GOODWE

User Manual

PV Master App

V1.1 -2022 -03-03

Trademarks

GOODWE and other GOODWE trademarks are trademarks of GoodWe Technologies Co., Ltd. All other trademarks or registered trademarks mentioned in this manual are owned by GoodWe Technologies Co., Ltd.

Notice

The information in this user manual is subject to change due to product updates or other reasons. This guide cannot replace the product labels or the safety precautions in the user manual unless otherwise specified. All descriptions in the manual are for guidance only.

Contents

1 About This Manual

- This manual introduces commonly used operations in PV Master.
- Before setting any parameters, read through the app and the inverter user manual to learn the product functions and features. When the inverter parameters are set improperly, the inverter may fail to connect to the utility grid or fail to connect to the grid in compliance with related requirements and damage the battery, which will affect the inverter's power generation.
- This manual is subject to update without notice. For more product details and latest documents, visit https://www.goodwe.com/.

1.1 Target Audience

This manual applies to trained and knowledgeable technical professionals. The technical personnel has to be familiar with the product, local standards, and electric systems.

1.2 Symbol Definition

Different levels of warning messages in this manual are defined as follows:

DANGER
Indicates a high-level hazard that, if not avoided, will result in death or serious injury.
WARNING
Indicates a medium-level hazard that, if not avoided, could result in death or serious injury.
CAUTION
Indicates a low-level hazard that, if not avoided, could result in minor or moderate injury.
NOTICE
Highlight and supplement the texts. Or some skills and methods to solve product-related problems to save time.

1.3 Updates

The latest document contains all the updates made in earlier issues.

V1.0 2021-12-17

- First Issue

V1.1 2022-03-03

- Updated 3.3 Setting Export Power Limitation.

2 Product Introduction

PV Master is an external monitoring / configuration application for hybrid inverters, used on smart phones or tablets for both Android and iOS system. Features include:

1. Edit system configurations according to customer needs.
2. Check the firmware version.
3. Set the safety region by country and region according to local utility requirement.
4. Adjust the export limit.
5. Monitor and check the performance of the hybrid system.

2.1 Applicable Inverter Model

PV Master applies to GoodWe hybrid inverters.

2.2 Downloading and Installing the App

Make sure that the mobile phone meets the following requirements:

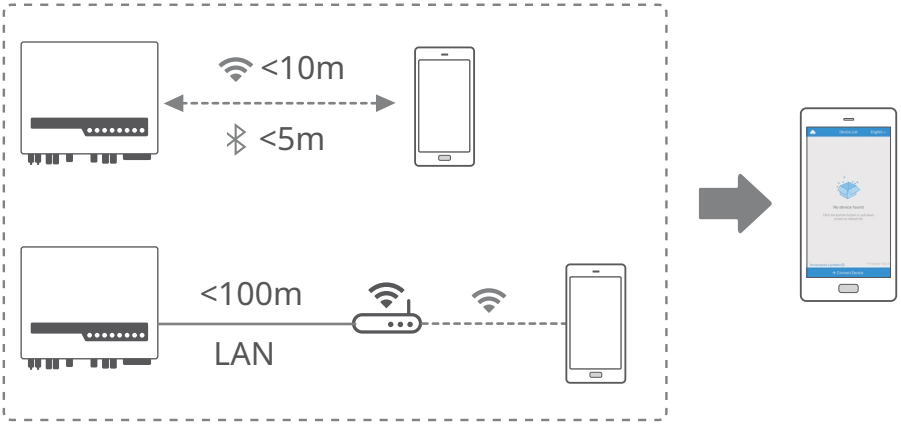
- Mobile phone operating system: Android 4.3 or later, iOS 9.0 or later.
- The mobile phone can access the Internet.
- The mobile phone supports WiFi or Bluetooth.

Search PV Master in Google Play (Android) or App Store (iOS), then download and install the app.

NOTICE
After installing the app, it can automatically prompt users to update the app version.

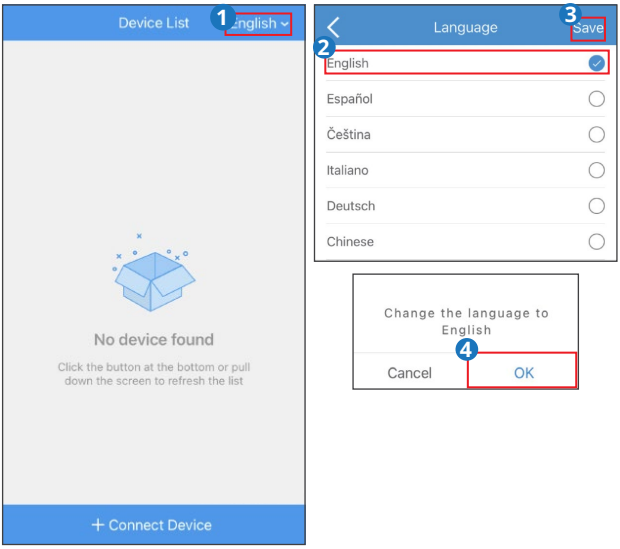
2.3 App Connection

After powering on the DC side of the inverter, the app can connect to the inverter. Connect as the following shows.



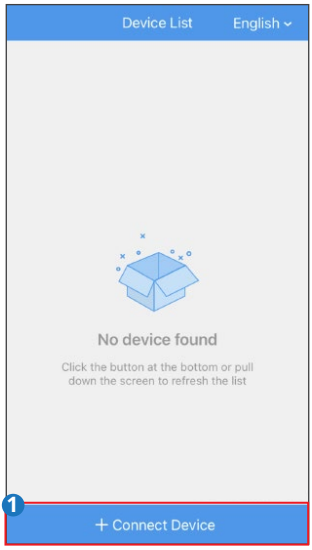
Set App Language

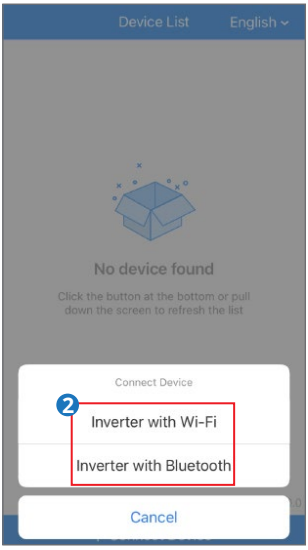
The interface can be displayed in 6 different languages. Switch the language as the following shows.

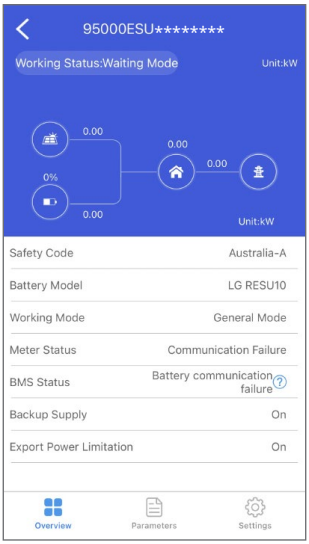


2.5 Log In

Select WiFi connection or LAN connection according to the communication module type.

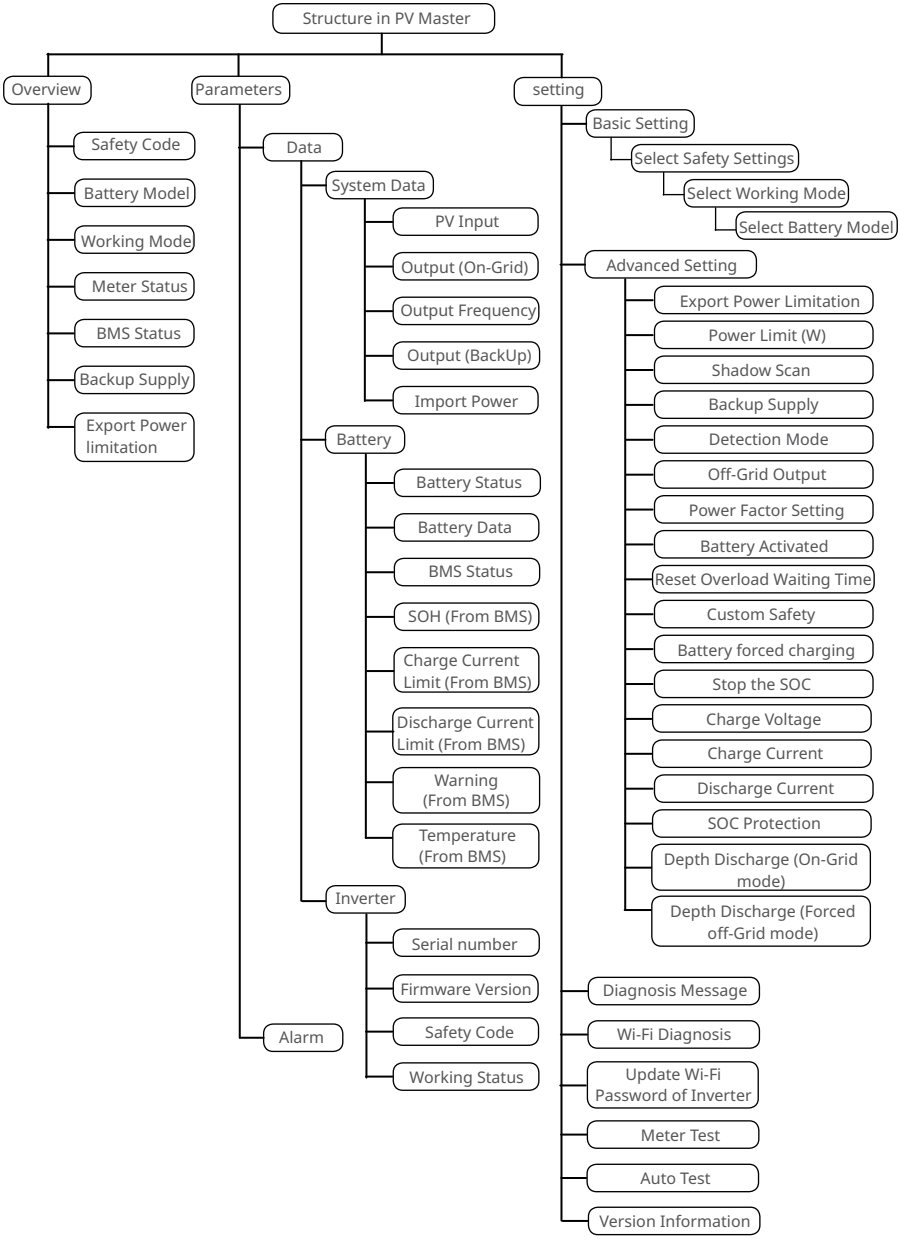






2.6 App Interface Structure

The interface structure of PV Master is shown as follows.
Check system data, equipment information, and alarms on Overview and Parameters interfacce.
Set system equipment parameters on Setting interface.



3 App Operations

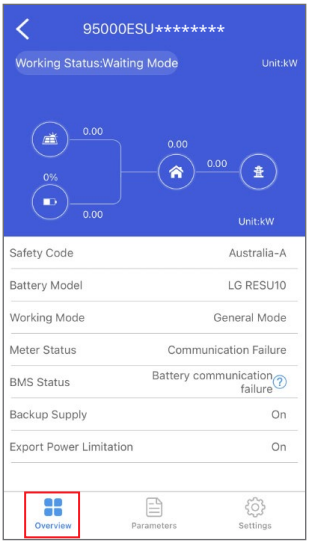
NOTICE

- All the user interface (UI) screenshots in this document are based on PV Master App V4.3.0. The UI may be different due to the version upgrade. The data on the UI screenshots is for reference only.
- Before setting any parameters, read through the app and the inverter user manual to learn the product functions and features. When the inverter parameters are set improperly, the inverter may fail to connect to the utility grid or fail to connect to the utility grid in compliance with related requirements and damage the battery, which will affect the inverter's power generation.

3.1 Checking Information

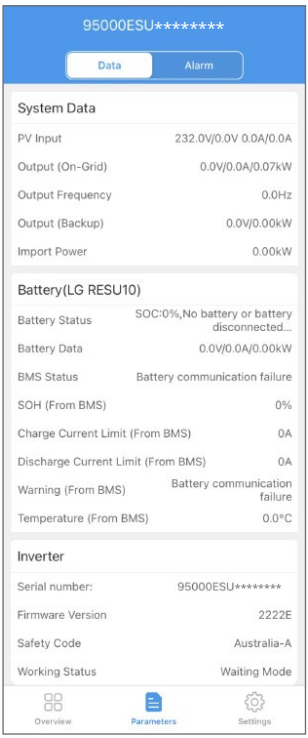
3.1.1 Checking Basic Information

Tap **Overview** to check the inverter and battery status after login.



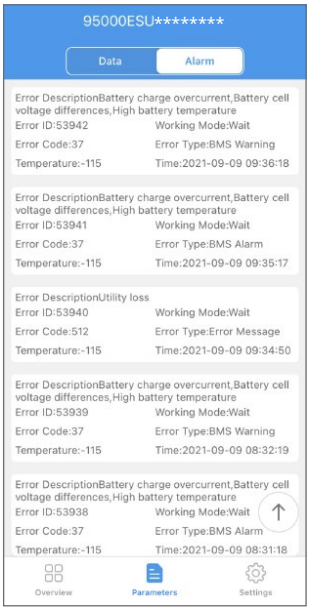
3.1.2 Checking the System and Real-time Data

Step 1 Tap **Overview** > **Parameters** > **Data** to check the real-time system and inverter data.



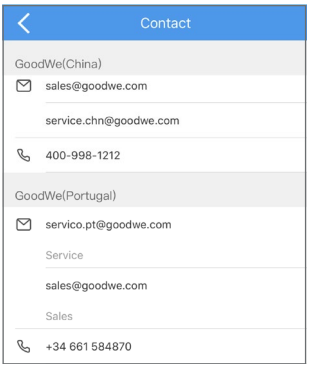
3.1.3 Checking Alarms

Step 1 Tap **Overview** > **Parameters** > **Alarm** to check the alarms.



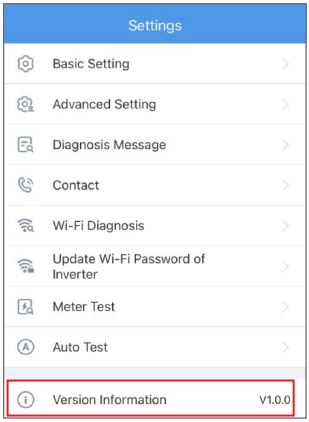
3.1.4 Checking Contact Information

Step 1 Tap **Overview** > **Setting** > **Contact** to check the contact information, including Greece, Australia, Poland, Korea, Britain, South Africa, Spain, Brazil, Italy, Mexico, India, Chile, Germany, Vietnam, China, Portugal, Turkey, Argentina, Netherlands.



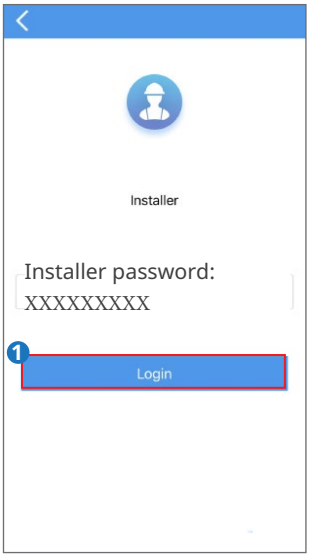
3.1.5 Checking App Version

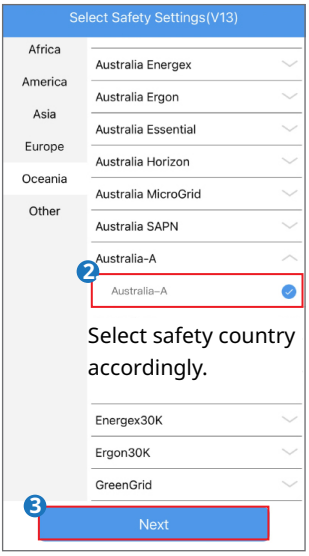
Step 1 Tap **Overview** > **Setting** to check the app version information.

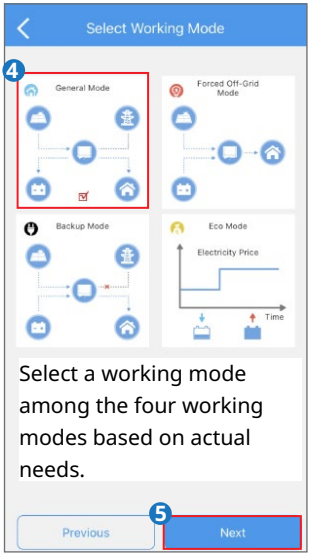


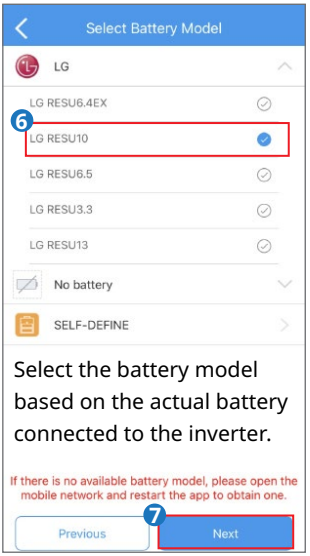
3.2 Setting Basic Parameters

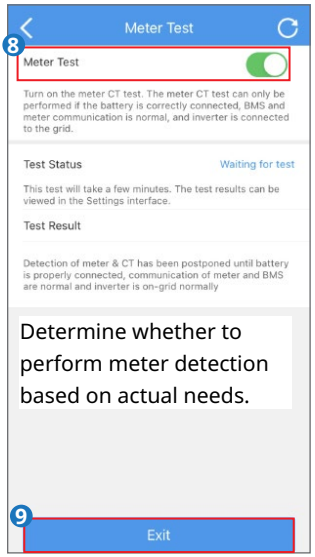
Step 1: Tap **Overview** > **Setting** > **Basic Setting** to set the basic parameters according to the inverter location and actual application scenarios.

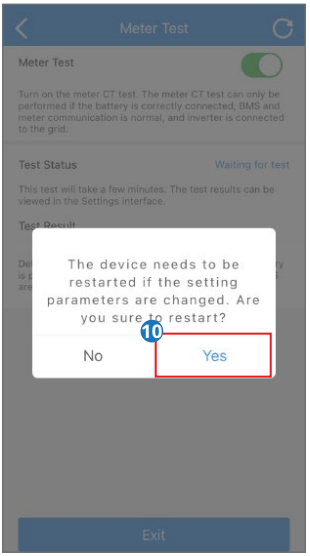












NOTICE

The parameters will be configured automatically after selecting the safety country/region, including overvoltage protection, undervoltage protection, overfrequency protection, underfrequency protection, voltage/frequency connection protection, cosφcurve, Q(U) curve, P(U) curve, FP curve, HVRT, LVRT, etc. Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** to check the detailed parameters.

The power generation efficiency will be different on different working modes. Set the working mode according to the local requirements and situation.

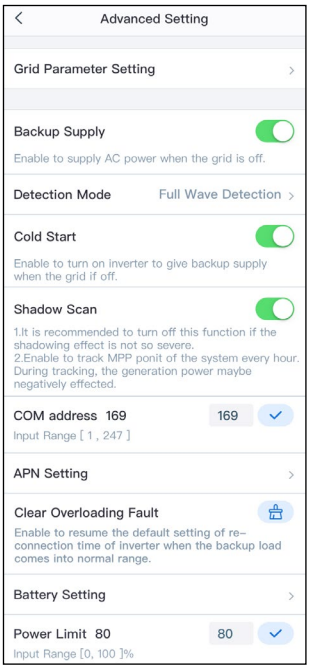
- **General Mode:** The power generated by the PV panels firstly supports the load, secondly it charges the battery, and the rest of the power is exported to the grid. Battery charge/discharge time is set to 00:00-00:00 by default. Battery is charged or discharged automatically based on the system operation condition.
- **Forced Off-Grid Mode:** Used for off-grid operation (no grid connection). When choosing this mode, the system automatically cuts off the connection to the grid, even if the grid is available.
- **Backup Mode:** Used for off-grid operation (no grid connection). When choosing this mode, the system automatically cuts off the connection to the grid, even if the grid is available.
- **Eco Mode:** The power generated by the PV panels firstly supports the load, secondly it charges the battery, and the rest of the power is exported to the grid. Battery charge/discharge time is set to 00:00-00:00 by default. Battery is charged or discharged automatically based on the system operation condition.

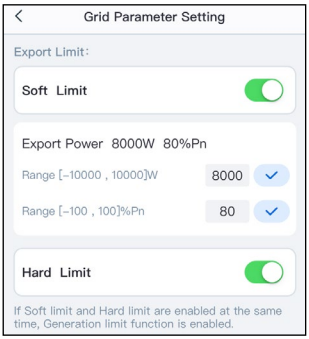
3.3 Setting the Export/Power Limit Parameters

Enable the Export/Power Limitation function, which is disabled by default. Set Export/Power Limitation after enabling the function. Set the Export/Power Limitation in compliance with local grid requirements.

3.3.1 Power Limit Setting (Only for Australia)

Step 1: Tap **More** > **Advanced Setting** to set the **Power Limit** parameters according to the actual needs.
Step 2: Tap **More** > **Advanced Setting** > **Grid Parameter Setting** to set the parameters.
Step 3: Enter the parameters based on actual needs and tap "√ **"**.The parameters are set successfully.

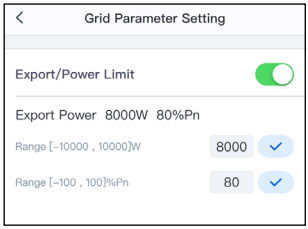




No.	Parameters	Description
1	Soft Limit	Enable Soft Limit when power limiting is required by local grid standards and requirements.
2	Export Power	Set the value based on the actual maximum power feed into the utility grid.
3	Hard Limit	After enabling this function, the inverter and the utility grid will automatically disconnect when the power feeds into the grid exceeds the required limit.

3.3.2 Power Limit Setting (For countries and regions except Australia)

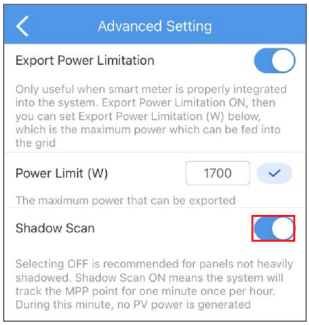
Step1: Tap **More** > **Advanced Setting** > **Grid Parameter Setting**.
Step2: Enter the parameters based on actual needs and tap "√ **"**.The parameters are set successfully.



3.4 Setting Shadow Scan

Enable Shadow Scan when the PV panels are severely shadowed to optimize the power generation efficiency.

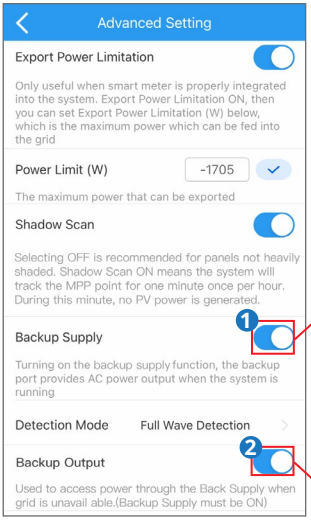
Step 1: Tap **Settings** > **Advanced Setting**.
Step 2: Set Shadow Scan.



3.5 Setting Backup Supply

The loads connected to the backup ports will be charged by batteries and get an interruptible power supply when the **Backup Supply** function is enabled.

Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Set Backup Supply.



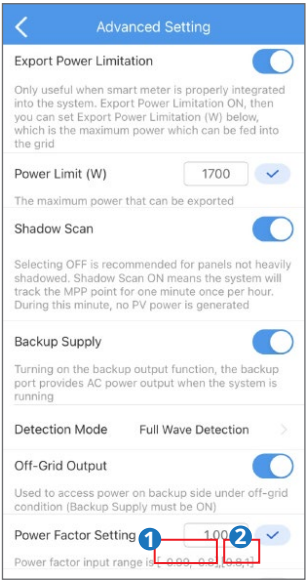
Backup Supply function is ON by default. This provides power to the back-up supply when grid is available. Select OFF only if you do not intend to use Backup Supply under any circumstance

Turned ON manually only during commissioning with grid absence, to get backup power supply.

3.6 Power Factor Setting

Set the power factor in compliance with local grid regulations to meet the requirements.

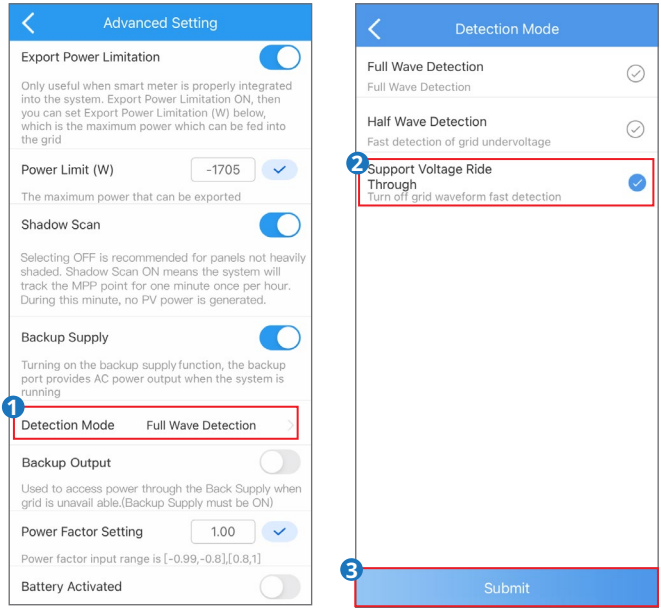
Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Set power factor.



3.7 Set the Detection Mode

Enable Detection Mode to check whether the utility grid voltage is normal.

Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Select **Detection Mode**.



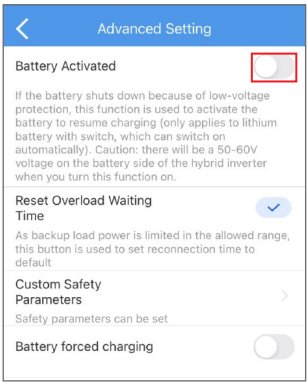
Note:
Standard setting for grid connection is **Full Wave Detection**.

No.	Parameters	Description
1	Full Wave Detection	Check whether the utility grid voltage is too high or too low.
2	Half Wave Detection	Check whether the utility grid voltage is too low.
3	Support Voltage Ride Through	Stop detecting utility grid voltage.

3.8 Battery Activated

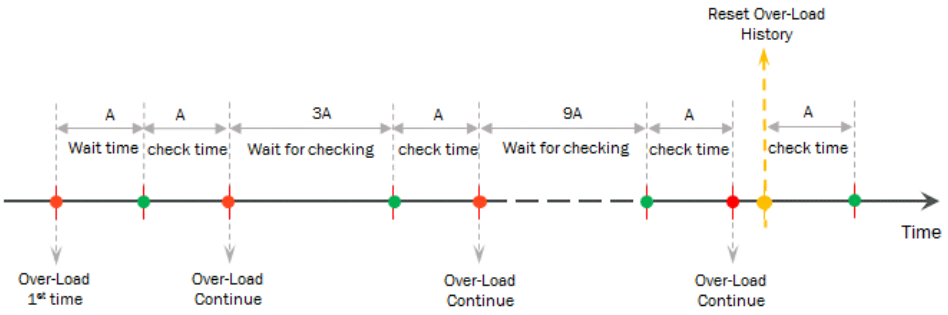
Enable **Battery Activated**, the battery will be charged and activated from low-voltage protection status.

Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Set Battery Activated.

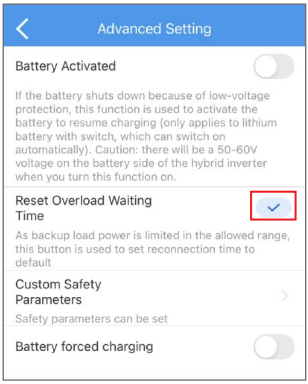


3.9 Reset Overload Waiting Time

As there is back-up overload protection happens, inverter will protect itself and then after a time (depends on safety code requirement), inverter will try to self-check again.
If overload condition is still there, it waits triple time to recheck again and go on by the same logic (max 1 hour).
Use Reset Overload History function to reset the waiting time back to safety code requirement.
We suggest use this function after being sure of no overload condition anymore.
Overload Reset Function Simulation:



Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Set **Reset Overload Waiting Time**.



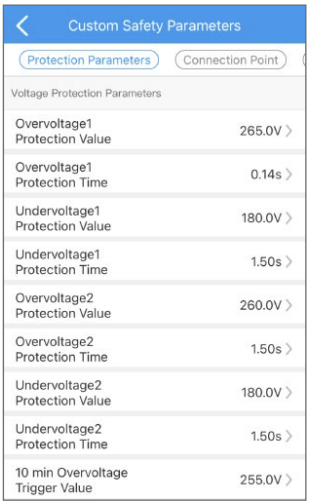
3.10 Setting Custom Safety Parameters

Set the custom safety parameters in compliance with local requirements.

3.10.1 Setting Voltage Protection Parameters

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Protection Parameter**.
Step 2: Set the parameters based on the actual needs.



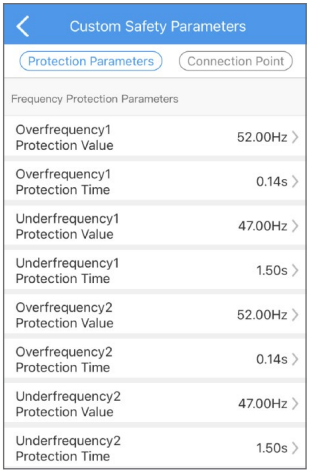
No.	Parameters	Description
1	Overvoltage1 Protection Value	Set the level 1 overvoltage protection threshold value.
2	Overvoltage1 Protection Time	Set the level 1 overvoltage protection tripping time.
3	Undervoltage1 Protection Value	Set the level 1 undervoltage protection threshold value.
4	Undervoltage1 Protection Time	Set the level 1 undervoltage protection tripping time.
5	Overvoltage2 Protection Value	Set the level 2 overvoltage protection threshold value.
6	Overvoltage2 Protection Time	Set the level 2 overvoltage protection tripping time.
7	Undervoltage2 Protection Value	Set the level 2 undervoltage protection threshold value.
8	Undervoltage2 Protection Time	Set the level 2 undervoltage protection tripping time.
9	10 min Overvoltage Trigger Value	Set the 10min overvoltage protection threshold value.

3.10.2 Setting Frequency Protection Parameters

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Protection Parameter**.

Step 2: Set the parameters based on the actual needs.



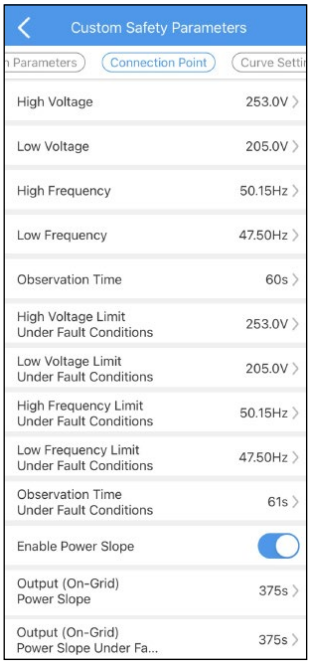
No.	Parameters	Description
1	Overfrequency1 Protection Value	Set the level 1 overfrequency protection threshold value.
2	Overfrequency1 Protection Time	Set the level 1 overfrequency protection tripping time.
3	Underfrequency1 Protection Value	Set the level 1 underfrequency protection threshold value.
4	Underfrequency1 Protection Time	Set the level 1 underfrequency protection tripping time.
5	Overfrequency2 Protection Value	Set the level 2 overfrequency protection threshold value.
6	Overfrequency2 Protection Time	Set the level 2 overfrequency protection tripping time.
7	Underfrequency2 Protection Value	Set the level 2 underfrequency protection threshold value.
8	Underfrequency2 Protection Time	Set the level 2 underfrequency protection tripping time.

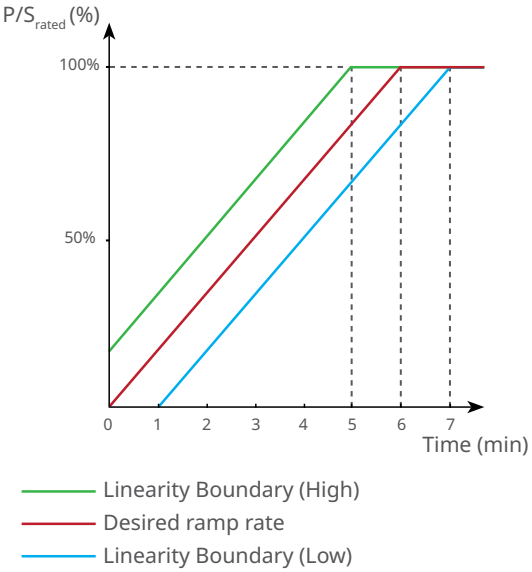
3.10.3 Setting Connection Point

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Connection Point**.

Step 2: Set the parameters based on the actual needs.





No.	Parameters	Description
1	High Voltage	The inverter cannot connect to the grid if it is powered on for the first connection and the grid voltage is higher than the High Voltage.
2	Low Voltage	The inverter cannot connect to the grid if it is powered on for the first connection and the grid voltage is lower than the Low Voltage.
3	High frequency	The inverter cannot connect to the grid if it is powered on for the first connection and the grid frequency is higher than the High Frequency.

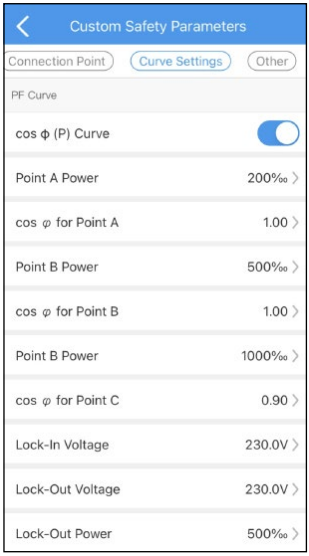
No.	Parameters	Description
4	Low frequency	The inverter cannot connect to the grid if it is powered on for the first connection and the grid frequency is lower than the Low Frequency.
5	Observation Time	The waiting time for connecting the inverter to the grid when meeting the following requirements. 1. The inverter is powered on for the first connection. 2. The utility grid voltage and frequency meet certain requirements.
6	High Voltage Limit Under Fault Conditions	The inverter cannot connect to the grid if it is reconnecting due to a fault and the grid voltage is higher than the High Voltage Limit Under Fault Conditions.
7	Low Voltage Limit Under Fault Conditions	The inverter cannot connect to the grid if it is reconnecting due to a fault and the grid voltage is lower than the Low Voltage Limit Under Fault Conditions.
8	High frequency Limit Under Fault Conditions	The inverter cannot connect to the grid if it is reconnecting due to a fault and the grid frequency is higher than the High frequency Limit Under Fault Conditions.
9	Low frequency Limit Under Fault Conditions	The inverter cannot connect to the grid if it is reconnecting due to a fault and the grid frequency is lower than the Low frequency Limit Under Fault Conditions.
10	Observation Time Under Fault Conditions	The waiting time for connecting the inverter to the grid when meeting the following requirements. 1. The inverter is reconnecting to the grid due to a fault. 2. The utility grid voltage and frequency meet certain requirements.
11	Enable Power Slope	Enable the start up power slope.
12.	Output (On-Grid) Power Slope	Indicates the duration for the output power increases to the rated power when the inverter connects to the utility grid for the first time.
13	Output (On-Grid) Power Slope Under Fault Conditions	Indicates the duration for the output power increases to the rated power when the inverter reconnects to the utility grid due to a fault.

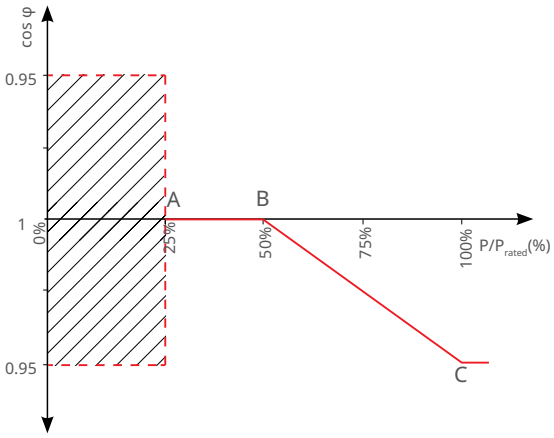
3.10.3 Setting Cosφ (P) Curve

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Curve Settings**.

Step 2: Set the parameters based on the actual needs.





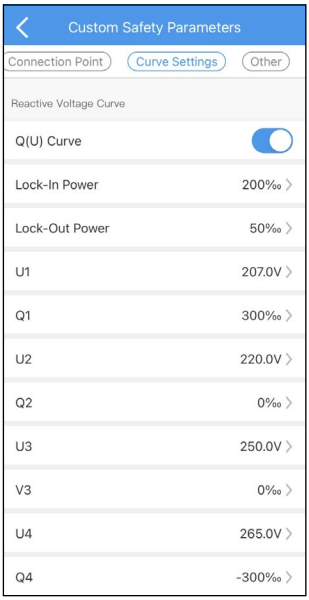
No.	Parameters	Description
1	Cosφ (P) Curve	Enable Cosφ (P) Curve when it is required by local grid standards and requirements .
2	Point A Power	The percentage of the inverter output active power to the rated power at point A.
3	Cosφ for Point A	The power factor at point A.
4	Point B Power	The percentage of the inverter output active power to the rated power at point B.
5	Cosφ for Point B	The power factor at point B.
6	Point C Power	The percentage of the inverter output active power to the rated power at point B.
7	Cosφ for Point C	The power factor at point C.
8	Lock-In Voltage	When the grid voltage is between Lock-In Voltage and Lock-Out Voltage, the voltage meets Cosφ curve requirements
9	Lock-Out Voltage	
10	Lock-Out Power	The Cosφ(P) curve cannot work when the output active power to rated power ratio is lower than the Lock-Out Power.

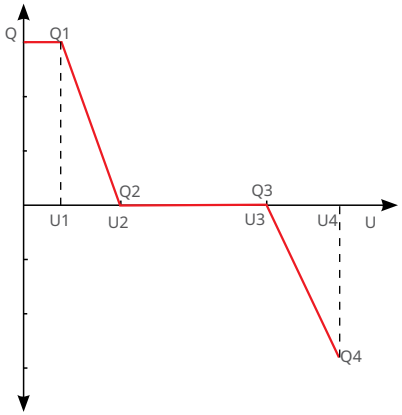
3.10.4 Setting Q(U) Curve

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Curve Settings**.

Step 2: Set the parameters based on the actual needs.





No.	Parameters	Description
1	Q(U) Curve	Enable Q(U) Curve when it is required by local grid standards and requirements.
2	Lock-In Power	When the inverter output reactive power to the rated power ratio is between the Lock-In Power and Lock-Out Power, the ratio meets Q(U) curve requirements.
3	Lock-Out Power	
4	U1	The utility grid voltage at point U1.
5	Q1	The percentage of the inverter output reactive power to the rated power at point Q1.
6	U2	The utility grid voltage at point U2.
7	Q2	The percentage of the inverter output reactive power to the rated power at point Q2.
8	U3	The utility grid voltage at point U3.

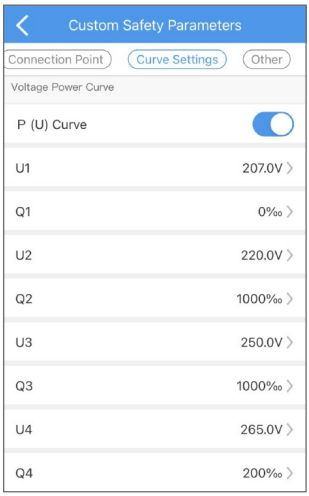
No.	Parameters	Description
9	Q3	The percentage of the inverter output reactive power to the rated power at point Q3.
10	U4	The utility grid voltage at point U4.
11	Q4	The percentage of the inverter output reactive power to the rated power at point Q4.

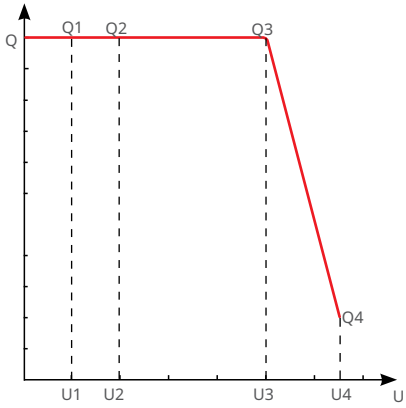
3.10.5 Setting P(U) Curve

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company. When the grid voltage is too high, decrease the inverter output power to decrease the grid-tied power.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Curve Settings**.

Step 2: Set the parameters based on the actual needs.





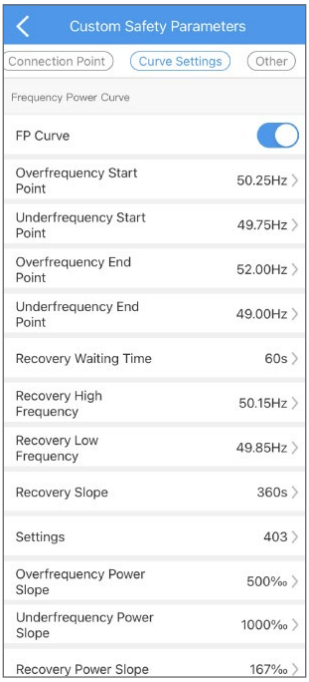
No.	Parameters	Description
1	P(U) Curve	Enable P(U) Curve when it is required by local grid standards and requirements .
2	U1	The utility grid voltage at point U1.
3	Q1	The percentage of the inverter output active power to the rated power at point Q1.
4	U2	The utility grid voltage at point U2.
5	Q2	The percentage of the inverter output active power to the rated power at point Q2.
6	U3	The utility grid voltage at point U3.
7	Q3	The percentage of the inverter output active power to the rated power at point Q3.
8	U4	The utility grid voltage at point U4.
9	Q4	The percentage of the inverter output active power to the rated power at point Q4.

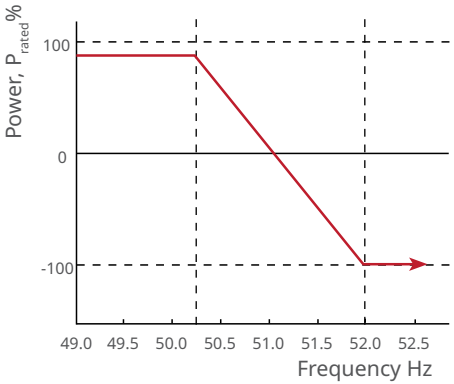
3.10.6 Setting FP Curve

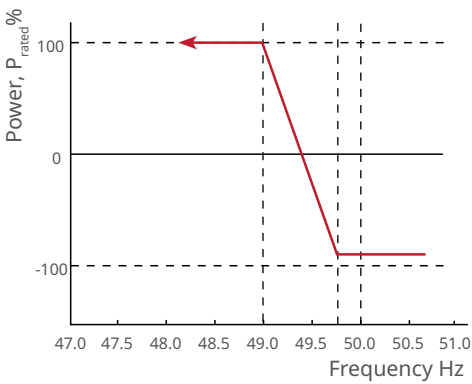
Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Curve Settings**.

Step 2: Set the parameters based on the actual needs.





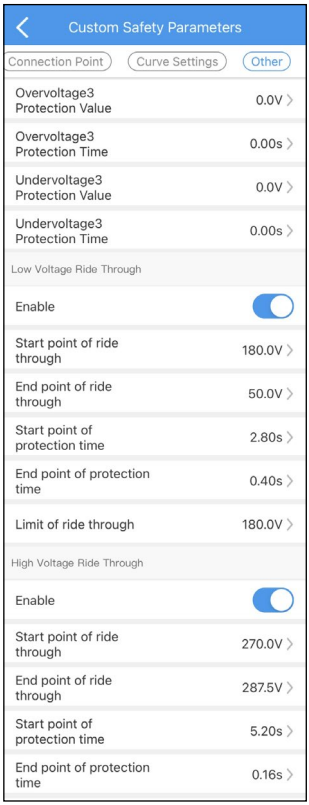


No.	Parameters	Description
1	FP Curve	Enable FP Curve when it is required by local grid standards and requirements.
2	Overfrequency Start Point	The inverter output active power will decrease when the utility grid frequency is too high. The inverter output power will decrease when the utility grid frequency is higher than Overfrequency Start Point.
3	Underfrequency Start Point	The inverter output active power will increase when the utility grid frequency is too low. The inverter output power will increase when the utility grid frequency is lower than Underfrequency Start Point.
4	Overfrequency End Point	The inverter output active power will decrease when the utility grid frequency is too high. The inverter output power will stop decreasing when the utility grid frequency is higher than Overfrequency End Point.
5	Underfrequency End Point	The inverter output active power will increase when the utility grid frequency is too low. The inverter output power will stop increasing when the utility grid frequency is lower than Underfrequency End Point.
6	Recovery Waiting Time	Indicates the time the inverter output power need to recover after the power grid recovers.
7	Recovery High Frequency	The inverter output active power decreases when the utility grid frequency is too high. The inverter output power recovers when the utility grid frequency is lower than Recovery High Frequency.
8	Recovery Low Frequency	The inverter output active power will increase when the utility grid frequency is too low. The inverter output power will recover when the utility grid frequency is higher than Recovery Low Frequency.
9	Recovery Slope	Indicates the time the inverter output power recovers.
10	Settings	Set the FP curve mode based on the utility grid standards and requirements.
11	Overfrequency Power Slope	The inverter output active power will decrease when the utility grid frequency is too high. Indicates the slope when the inverter output power decreases.
12.	Underfrequency Power Slope	The inverter output active power will increase when the utility grid frequency is too low. Indicates the slope when the inverter output power increases.
13	Recovery Power Slope	Indicates the variation slope when the power recovers.

3.10.7 Setting Other Parameters

Set the parameters based on the requirements of the grid company. Do not change the parameters without the prior consent of the grid company.

Step 1: Tap **Overview** > **Setting** > **Advanced Settin** > **Custom Safety Parameters** > **Others**.
Step 2: Set the parameters based on the actual needs.

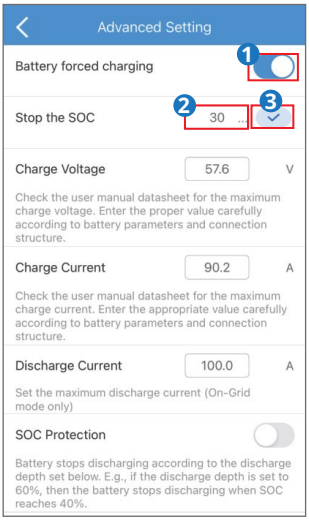


Parameters	Description
Overvoltage3 Protection Value	Set the level 3 overvoltage protection threshold value.
Overvoltage3 Protection Time	Set the level 3 overvoltage protection tripping time.
Undervoltage3 Protection Value	Set the level 3 undervoltage protection threshold value.
Undervoltage3 Protection Time	Set the level 3 undervoltage protection tripping time.
Low Voltage Ride Through	
Enable	Enable the low voltage ride through function.
Start point of ride through	The inverter will not be disconnected from the utility grid immediately when the grid voltage is between Start point of ride through and End point of ride through.
End point of ride through	
Start point of Protection time	The longest time for the inverter stays connected to the grid when the grid voltage is at the Start point of ride through.
End point of Protection time	The longest time for the inverter stays connected to the grid when the grid voltage is at the End point of ride through.
Limit of ride through	LVRT is allowed when the grid voltage is lower than the Limit of ride through.
High Voltage Ride Through	
Enable	Enable the high voltage ride through function.
Start point of ride through	The inverter will not be disconnected from the utility grid immediately when the grid voltage is between the Start point of ride through and the End point of ride through.
End point of ride through	
Start point of Protection time	The longest time for the inverter stays connected to the grid when the grid voltage is at the Start point of ride through.
End point of Protection time	The longest time for the inverter stays connected to the grid when the grid voltage is at the End point of ride through.
Limit of ride through	HVRT is allowed when the grid voltage is higher than the Limit of ride through.

3.11 Setting Battery Forced Charging

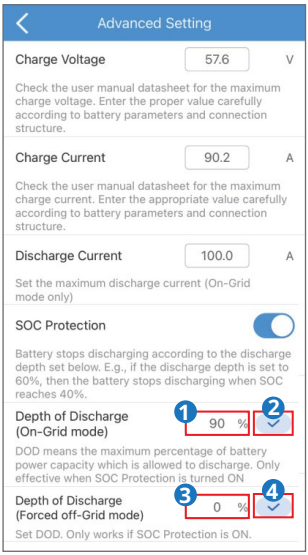
The battery will be charged to the set charging depth immediately when **Battery Forced Charging** is enabled. This function takes effect only once.

Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.
Step 2: Set Battery Forced Charging.



3.12 Setting Depth of Discharge (ON-Grid/Off-Grid)

Step 1: Tap **Overview** > **Setting** > **Advanced Setting**.

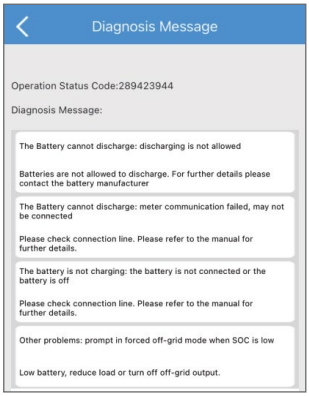


3.13 Equipment Maintenance

3.13.1 Diagnosis Message

Tap **Diagnosis Message** to check inverter working status information and battery charge and discharge information.

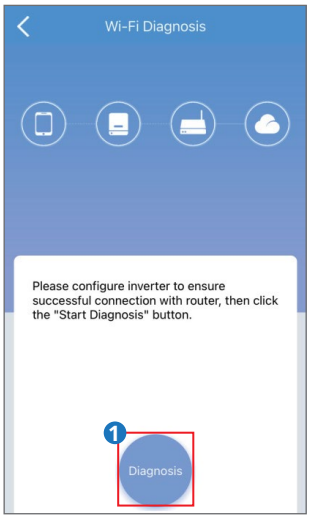
Step 1: Tap **Overview** > **Setting** > **Diagnosis Message**.
Step 2: The following figure shows the messages.

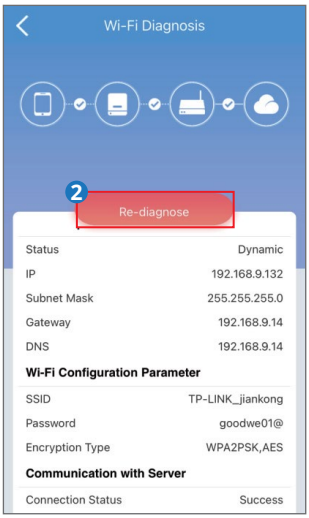


3.13.2 WiFi Diagnosis

Wi-Fi Diagnose helps to find out the problem in the W-Fi communication route. The diagnosis results are possible reasons and troubleshooting suggestions. Wi-Fi Diagnose is only available if PV Master is connecting to inverter Solar-WiFi signal directly.

Step 1: Tap **Overview** > **Setting** > **WiFi Diagnosis.**
Step 2: Perform WiFi diagnosis as the following shows.



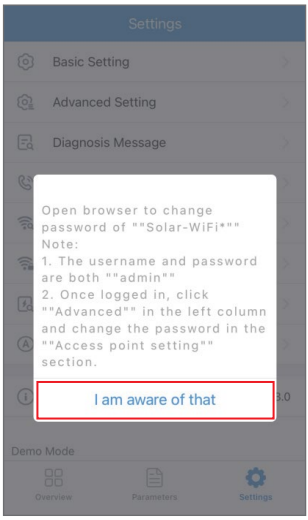


3.13.3 Update Wi-Fi Password of Inverter

Initial password: 12345678. To ensure account security, change the password periodically.

Step 1: Tap **Overview** > **Setting** > **Update Wi-Fi Password of Inverter**.

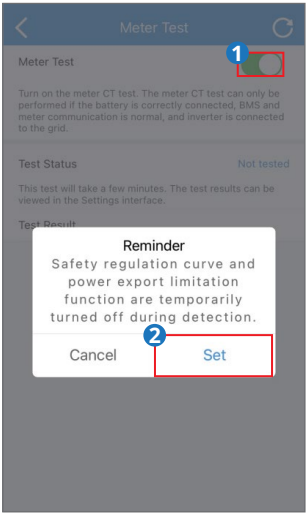
Step 2: Tap **I am aware of that** and change the WiFi password. For more details, refer to the WiFi Configuration Instruction.

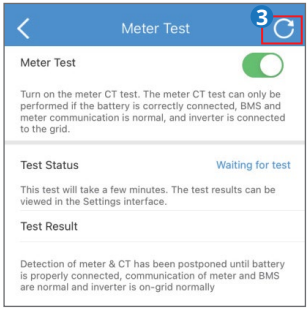


3.13.4 Meter Test

Meter Detection is used to auto-check if the Smart Meter and CT are connected in the right way or not in the energy storage system.

Step 1: Tap **Overview** > **Setting** > **Meter Test** .





4 Alarms

Battery Alarms

Alarm Code	Alarm Description	Troubleshooting
1	High battery temperature	The battery is overloaded. You are recommended to reduce loads. If the problem persists, contact the after-sales service for help.
2	Low battery temperature	The ambient temperature is too low to run the battery.
4	Battery cell voltage differences	If the problem persists, contact the after-sales service for help.
8	Battery over total voltage	
16	Battery discharge overcurrent	If the problem persists, contact the after-sales service for help.
32	Battery charge over current	If the problem persists, contact the after-sales service for help.
64	Battery under SOC	If the PV works properly but the problem persists, contact the after-sales service for help.
128	Battery under total voltage	
256	Battery communication failure	Check the electrical connections by professionals.
512	Battery output shortage	
1024	Battery SOC too high	If the problem persists, contact the after-sales service for help.
2048	BMS module fault	
4096	BMS system fault	
8192	BMS internal fault	
65536	High battery charge temperature	
131072	High battery discharge temperature	The battery is overloaded. You are recommended to reduce loads. If the problem persists, contact the after-sales service for help.
262144	Low battery charge temperature	The ambient temperature is too low to run the battery.
524288	Low battery discharge temperature	

Inverter Alarms

Alarm code	Alarm Descriptions	Troubleshooting
1	GFCI device check failure	Contact the after-sales service for help.
2	AC HCT check failure	
64	GFCI device failure	
128	Relay Device Failure	
256	AC HCT failure	
512	Utility loss	Utility grid input exception. Check the power supply and electrical connections by professionals.
1024	Ground I failure	System grounding exception. Check the power supply and electrical connections by professionals.
2048	DC Bus high	Detect the DC input voltage to see whether it is within the permissible range. If the problem persists, contact the after-sales service for help.
4096	Backup output overload	There are too many electric devices in the system. You are recommended to use less electrical equipment.
8192	Over-temperature	Check whether the equipment is blocked. If the problem persists, contact the after-sales service for help.
32768	PV voltage	The PV input voltage is too high. You are recommended to reduce the number of PV panels.
65536	External fan failure	Check whether the external fan is blocked. If the problem persists, contact the after-sales service for help.
131072	VAC failure	Utility grid input exception. Check the power supply and electrical connections by professionals.
262144	Isolation failure	Check whether the DC input cables are short circuit to the ground and whether the system is grounded reliably.

Alarm code	Alarm Descriptions	Troubleshooting
524288	High DC supply	The DC input voltage is too high. Check the system by professionals.
33554432	Relay check failure	Contact the after-sales service for help.
536870912	FAC failure	Utility grid input exception. Check the power supply and electrical connections by professionals.
1073741824	EEPROM R/W failure	Contact the after-sales service for help.
2147483648	Internal communication failure	

5 Appendix

Australia safety regulations

To comply with AS/NZS 4777.2:2020 in Australian market, please select from Australia Region A/B/C or New Zealand. Contact your local electricity grid operator on which Region to select.

Selecting a Region B should then automatically load all region B setpoints for volt-watt, volt-var, underfrequency, overfrequency, etc.

Volt–var response set-point values

Region	Default value	U1	U2	U3	U4
Australia A	Voltage	207V	220V	240V	258V
	Inverter reactive power level (Q) % of Srated	44 % supplying	0%	0%	60 % absorbing
Australia B	Voltage	205V	220V	235V	255V
	Inverter reactive power level (Q) % of Srated	30 % supplying	0%	0%	40 % absorbing
Australia C	Voltage	215V	230V	240V	255V
	Inverter reactive power level (Q) % of Srated	44 % supplying	0%	0%	60 % absorbing
New Zealand	Voltage	207V	220V	235 V	244 V
	Inverter reactive power level (Q) % of Srated	60 % supplying	0%	0%	60 % absorbing
Allowed range	Voltage	180 to 230 V	180 to 230 V	230 to 265 V	230 to 265 V
	Inverter reactive power level (Q) % of Srated	30 to 60 % supplying	0%	0%	30 to 60 % absorbing

NOTE 1 Inverters may operate at a reactive power level with a range up to 100 % supplying or absorbing.
NOTE 2 Australia C parameter set is intended for application in isolated or remote power systems.

Volt–watt response default set-point values

Region	Default value	U3	U4
Australia A	Voltage	253V	260V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Australia B	Voltage	250V	260V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Australia C	Voltage	253V	260V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
New Zealand	Voltage	242 V	250V
	Inverter maximum active power output level (P) % of S_{rated}	100%	20%
Allowed range	Voltage	235 to 255 V	240 to 265 V
	Inverter maximum active power output level (P) % of S_{rated}	100%	0 % to 20 %

NOTE: Australia C parameter set is intended for application in isolated or remote power systems.

Passive anti-islanding voltage limit values

Protective function	Protective function limit	Trip delay time	Maximum disconnection time
Undervoltage 2 (V < <)	70 V	1 s	2 s
Undervoltage 1 (V <)	180 V	10 s	11 s
Overvoltage 1 (V >)	265 V	1 s	2 s
Overvoltage 2 (V > >)	275V	-	0.2 s

Passive anti-islanding frequency limit values

	Region	Australia A	Australia B	Australia C	New Zealand
Underfrequency 1(F <)	Protective function limit value	47 Hz	47 Hz	45 Hz	45 Hz
	Trip delay time	1 s	1 s	5 s	1 s
	Maximum disconnection time	2 s	2 s	6 s	2 s
Over-frequency 1 (F >)	Protective function limit value	52 Hz	52 Hz	55 Hz	55 Hz
	Trip delay time	-	-	-	-
	Maximum disconnection time	0.2s	0.2s	0.2s	0.2s

GoodWe Website

GoodWe Technologies Co., Ltd.

No. 90 Zijin Rd., New District, Suzhou, 215011, China

www.goodwe.com

service@goodwe.com

Local Contacts