

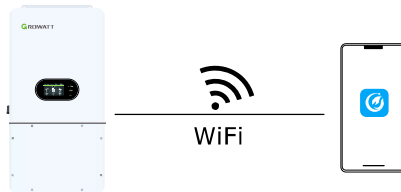
4 Operations on The Shinephone APP

4.1 Overview

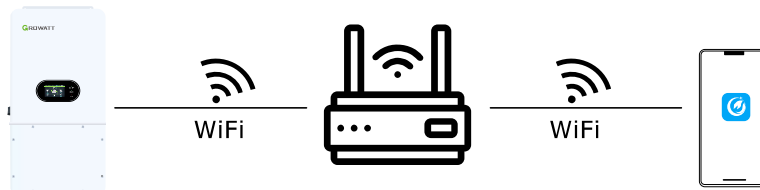
The Shinephone APP is a mobile phone app that can locally communicates with the SPH 10000TL-HU-US, over WiFi to allow for real-time status monitoring, system mode management, performing routine maintenance, and commissioning.

After the PV or Power Grid side of the SPH 10000TL-HU-US is energized, the APP can connect to the inverter in either of the following ways:

1.The mobile phone is directly connected to the Bluetooth inside the SPH 10000TL-HU-US for local tools.



2.The mobile phone is connected to the SPH 10000TL-HU-US inverter through the router. (Notice: Do not use this method for the first login). If you need to use this method, make sure the inverter is connected to the router via the Shinetools network. For remote and mobile monitoring and setup.



4.2 APP Download

There are three ways to download the Shinephone APP.

4.2.1 Scan the QR code



Scanning the QR code with the WeChat sweep function, then download the APP.

4.2.2 APP Store

Search for Shinephone from one of the following app stores in the following list, download the installation package, and install the Shinephone app by following the in instructions.

-Google Play (Android)

-App store (iOS)

4.2.3 Website

Log in to our monitoring website <https://server-us.growatt.com> to download.

After the app is installed, the Shinephone icon is displayed on the home screen.



4.3 APP Introduction

4.3.1 Multiple Languages Supported

Shinephone supports multiple languages. APP language automatically switches according to the user's mobile language.

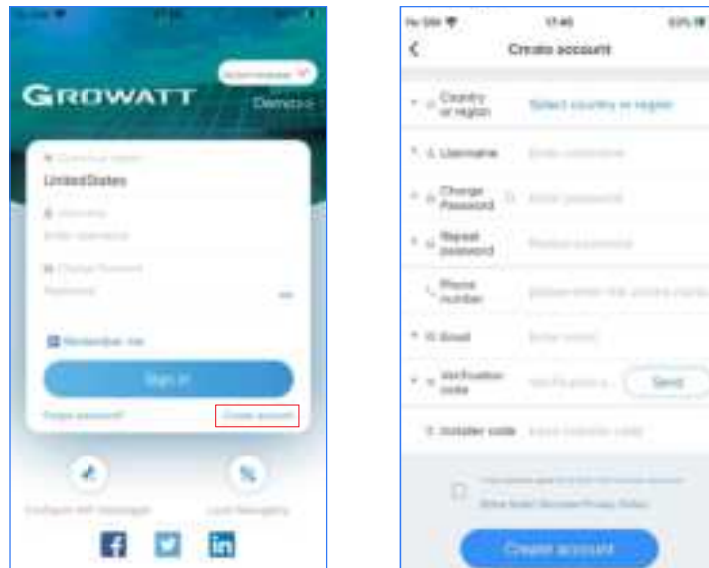
4.3.2 Local Tool

You can choose to configure the local debugging tool by clicking the tool below the login interface. There are real-time device control and device information function.

4.3.3 Login to Shinephone

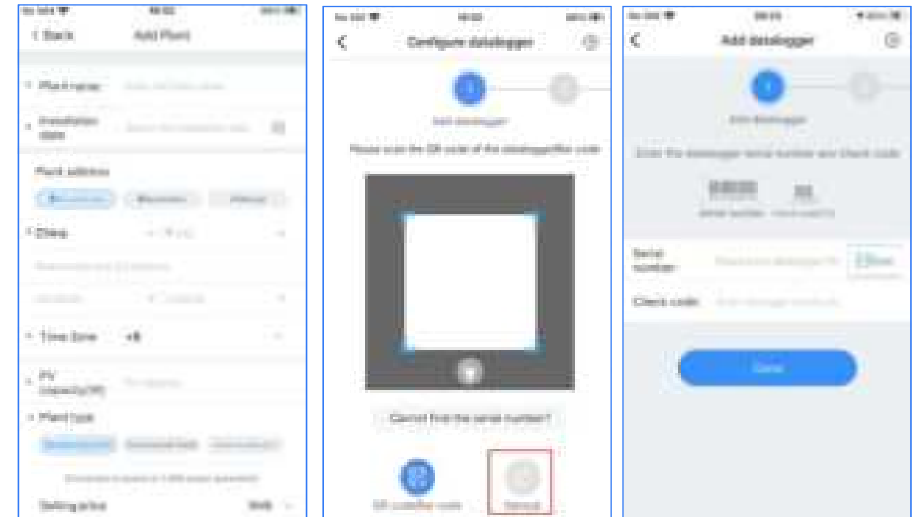
Connecting to the inverter Collector to allow for real-time status monitoring, system mode management, performing routine maintenance, and commissioning. It's also the first step in remote network configuration.

- Open the Shinephone app to register an account, log in to your account after registration is complete
- You can switch the App language through the upper right corner.
- Select country and religion.
- Enter username and password.
- Click "Remember Password" to save your password.
- Click to log in to the homepage.



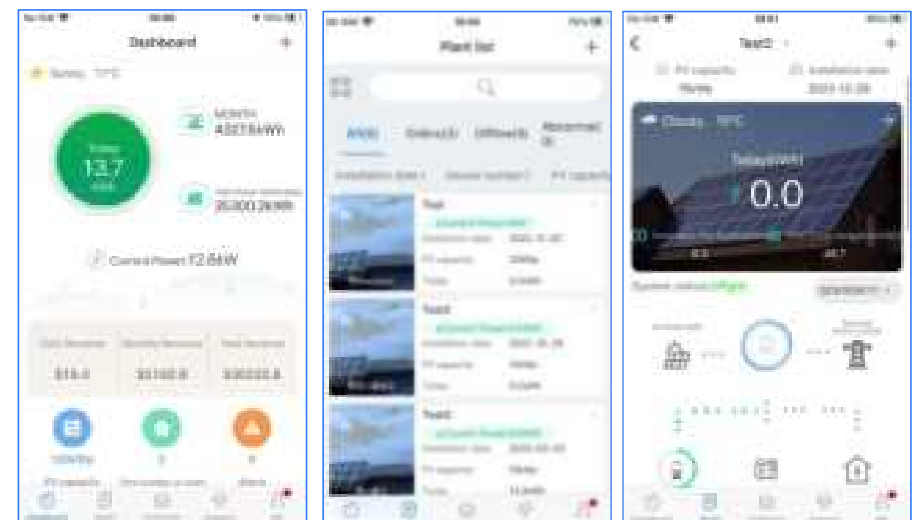
4.3.4 Add power station and collector

- Create a power station after logging in to the homepage (Note: Items marked * are required. Please fill it out correctly.)
- You can add the collector to the corresponding power station by scanning the collector "SN" number (VCxxxxxxxxx) on the right side of the inverter, or you can enter it manually.



4.3.5 Main interface display and power station list

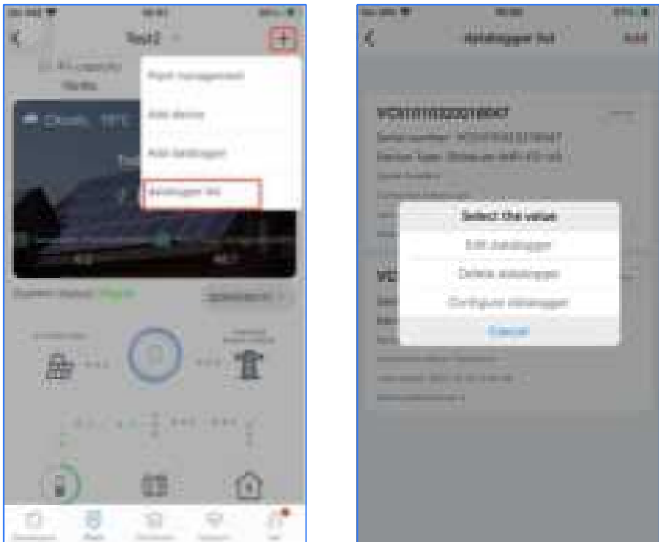
- After successfully creating a power station and adding a collector, it will automatically jump to the APP main interface.
- Click "Plant" in the lower tab bar to jump to the plant list interface, and click the corresponding plant to view the generation, power and the other parameters of each inverter under each plant.



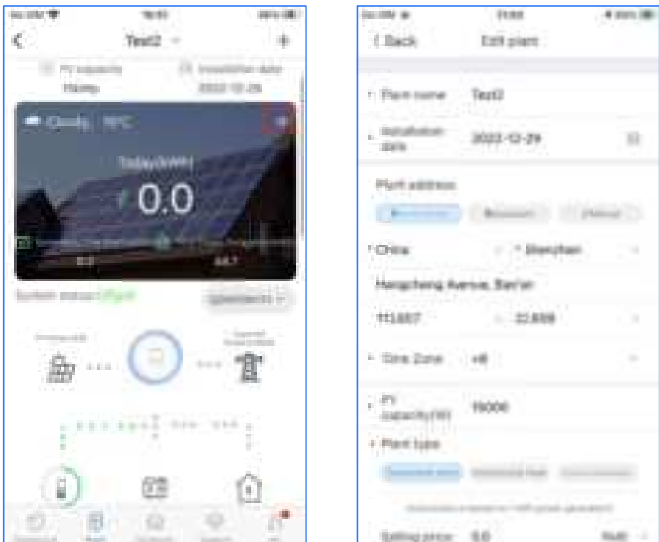
4.3.6 Details and parameter settings in the power station

-If you need to add, view, delete the datalogger or add a plant, please click the "+" in the upper right corner.

Note: If the datalogger needs to change the account monitoring, you need to delete the datalogger under the original account, then add the datalogger under the new account.

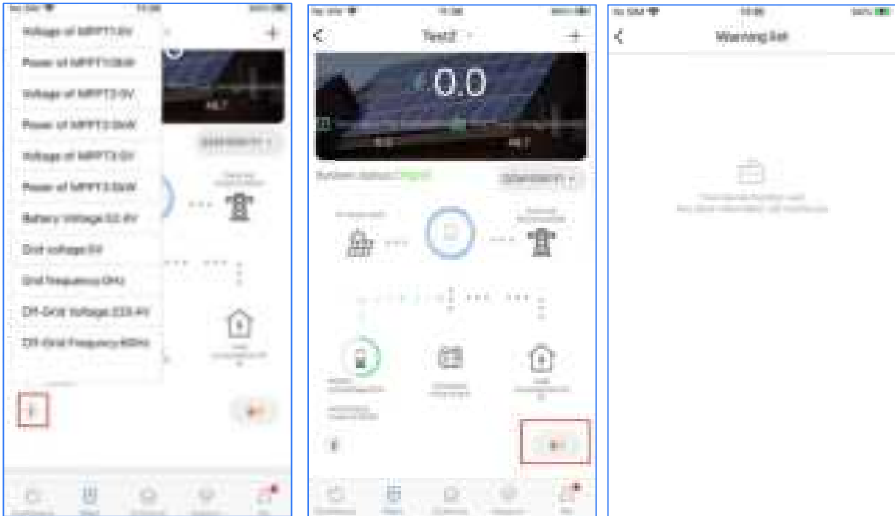


- Click "→" to modify the power station details (for example: power station name, photovoltaic components, etc.)



- Click "!" to quickly view the current working data of the inverter (Solar voltage/Battery voltage/Grid voltage/Grid frequency/Output voltage/Output frequency).

- Click the fault icon in the lower right corner to display the current machine fault information details.



-Drag the screen down to see the energy trend graph. This interface can view the current power, SOC usage (only in lithium battery mode) and battery charge and discharge energy. You can also view the daily, monthly, and annual photovoltaic output/feed into the grid/load consumption/grid power withdrawal/self-consumption cumulative electricity.



-In the My device list at the bottom of the interface, you can view the status (signal strength, refresh time, etc.) of all collectors added to the power station.

-You can also enter the detailed parameter reading and control interface of the inverter according to the device serial number.



- Energy trend graphs can also be found here. For more details, we can click on the icon in the upper right corner to view it.

- This interface can display the real-time status of the data, and you can also view the detailed parameters of the inverter, solar energy, grid, battery, and load under the working status of the device, as well as the basic parameters of the device itself (For example: serial number, model, firmware version...).



This screenshot shows a table of historical data for the QDM160K711 device. The table has two columns: 'Time' and 'Value'. The data is as follows:

Time	Value
10:10	0.0%
10:11	0.0%
10:12	0.0%
10:13	0.0%
10:14	0.0%
10:15	0.0%
10:16	0.0%
10:17	0.0%
10:18	0.0%
10:19	0.0%
10:20	0.0%
10:21	0.0%
10:22	0.0%
10:23	0.0%
10:24	0.0%
10:25	0.0%
10:26	0.0%
10:27	0.0%
10:28	0.0%
10:29	0.0%
10:30	0.0%



This screenshot shows a list of parameters for the QDM160K711 device. The parameters are listed in a table with a 'Name' column and a 'Value' column. The data is as follows:

Name	Value
Grid voltage (V)	220V
Battery voltage (V)	12.8V
Battery current (A)	0.0A
Battery power (W)	0.0W
System work mode setting 1	1
System work mode setting 2	2
Grid setting 1	1
Grid setting 2 (Reserved)	1
High and low voltage setting	1
High and low frequency setting	1
Generator setting	1

-In the log at the bottom of the interface, you can view the device's historical fault records and fault details.

Device editing page: Users can edit device aliases and delete devices.



This screenshot shows a list of warning logs for the QDM160K711 device. The logs are listed in a table with a 'Time' column and a 'Message' column. The data is as follows:

Time	Message
2020-10-29 10:10	Grid voltage (V) 220V
2020-10-29 10:11	Battery voltage (V) 12.8V
2020-10-29 10:12	Battery current (A) 0.0A
2020-10-29 10:13	Battery power (W) 0.0W
2020-10-29 10:14	System work mode setting 1
2020-10-29 10:15	System work mode setting 2
2020-10-29 10:16	Grid setting 1
2020-10-29 10:17	Grid setting 2 (Reserved)
2020-10-29 10:18	High and low voltage setting
2020-10-29 10:19	High and low frequency setting
2020-10-29 10:20	Generator setting



This screenshot shows a list of parameters for the QDM160K711 device. The parameters are listed in a table with a 'Name' column and a 'Value' column. The data is as follows:

Name	Value
Grid voltage (V)	220V
Battery voltage (V)	12.8V
Battery current (A)	0.0A
Battery power (W)	0.0W
System work mode setting 1	1
System work mode setting 2	2
Grid setting 1	1
Grid setting 2 (Reserved)	1
High and low voltage setting	1
High and low frequency setting	1
Generator setting	1

- Equipment control interface: Users can turn on and off the machine on the equipment control interface. Set the maximum charging current, maximum discharge current, inversion time, grid voltage upper limit, grid voltage Lower limit etc. The password is: growatt + current date.(Notice: Do not change parameters at will as this may cause your inverter to malfunction.)

5 Operation

5.1 Power ON/OFF

Once the unit has been properly installed and the batteries are connected well, simply press On/Off button (located on the left side of the case) to turn on the unit. When one of the grid or PV is connected the screen will still light up even if the battery is not connected, In this condition, the system can still work normally when switch on the ON/OFF button and select NO battery mode.

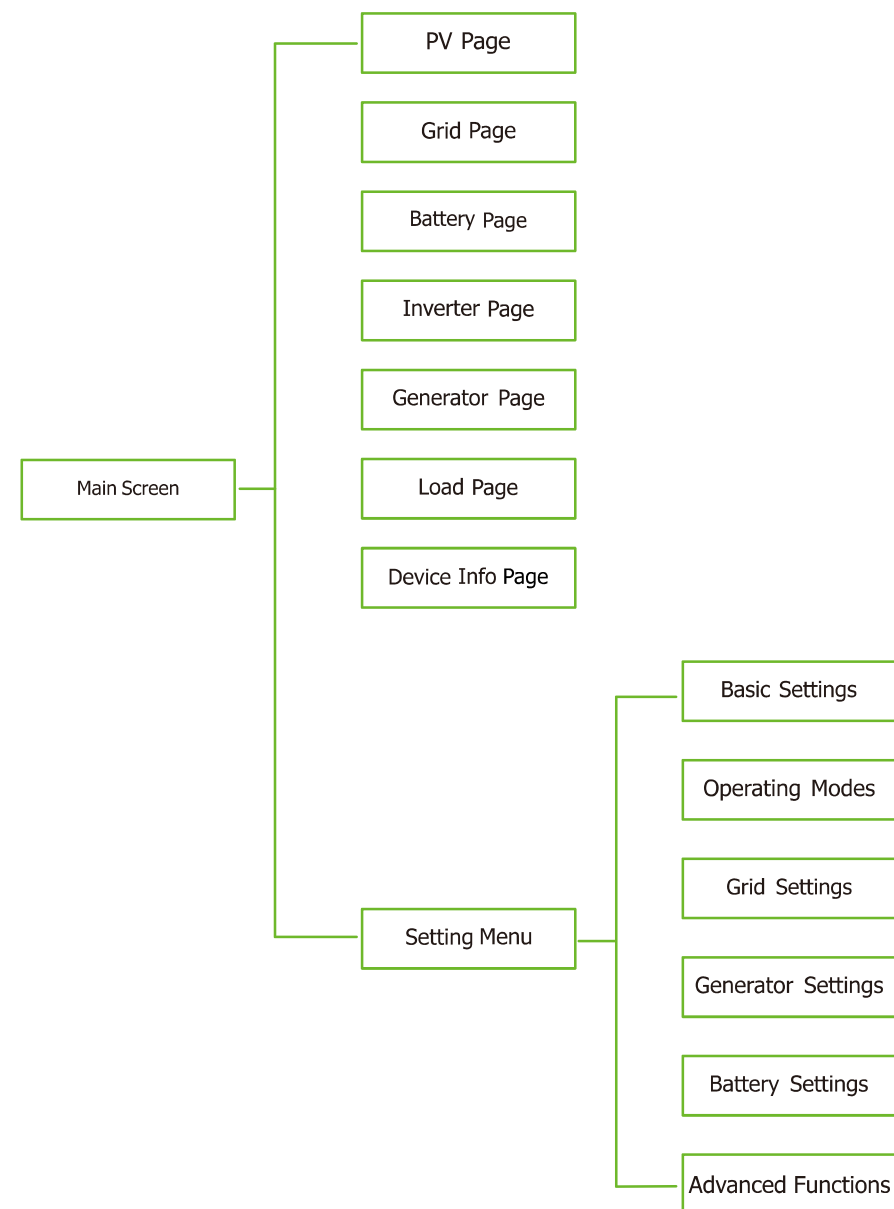
5.2 Operation and Display Panel

The operation and display panel, shown in below chart, is on the front panel of the inverter. It includes three indicators and a touch screen display, indicating the operating status and input/output power information.

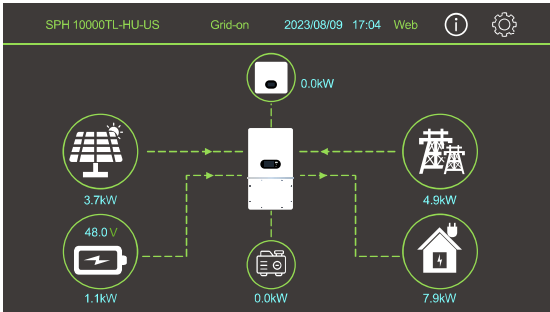
LED Indicator			Messages
AC/INV	GREEN	Light	Powered by AC
		Twinkle	Powered by DC
CHARGE	GREEN	Light	Full battery
		Twinkle	Charging
FAULT	RED	Light	Error
		Twinkle	Warning

6 Main Screen

6.1 Touch screen Operation Flow Chart



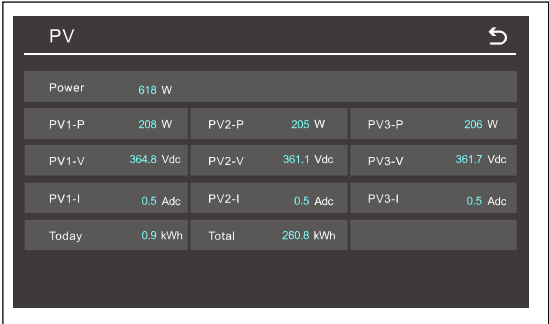
6.2 Main Screen



Icon	Description
	PV
	Battery: Battery Power; Charge(negative); Discharge(positive)
	Inverter
	Generator
	Setting Menu
	Grid: Grid Power; Export(negative); Import(positive)
	Load

- 1.The “Grid-on” in the above of the home screen indicates that the system is Normal operation.If it turns into “Fault: F17-64 or Alarm: W01-W96”,it means the inverter has communication errors or other errors,the error message will display the upper left corner of the home screen.F17-F64 faults and W01-W96 alarms,detailed information can be found in the exclamation mark in the upper right corner of the main screen.
 - 2.At the top of the screen is the time.
 - 3.System Setup Icon,press this set button,you can enter into the system setup screen which including Basic Settings,Operating Modes,Grid Settings,Generator Settings,Battery Settings and Advanced Functions.
 - 4.The main screen showing the info including Solar,Grid,Load and Battery.Its also displaying the energy flow direction by arrow.
- PV power and Load power always keep positive.
- Grid power negative means sell to grid,positive means get from grid.
- Battery power negative means charge,positive means discharge.

PV Detail Page

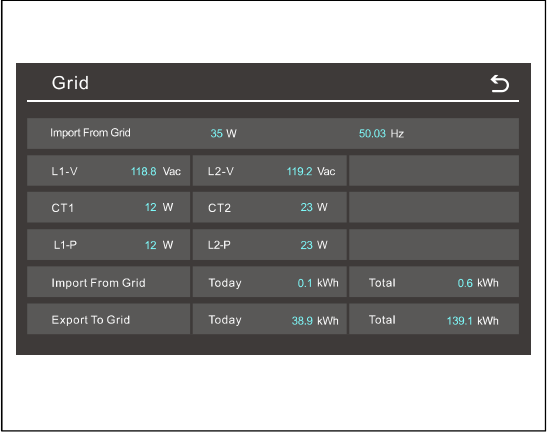


Solar Panel Generation.

Power,Voltage,Current for each MPPT.

Solar panel energy for Day and Total.

Grid Detail Page



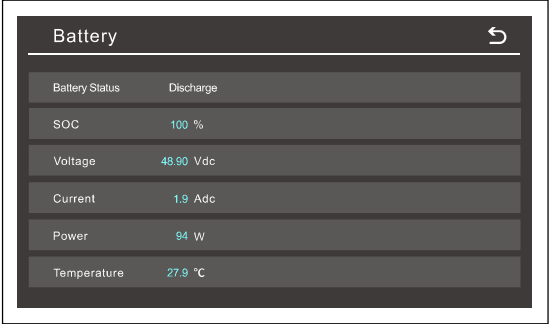
Status(Import From Grid,Export From Grid,Stand-by), Power, Frequency.

L1-V&L2-V: Voltage for each phase.

CT1&CT2: External Current Sensor Power.

Grid Power L1&Grid Power L2: Internal Current Sensor Power. Solar panel import from grid for Today and Total, Solar panel export to grid for Today and Total.

Battery Detail Page



This is Battery % detail page.

Battery		
Battery Status	Discharge	
Voltage	48.90	Vdc
Current	1.9	Adc
Power	94	W
Temperature	27.9	°C

This is Battery V detail page.

Li-BMS		
Battery Status	Discharge	
SOC	43	%
Voltage	52.7	Vdc
Current	5.2	Adc
Power	274	W
Temperature	28.4	°C

Li-BMS		
Mean Voltage	52.8	Vdc
Total Current	1.5	Adc
Mean Temp	28.4	°C
Total SOC	43	%
Dump Energy	45	Ah

If you use Lithium Battery,you can enter 1-2 page.

Inverter Detail Page

Inverter		
Power	28	W
L1-V	120.1	Vac
L1-I	0.7	Aac
L1-P	10	W
AC-Temp	34.9	°C

Inveretr Generation Power and Frequency. Voltage,Current,Power for each phase.
AC-Tem: Temperature of Heat-sink.
DC-Temp: Temperature of DC-DC module.

Generator Detail Page

Generator		
L-P	0	W
L-V	230.2	Vac
Frequency	50.01	Hz
Total	0.0	kWh

Generator Power,Voltage and Frequency.
 Generator exportation for Total.

Load Detail Page

Load		
Power	26	W
L1-V	120.1	Vac
L1-P	0	W
Today	0.0	kWh

Load Power.
 Voltage,Power for each phase.
 Load consumption for Day and Total.

6.3 Setting Menu

Setting Menu		
Basic Settings		
Operating Modes		
Grid Settings		
Generator Settings		
Battery Settings		
Advabced Functions		

This is Setting menu detail page.