MC2600 WEB Introduction

Ver:2.0

MEGMEET
everywhere

WEB Connect-1

Step1
- Set IP address
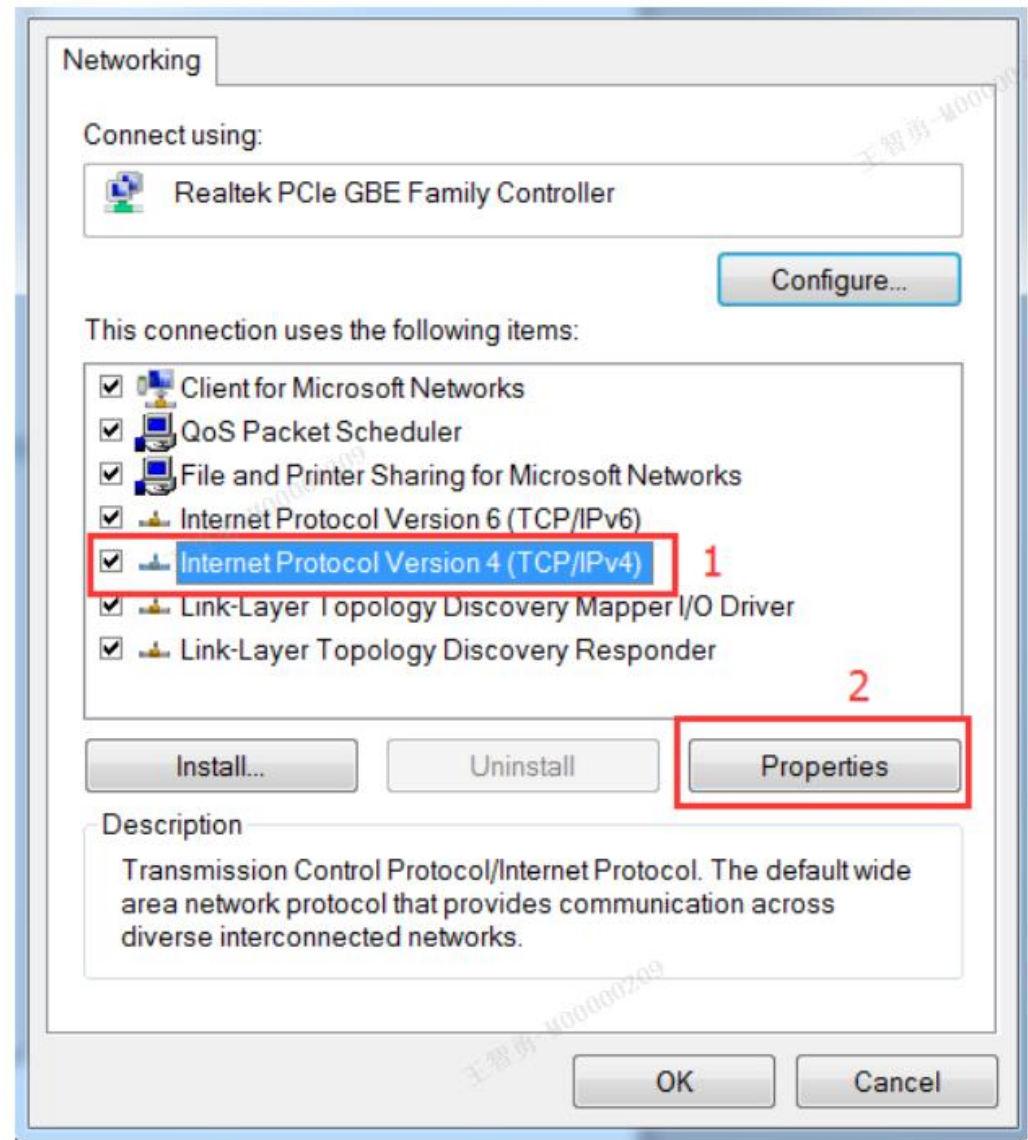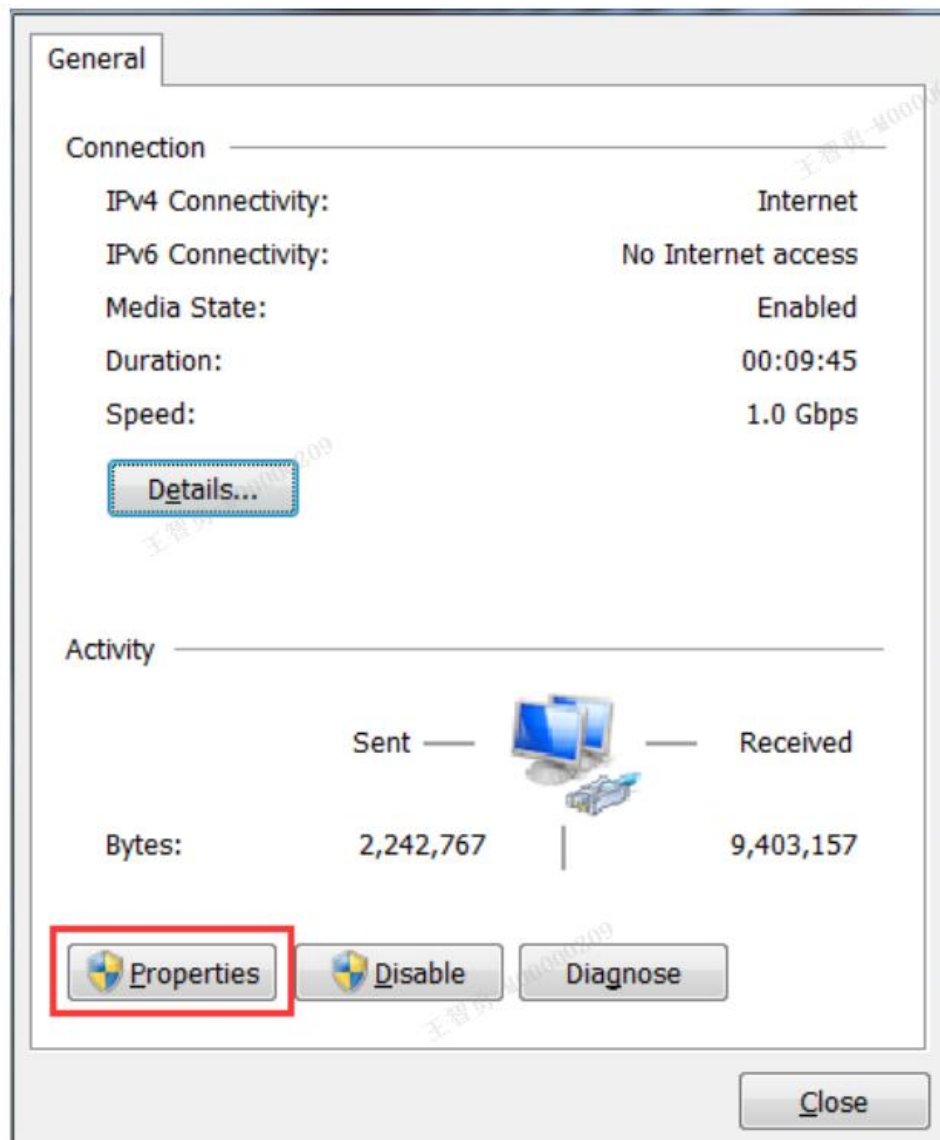
Step2
- Set WEB
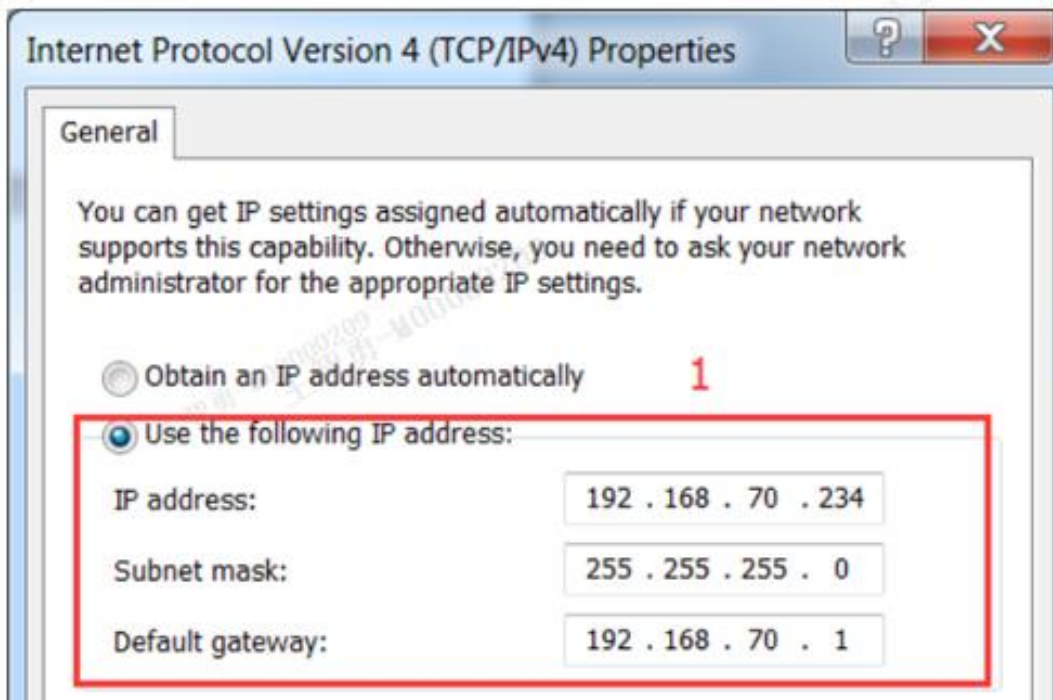
Step3
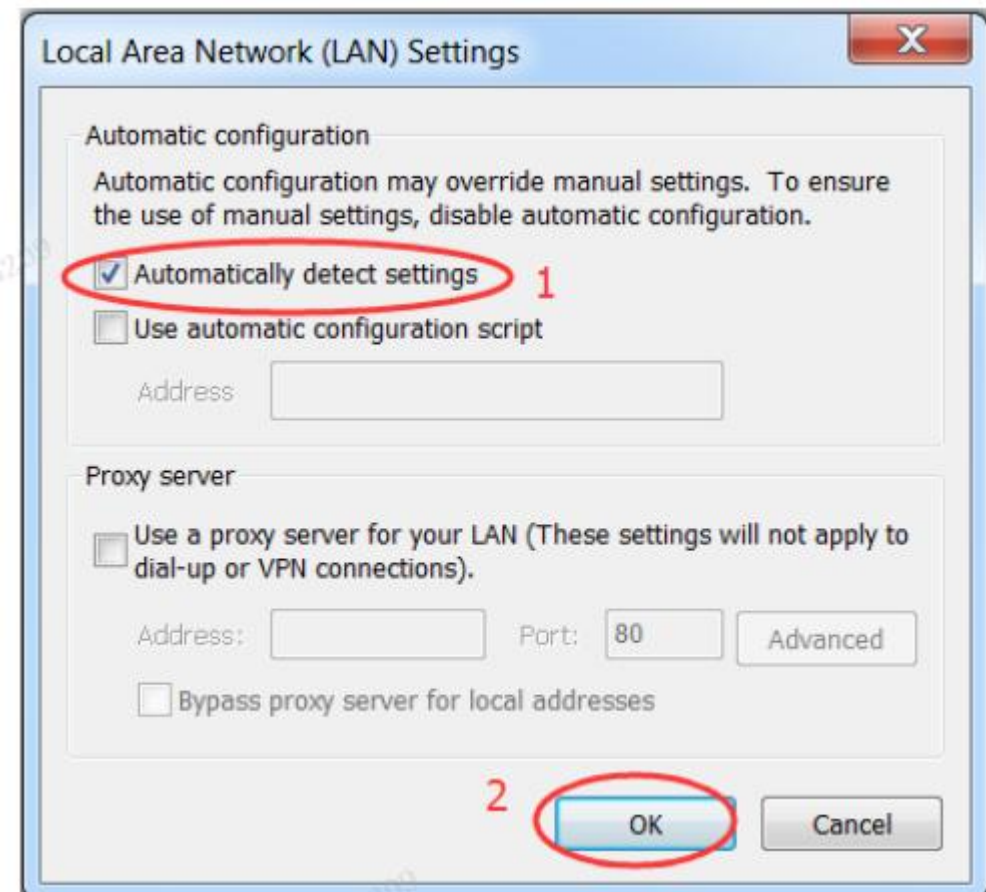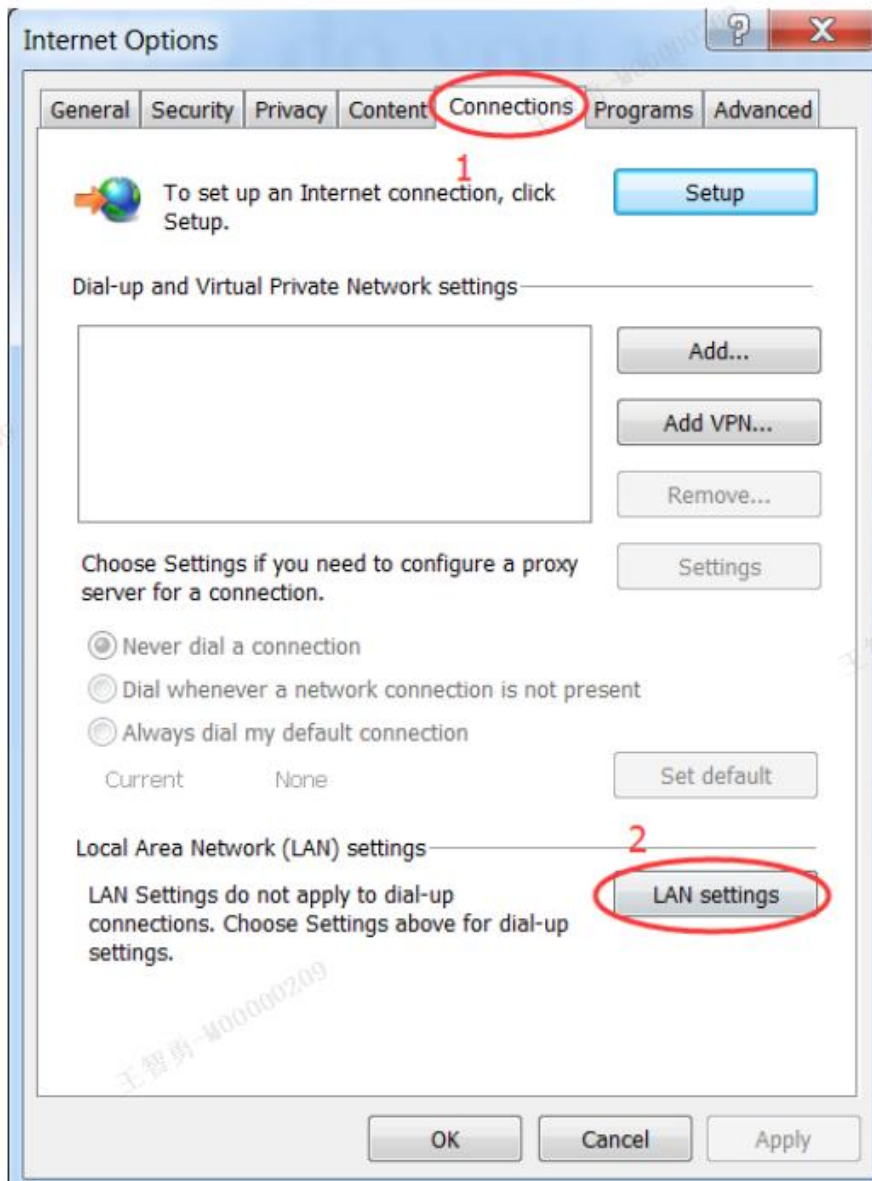- Connect Monitor and PC
- Log in WEB

WEB Connect-2

General
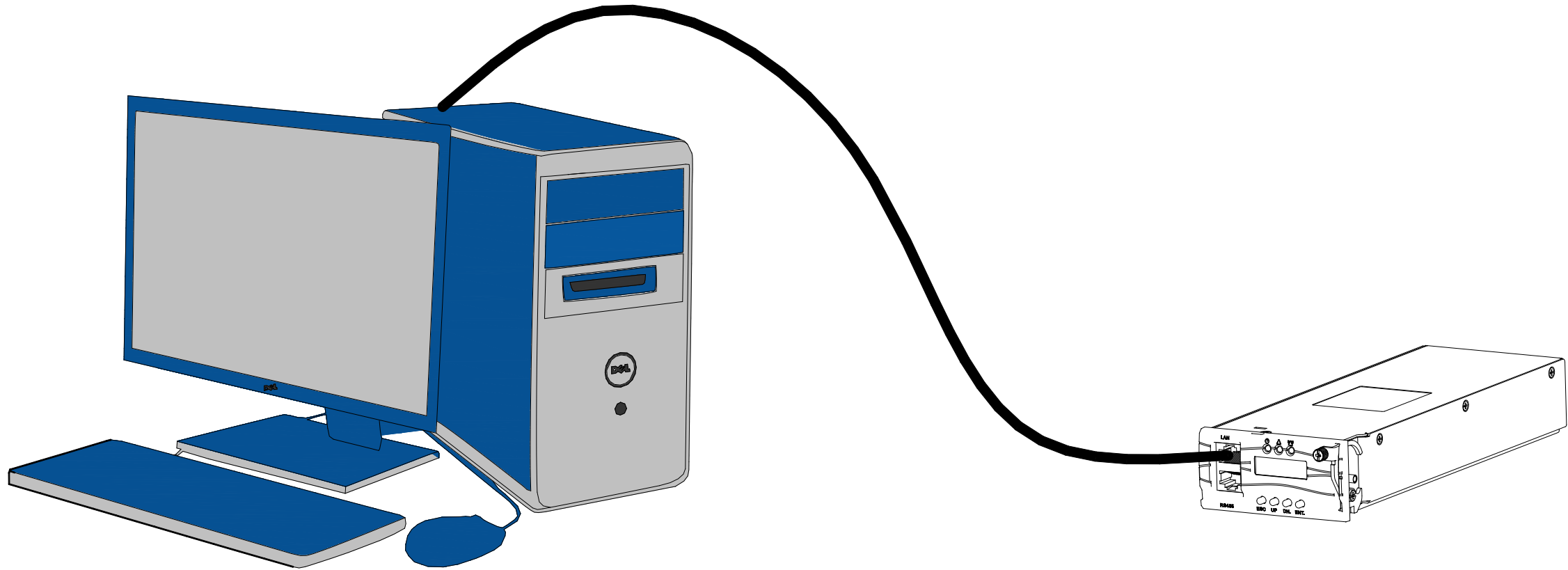
Connection

IPv4 Connectivity:	Internet
IPv6 Connectivity:	No Internet access
Media State:	Enabled
Duration:	00:09:45
Speed:	1.0 Gbps

Details...

Activity

Sent — Received

Bytes: 2,242,767 | 9,403,157

[Properties] Disable Diagnose

Close

Networking

Connect using:

Realtek PCIe GBE Family Controller

Configure...

This connection uses the following items:

☑ Client for Microsoft Networks
☑ QoS Packet Scheduler
☑ File and Printer Sharing for Microsoft Networks
☑ Internet Protocol Version 6 (TCP/IPv6)
☑ Internet Protocol Version 4 (TCP/IPv4)   1
☑ Link-Layer Topology Discovery Mapper I/O Driver
☑ Link-Layer Topology Discovery Responder

2

Install...   Uninstall   Properties

Description

Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

OK   Cancel

WEB Connect-3

Internet Protocol Version 4 (TCP/IPv4) Properties

General

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically   **1**

● Use the following IP address:

IP address: 192 . 168 . 70 . 234

Subnet mask: 255 . 255 . 255 . 0

Default gateway: 192 . 168 . 70 . 1

➢ If the monitor IP address is 192.168.70.2，the computer IP address should set to 192.168.70.X, where X represents any number from 3 to 254;

Note：The monitoring module and the computer must be in the same ip address segment，but should set different ip address.

➢ the subnet mask, default gateway settings are as left picture;

WEB Connect-4

Internet Options

General | Security | Privacy | Content | **Connections** | Programs | Advanced

1

To set up an Internet connection, click Setup.   [Setup]

Dial-up and Virtual Private Network settings

[Add...]
[Add VPN...]
[Remove...]

Choose Settings if you need to configure a proxy server for a connection.   [Settings]

◉ Never dial a connection
○ Dial whenever a network connection is not present
○ Always dial my default connection

Current   None   [Set default]

Local Area Network (LAN) settings

2

LAN Settings do not apply to dial-up connections. Choose Settings above for dial-up settings.   [LAN settings]

[OK] [Cancel] [Apply]

Local Area Network (LAN) Settings

Automatic configuration

Automatic configuration may override manual settings. To ensure the use of manual settings, disable automatic configuration.

☑ Automatically detect settings   1
☐ Use automatic configuration script

Address [   ]

Proxy server

☐ Use a proxy server for your LAN (These settings will not apply to dial-up or VPN connections).

Address: [   ]   Port: [80]   [Advanced]

☐ Bypass proxy server for local addresses

2   [OK]   [Cancel]

WEB Connect-5

WEB Connect-6

Windows Security

The server 192.168.70.2 at Access to controller requires a username and password.

Warning: This server is requesting that your username and password be sent in an insecure manner (basic authentication without a secure connection).

admin — User name: admin

Password — Password: 654321

☐ Remember my credentials

OK   Cancel

Main interface introduction

Major Parameters

Parameter Menu

Main menu

Major Parameters

DC Voltage: 23.9V	Load Curr: 0A	Batt Curr: 1.2A	Battery Mode: Float	Alarm State: Major

Display bus bar DC voltage

Display total load current

Display real-time battery current. The current is positive when the battery is charging, and negative when the battery is discharging.

Charge state：Float——float charge，Boost——boost charge

Display the alarm status of the system:

➤ If the system has a serious alarm, which is displayed as red   'Major'

➤ If the system has a normal alarm, which is displayed as orange   'Minor'

➤ If the system has no alarm, which is displayed as yellow   'Normal'

If need to know the specific alarm information of the system, check the Active Alarm menu under the Alarm menu

Main menu

This page is a navigation page for important parameters. Through this page, can select the display, view, and settings of various parameters of the system.

- Input
- Diesel
- DC
- Modules
- Battery
  - Charge
  - LVD
  - Test
  - Temperature
  - BMS/BCM
- ECO
- Communication
- Alarm
  - Active Alarm
  - History Alarm
  - History Data Log
  - Battery Log
  - Alarm Config
- System
- Up/Download

Input menu-1

AC Input Information

AC-L1 Volt: ---V	AC-L2 Volt: ---V	AC-L3 Volt: ---V	AC Frequency: ---Hz

AC Input Settings

AC Over Volt: 280V		AC Under Volt: 180V		Phase Loss Volt: 80V		AC Input Type: PH-3	
	Set		Set		Set	PH-1 ▾	Set

PV Input Information

PV Input Voltage: ---V

PV Input Settings

Solar Input Over Vol: 440V		Solar Input Under Vol: 110V	
	Set		Set

MPPT input overvoltage and undervoltage setting

AC input over-voltage alarm threshold setting and system single-phase and three-phase input selection

Show AC input phase voltage

DG menu-1

Diesel Capacity Information

Diesel Capacity: ---- L	Diesel Voltage: ---- V

Diesel Capacity Settings

Level Total Num Setting: 0		Diesel Capacity Level: Zero		Diesel Voltage Setting: 0 V		Diesel Capacity Setting: 0 L	
	Set	Zero ▾	Set		Set		Set
Diesel Full Capacity: 100 L		Reset Diesel Capacity Settings:		Diesel Capacity High: 90 %		Diesel Capacity Low: 10 %	
	Set		Reset		Set		Set
Zero Position: 0V-0L		Full Position: 5V-100L		Lev1: --V- --L		Lev2: --V- --L	
Lev3: --V- --L		Lev4: --V- --L		Lev5: --V- --L		Lev6: --V- --L	
Lev7: --V- --L		Lev8: --V- --L		Lev9: --V- --L		Lev10: --V- --L	
Lev11: --V- --L		Lev12: --V- --L		Lev13: --V- --L		Lev14: --V- --L	
Lev15: --V- --L		Lev16: --V- --L		Lev17: --V- --L		Lev18: --V- --L	

For oil tanks with irregular shapes, the voltage sampling value of the oil level sensor and the oil volume cannot be proportional to the full range. Through this area, the fuel tank capacity and the sampling voltage of the liquid level sensor can be set in sections. Up to 18 segments can be set

Display current fuel volume and oil sensor voltage.

DG menu-2

Diesel Capacity Information

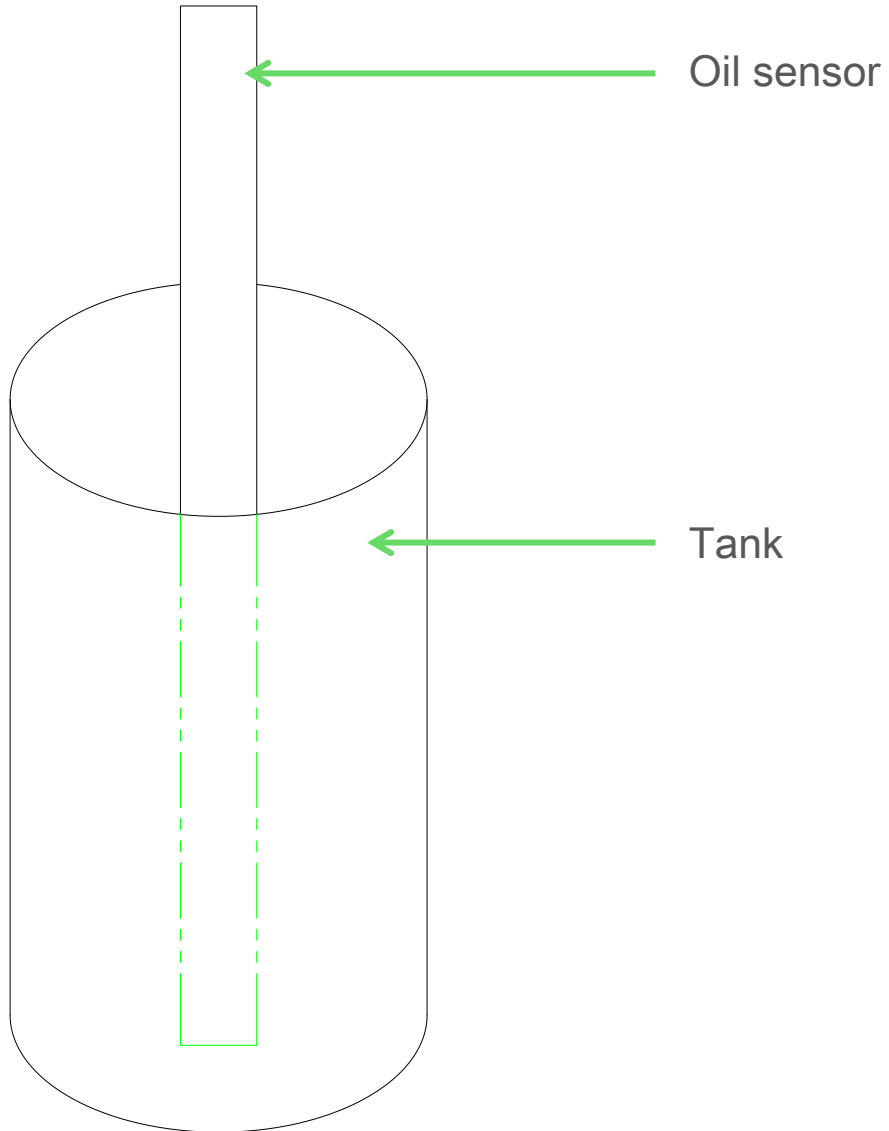|	
Diesel Capacity: ---- L	Diesel Voltage: ---- V

Diesel Capacity Settings

Level Total Num Setting: 0		Diesel Capacity Level: Zero		Diesel Voltage Setting: 0 V		Diesel Capacity Setting: 0 L	
	Set	Zero ▾	Set		Set		Set
Diesel Full Capacity: 100 L		**Reset Diesel Capacity Settings:**		**Diesel Capacity High: 90 %**		**Diesel Capacity Low: 10 %**	
	Set		Reset		Set		Set
Zero Position: 0V-0L		Full Position: 5V-100L		Lev1: --V- --L		Lev2: --V- --L	
Lev3: --V- --L		Lev4: --V- --L		Lev5: --V- --L		Lev6: --V- --L	
Lev7: --V- --L		Lev8: --V- --L		Lev9: --V- --L		Lev10: --V- --L	
Lev11: --V- --L		Lev12: --V- --L		Lev13: --V- --L		Lev14: --V- --L	
Lev15: --V- --L		Lev16: --V- --L		Lev17: --V- --L		Lev18: --V- --L	

Fuel tank fuel level high and low alarm threshold settings

To set maximum fuel quantity

Reset DG capacity settings

DG menu-3

Diesel Capacity Information

Diesel Capacity: ---- L	Diesel Voltage: ---- V

Diesel Capacity Settings

Level Total Num Setting: 0	Diesel Capacity Level: Zero	Diesel Voltage Setting: 0 V	Diesel Capacity Setting: 0 L
[____] Set	Zero ▾ [____] Set	[____] Set	[____] Set
Diesel Full Capacity: 100 L	**Reset Diesel Capacity Settings:**	**Diesel Capacity High: 90 %**	**Diesel Capacity Low: 10 %**
[____] Set	Reset	[____] Set	[____] Set
Zero Position: 0V-0L	Full Position: 5V-100L	Lev1: --V- --L	Lev2: --V- --L
Lev3: --V- --L	Lev4: --V- --L	Lev5: --V- --L	Lev6: --V- --L
Lev7: --V- --L	Lev8: --V- --L	Lev9: --V- --L	Lev10: --V- --L
Lev11: --V- --L	Lev12: --V- --L	Lev13: --V- --L	Lev14: --V- --L
Lev15: --V- --L	Lev16: --V- --L	Lev17: --V- --L	Lev18: --V- --L

Display the corresponding relationship between the voltage of each segment of the oil level sensor and the oil level of the fuel tank
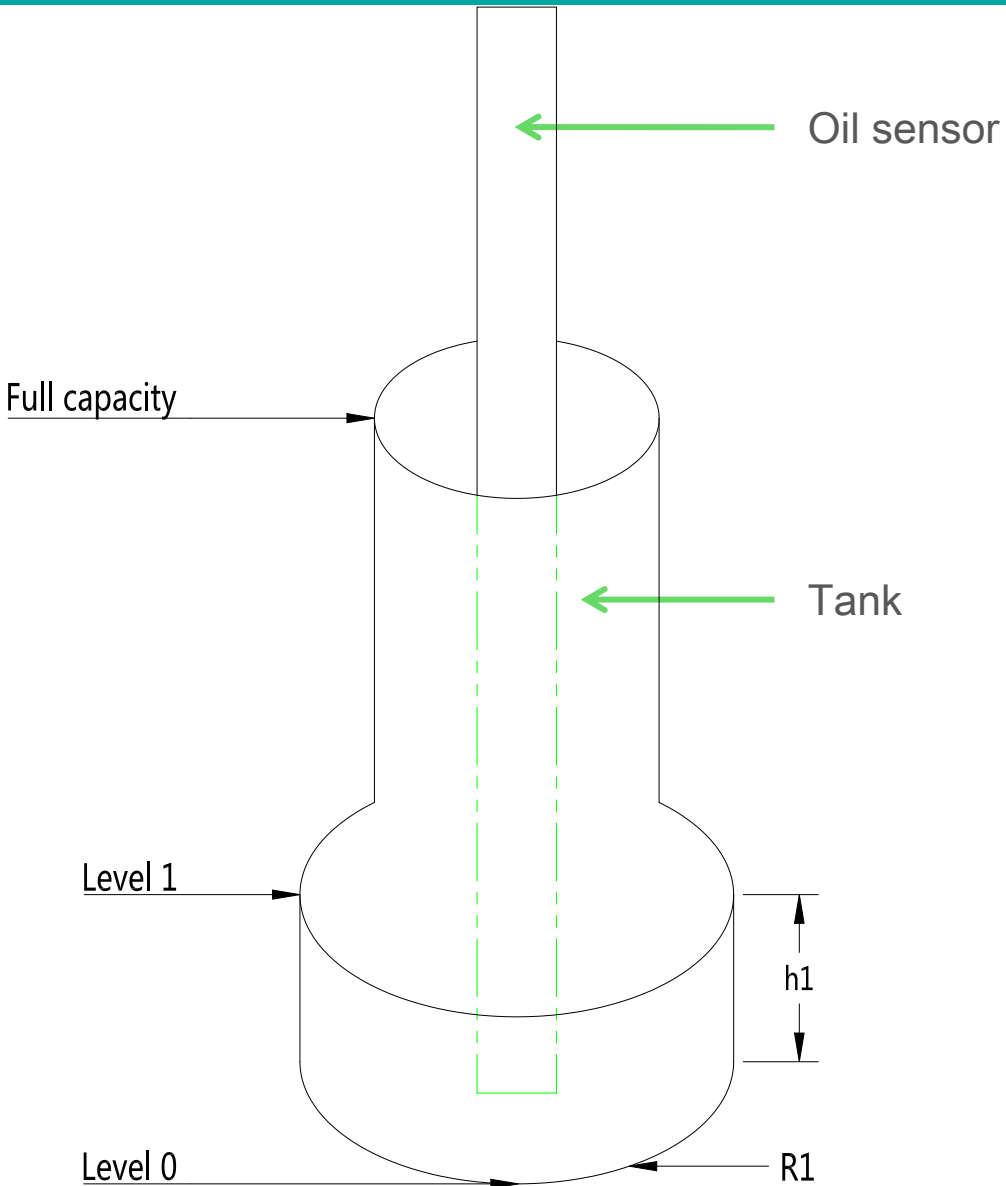
DG menu-4

Oil sensor

Tank

For a fuel tank with a regular structure, if the fuel volume has a linear relationship with the fuel level detector voltage, as shown on the left, the settings are as follows:

- **Level Total Num setting**: 0
- **Diesel Capacity Level**: Zero
- **Diesel Voltage Setting**: Zero
- **Diesel Capacity Setting**: Zero

DG menu-5

For an irregularly shaped fuel tank, the fuel volume of the fuel tank and the voltage of the fuel level detector are not linearly related, as shown on the left, the settings are as follows:

➢ **Level Total Num setting**: 1

➢ **Diesel Capacity Level**: Zero
➢ **Diesel Voltage Setting**: Zero
➢ **Diesel Capacity Setting**: Zero

➢ **Diesel Capacity Level**: Level 1
➢ **Diesel Voltage Setting**: $\pi(R1^2*h1)$/Diesel Full Capacity*5
➢ **Diesel Capacity Setting**: $\pi R1^2*h1$

DG menu-6

Diesel Generator Information

DG1 Run Status: **Stopped**   DG2 Run Status: **Stopped**

Display the operating status of the DG. The operating status of the DG is transmitted to the monitoring through the DI port of the monitoring module from DI/DO interface on subrack

Diesel Generator Settings

DG1 Status: None		DG1 Start/Stop: None		DG2 Status: None		DG2 Start/Stop: None	
None ▾	Set	None ▾	Set	None ▾	Set	None ▾	Set
Voltage Controlled DG Start: Enable		**Start DG On: 47.5V**		**Current Controlled DG Stop: Enable**		**Stop DG On: 10A**	
Enable ▾	Set		Set	Enable ▾	Set		Set

DG1 operating status feedback port setting — Setting of DO port for start-stop signal of DG1

Low busbar voltage start DG enable setting

DG2 operating status feedback port setting

Busbar voltage start DG threshold setting

Current stop DG enable setting

Setting of DO port for start-stop signal of DG2

Current stop DG operating threshold setting

DG menu-8

Capacity Controlled DG Start: Disable	Start DG On: 50%	Stop DG On: 95%	Daily DG Start: Disable
Enable ▾ Set	[ ] Set	[ ] Set	Enable ▾ Set

Battery remaining capacity start oil engine enable setting

Threshold of remaining battery capacity of start DG

Stop the battery remaining capacity threshold of the DG

Start the DG enable setting on a daily basis

DG menu-9

Daily Start DG On: 17:00	Stop Delay: 5min	Monthly DG Start: Enable	Monthly Start Day1: 1
Hour [ ] Min [ ] [Set]	[ ] [Set]	Enable ⌄ [Set]	[ ] [Set]

Monthly Start Day2: 10	Monthly Start Day3: 20	Monthly Start Time: 21:00	Monthly Charge Duration Time: 12H
[ ] [Set]	[ ] [Set]	Hour [ ] Min [ ] [Set]	[ ] [Set]

Low Fuel Controlled DG Stop: Disable	DG Limit Power: Disable	DG Max Power: 21000 W
Enable ⌄ [Set]	Enable ⌄ [Set]	[ ] [Set]

Start theDG parameter setting on a daily basis

DG power limit enable setting

Low oil level start DG enable setting

When the engine stop condition is reached, monitor the delay time of issuing the engine stop command

DG menu-10

Daily Start DG On: 17:00		Stop Delay: 5min		Monthly DG Start: Enable		Monthly Start Day1: 1	
Hour [ ] Min [ ]	[Set]	[ ]	[Set]	[Enable ▼]	[Set]	[ ]	[Set]

Monthly Start Day2: 10		Monthly Start Day3: 20		Monthly Start Time: 21:00		Monthly Charge Duration Time: 12H	
[ ]	[Set]	[ ]	[Set]	Hour [ ] Min [ ]	[Set]	[ ]	[Set]

Low Fuel Controlled DG Stop: Disable		DG Limit Power: Disable		DG Max Power: 21000 W	
[Enable ▼]	[Set]	[Enable ▼]	[Set]	[ ]	[Set]

Start the DG settings on a monthly basis

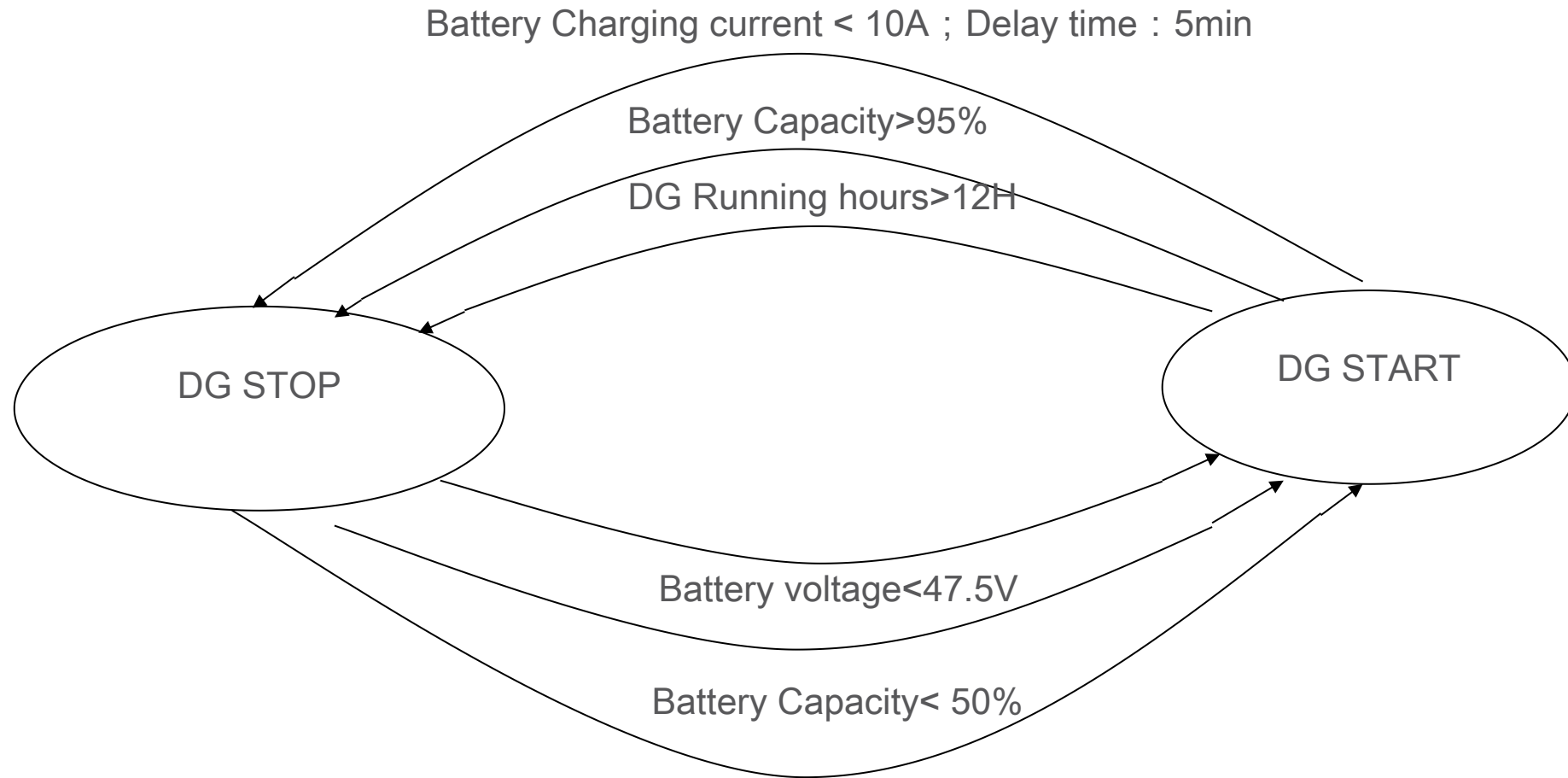After starting the diesel engine monthly, the constant charging time of the DG

DG menu-11

Daily Start DG On: 17:00		Stop Delay: 5min		Monthly DG Start: Enable		Monthly Start Day1: 1	
Hour [ ] Min [ ]	Set	[ ]	Set	Enable ▾	Set	[ ]	Set

Monthly Start Day2: 10		Monthly Start Day3: 20		Monthly Start Time: 21:00		Monthly Charge Duration Time: 12H	
[ ]	Set	[ ]	Set	Hour [ ] Min [ ]	Set	[ ]	Set

Low Fuel Controlled DG Stop: Disable		DG Limit Power: Disable		DG Max Power: 21000 W	
Enable ▾	Set	Enable ▾	Set	[ ]	Set

The maximum power setting of the DG

Note: In order to prevent the engine from being unable to start due to excessive load power, the maximum power of the engine must be set. The monitoring module restricts the output power of the rectifier module to not greater than the maximum power of the diesel engine through the current limit command.

DG menu-12

Battery Charging current < 10A；Delay time：5min

Battery Capacity>95%

DG Running hours>12H

DG STOP

DG START

Battery voltage<47.5V

Battery Capacity< 50%

➢ DG Daily Running Time Arrive: 17:00

➢ DG Monthly Running Time Arrive：1/10/20 21:00

DC menu-1

DC Information

Load 1 Curr: 0A	Load 1 Insant Energy: 0kWh	Load 1 Today Energy: 0kWh	Load 1 Total Energy: 0kWh
Load 2 Curr: 0A	Load 2 Insant Energy: 0kWh	Load 2 Today Energy: 0kWh	Load 2 Total Energy: 0kWh
Load 3 Curr: 0A	Load 3 Insant Energy: 0kWh	Load 3 Today Energy: 0kWh	Load 3 Total Energy: 0kWh
Load 4 Curr: ---A	Load 4 Insant Energy: ---kWh	Load 4 Today Energy: ---kWh	Load 4 Total Energy: ---kWh
Batt Curr: 1A	Batt Insant Energy: 0kWh	Batt Today Energy: 0kWh	Batt Total Energy: 0kWh
Batt 1 Mid V: ---V	Batt 2 Mid V: ---V	Batt 3 Mid V: ---V	Batt 4 Mid V: ---V

Load, battery current and energy consumption statistics

Battery pack midpoint voltage detection value

DC menu-2

DC Over Volt: 58.5V		DC Under Volt: 47V	
[input]	Set	[input]	Set
Batt Mid Volt: No		Battery Mid-Voltage Difference: 2V	
Yes ▼	Set	[input]	Set
Heavy Load Ratio : 100%		Load Shunt Current : 200A	Load Shunt Volt : 25mV
[input]	Set	[input] Set	[input] Set
Load 1 Shunt: Yes		Load 2 Shunt: Yes	
Yes ▼	Set	Yes ▼	Set
Load 3 Shunt: No		Load 4 Shunt: No	
Yes ▼	Set	Yes ▼	Set

System output over/under voltage point setting

Load current overcurrent alarm coefficient setting

Battery midpoint voltage enable setting: whether to detect the battery midpoint voltage

Whether the load branch has a shunt setting

DC menu-3

DC Settings

DC Over Volt: 58.5V		DC Under Volt: 47V	
	Set		Set
Batt Mid Volt: No		**Battery Mid-Voltage Difference: 2V**	
Yes ▼	Set		Set
Heavy Load Ratio : 100%		**Load Shunt Current : 200A**	**Load Shunt Volt : 25mV**
	Set		Set		Set
Load 1 Shunt: Yes		**Load 2 Shunt: Yes**	
Yes ▼	Set	Yes ▼	Set
Load 3 Shunt: No		**Load 4 Shunt: No**	
Yes ▼	Set	Yes ▼	Set

Battery cell voltage unbalance alarm threshold setting

Load shunt parameter setting

DC menu-4

DC Calibration

System Voltage Calibration Coefficient: k = 1.004			Reset Calibration Coefficient:		
System Voltage:		Set	Calibration Type: System Voltage ▾		Set
Battery 1 Mid-Point Voltage Calibration Coefficient: k = 1.006			Battery 2 Mid-Point Voltage Calibration Coefficient: k = 1.004		
Mid-Point Voltage 1:		Set	Mid-Point Voltage 2:		Set
Battery 3 Mid-Point Voltage Calibration Coefficient: k = 1			Battery 4 Mid-Point Voltage Calibration Coefficient: k = 1		
Mid-Point Voltage 3:		Set	Mid-Point Voltage 4:		Set
Load1 Current Calibration Coeff: y = 1x0			Load2 Current Calibration Coeff: y = 1x0		
Load1 Current Value:		Set	Load2 Current Value:		Set
Load3 Current Calibration Coeff: y = 1x0			Load4 Current Calibration Coeff: y = 1x0		
Load3 Current Value:		Set	Load4 Current Value:		Set

This page performs calibration settings for some parameters of DC sampling.

Walk-in mode

Output Current
Output Voltage

Float voltage

1/2 Walk-in time   1/2 Walk-in time
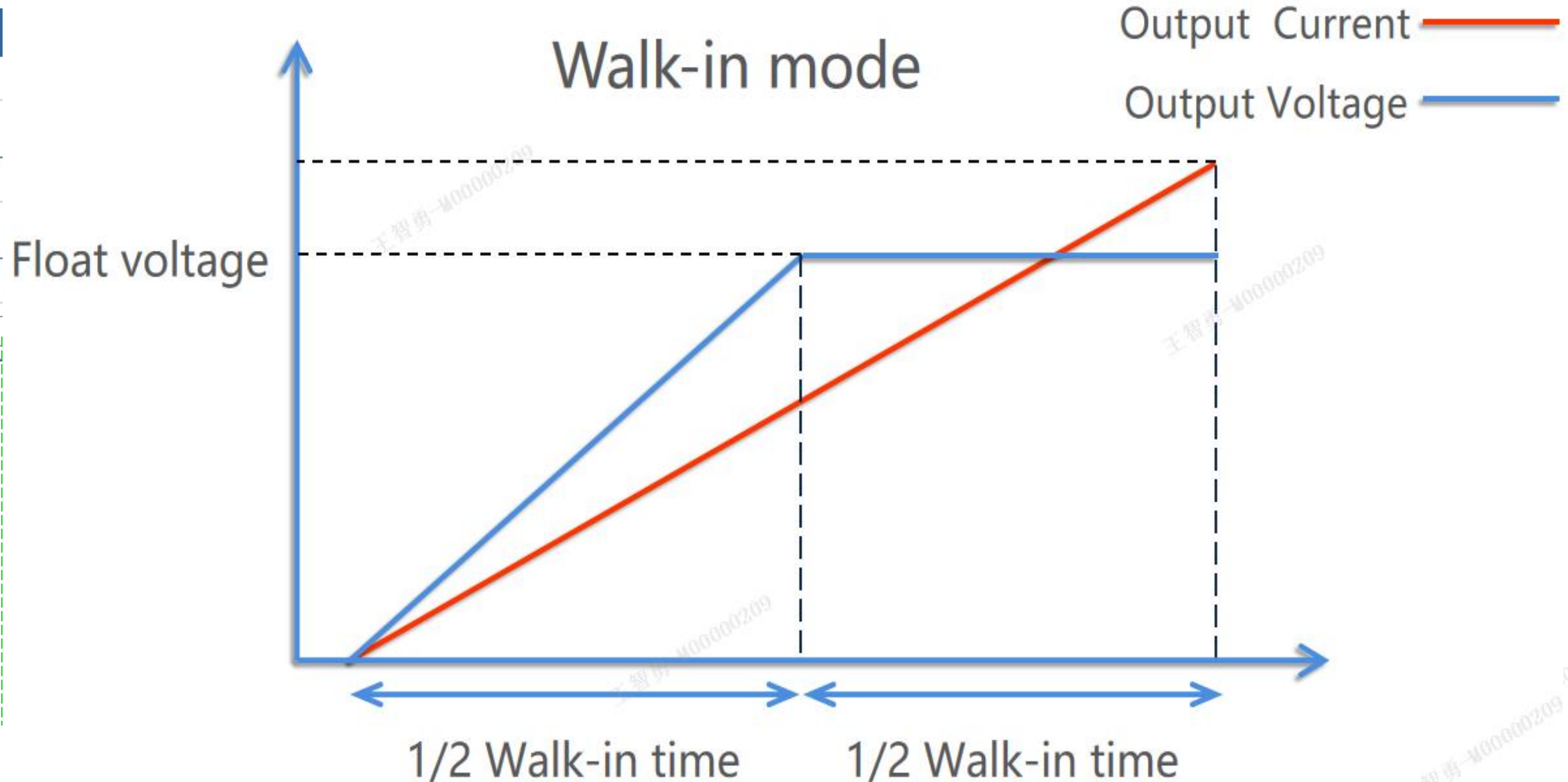
Module menu-1.2

Modules Settings

Sys Control Mode: Auto		Manual Manage Mode:		Rect Slot Number: 8		Solar Slot Number: 4	
Auto ▾	Set	Floating Char ▾	Set		Set		Set
Start Mode: Pocl		**Output Over Volt: 60.5V**		**Start Volt: 42V**		**Rect Current Limit: 122%**	
Walk-In ▾	Set		Set		Set		Set
Default Output Volt: 52V		**MPPT Scan Period: 300s**					
	Set		Set				

Several operating options in manual mode

① Charge mode：You can manually control the system to immediately enter the equal charge, float charge, and battery test；

② LVD control：Manually control the power on and off of the load and battery；

③ DG control：Manually issue the start and stop commands to the DG；

Module menu-1.3

Modules Settings

Sys Control Mode: Auto			Manual Manage Mode:			Rect Slot Number: 8			Solar Slot Number: 4	
Auto ▾		Set	Floating Char ▾		Set			Set		Set
Start Mode: Pocl			Output Over Volt: 60.5V			Start Volt: 42V			Rect Current Limit: 122%	
Walk-In ▾		Set			Set			Set		Set
Default Output Volt: 52V			MPPT Scan Period: 300s							
		Set			Set					

Module output voltage overvoltage alarm point

MPPT tracking cycle setting

Module menu-1.4

Modules Settings

Sys Control Mode: Auto		Manual Manage Mode:		Rect Slot Number: 8		Solar Slot Number: 4	
Auto ⌄	Set	Floating Char ⌄	Set	[ ]	Set	[ ]	Set
Start Mode: Pocl		Output Over Volt: 60.5V		Start Volt: 42V		Rect Current Limit: 122%	
Walk-In ⌄	Set	[ ]	Set	[ ]	Set	[ ]	Set
Default Output Volt: 52V		MPPT Scan Period: 300s					
[ ]	Set	[ ]	Set				

Number of rectifier module slots: Set according to the number of rectifier module slots in the system.

Note: It does not mean that there are several rectifier modules installed in the system.

Module output voltage: monitor the real-time voltage limit value sent to the module, and the output voltage of the rectifier module cannot exceed this value.

Module menu-1.5

Modules Settings

Sys Control Mode: Auto		Manual Manage Mode:		Rect Slot Number: 8		Solar Slot Number: 4	
Auto ▾	Set	Floating Char ▾	Set	[ ]	Set	[ ]	Set
Start Mode: Podl		**Output Over Volt: 60.5V**		**Start Volt: 42V**		**Rect Current Limit: 122%**	
Walk-In ▾	Set	[ ]	Set	[ ]	Set	[ ]	Set
Default Output Volt: 52V		**MPPT Scan Period: 300s**					
[ ]	Set	[ ]	Set				

MPPT module slot number: set according to how many rectifier module slots in the system.

Note: It does not mean that there are several MPPT modules installed in the system.

Module current limit: the output current limit value issued by the monitoring module to the module, which is set as a percentage of the module's rated current.

Module menu-2

Module Information

Module No.	Vin/V	Vout/V	Iout/A	Power/kW	Temp/°C	Working Time/H	On/Off Status	Serial Number	On/Off Control
#1	---	---	---	---	---	---	---	---	On ▾ / Set
#2	---	---	---	---	---	---	---	---	On ▾ / Set
#3	---	---	---	---	---	---	---	---	On ▾ / Set

Module real-time input voltage

Module real-time output voltage

Module real-time output current

Module real-time output power

Module air inlet temperature

Module running time: the module starts timing from the factory, the total running time

On/off status

The module is individually powered on and off. Operable in manual mode, invalid in automatic mode

Module barcode and software version

Charging mode transition

Cycle Boost is enabled and
Battery state is normal and
Cycle Boost period arrives

Auto Boost is enabled and
Battery state is normal and
Battery current > Float To Boost Curr(for 3mins)

Auto Boost is enabled and
Battery state is normal and
Battery SOC < Float To Boost Cap

Float Charge

Boost Charge

Const Boost Charge Time-up

Const Boost
Charge

Battery current <
Boost To Float Curr

Cycle Boost is disabled and
Auto Boost is disabled

Duration of Cycle Boost Charge > Cyc Boost Time

Duration of Boost Charge > Boost Limit Time

Charge menu-1

Battery Groups Infomation

Batt 1 Curr: 0A	Batt 2 Curr: --A
Batt 1 SOC: 100%	Batt 2 SOC: --%

Display the real-time charging current of the battery and the remaining battery capacity

Charge menu-2

Battery Charge Settings

Float Voltage: 54.5V		Boost Voltage: 56V	
	Set		Set
Charge Current Limit: 0.1C10		**Solar Delta Volt: 1V**	
	Set		Set
Batt Capacity: 100Ah		**Boost Charge Enable: Enable**	
	Set	Enable	Set

Float charge voltage setting。

For Lead-acid battery， FC voltage and boost voltage have different voltage； for lithium battery fc voltage=boost charge voltage

Battery charging current limit coefficient setting: battery charging current cannot be greater than $0.1C_{10}$

Charge menu-3

Battery Charge Settings

Float Voltage: 54.5V		Boost Voltage: 56V	
	Set		Set
Charge Current Limit: 0.1C10		Solar Delta Volt: 1V	
	Set		Set
Batt Capacity: 100Ah		Boost Charge Enable: Enable	
	Set	Enable ⌄	Set

Boost charge voltage setting

Battery capacity setting: If all batteries have the same capacity, set the capacity here as the number of battery packs x the capacity of a single battery; if any group of batteries have different capacities, set it to the battery capacity with the smallest battery capacity.

Overcharge alarm current coefficient setting

Boot charge enable setting

Charge menu-4

Cyc Boost Period: 2400hour	Cyc Boost Enable: Enable
[ ] Set	Enable ⌄ Set
Cyc Boost Time: 240min	Boost Limit Time: 1080min
[ ] Set	[ ] Set

To set cyclic boost charging. 'Per.Boost Period' means interval time between twice timing boost charge. Battery charging voltage is 'Boost charge voltage' Setting value. Charge time is 'Per.Boost Time' setting value

During boost charge, monitor module will force system turns to float charge to secure system when boost charge time reaches to the value of 'Boost protect time'

Charge menu-5

Boost To Float Curr: 0.01C10		Float To Boost Curr: 0.06C10	
	Set		Set
Float To Boost Cap: 80%		Const Boost Time: 180min	
	Set		Set

Setting of boost charge to float charge current value

Floating charge to boost charge capacity setting

Floating charge to average charge current value setting

Steady state equalization time setting

Batt 1 Shunt: Yes		Batt 2 Shunt: No	
Yes ▾	Set	Yes ▾	Set

Batt Fuse Num: 2		Batt Shunt Current: 400A		Batt Shunt Volt: 25mV	
1 ▾	Set		Set		Set

If the subrack has battery shunt, set to enable

Battery fuse group number setting: the default setting is 1 group,when the battery MCB trips, and the battery fuse 1 broken alarm is reported.

Battery shunt parameter setting

Charge menu-7

Battery Current Calibration

Batt1 Current Calibration Coeff: y =1.008x-1.996			Batt2 Current Calibration Coeff: y = 1.002x-0.394	
Batt1 Actual Current: [ ]		Set	Batt2 Actual Current: [ ]	Set
Reset Calibration Parameter Type: Battery1 Current ▾		Set		

If the battery current sampling is inaccurate, the battery current sampling can be calibrated through this interface:

① Reset battery current sampling coefficient

② Use tools such as clamp meter to measure the current sampling value and enter it into the text box in the figure above. Click on the settings

LVD introduction-1

- **LVD(Low Voltage Disconnect)**
- **LLVD(Load Low Voltage Disconnect)**
- **BLVD(Battery Low Voltage Disconnect)**
- **LVD Voltage and LVD Recovery Voltage can be set**
- **LVD Capacity and LVD Recovery Capacity can be set**
- **LVD Time and LVD Recovery Time can be set**
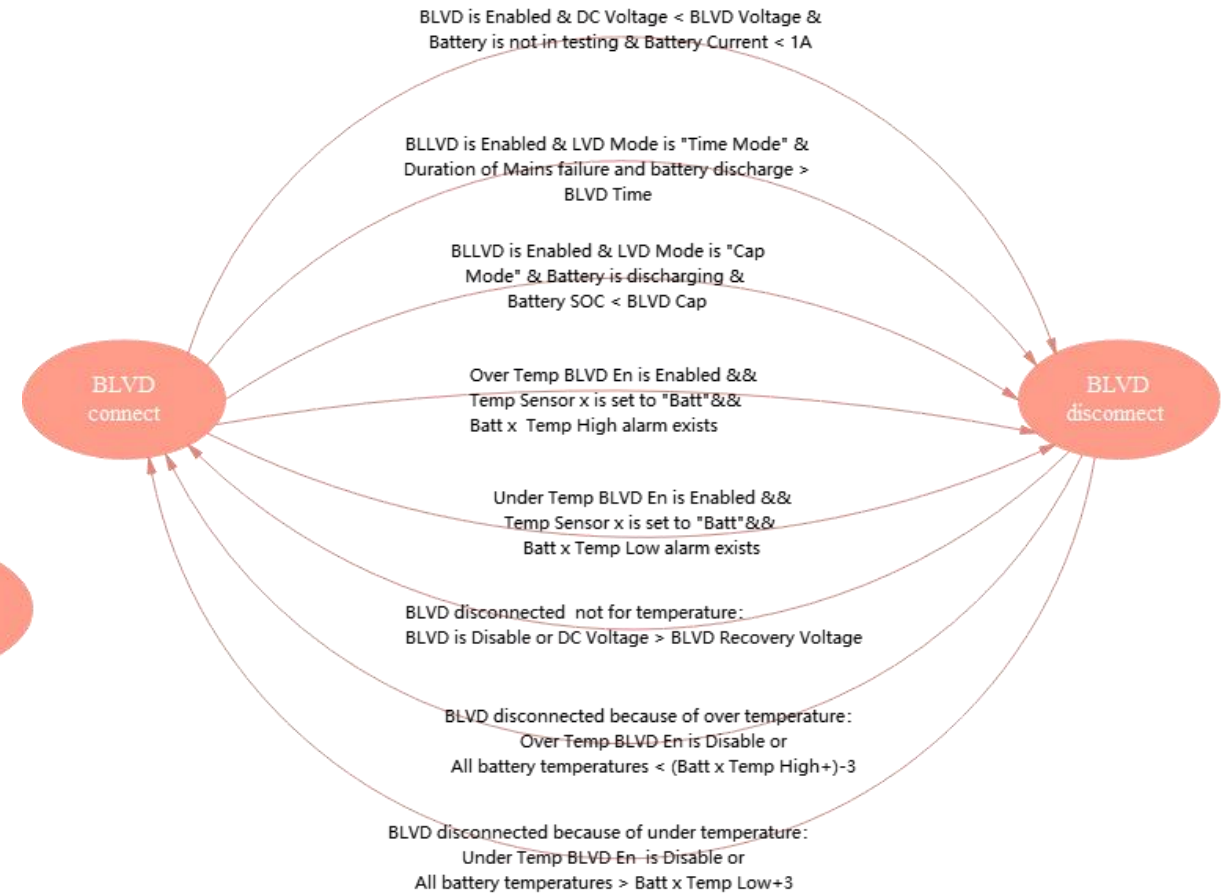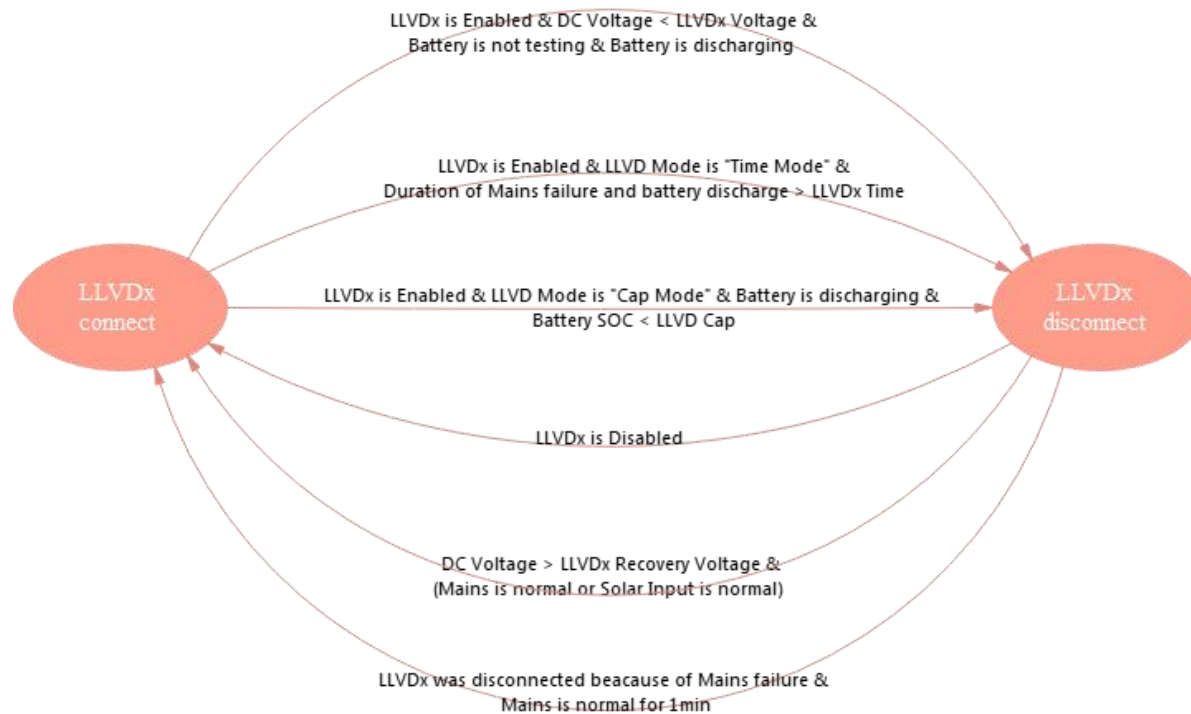
LVD introduction-3
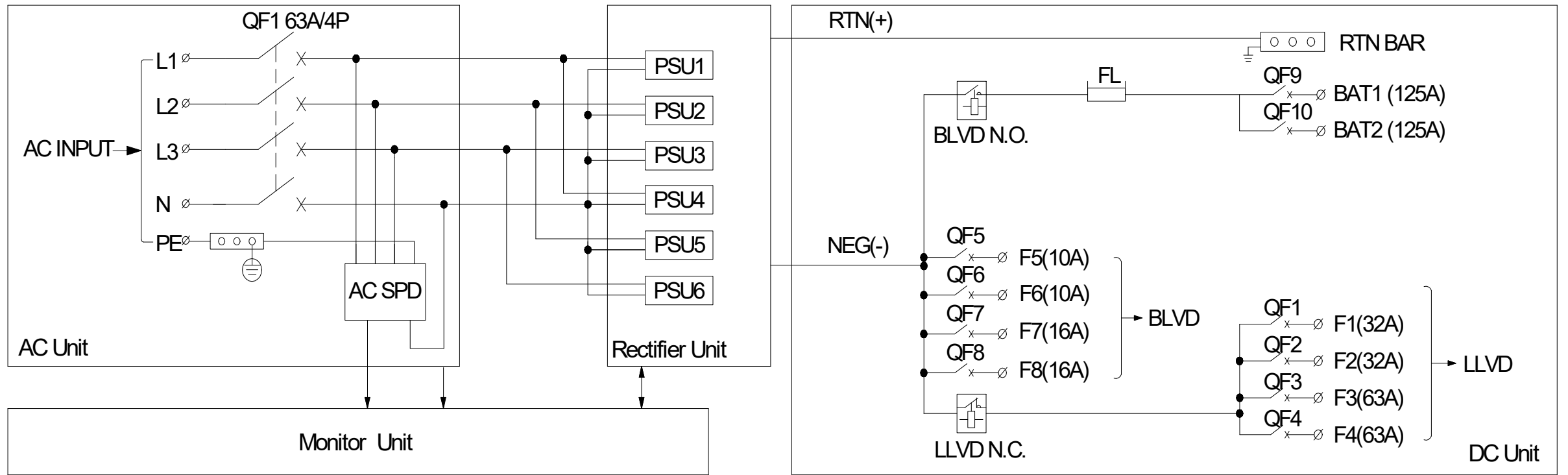
Power System Electrical Schematic Diagram

LVD menu-1

LVD Management			
LVD Mode: Volt Mode	**Over Temp BLVD En: Enable**	**Under Temp BLVD En: Disable**	**BLVD Enable: Enable**
Volt Mode ▾	Set	Enable ▾	Set	Enable ▾	Set	Enable ▾	Set
LLVD 1 Enable: Enable	**LLVD 2 Enable: Enable**	**LLVD 3 Enable: Disable**	**LLVD 4 Enable: Disable**
Enable ▾	Set	Enable ▾	Set	Enable ▾	Set	Enable ▾	Set

BLVD enable setting

BLVD battery high and low temperature

power-on enable setting

LVD mode setting

① Volt Mode：Use the busbar voltage as the LVD power-off criterion

② Time Mode：Use time as the basis for powering off the LVD. Start timing from battery discharge;

③ Cap Mode:：Use the remaining battery capacity as the basis for power-off

LLVD enable setting

LVD menu-2

LVD Voltage Settings

LLVD 1 Volt: 45V		LLVD 2 Volt: 44V		LLVD 3 Volt: 44V		LLVD 4 Volt: 44V	
	Set		Set		Set		Set
LLVD 1 Recovery Volt: 50V		**LLVD 2 Recovery Volt: 50V**		**LLVD 3 Recovery Volt: 50V**		**LLVD 4 Recovery Volt: 50V**	
	Set		Set		Set		Set
BLVD Volt: 43.5V		**BLVD Recovery Volt: 50V**					
	Set		Set				

If the voltage power-off mode is selected, the protection voltage and recovery voltage of each power-off can be set through this interface.

LVD menu-3

LVD Time Settings

LLVD 1 Time: 360min		LLVD 2 Time: 360min		LLVD 3 Time: 360min		LLVD 4 Time: 360min	
	Set		Set		Set		Set

BLVD Time: 480min	
	Set

If select the time power-off module, you can set the power-off time of each channel through this interface.

Note: Discharge from the battery is the starting point for timing.

LVD menu-4

LVD Capacity Settings

LLVD 1 Capacity: 15%		LLVD 2 Capacity: 15%		LLVD 3 Capacity: 15%		LLVD 4 Capacity: 15%	
	Set		Set		Set		Set

BLVD Capacity: 5%	
	Set

If the battery capacity power-off mode is selected, the remaining capacity of each power-off battery can be set through this interface

Battery test introduction

The battery test process allows for the battery to be discharged on-line using the system load. There are three types of battery test:

➢ Manual start and stop stable test or short test.

➢ Automatic stable test, if enabled.

➢ Automatic short test, if enabled.

Battery test screen is submenu of parameter setting screen, mainly used for operator to set battery test of system battery management.

Battery test menu-1

Battery Test Settings

Automatic Testing

| End Test Voltage: 45.2V		End Test Capacity: 70%	
	Set		Set

In the process of battery test, if meet one of the following three conditions, exit the battery test and turn to float charge :

- ➤ Battery voltage reaches to 'End Test Voltage'
- ➤ Battery residual capacity reaches to 'End Test Cap'

Short test introduction

➤ The output voltage of the rectifier is adjusted to the 'End Test Voltage'

➤ BattMaxCurr - BattMinCurr < Batt Curr Imbalance during short test,Short Test is OK else Short Test is FAIL.

➤ End Test Voltage、Short Test Enable、Short Test Period、Short Test Time、Batt Curr Imbalance can be set
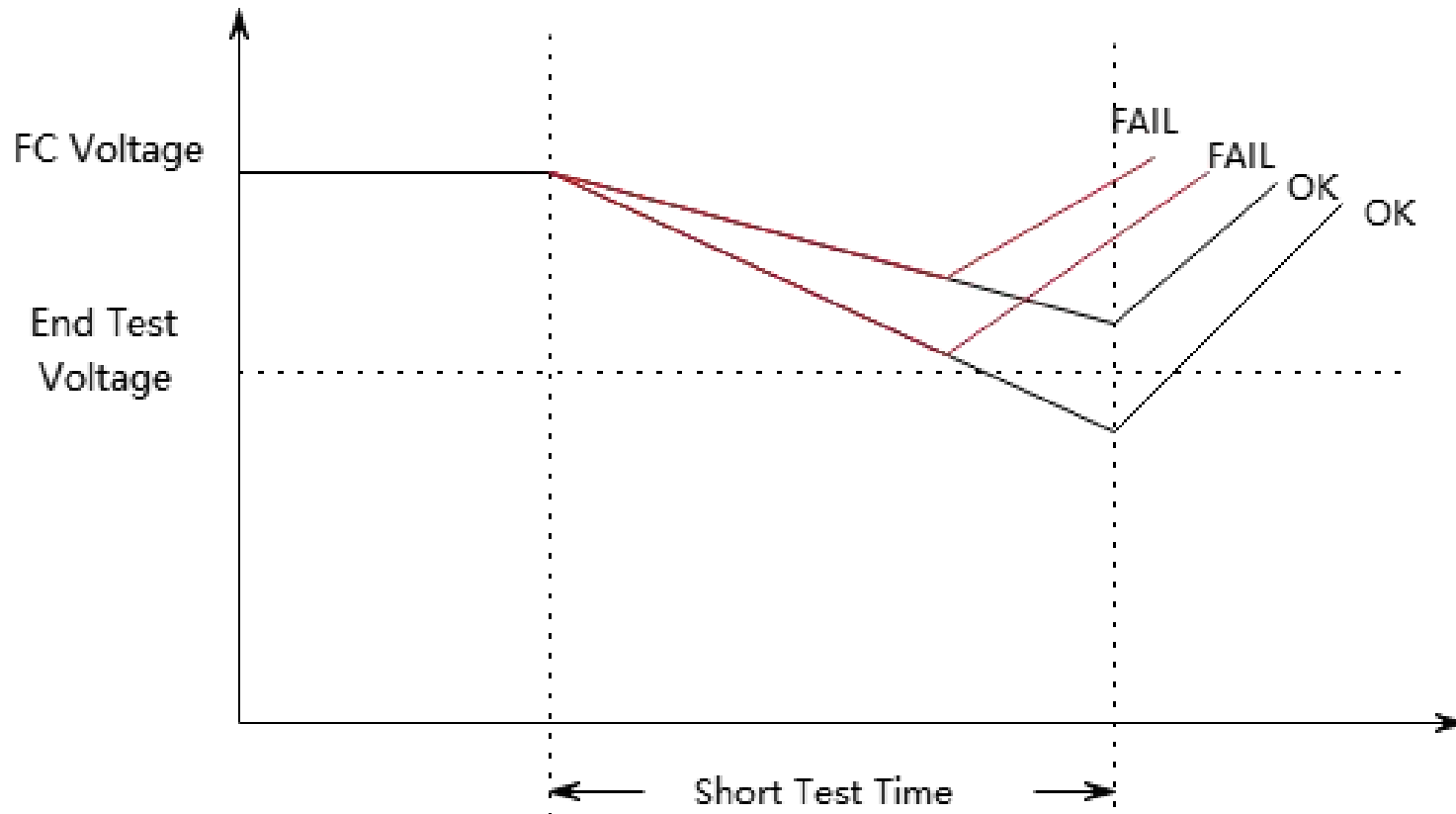
Battery test menu-2

Short Test

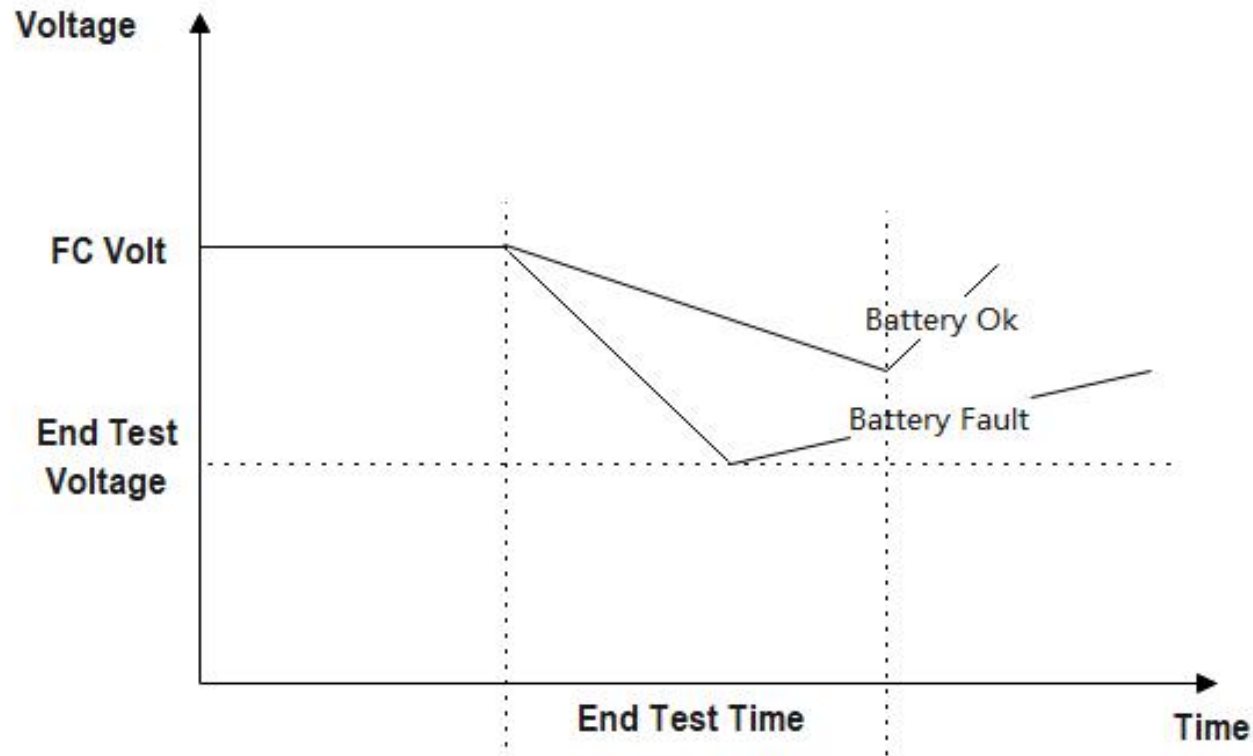| Short Test Enable: Disable		Short Test Period: 720hour	
Enable ▼	Set		Set
Short Test Time: 5min		**Batt Curr Imbalance: 5A**	
	Set		Set

Short test enable setting

Short test time setting

Short test period setting

Short test alarm current setting

Constant current test introduction

➤Stable test mode is recommended in only one battery current system

➤the battery discharge current is limited to 'Stable Test Curr'

➤the battery test fault alarm appear when Stable test is not OK

➤The battery test fault alarm disappears for 5 minutes, and become a historical alarm.

➤Stable Test Curr Can be set

➤stable test period Can be set

➤the duration of stable test period Can be set

Notice: This type of battery test is designed to give an indication only of battery state of health.

Battery test menu-3

Constant Current Test

Batt Test Enable: Disable	Stable Test Current: 0.2C10
Enable ∨ Set	Set
Stable Test Period: 4320hour	End Test Time: 300min
Set	Set

Constant current test enable setting

Constant current test parameter setting

Battery test menu-4

Peak Discharge Test

Peak Discharge: Disable		Peak Period1: 08:00 -- 11:00	
Enable ▼	Set	Hour☐ Min☐ - Hour☐ Min☐	Set
Peak Period2: 14:00 -- 15:00		Peak Period3: 18:00 -- 23:00	
Hour☐ Min☐ - Hour☐ Min☐	Set	Hour☐ Min☐ - Hour☐ Min☐	Set

When set to 'Enable', the system will enable peak battery discharge function. The battery will discharge during the peak period of electricity tariff, and the battery will be recharged for energy storage during other periods to achieve the purpose of reducing the electricity cost.

At the daily peak start time , the battery starts discharging.

At the daily peak end time， the battery stops discharging

Temperature test-1

Temperature and Humidity Information	
Batt 1 Temp: ---℃	Batt 2 Temp: ---℃
Sen. 3 Temp: ---℃	Sen. 4 Temp: ---℃
Env Humidity: ---%RH	
Ws Env Temp: ---℃	Ws Env Humidity: ---%RH

This page displays real-time sampling values of battery temperature, ambient temperature and ambient humidity

Temperature detect-2

Temperature and Humidity Settings

Temp Comp Enable: Enable		Temp Comp Coef: 96mV/℃	
Enable ▼	Set		Set
Temp Comp Center: 25℃		**Humidity Sensor: No**	
	Set	No ▼	Set
Temp Sensor 1: Batt		**Temp Sensor 2: No**	
Batt ▼	Set	Batt ▼	Set
Temp Sensor 3: No		**Temp Sensor 4: No**	
Batt ▼	Set	Batt ▼	Set

Float charge voltage decrease value = (Battery temperature measuring value- 25) ×Temperature compensation coefficient When rectifier communication fail or system over/under voltage,temperature compensation function will be invalid. When anyone battery temperature sensor is fault or disconnect, temperature compensation function will be invalid. When there are multiple temperature sensors, select the lowest temperature for temperature compensation

Temperature detect-3

Temperature and Humidity Settings

Temp Comp Enable: Enable			Temp Comp Coef: 96mV/°C	
Enable ▼	Set			Set

Temp Comp Center: 25°C			Humidity Sensor: No	
	Set		No ▼	Set

Temp Sensor 1: Batt			Temp Sensor 2: No	
Batt ▼	Set		Batt ▼	Set

Temp Sensor 3: No			Temp Sensor 4: No	
Batt ▼	Set		Batt ▼	Set

Battery temperature sensor 1, 2, environmental humidity sensor enable setting

Temperature sensor 3, 4 type and enable setting

Temperature detect-4

Temperature and Humidity Alarm			
Batt 1 Temp High+: 60℃		Batt 1 Temp High: 55℃	
	Set		Set
Batt 1 Temp Low: -33℃		Batt 2 Temp High+: 60℃	
	Set		Set
Batt 2 Temp High: 55℃		Batt 2 Temp Low : -33℃	
	Set		Set

Temperature alarm thresholds of battery temperature sensors 1 and 2

Temperature detect-5

Sen. 3 Temp High+: 60℃

Set

Sen. 3 Temp Low: -33℃

Set

Sen. 4 Temp High: 55℃

Set

Sen. 3 Temp High: 55℃

Set

Sen. 4 Temp High+: 60℃

Set

Sen. 4 Temp Low : -33℃

Set

Env.Humidity H: 95%RH

Set

Env.Humidity L: 5%RH

Set

Set the temperature alarm thresholds of temperature sensors 3 and 4

Set the humidity high and low alarm thresholds of the humidity sensor

BMS information

| BMS protocol: Narada	BMS Total Num: 0	BMS Baud Rate: 9600	Unlock Password
Polarium ▼ Set		4800 ▼ Set	Set

BMS Information

No	Pack Voltage/V	Current/A	SOC/%	SOH/%	Charging Switch State	Discharging Switch State	Limit Switch State	Max Cell Voltage/V	Min Cell Voltage/V	Max Cell Temperature/ ℃	Min Cell Temperature/ ℃	Average Cell Temperature/ ℃	Ambient Temperature/ ℃	Remain Capacity/AH	Battery Cycles	Model	Software Version	Hardware Version	Serial No	Date of Manufacture

If the monitoring module is connected to the lithium battery communication port, this page will display the relevant information of the BMS

ECO introduction
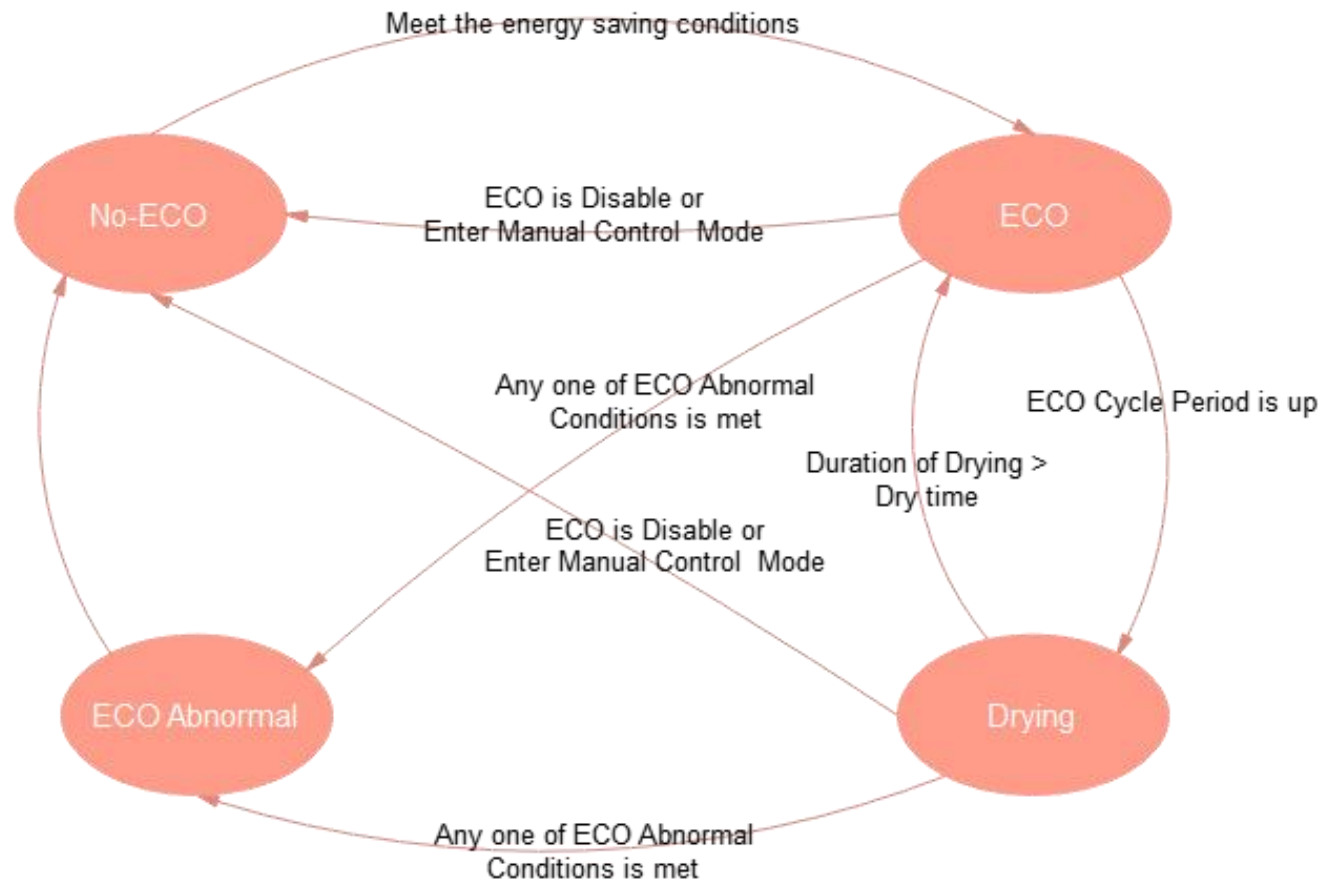
In the ECO mode, the controller controls the rectifiers to switch on and off according to the load, so that the rectifiers work under the load rate with the highest efficiency.

ECO Abnormal Conditions:

- Both Mains and PV input failure
- DC under voltage
- Batteries are in testing
- Batteries are discharging
- Battery fuses failure
- BLVD disconnect
- Any rectifier module alarms (e.g., communication interruption)

Note:

When the system exit ECO due to the preceding reasons and any rectifier is turned off, the number of ECO exceptions increases by 1. If the number of ECO exceptions reaches 10 within 1 hour, ECO Pause alarm occur and the ECO function will be disabled. After 12 hours, the ECO function will automatically become enabled.

ECO-1

ECO Information	
ECO State: Off	ECO Error State: 0

ECO Settings

ECO Enable: Disable			ECO Cycle Period: 168h	
Enable ▾		Set		Set

Best Load Ratio: 60%			Rect Save Stop: 90%	
		Set		Set

Min Rect Num: 2			Phase Balance Prio: Enable	
		Set	Enable ▾	Set

DryTime: 120min		
		Set

Short test enable setting

Rect Save Start is also known as rectifier best operating-point. At the best operating-point, the rectifier module operates at a relatively high efficiency and is subject to more suitable stresses.

ECO-2

ECO Information	
ECO State: Off	ECO Error State: 0

ECO Settings

ECO Enable: Disable			ECO Cycle Period: 168h	
Enable ▾		Set		Set
Best Load Ratio: 60%			**Rect Save Stop: 90%**	
		Set		Set
Min Rect Num: 2			**Phase Balance Prio: Enable**	
▾		Set	Enable ▾	Set
DryTime: 120min				
		Set		

Period Time is also known as cycle activation time. In order to synchronize the life of all the rectifier modules, it is necessary to operate the module with a long sleep time at a certain time interval while allowing the module with a long working time to sleep. This time interval is cycle activation time.

ECO-3

ECO Information	
ECO State: Off	ECO Error State: 0

ECO Settings	
ECO Enable: Disable	ECO Cycle Period: 168h
Enable ▾ Set	Set
Best Load Ratio: 60%	Rect Save Stop: 90%
Set	Set
Min Rect Num: 2	Phase Balance Prio: Enable
Set	Enable ▾ Set
DryTime: 120min	
Set	

Rect Save Stop is also known as system energy-saving point. If load / rated capacity ratio more than system energy-saving point, the power supply system exit energy-saving mode.

The minimum number of rectifier working

ECO-4

ECO Information	
ECO State: Off	ECO Error State: 0

ECO Settings

ECO Enable: Disable			ECO Cycle Period: 168h	
Enable ▾		Set		Set
Best Load Ratio: 60%			**Rect Save Stop: 90%**	
		Set		Set
Min Rect Num: 2			**Phase Balance Prio: Enable**	
		Set	Enable ▾	Set
DryTime: 120min				
		Set		

➢ Enable: In ECO mode, AC three-phase voltage balance is considered first, rectifier efficiency is considered second, and rectifier running time is considered third.

➢ Disable: In ECO mode, rectifier efficiency is considered first, and rectifier slot is considered second. Rectifier modules off from a lower slot, and rectifier modules on from a higher slot.

Communication munu-1

Communication Information

MAC Address: 68:27:19:21:73:A8

IP Settings

IP Address: 10.2.80.165	Subnet Mask: 255.255.255.0	Gateway Address: 10.2.80.1	
			Set

Set IP parameter

Communication munu-2

Set communication parameter

Active Alarm

Active Alarm List

Active Alarm Number : 4

BMS Detailed Alarms

AlarmNo	AlarmName	BeginTime	AlarmLevel
1	BLVD	2018-01-01 00:52:04	Major Alarm

Alarm name

Alarm begin time

Alarm level

History Alarm

History Alarm List

History Alarm Number : 102

Maximum History Alarm Number can be shown : 100

AlarmNo	AlarmName	BeginTime	EndTime
1	SPD Alarm	2018-01-01 00:03:01	2018-01-01 00:03:47
2	SPD Alarm	2018-01-01 00:00:02	2018-01-01 00:03:01
3	Mains Failure	2018-01-01 00:00:30	2018-01-01 00:03:01
4	AC Breaker Open	2018-01-01 00:00:30	2018-01-01 00:03:01
5	Temp Sensor 1 Fault	2018-01-01 00:00:32	2018-01-01 00:03:01

Alarm name

Alarm begin time

Alarm end time

Data Log

Data Log Settings

Vin Config: undefined		Iout Config: undefined		BattCurr Config: undefined		BattTemp Config: undefined		Data Logs Period: undefinedmin
AC Input Voltage ▾	Set	Load Current ▾	Set	Battery Current ▾	Set	Batt Temper1 ▾	Set	Set

Data Log Number : 103

Maximum Data Log Number can be shown : 100

Data Log List

SeqNo	Data Log Time	Vin/V	Vout/V	Iout/A	BattCurr/A	BattTemp/℃
01	2018-01-01 01:53:47	0.0	23.9	0.0	1.1	25.0
02	2018-01-01 01:48:47	0.0	23.9	0.0	1.1	25.0

Set which parameters need to be set for data log

Battery Log

Battery Log List

SeqNo	StartTime	StartMode	StartVolt	EndTime	EndMode	End Test Voltage	Discharge capacity of battery 1	Discharge capacity of battery 2
01	2022-05-19 15:42:09	Constant current test	51.10V	2022-05-19 15:47:00	Constant test exit on time	54.59V	0.0%	0.0%
02	2022-05-19 14:10:00	Constant current test	54.51V	2022-05-19 14:14:00	Constant test exit on time	48.60V	0.5%	0.0%
03	2022-05-19 14:00:00	Constant current test	54.52V	2022-05-19 14:04:01	Constant test exit on time	48.68V	0.5%	0.0%
04	2022-05-19 13:47:00	Constant current test	54.53V	2022-05-19 13:52:00	Constant test exit on time	50.24V	0.0%	0.0%
05	2022-05-19 11:37:00	Constant current test	52.97V	2022-05-19 11:42:00	Constant test exit on time	54.52V	0.0%	0.0%
06	2022-05-19 11:15:00	Constant current test	54.54V	2022-05-19 11:20:00	Constant test exit on time	54.53V	0.5%	0.0%
07	2022-05-19 10:14:00	Constant current test	54.54V	2022-05-19 10:19:00	Constant test exit on time	54.51V	0.0%	0.0%
08	2022-05-19 10:10:05	Constant current test	54.53V	2022-05-19 10:10:40	Manual exit test	51.73V	0.0%	0.0%

Alarm Config

Alarm Config

Alarm Name: DC Under Volt	Alarm Level:Major Alarm	Alarm Relay:None
Alarm Name: [DC Under Volt ▾] [Set]	Alarm Level: [No Alarm ▾] [Set]	Alarm Relay: [None ▾] [Set]

Digital Input Config

DI Id: DI1	DI Name:Climate Alarm	DI Alarm:NO
DI: [DI1 ▾] [Set]	DI Name: [____] [Set]	DI Alarm: [NO ▾] [Set]

Digital Output Config

DO Id:DO1	DO Alarm:NC
DO: [DO1 ▾] [Set]	DO Alarm: [NO ▾] [Set]

Set the alarm level of the alarm and the DO corresponding to the alarm

Set DI name and DI's normally open normally closed state

Set the normally open and normally closed state of DO

System menu-1

System Information

Software Version: 9.02150401	Hardware Version: 25.5	User Config Version:1.03

------ Show monitor SW version

------ Show monitor user config version

System menu-2

System Information Settings

Site Name:		Date and Time:2018-1-1 02:00	Windows Time
[ ]	Set	Year[ ] Mon[ ] Day[ ] Hour[ ] Min[ ] Sec [ ]	Set
Change The Operator Password		**Change The Administrator Password**	
[ ]	Set	[ ]	Set
System Rectifier Type: 21000W		**System Solar Type: 12000W**	
[ ]	Set	[ ]	Set
System Power Mode: Only Mains			
Only Mains ▼	Set	System Restart:	Set

Set site name

Modify password

Report the power of the rectifier module to the upper monitor

Restar the monitor

Modify the current time of monitoring

Report the power of the MPPT module to the upper monitor

System menu-3

Clear Alarm Log

| Clear Alarm Record ▼ | Set | Restore to Default: | Set |

Clear log parameters and alarm records

Reset the monitor the factory parameter

Upload/Download

Upload/Download File

Download File		Select Configuration File	
Configuration File ▼	Download	选择文件 未选择任何文件	Upload

Software Upgrade

- ➢ Upload and download configuration files
- ➢ Upgrade monitor program

Thanks