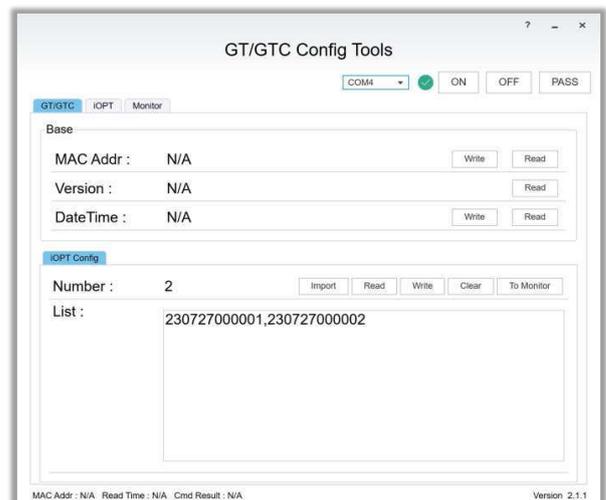
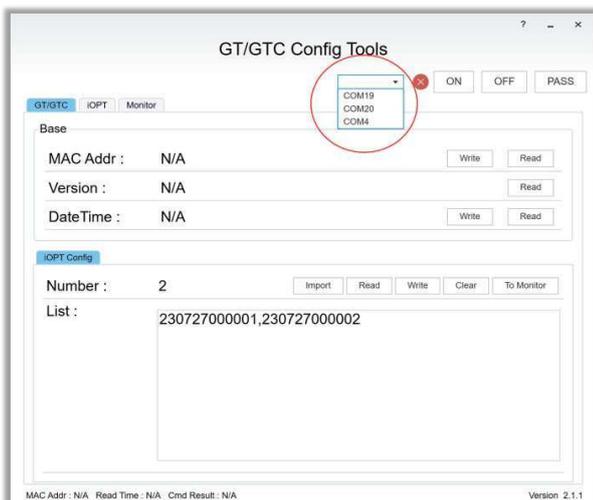


Wiring Diagram

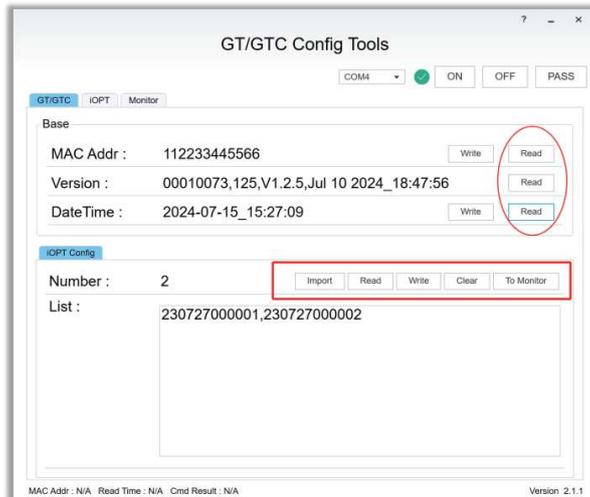
III. Description

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

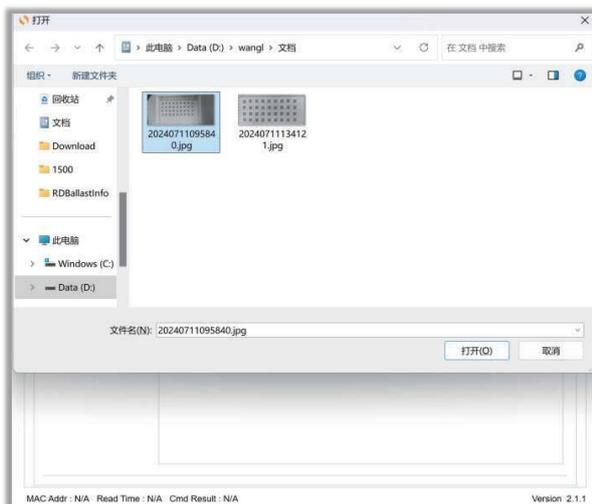
Click Read to read the software version number of GTC.

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.

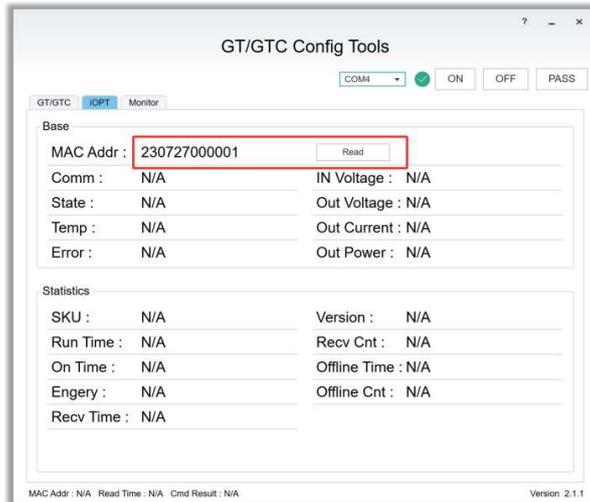
⑦RSDi-2 Config - Clear

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

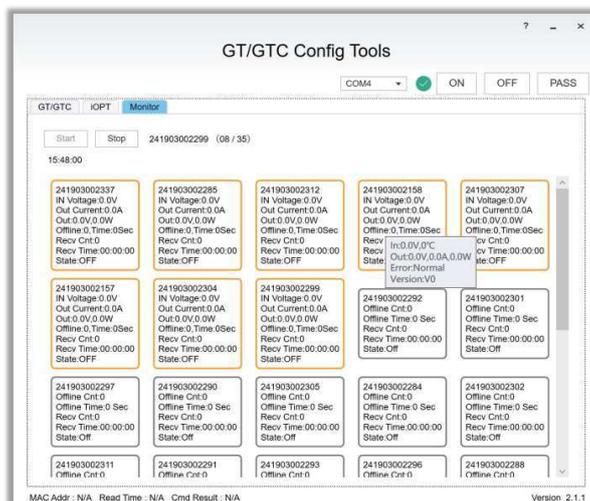
Run Time: Run Time

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.

4.1 GTC distribution network (APP1.0 instructions for use)

Step 1. Download APP and register account



iSungo-Android



iSungo-ios



Scan the QR code to download APP

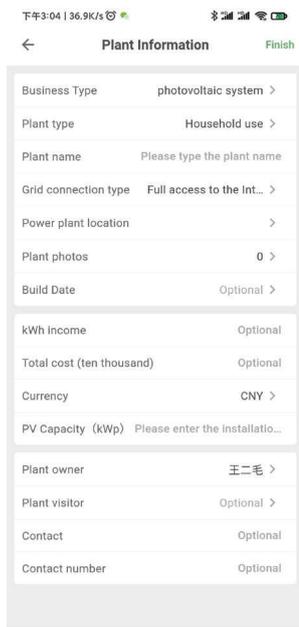
Open the APP to register an account

Step 2. Creation of PV power plants



Click on the top right corner to create a power station

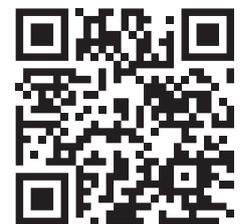
Step 3. Fill in the power station information



Step 4. Sweeping Code Collection Data Gateway



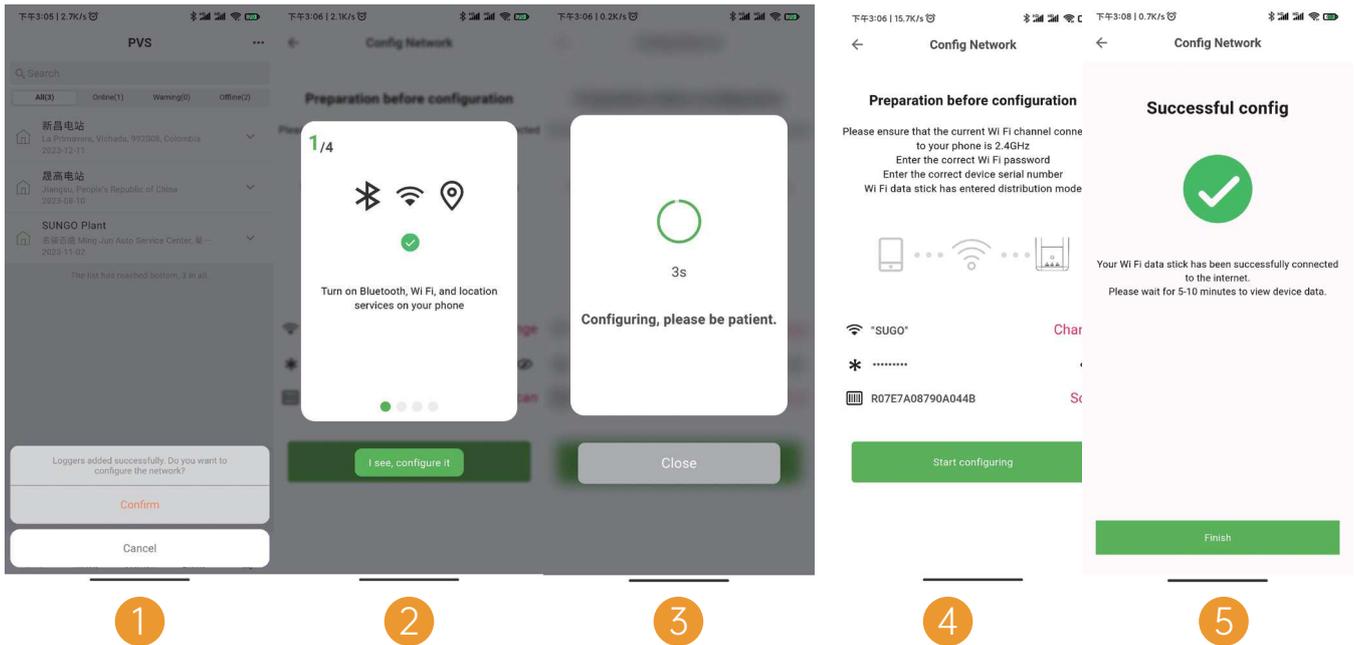
WiFi Serial Number:
XXXXXXXXXXXXXXXXXX



Example of QR code on the left side of GTC

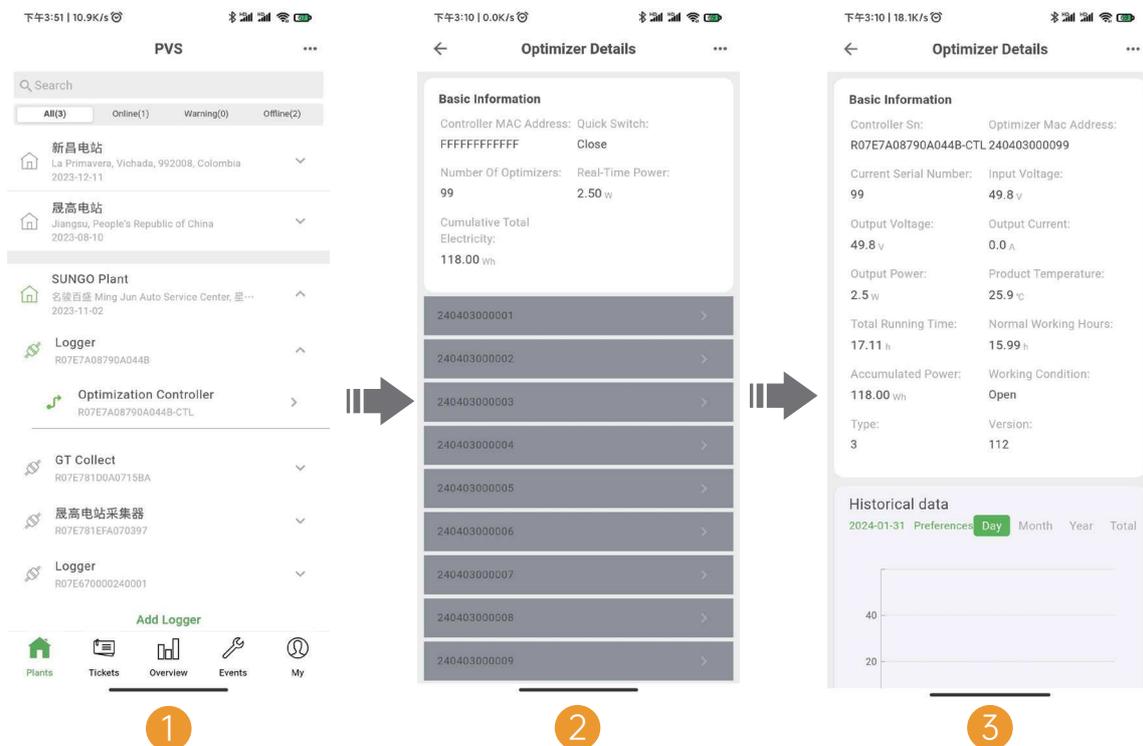
Click the arrow on the right side of the power station, scroll down, and click 'Add Collector.' Then, scan the WIFI serial number on the left side of the Data Gateway GTC by using the QR Code.

Step 5. GTC WIFI Distribution Network



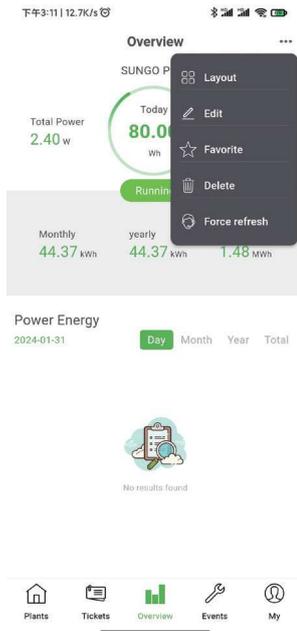
Just follow the instructed process to show the successful distribution of the network.

Step 6. Optimizer(RSD) Status View



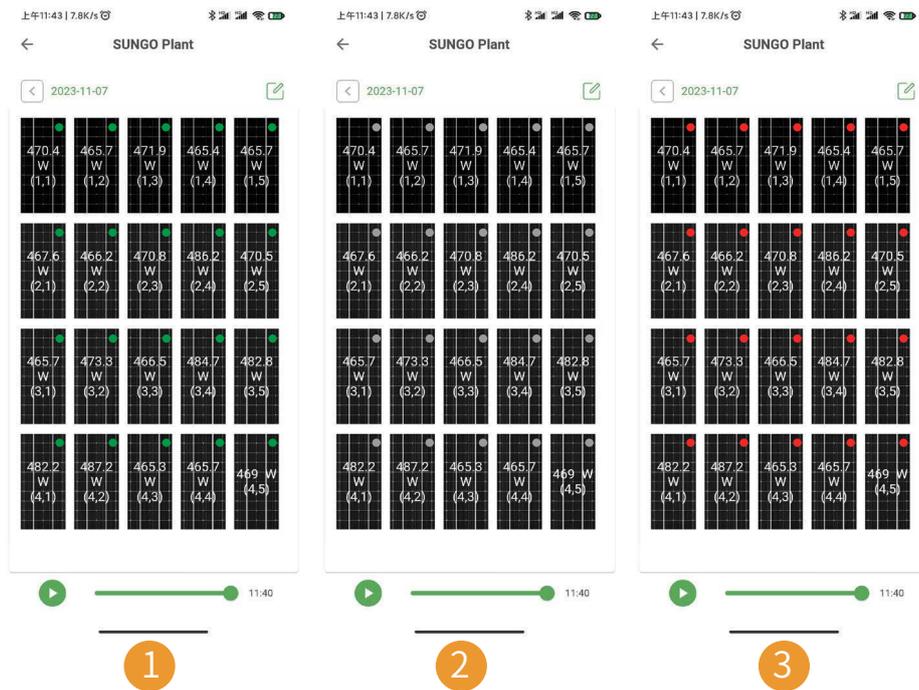
After successful grid distribution, click on the arrow to the right of the power station project until the optimizer controller appears, then click on the optimizer controller, then click on the Optimizer Code to view the optimizer details(RSD details).

Step 7. Check the status of the power station



Click on APP OVERVIEW, then open the drop-down menu in the upper right corner of the page. Click on the layout to see the status.

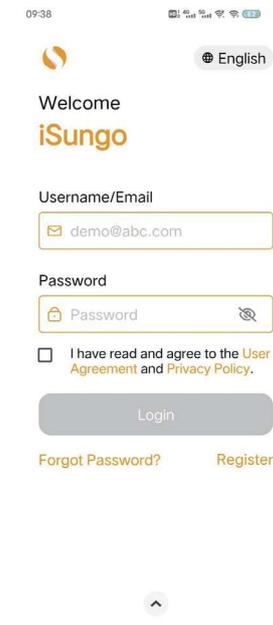
After clicking Layout, the status of the power plant is displayed in several states as shown below.



State of affairs	Clarification
Figure 1 - Green circle in the upper right corner	Rapid shutdown is running fine
Figure 2 - Gray circle in the upper right corner	Rapid shutdown is offline, please check that the SN and location information is correct and then search the device again!
Figure 3 - Red circle in the upper right corner	Rapid shutdown failure, need to replace rapid shutdown

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

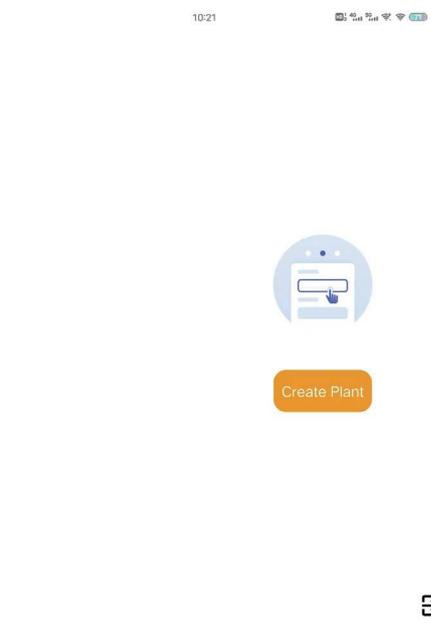
Step 1. Download APP and register account



Scan the QR code to download APP

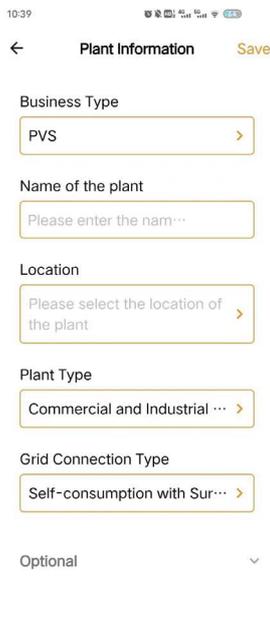
Open the APP to register an account

Step 2. Creation of PV power plants



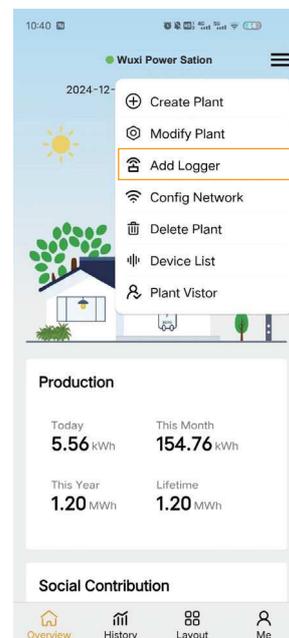
Click to create a power station

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



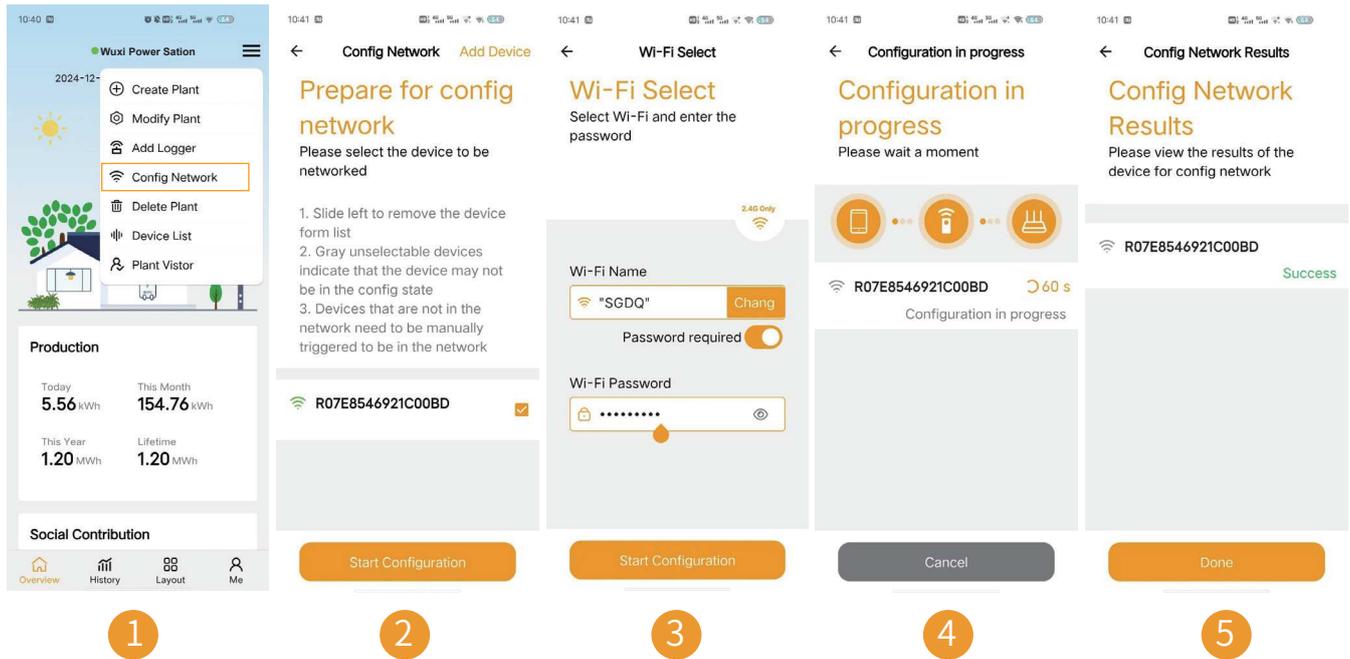
WiFi Serial Number:
XXXXXXXXXXXXXXXXXX



Example of QR code on the left side of GTC

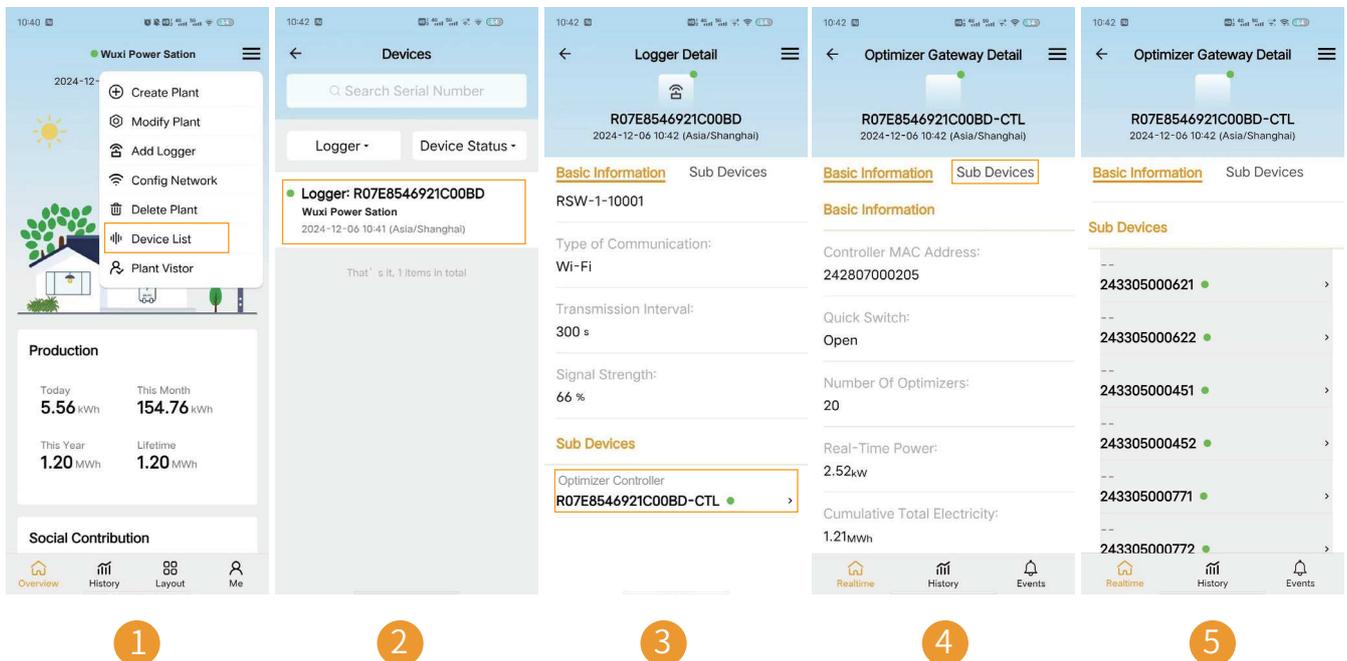
Click the drop-down menu in the upper right corner, click "Add Logger", and scan the QR code of the WIFI serial number on the left side face of the Data Gateway GTC

Step 5. GTC WIFI distribution network

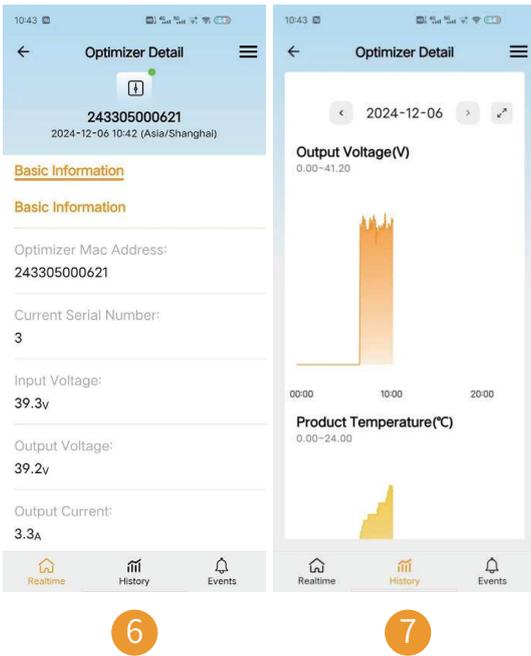


First, click on the drop-down menu in the upper right corner of the "Overview" page, and then click on "Configuring Network". Operate according to the indicated process. It will be okay as long as the successful network configuration is displayed

Step 6. Optimizer(RSD) Details

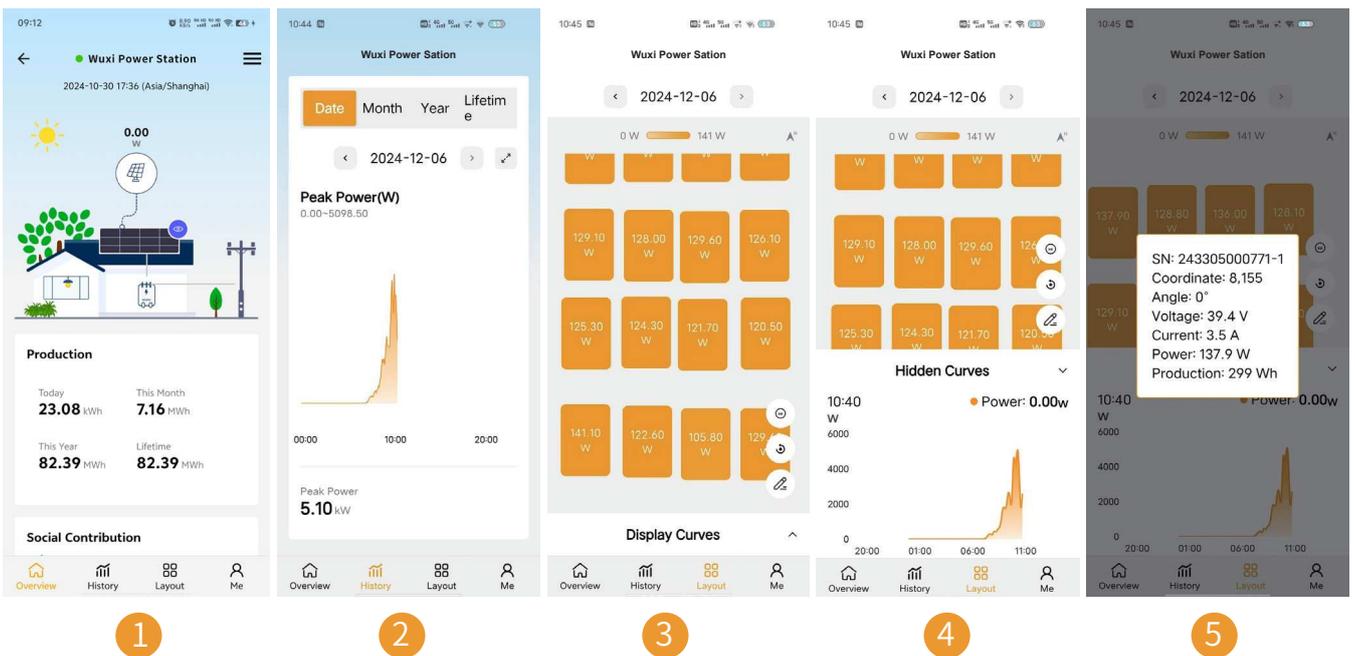


1. Click on the drop-down menu in the upper right corner on the "Overview" page, and then click on "Device List"
2. Click on the "Logger" column to enter the collector details page
3. Click on the "Optimizer Controller" under "Logger Details" to enter the "Optimizer Gateway Detail" page
4. Click on "Sub 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



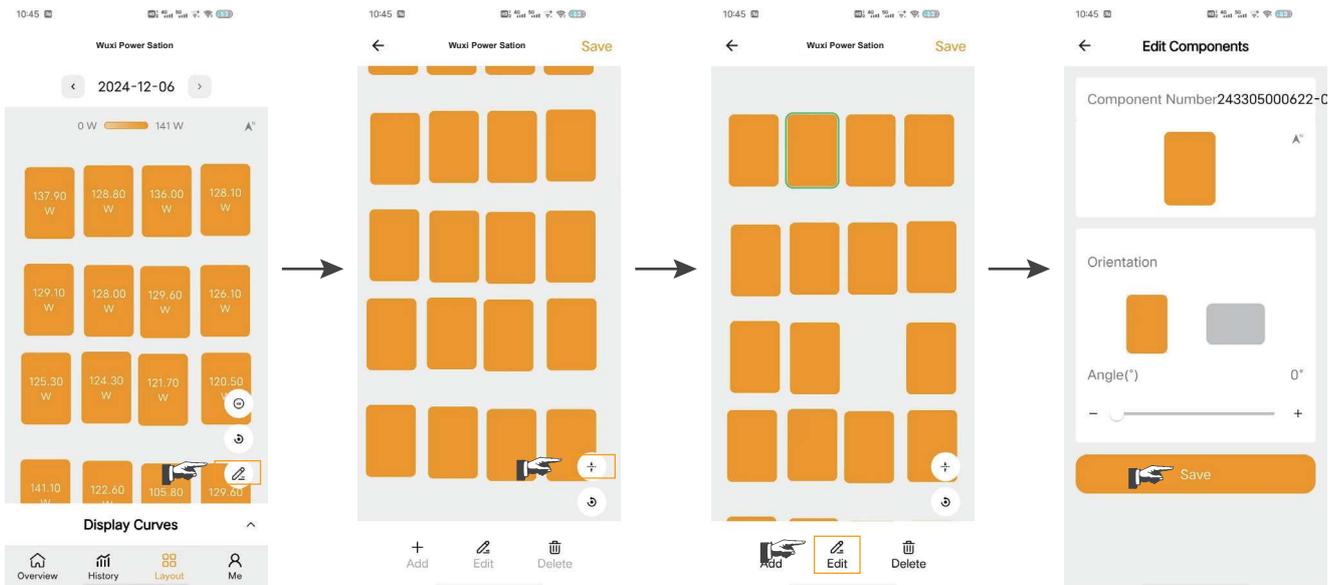
6.The device information will be displayed on the "Optimizer Detail (RSD Detail)" page
 7.Click on the "History" icon at the bottom to view the graphical display of the "Optimizer Detail (RSD Detail)" (showing input voltage, output voltage, temperature, output current and output power)

Step 7. Observation of the status of the power station



- 1.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



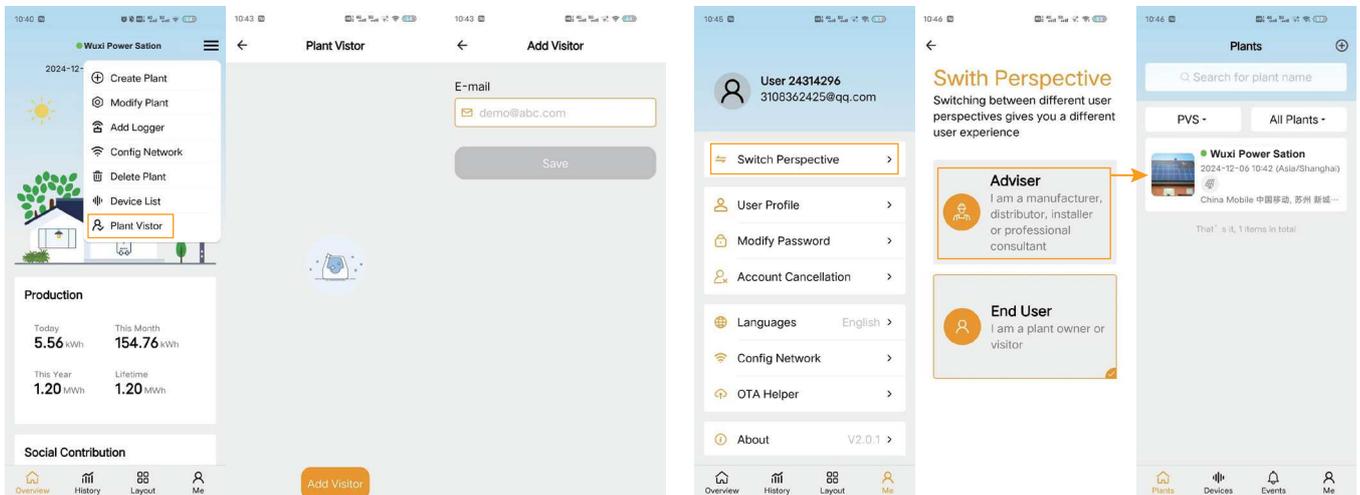
Click on the small icon here to modify the layout

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

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一拖二快速关断器SUNGO RSDi-2 & 数据网关SUNGO GTC快速安装指南

文档版本: SUNGO-RSDi-2>C[™]-V1-2024 CN
发布日期: 2024.7

1 产品概述

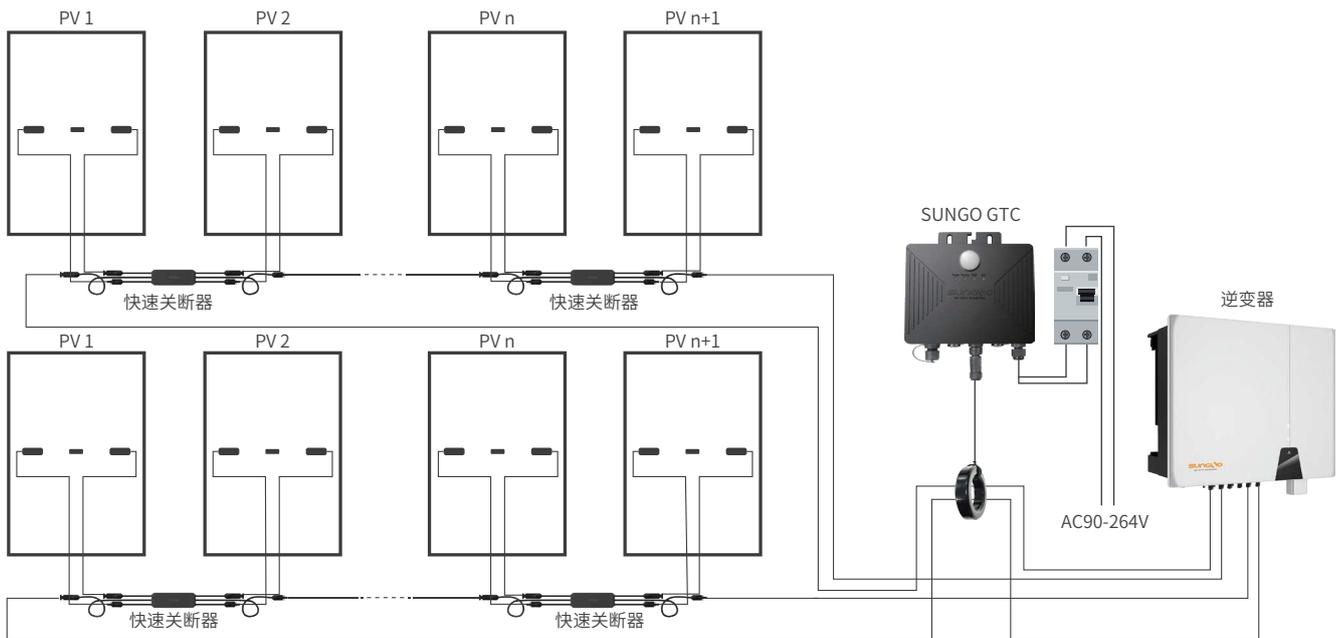


一拖二快速关断器
SUNGO RSDi-2



数据网关
SUNGO GTC

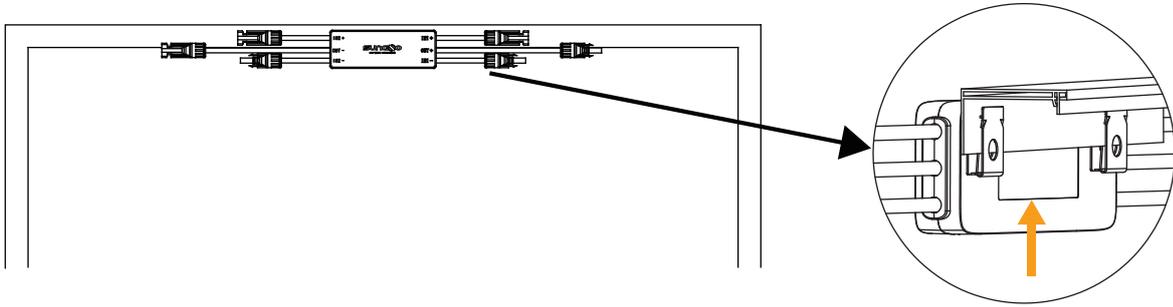
SUNGO RSDi-2是一种带数据监控的快速关断器, 匹配数据网关GTC, 具有组件级快速关断功能, 可以监测PV组件的工作参数, 上报组件的工作状态。



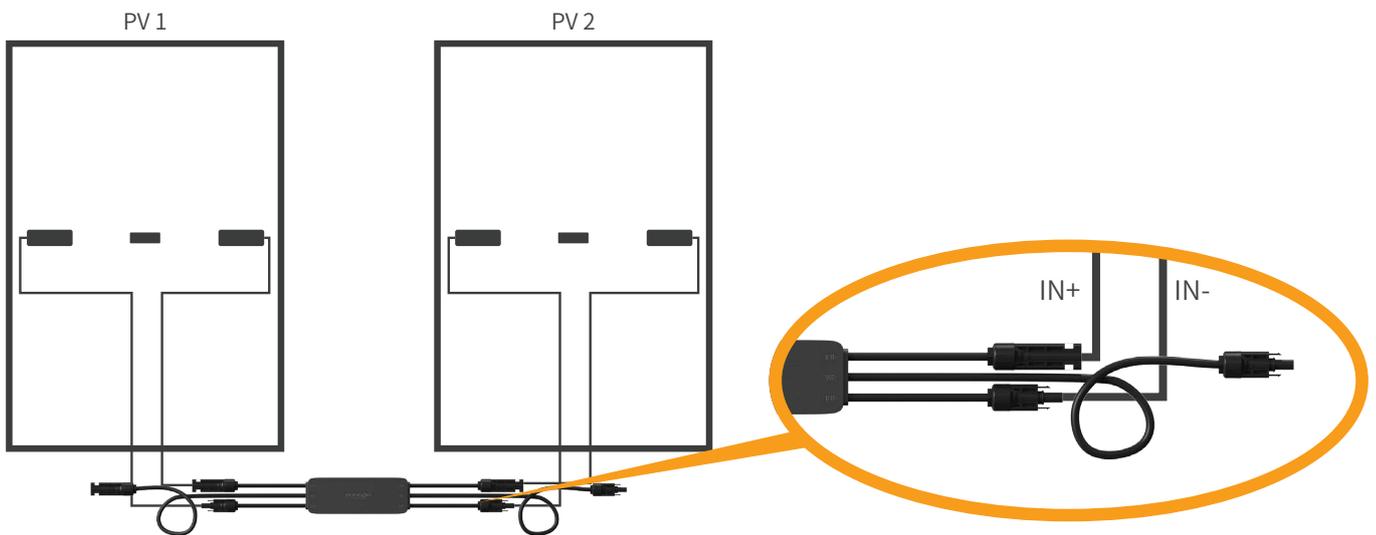
系统接线图

2 SUNGO RSDi-2产品安装

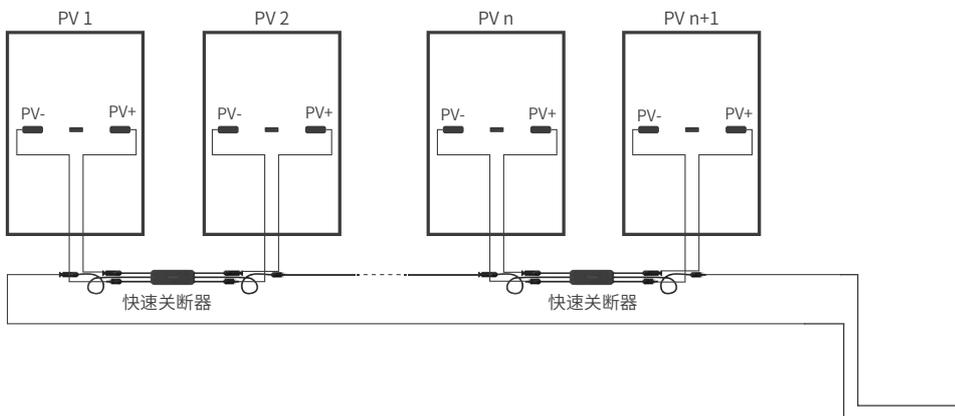
1. 安装RSDi-2, 将 RSDi-2 向上卡入光伏组件边框上。



2. 将 RSDi-2 的 IN+、IN- 分别连接第一块和第二块光伏组件接线盒的正负极接线端，以此类推。



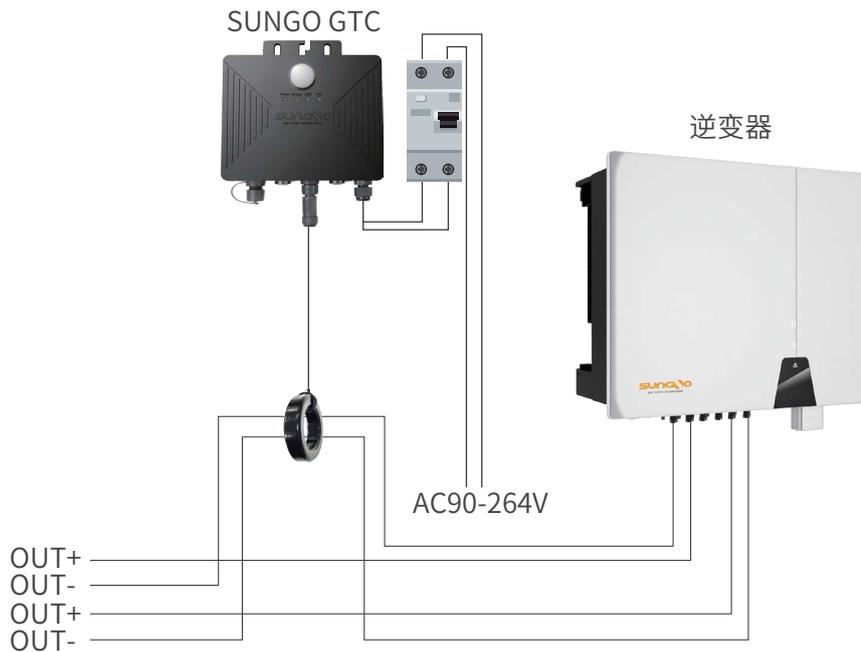
3. 将两个相邻 RSDi-2 的输出端口串联起来, 然后用自制的直流延长线连接到逆变器附近。



3 SUNGO GTC安装

步骤1. 数据网关连线

1. 将GTC安装到逆变器附近。
2. 将最后一个关断器的OUT+连接到逆变器的PV+。
3. 将第一个关断器的OUT-穿过GTC的磁环再连接到逆变器的PV-。
4. 确认连接无误后GTC连接微型断路器再连接到市电。



- GTC本身具有IP67防水,可以不使用电柜箱, AC输入线使用L16-2防水连接器接入市电。
- 检查结构安装件是否牢固,所有螺丝是否拧紧。
- 检查所有线缆连接极性是否正确,连接是否牢固可靠,确保无短路。
- 确认系统连接无误,逆变器DC开关置于ON档,逆变器开机。

说明:一个GTC最大可带50个RSDi-2。

步骤2. 数据网关供电

将数据网关GTC接到AC 90~264V市电电源。Power指示灯绿灯常亮,Running指示灯绿灯常亮,查看逆变器是否正常工作。

步骤3:GTC状态指示



指示灯状态:

1、2、4指示灯状态示意: ●表示常亮 ●表示熄灭 ●表示闪烁 3指示灯状态示意: ●表示常亮 ●表示熄灭 ●表示闪烁	
 四个指示灯都不亮 电路连接错误或者故障	 1亮 2灭 3亮 4亮 关断关断器, 网络正常连接
 1、2亮 3、4灭 启动关断器, 网络未连接	 1亮 2闪烁 3闪烁 4闪烁 搜索关断器自检
 1、2亮 3灭 4亮 启动关断器, 网络正常连接	 1亮 2闪烁 3灭 4灭或亮 搜索关断器自检成功
 1亮 2灭 3亮 4灭 关断关断器, 网络未连接	 1亮 2灭 3闪烁 4灭或亮 搜索关断器自检失败

步骤4. GTC录入关断器

GTC中需要录入所管理的关断器的地址, 否则无法正常通信并上传关断器的数据。录入关断器分别有**自动**和**手动**两种方式, 当现场只有1台GTC时可以使用自动录入关断器, 如果现场有多台GTC时**必须执行**手动录入关断器。

自动录入关断器 (GTC=1个)

按GTC中间按钮让Running灯常亮, 让RSD灯熄灭, 5秒后再长按按钮, GTC进入自动录入模式, 松开按钮, 指示灯234来回闪烁等待约10分钟Running指示灯闪烁表示自动录入成功, 再次按按钮至Running指示灯常亮, 关断器正常工作。如果指示灯3闪烁代表本次自动录入失败请检查线路后重新执行该步骤, 如果三次都不成功请联系相关技术人员。

手动录入关断器 (GTC > 1个)

备注:如果使用了自动录入关断器功能,会使现场多台GTC中各自管理的关断器重复而产生冲突,只需重新执行手动录入关断器的操作即可。(手动录入关断器是为了将现场的关断器录入到不同的GTC中)

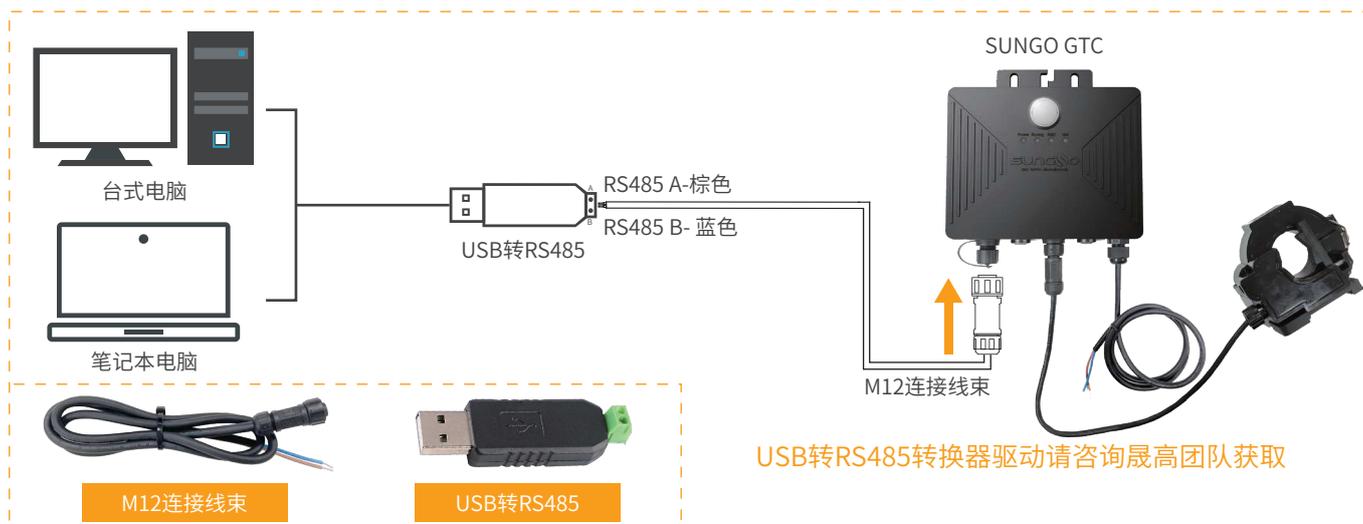
一、流程

推荐应用流程:

- 1.首先将GTC上电
- 2.采用USB转RS485线,连接GTC和电脑
- 3.选择对应的串口
- 4.读取MAC Addr和Version,如果正常显示,代表当前连接正常,否则检查线缆是否正确连接
- 5.录入RSDi-2编码到List列表,然后点击Write写入GTC;录入方式方式有以下两种
 - ①通过Import按钮,识别选择的图片进行导入
 - ②通过键盘手工录入编号,注意每个编号间采用英文逗号进行分割
- 6.通过To Monitor,进行关断器当前状态监控

二、接线

使用USB转RS485,将GTC与电脑连接,连接示意如下图

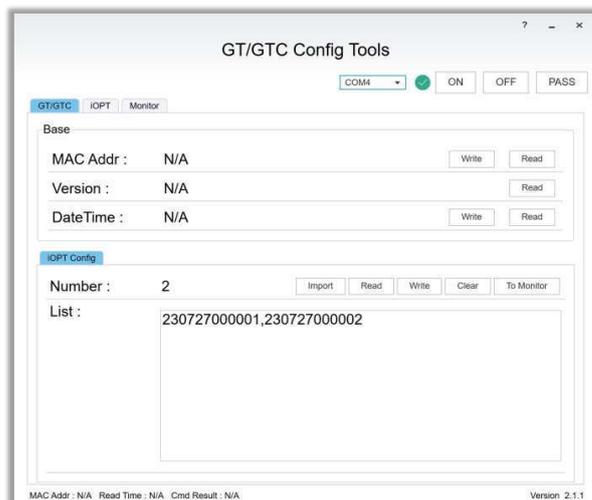
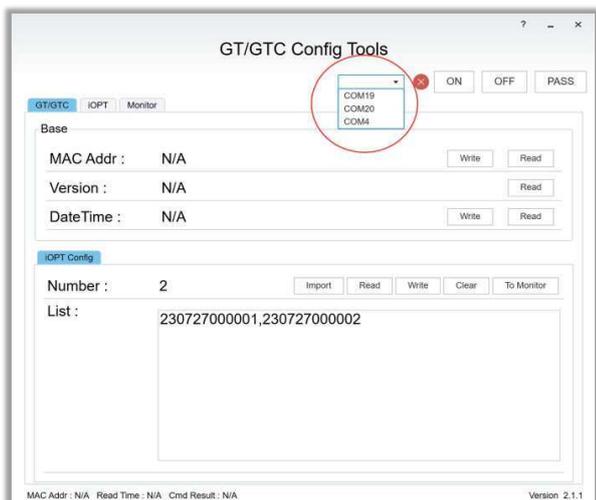


接线示意图

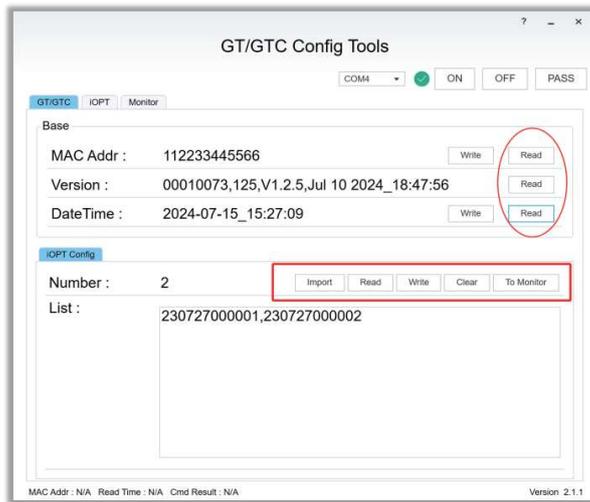
三、说明

1.选择对应的串口

成功后,显示绿圆圈,如下图



2.GTC功能说明



①MAC Addr:

点击Read, 读取GTC的地址, 点击Write将左侧输入框内的地址写入GTC

②Version

点击Read, 读取GTC的软件版本号

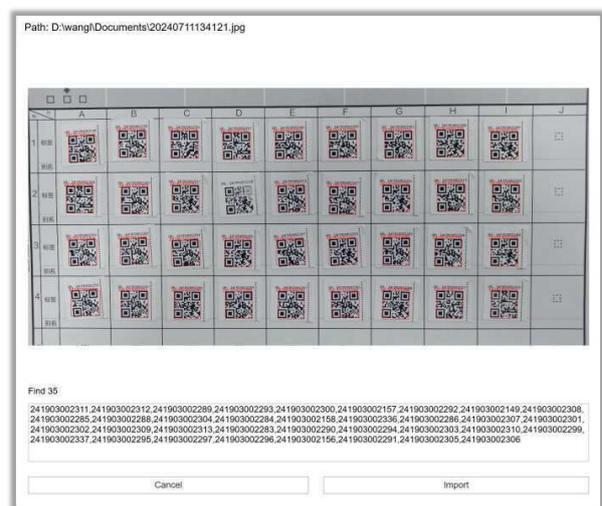
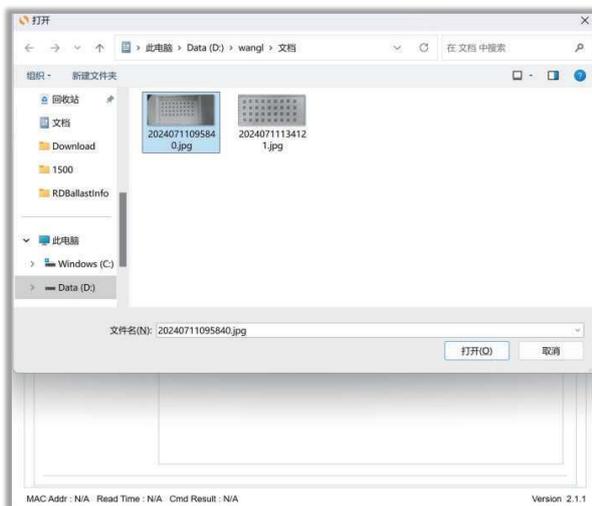
③DateTime

点击Read, 读取GTC的时间, 点击Write将系统时间写入GTC

④RSDi-2 Config – Import

点击Import, 通过图片导入RSDi-2编码, 如下图

点击Import, 将识别到的编码, 导入List框中



⑤RSDi-2 Config – Read

点击Read, 读取当前GTC配置的RSDi-2列表

⑥RSDi-2 Config – Write

点击Write, 将List中的RSDi-2列表, 写入GTC

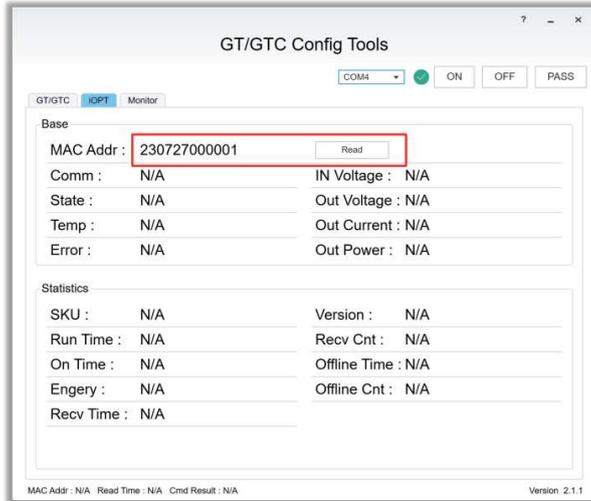
⑦RSDi-2 Config – Clear

点击Clear, 将GTC中的RSDi-2都删除

⑧RSDi-2 Config – To Monitor

点击Monitor, 将List列表的RSDi-2, 放到Monitor页面进行展示

3. 读取单台RSDi-2工作参数功能说明



输入需要读取的RSDi-2编号, 点击Read, 读取其当前状态

Comm: 通讯状态, Online代表在线, Offline代表离线

State: 当前状态, ON工作, OFF关闭

Temp: 当前温度, 摄氏度

Error: 当前故障, Normal代表正常

IN Voltage: 输入电压

Out Voltage: 输出电压

Out Current: 输出电流

Out Power: 输出功率

SKU: 产品型号

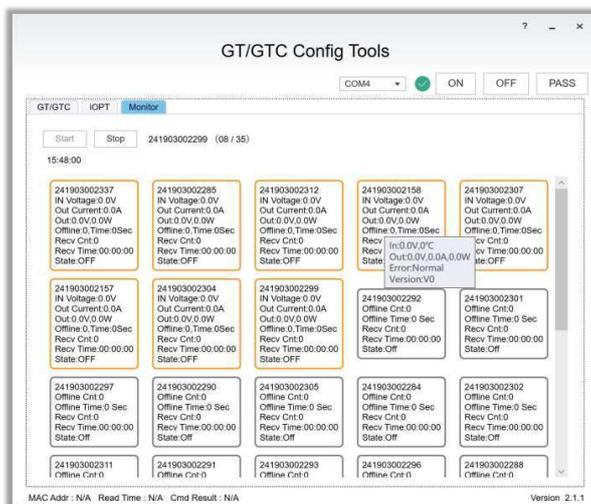
Run Time: 运行时间

On Time: 工作时间

Engery: 发电量

Recv Time: 接收时间

4. Monitor功能说明



点击Start, 启动监控, 软件将定时刷新List中RSDi-2的状态。

4.1 GTC配网(APP1.0 使用说明)

步骤1. 下载APP并注册账号



iSungo-Android



iSungo-ios

扫描二维码下载
iSungo APP



打开APP注册账号

步骤2. 创建电站



点击右上角创建电站

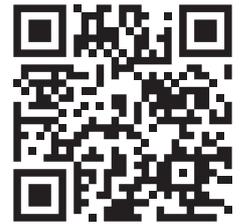
步骤3. 填写电站信息



步骤4. 扫码采集数据网关



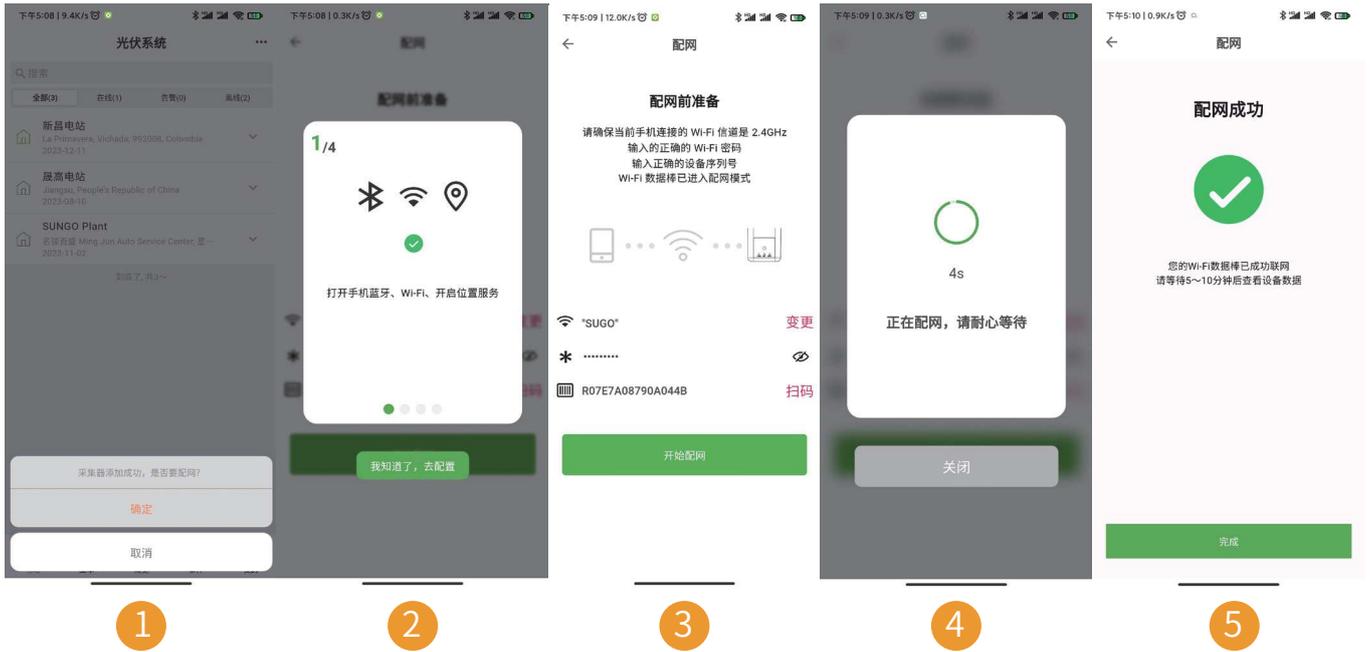
WIFI Serial Number:
XXXXXXXXXXXXXXXXXX



GTC左侧二维码示例

点击电站右侧箭头，下拉点击添加采集器，扫描数据网关GTC左侧面的WIFI序列号二维码。

步骤5. GTC WIFI 配网



按照指示流程操作, 显示配网成功即可。

步骤6. 优化器(关断器)状态查看



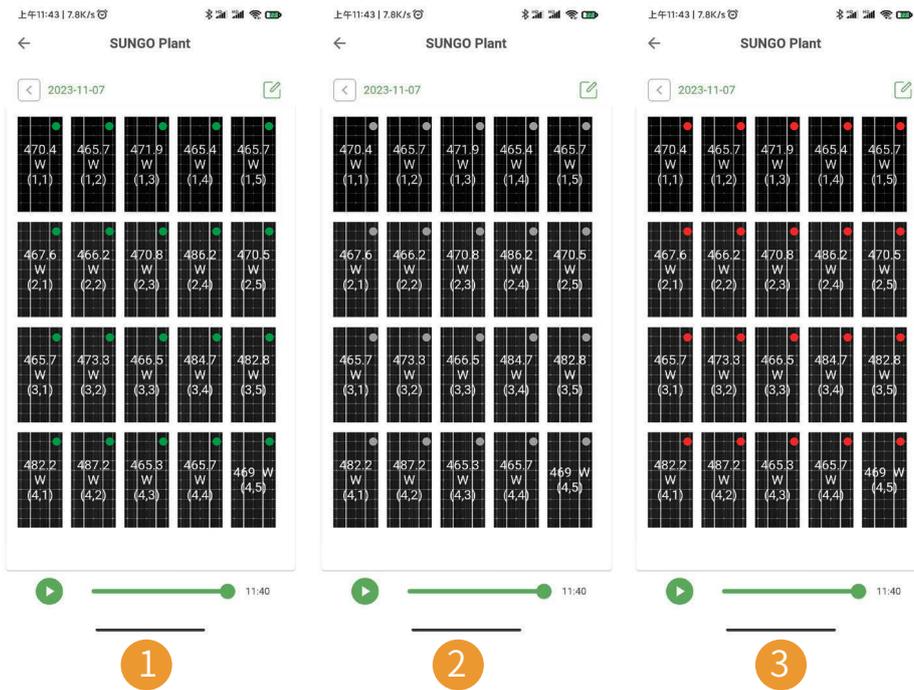
配网成功后, 点击电站项目右侧箭头直到出现优化控制器, 然后点击优化控制器, 再点击优化器编码, 查看优化器详情(关断器详情)。

步骤7. 查看电站状态



点击APP概览,再打开页面右上角下拉菜单,点击布局查看状态。

点击布局后,电站状态如下图几种状态显示。



状态	说明
如图1-右上角绿色圆圈	关断器运行正常
如图2-右上角灰色圆圈	关断器离线, 请检查SN和位置信息是否正确, 然后重新搜索设备
如图3-右上角红色圆圈	关断器故障, 需更换关断器

4.2 GTC配网(APP2.0 使用说明)

步骤1. 下载APP并注册账号



iSungo-Android



iSungo-ios

扫描二维码下载
iSungo APP



打开APP注册账号

步骤2. 创建电站



点击创建电站

步骤3. 填写电站信息



按照自己的电站信息填写即可

步骤4. 扫码采集数据网关



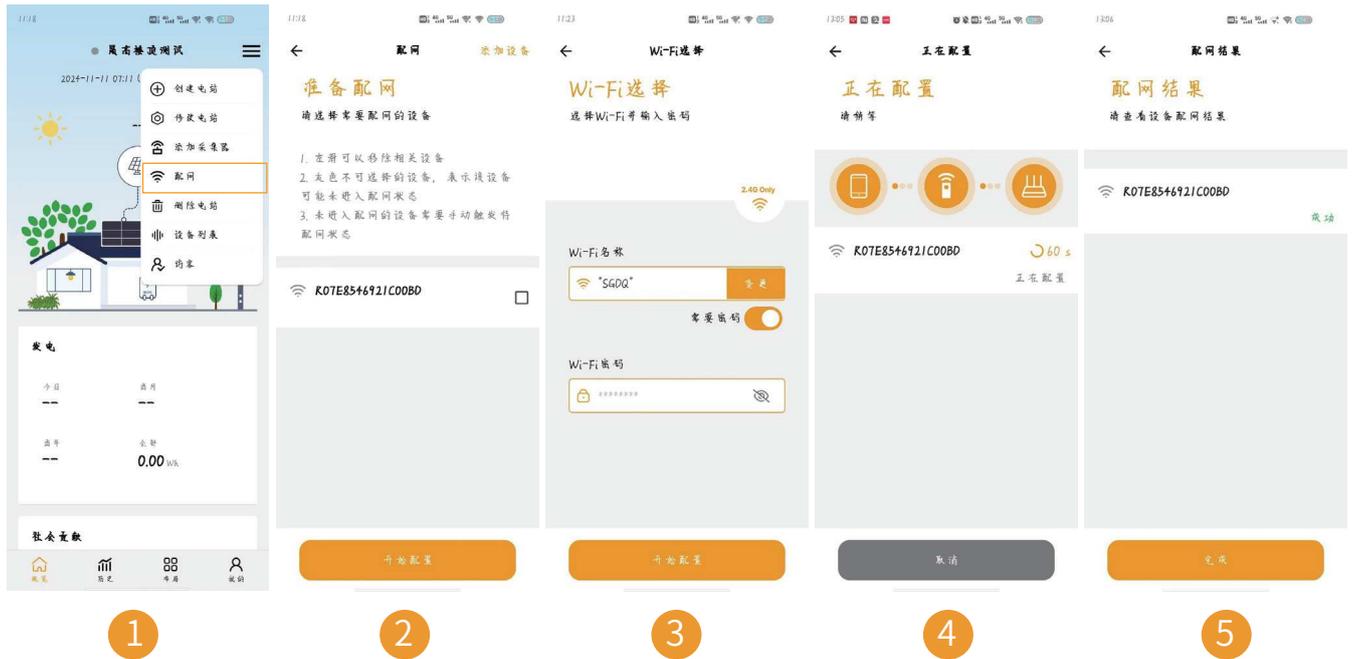
WIFI Serial Number:
XXXXXXXXXXXXXXXXXX



GTC左侧二维码示例

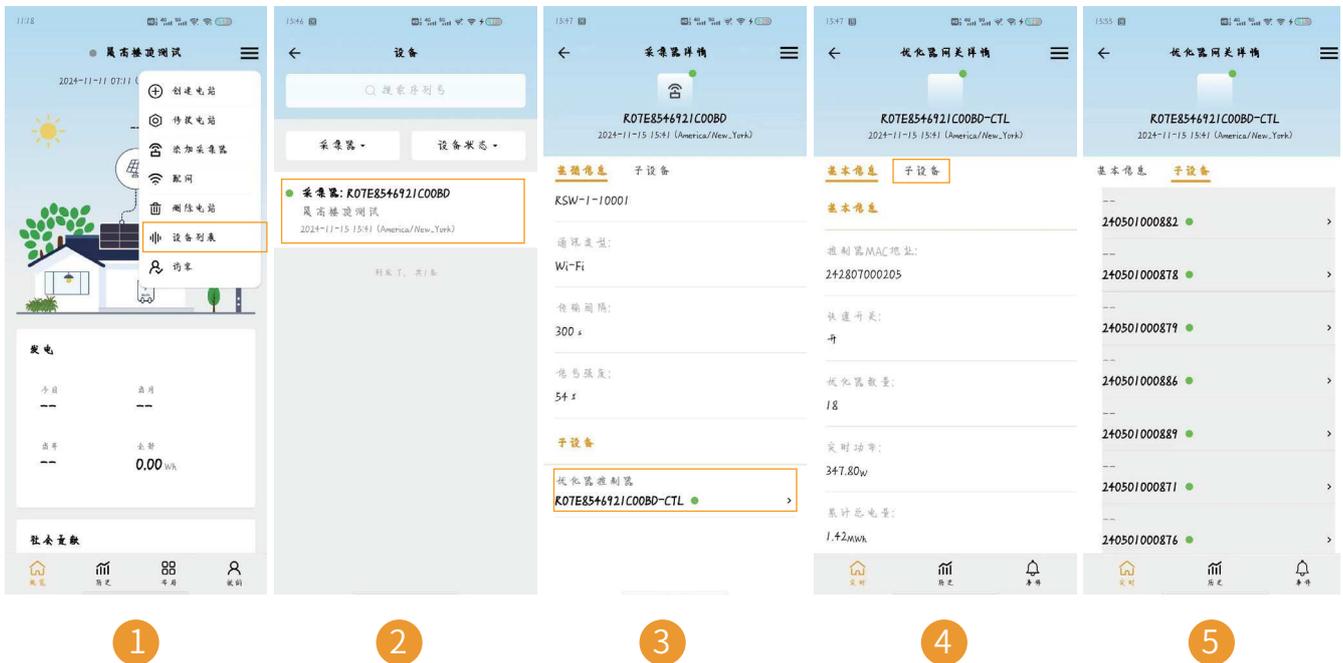
点击右上角下拉菜单, 点击“添加采集器”, 扫描
数据网关GTC左侧面的WIFI序列号二维码

步骤5. GTC WIFI 配网

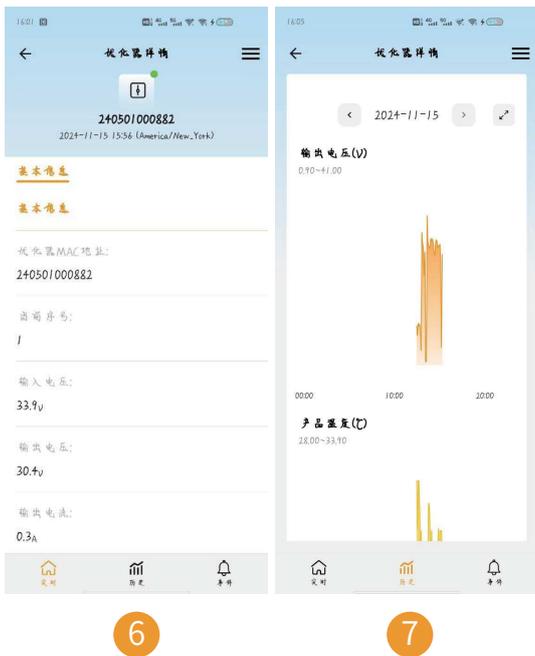


先点击“概览”页面右上角下拉菜单,点击“配网”,按照指示流程操作,显示配网成功即可

步骤6. 优化器(关断器)详情

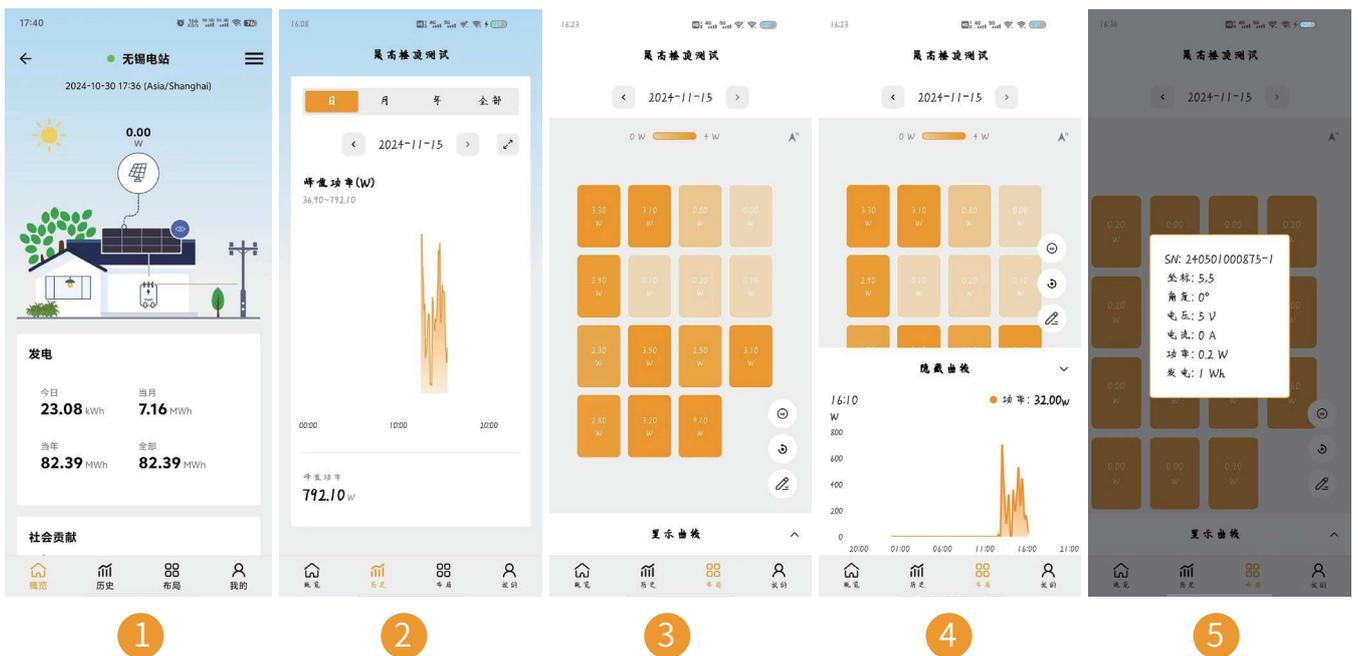


1. 点击“概览”页面右上角的下拉菜单, 然后点击“设备列表”
2. 点击“采集器”栏目即可进入采集器详情页面
3. 点击“采集器详情”下方的“优化器控制器”即可进入“优化器网关详情”页面
4. 点击“子设备”就可以看到优化器序列号
5. 点击优化器序列号右侧箭头就可以进入“优化器详情(关断器详情)”页面



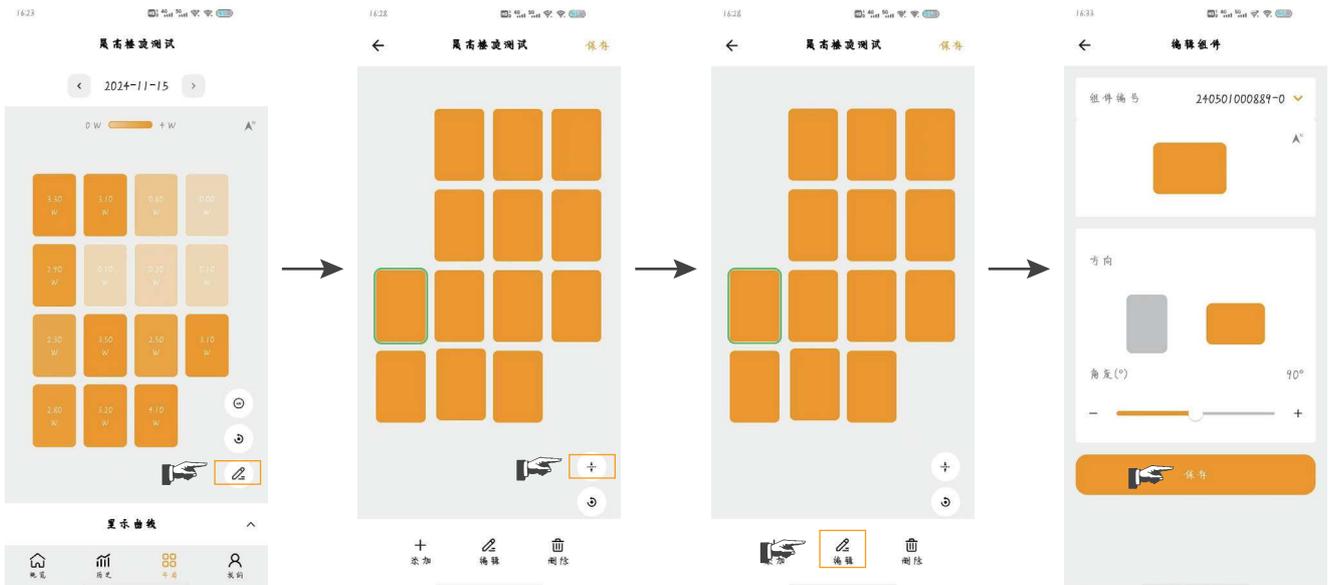
6. “优化器详情(关断器详情)”页面显示设备信息
 7. 点击下方“历史”图标就可以看到“优化器详情(关断器详情)”的图表显示(显示输入电压, 输出电压, 温度, 输出电流和输出功率)

步骤7. 查看电站状态



1. 返回“概览”页面可以看到电站发电的基本信息
2. 点击APP“概览”右侧的“历史”可以看到电站的峰值功率
3. 点击APP“历史”右侧的“布局”可以看到光伏组件的状态
4. 点击“显示曲线”可以看到光伏组件的功率曲线
5. 长按“光伏组件图形”可以显示组件的详细信息

步骤8. 布局修改



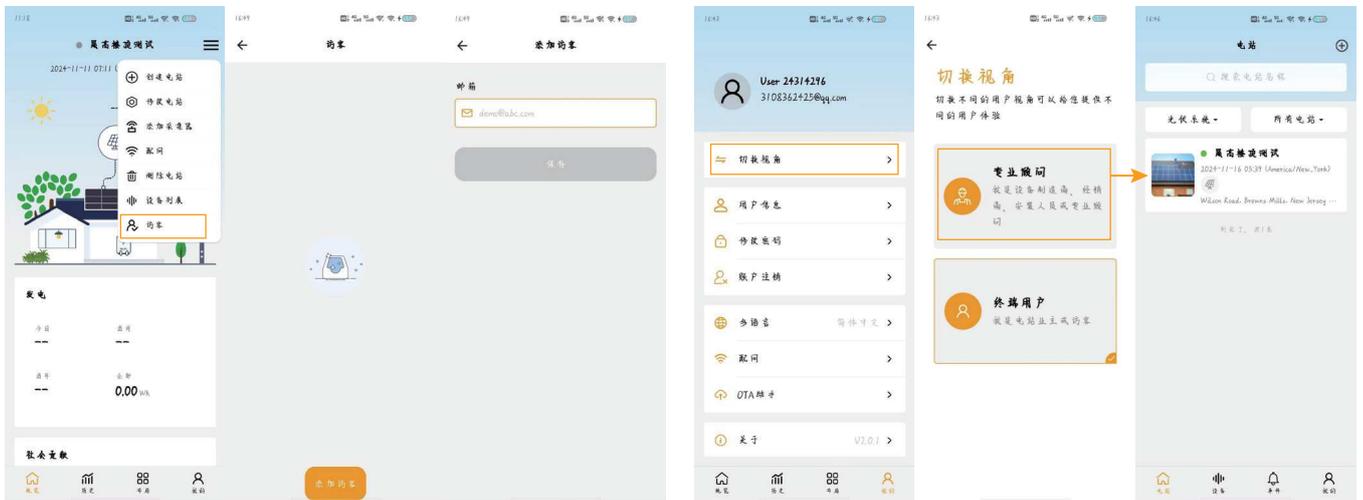
点击此处小图标
可以修改布局

点击此处小图标有
虚线网格方便布局

点击编辑

可以修改组件角度，
完成后保存即可

其它功能



添加访客邮箱

切换视角，专业顾问和终端用户，
以上步骤都是基于终端用户进行操作

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