UPS View Monitor User's Manual

Introduction

This software is designed for monitoring and setting UPS. There are two ways to connect with UPS: RS_232 & RS_485. If using RS_485 communication, a “485-232-adaptor” is necessary to connect 485 port of UPS and computer’s Serial port. If using RS_232 communication, a serial cable can be connected directly from UPS 232 port to the computer’s Serial port.

1. Hardware Connection of UPS and PC

1.1 RS_232 Definition

Female type holes' definition of RS_232 Port is shown in Fig1-1.

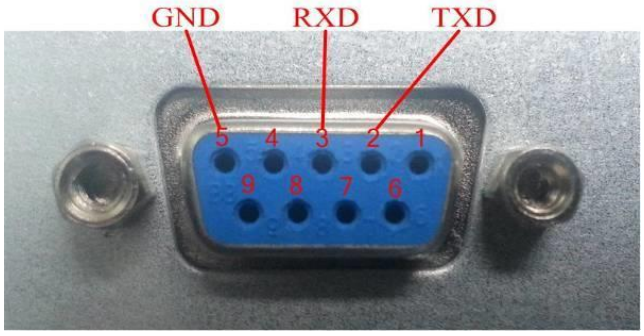


Fig1-1 Female type definition of RS_232Port
pin2---TXD
pin3---RXD
pin5 --- GND

Connect between UPS and PC

RS_232Connection of UPS- PC Monitoring System

As usual, the desktop computer is no serial communication port. The users need a USB-RS_232 cable and install a relative drive program at PC, as shown in Fig 1-2.

Fig 1-2 USB-RS_232 cable and the driver compact disc

To communicate with lead wire

The detailed way is shown in Fig 1-3:

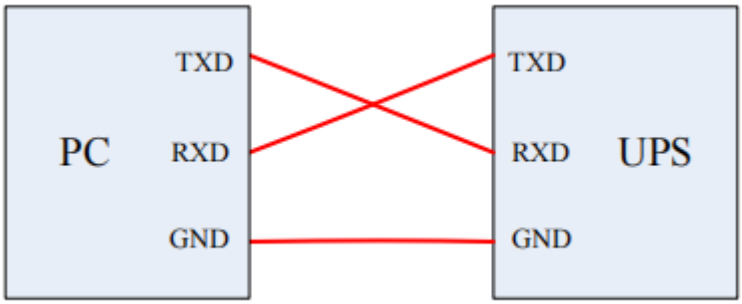


Fig 1-3 PC RS_232 port to UPS RS_232 port

1.2 RS_485 Definition

The RS_485 interfaces definition is shown in Fig 1-4.

Fig 1-4 RS_485 interface definitions

Connect between UPS and PC

RS_485Connection of UPS- PC Monitoring System

The connection of the UPS- PC monitoring system is shown in Fig.1-5.

1) Connect the 485-232 adaptor to the 485-port of UPS using a customized serial cable, which is an accessory
of UPS.

NOTE: Pins definition of this Serial cable is different from a normal one.

2) Connect the serial port of PC to 232 port of 485-232-adaptor using a normal serial cable.

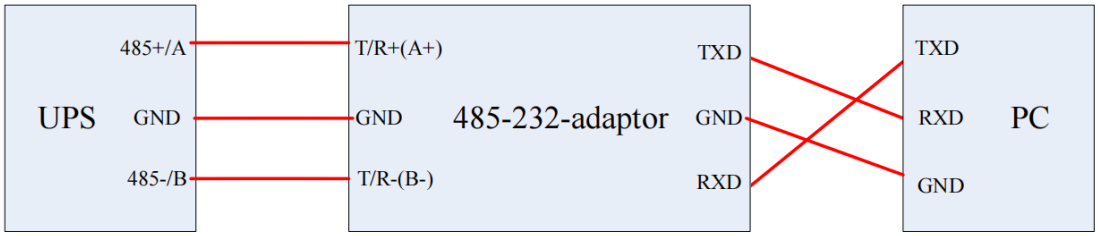


Fig 1-5 UPS and PC monitoring system connection

3) If there are more than one UPS connected, the communication bus of RS485 could be applied as below, please set the UPS with a different address, and choose the right address when starting the software connection.

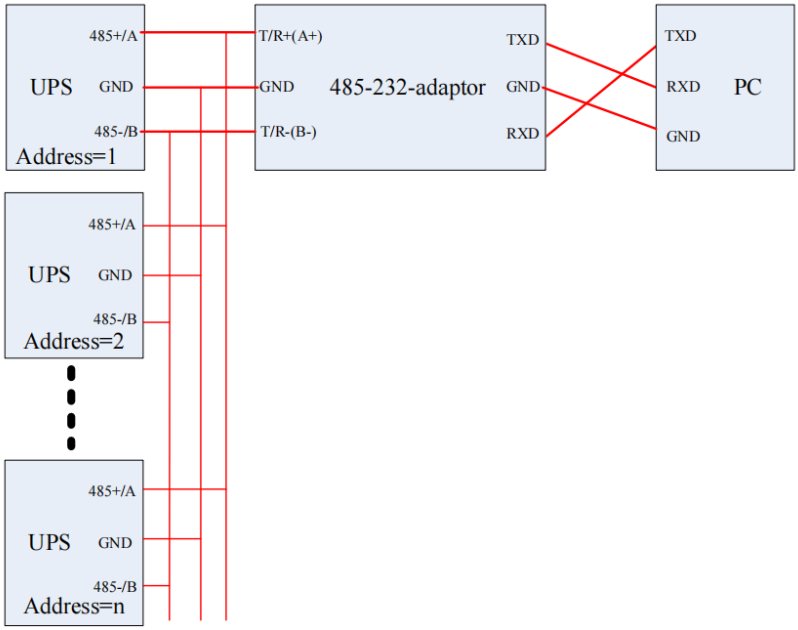


Fig 1-6 UPS and PC monitoring system connection by RS-485 bus

1.3 USB Connection of UPS to PC Monitoring System

The UPS provide a USB Type-B interface, you can connect the computer and UPS with a standard USB Type-B cable.Some computers require the installation of corresponding drivers.

Fig 1-7 Universal serial bus Type-B cable

2. Using -UPSView-Monitor Software

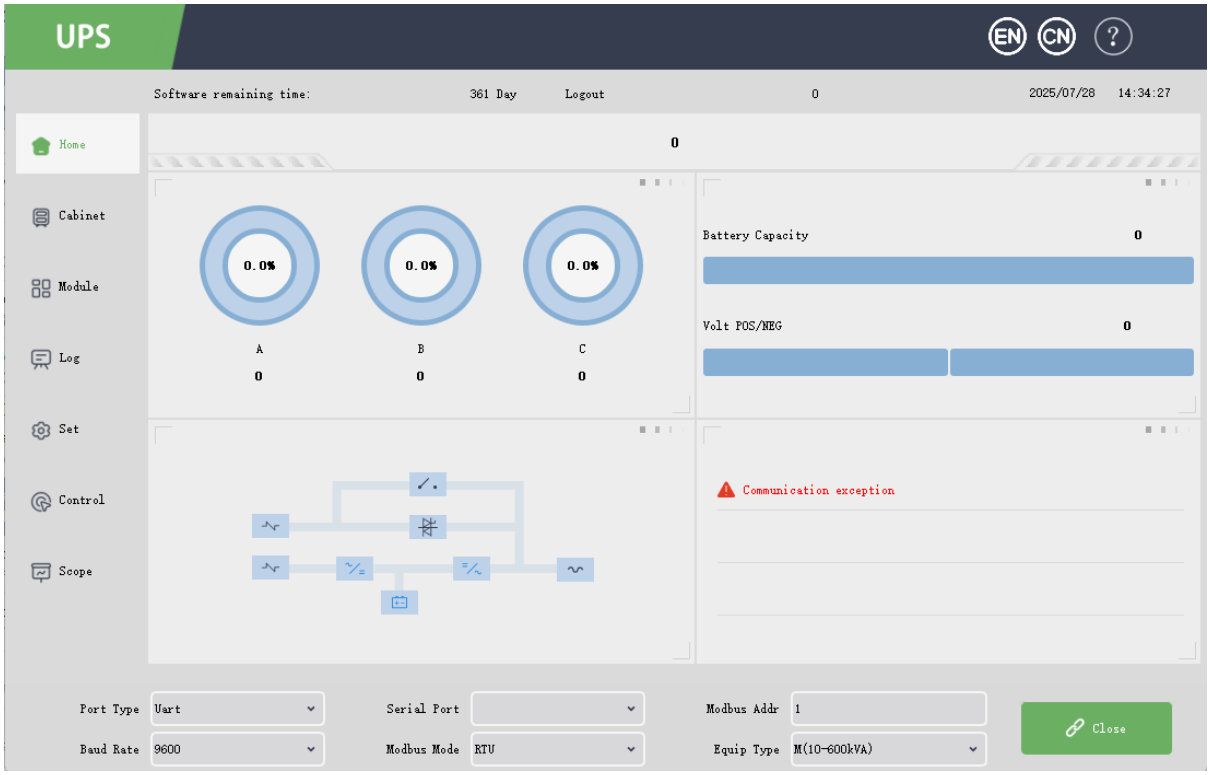
2.1 Software Introduction

After Decompressing, the software can be used directly, need not install it. Please make sure that all files should be put in the same directory.

After opening the software, authorization is required to register and use the settings function. Ordinary users can directly click on the trial version to skip the registration interface. Please refer to the attached

document.

As hardware connection finished, double click “UPSView_v****.exe” to start it. Then Home is visible as shown in Pic 2- 1. Left side of software window is **function selection menu**, bottom side is the **energy-flow-diagram**



Pic 2- 1. Home

2.2 UPS Setting On the LCD

Color touch screen

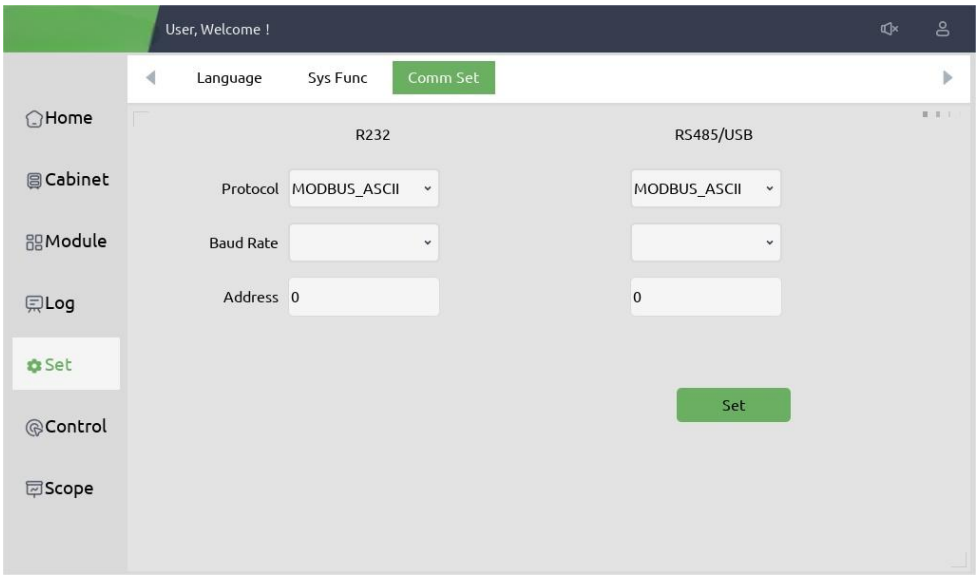


Fig. 2-2 Setting method for RS232/RS-485/USB cable

Click the icon 

, you will get the setting manual, then click the icon 

to enter the communication setting page, as shown on Fig 2-2, and set each item step by step:

RS232 Setting

1) RS_232 Protocol Selection: ASCII or RTU, but it must be the same as monitoring software;
2) Baudrate: 9600 or any other value, but it must be the same as monitoring software;
3) Device Address: 1;

4) After setting, click the confirm icon 

to complete the setting.

Note: RS232 port and intelligent slot port/snmp card slot do not support simultaneous use.
If the megatec protocol is selected, the RS232 port cannot be used.

RS485/USB Setting

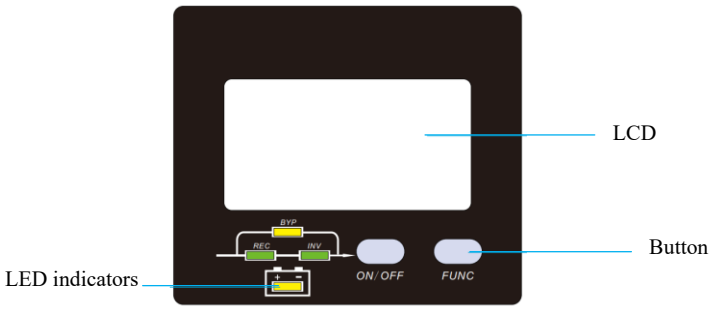
1) RS485/USB Protocol Selection: ASCII or RTU, but it must be the same as monitoring software;
2) Baudrate: 9600 or any other value, but it must be the same as monitoring software;
3) Device Address: 1;

4) After setting, click the confirm icon 

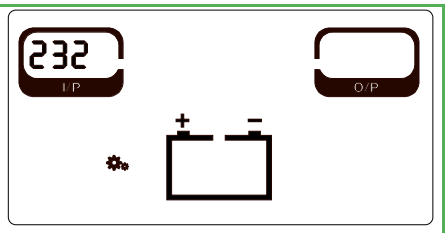
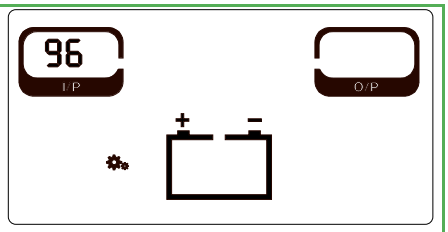
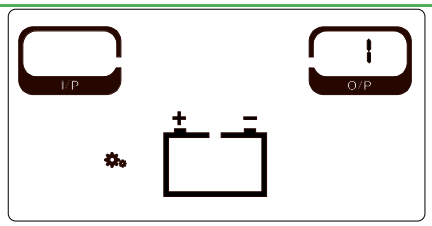
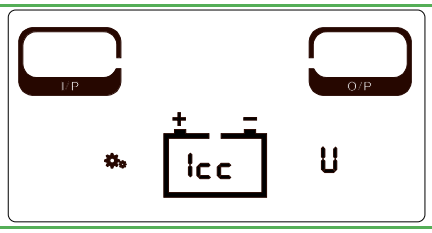
to complete the setting.

Note: USB port and RS_485 port do not support simultaneous use.

Small LCD



If want to set rated parameters, press ON/OFF and FUNC buttons together for 2.5s to enter in setting mode, “SETTING” on the bottom of LCD present and all LEDs flicks, LCD displays current setting in turn.

Main page	Press “FUNC” to select setting menu, press “ON/OFF” to confirm selection and enter in setting. 123—rated setting, 232—RS232 setting, 234—SNMP card, 485—485 setting, 567—setting recovery.	
Communication protocol setting	Select 232, 240 or 485 at main page to set communication: Baud rate:96—9600, 12—1200, 24—2400,48—4800,192--19200 Press “ON/OFF” to confirm and enter in ID setting	
Communication ID setting	Set ID as 1 to 32. Press “ON/OFF” to confirm and enter in protocol setting	
Communication protocol setting	0cc--ModBus 1cc--RTU 2cc—NetAgent Press “ON/OFF” to confirm and finish communication setting	

RS232/485-USB Setting

1) RS_232 Protocol Selection: ASCII or RTU, but it must be the same as monitoring software;
2) Baudrate: 9600 or any other value, but it must be the same as monitoring software;
5) Device Address: 1;

Note: RS232 port,USB port do not support simultaneous use.

2.3 Monitoring Software setting

To start monitoring software, UPS type, Protocol, Address, Baud rate, Serial port number need be set correctly, Click the button **“Open”** to make the software communicate with UPS.

After a few seconds, if hardware connection and the software setting are correct, the software window should display UPS status and data,and the, the energy diagram must flowing. As shown in Pic 2-3. If not, please check hardware and your setting.

When connected, clicking the button ‘Close ’ will make the software disconnect with UPS. Some settings are as follows:

Equip type:Auto or choose a type according to your UPS.

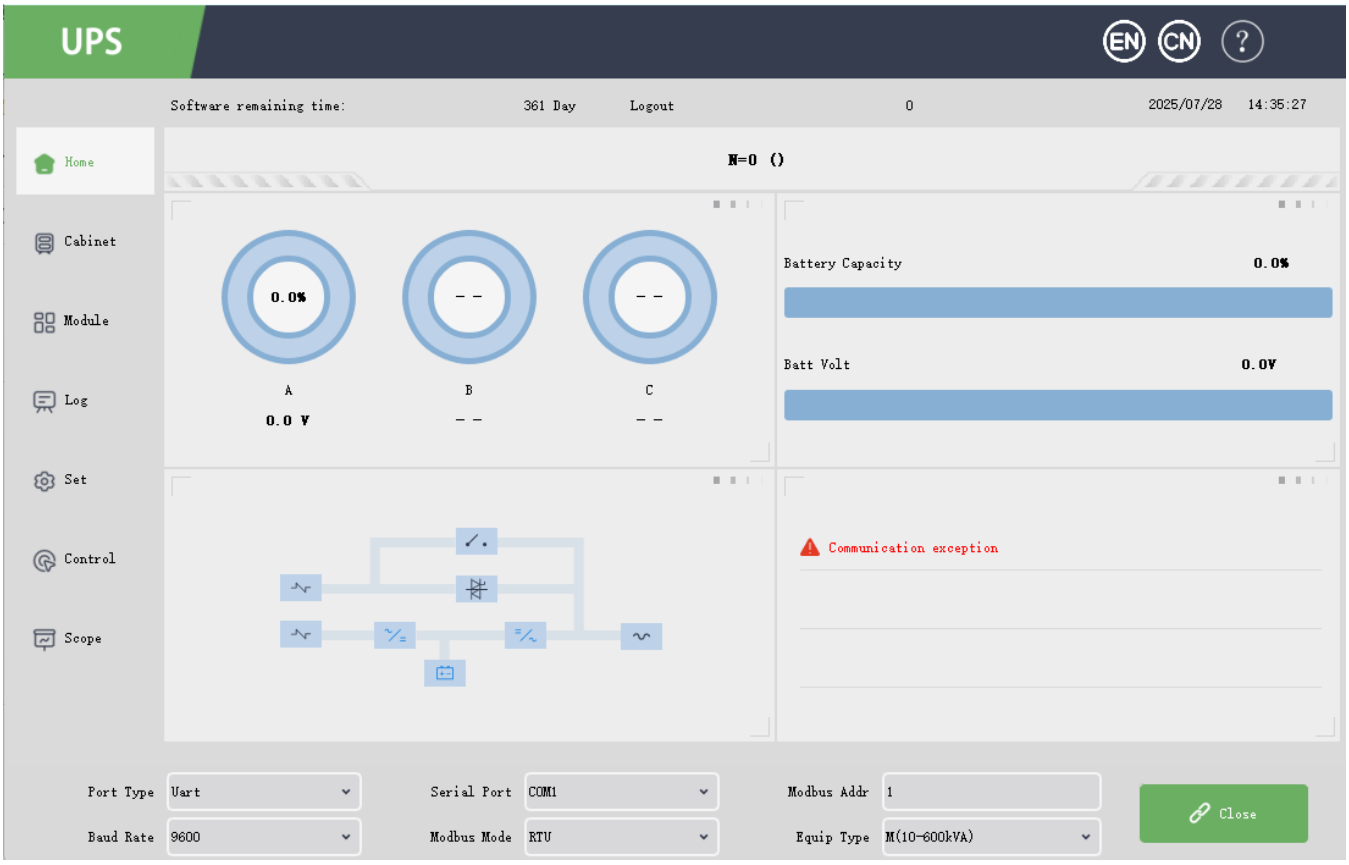
Baud rate: Auto , you can also choose other value, but it must is the same as UPS

Modbus Mode: Auto,MODBUS_ASCII or MODBUS_RTU, it must is the same as UPS

Modbus Address: 1,it must is the same as UPS

Note 1: "Equip type" must be set correctly.

Note 2: The software can scan serial port numbers of computer. If there is only one serial port for computer, no need to choose.



Pic 2-3. UPS connected

Once UPS is connected, UPS status and data are shown on PC. Clicking the menu items on the left side of the window, corresponding data will be shown.

3 Function selection menu

3.1 Home

Home Page display the energy-flow-diagram and information of output voltage, load present, battery voltage and battery capacity. The interface appears to be two different types according to the UPS model selected. Type A with M(10-600KVA), 3/3(10-100KVA) selected as is shown in Fig 3-1. Type B with 1/1(1-3KVA), 1/1(6-20KVA), 3/1(10-20KVA) selected as is shown in Fig 3-2.

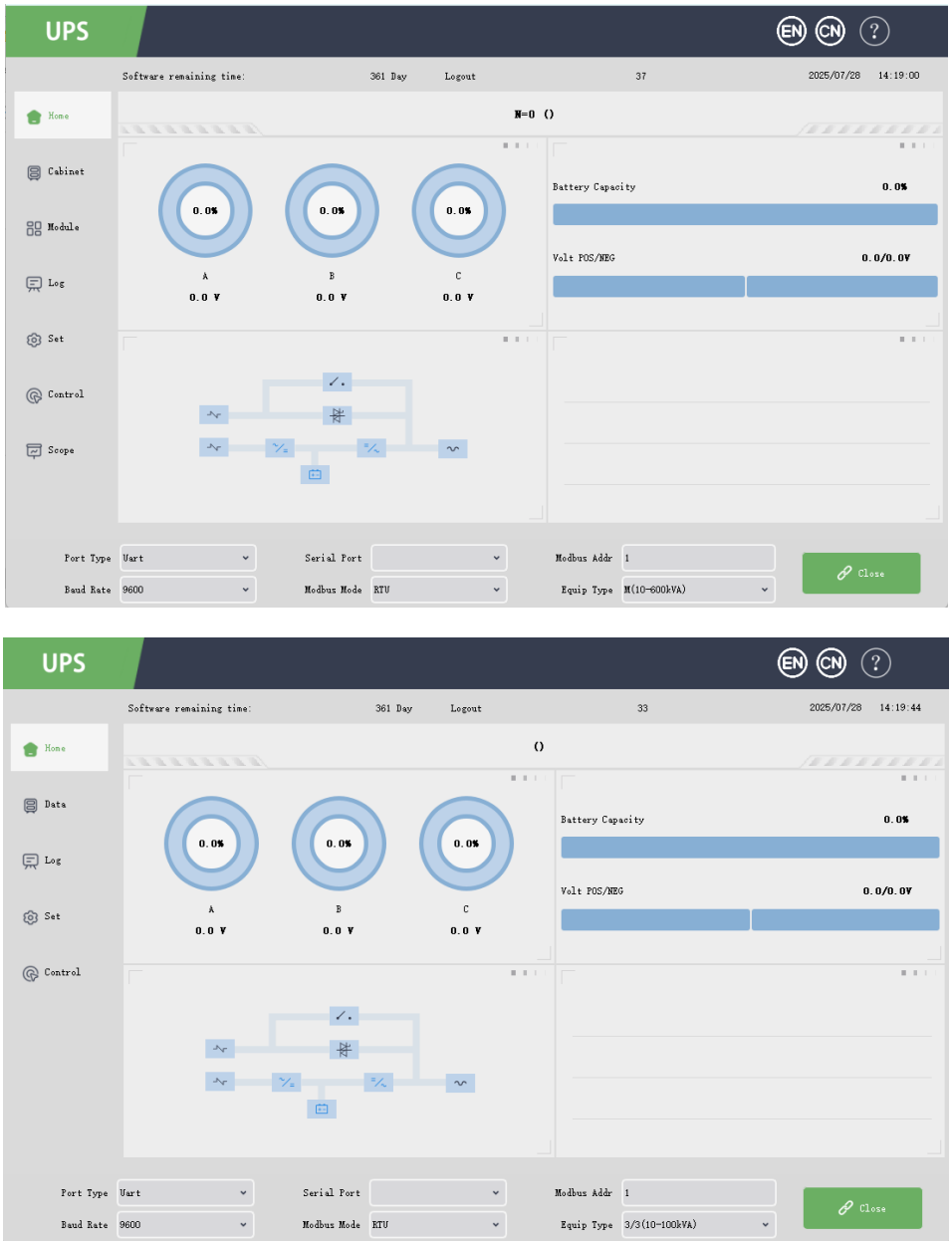


Fig 3-1 Homepage -Type A

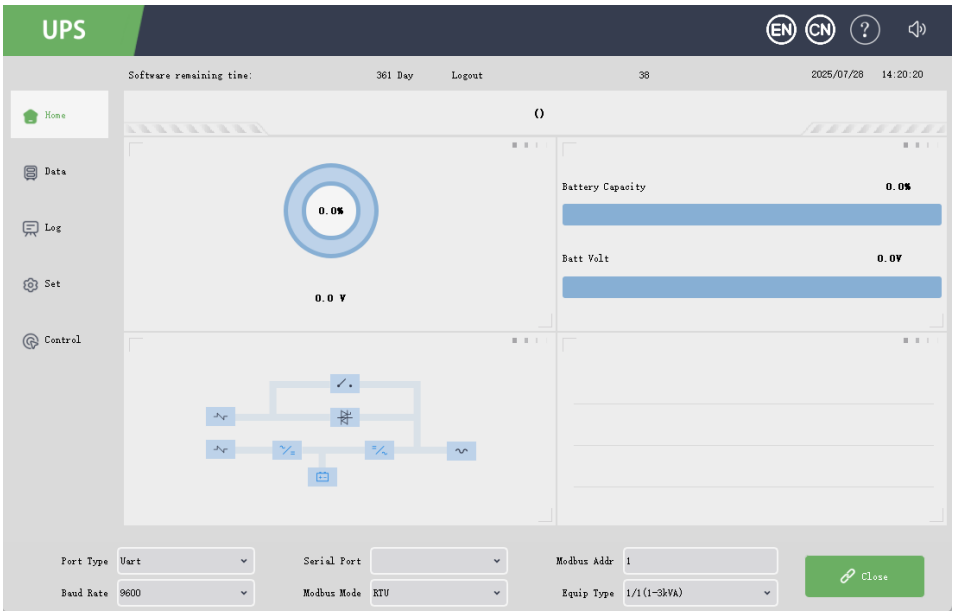


Fig 3-2 Homepage -Type B

3.2 Cabinet

The cabinet menu interface mainly consists of sub menus for bypass, main input, output, load, and battery as is shown in Fig 3-3.

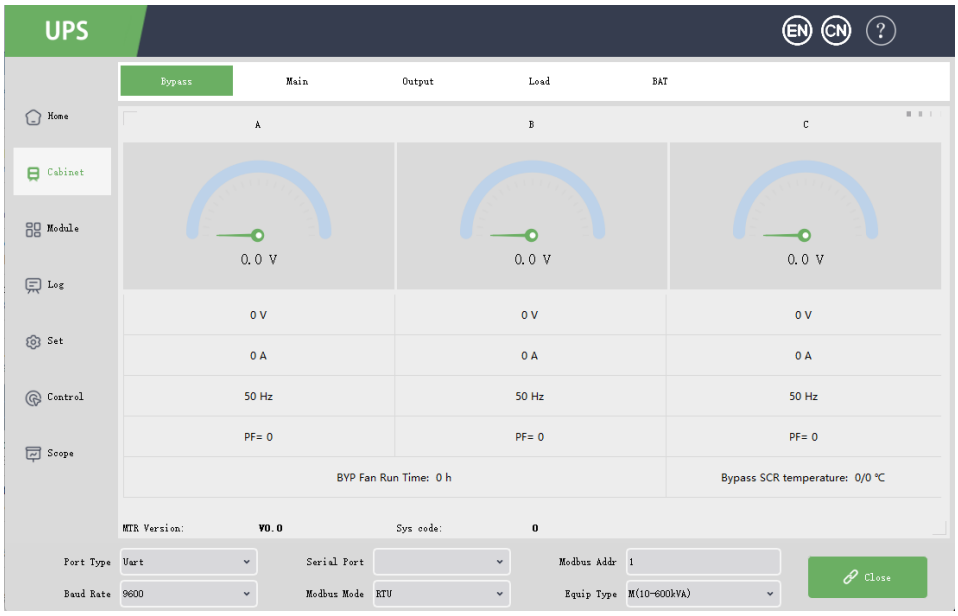


Fig 3-3 Cabinet menu

Menu information can be displayed on the next page through the flip icon 1/2 in the bottom right corner.

Note: Single phase UPS haven't this cabinet page.

Table 3-1 Description of each sub-menu of Cabinet

Sub-menu	Contents	Meaning
Bypass	V	Phase voltage
	A	Phase current
	Hz	Input frequency
	PF	Power factor
Main	V	Phase voltage
	A	Phase current
	Hz	Bypass frequency
	PF	Power factor
Output	V	Phase voltage
	A	Phase current
	Hz	Output frequency
	PF	Power factor
Load	kVA	Sout: Apparent Power
	kW	Pout: Active Power
	kVar	Qout: Reactive power
	%	Load (The percentage of the UPS load)
Battery	Battery Number	Total number of battery connections per group
	Battery Status	Battery boost/float charging status
	Run time	Total battery run time
	V	Battery positive/negative Voltage

Sub-menu	Contents	Meaning
	A	Battery positive/negative Current
	Battery Capacity (%)	The percentage compared with new battery
	Remain Time（Min）	Remaining battery backup time
	Battery Temp.(℃)	Battery temperature
	Ambient Temp.(℃)	Environmental temperature

3.3 Module

The power module mainly menu interface includes Input, Output, Load, information and S-CODE as is shown in Fig 3-4.

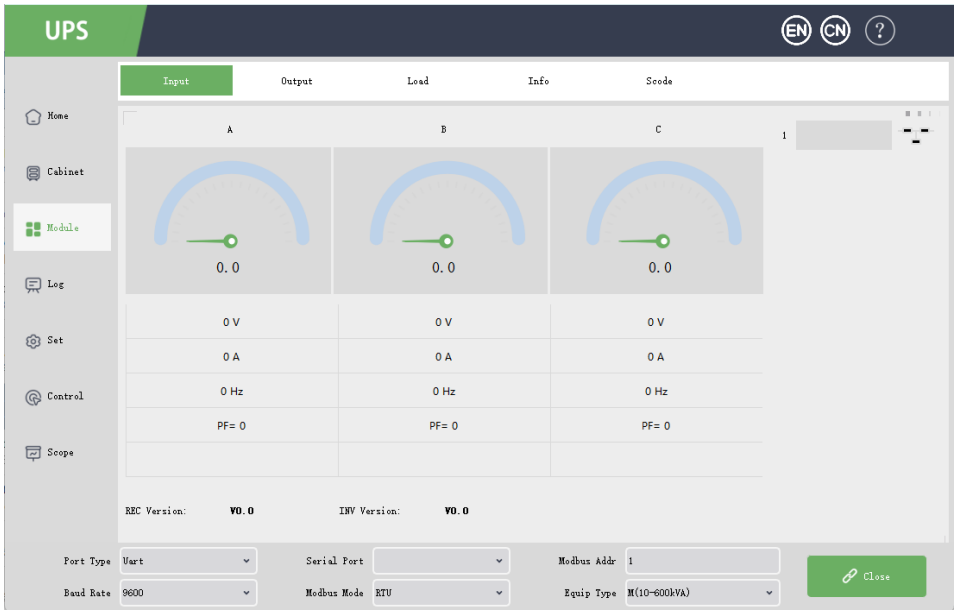


Fig 3-4 Module menu

Note: Single phase UPS and TT(10-40KVA) haven't this Module page.

- **Power module information**

(1) Power module number, automatically displaying the power module code based on different cabinet settings;
(2) Whether the power module is inserted and selected;
(3) The operating status of the power module is as follows:
(a) The green box indicates the current module being selected for viewing.
(b) The black box indicates that the power module has been connected to the system and displays the current status.
(c) If no module is displayed in the corresponding box, it means that no module has been detected in the slot.
(d) The status indicator lights on the right side of the module indicate the status of the input, output, and battery, with green indicating normal and red indicating abnormal.

- **Version Information**

Display the version information of rectifier and inverter for the selected module.
The sub-menus of Module are described below in details in Table 3-2.
Table 3-2 Description of each sub-menu of Module

Sub-menu Name	Contents	Meaning
Input	V	Input phase voltage of selected module
	A	Input phase current of selected module
	Hz	Input frequency of selected module
	PF	Input power factor of selected module
Output	V	Output phase voltage of selected module
	A	Output phase current of selected module
	Hz	Output frequency of selected module
	PF	Output power factor of selected module
Load	kVA	Sout: Apparent Power
	kW	Pout: Active Power
	kVar	Qout: Reactive power
	%	Load (The percentage of the UPS load)
Information	DC BUS +/-(V)	Bus voltage(positive & negative)
	Battery +/-(V)	Battery voltage (positive & negative)
	Charger(V)	Charger voltage(positive & negative)
	Charger(A)	Charger current(positive & negative)
	Discharger(A)	Discharger current(positive & negative)
	INV Voltage(V)	Inverter phase A/B/C voltage
	Fan Run Time(H)	Total fan's running time
	Capacitor Run Time(H)	Total capacitor running time
	Air Inlet Temp.(°C)	Air inlet temperature
	Air Outlet Temp.(°C)	Air outlet temperature
	REC IGBT Temp.(°C)	REC IGBT temperature of the phase A/B/C
	INV IGBT Temp.(°C)	INV IGBRT temperature of the phase A/B/C
S-code	Fault Code	For the maintenance personnel

3.4 Data

The data menu interface mainly consists of sub menus for bypass, main, output, load, battery, information and scode. The interface appears to be two different types according to the UPS model selected. Type A with 3/3(10-100KVA) selected as is shown in Fig 3-5. Type B with 1/1(1-3KVA), 1/1(6-20KVA), 3/1(10-20KVA) selected as is shown in Fig 3-6.

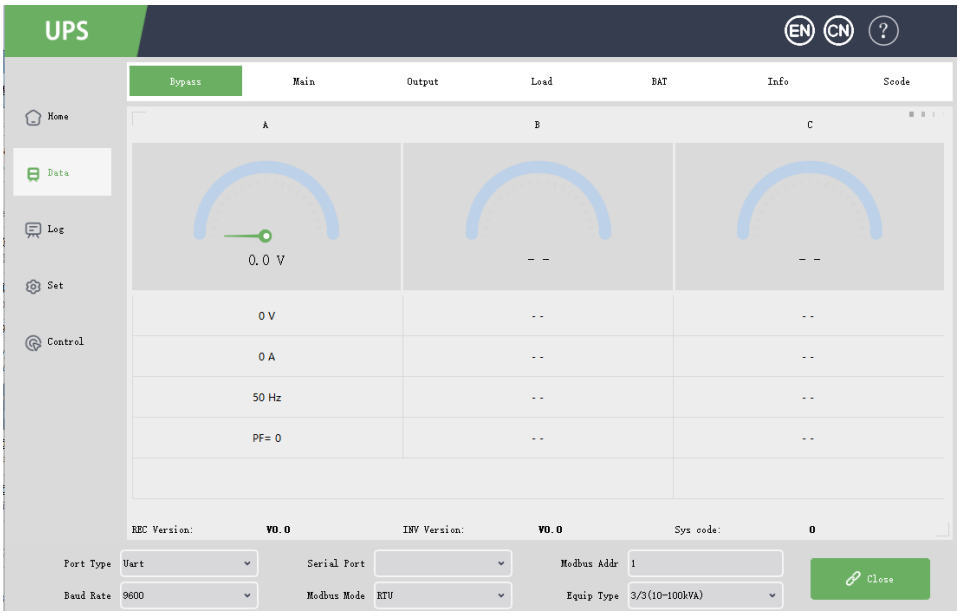


Fig 3-5 Data menu - Type A

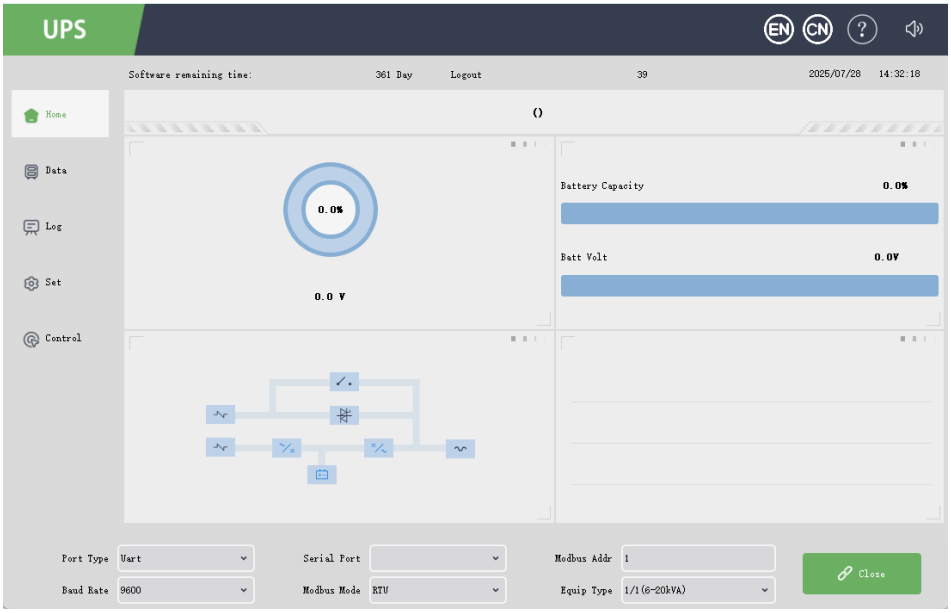


Fig 3-6 Data menu - Type B

Table 3-3 Description of each sub-menu of Data

Sub-menu	Contents	Meaning
Bypass	V	Phase voltage
	A	Phase current
	Hz	Input frequency
	PF	Power factor

Sub-menu	Contents	Meaning
Main	V	Phase voltage
	A	Phase current
	Hz	Bypass frequency
	PF	Power factor
Output	V	Phase voltage
	A	Phase current
	Hz	Output frequency
	PF	Power factor
Load	kVA	Sout: Apparent Power
	kW	Pout: Active Power
	kVar	Qout: Reactive power
	%	Load (The percentage of the UPS load)
Battery	Battery Number	Total number of battery connections per group
	Battery Status	Battery boost/float charging status
	Run time	Total battery run time
	V	Battery positive/negative Voltage
	A	Battery positive/negative Current
	Battery Capacity (%)	The percentage compared with new battery
	Remain Time（Min）	Remaining battery backup time
	Battery Temp.(℃)	Battery temperature
	Ambient Temp.(℃)	Environmental temperature
Information	DC BUS +/-(V)	Bus voltage(positive & negative)
	Charger(V)	Charger voltage(positive & negative)
	Charger(A)	Charger current(positive & negative)
	INV Voltage(V)	Inverter phase A/B/C voltage
	Fan Run Time(H)	Total fan's running time
	Capacitor Run	Total capacitor running time
	Air Inlet Temp.(°C)	Air inlet temperature
	Air Outlet Temp.(°C)	Air outlet temperature
	REC IGBT Temp.(°C)	REC IGBT temperature of the phase A/B/C
	INV IGBT Temp.(°C)	INV IGBRT temperature of the phase A/B/C
S-code	Fault Code	For the maintenance personnel

3.5 Log

Click on the icon on the left side of the LCD screen to enter the Log menu, where history is recorded by time.
Display various events and alarm information that have occurred in the system in sequence, and record the time of their set and -Disappear. The recording menu is divided into two menus: current alarm and history alarm. The Home screen is shown in Figure 3-7 below.

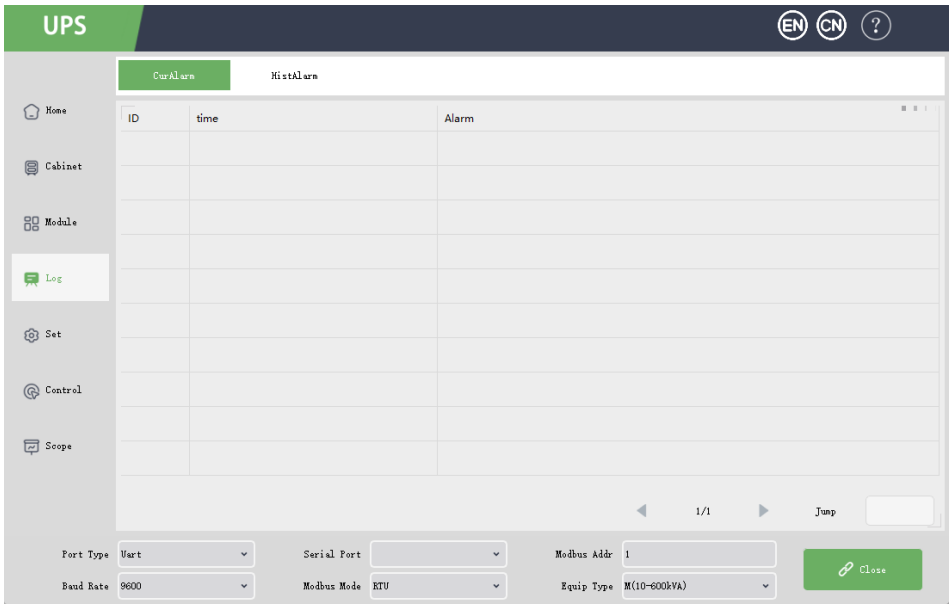


Fig 3-7 Log Menu

3.5.1 History log download

UPS history log can be downloaded to PC in this page. Click ‘Download’ to download history log from UPS which then would be displayed on PC. Click ‘Save ’ to save history log to PC as a file. It’s shown in Fig 3 - 8.

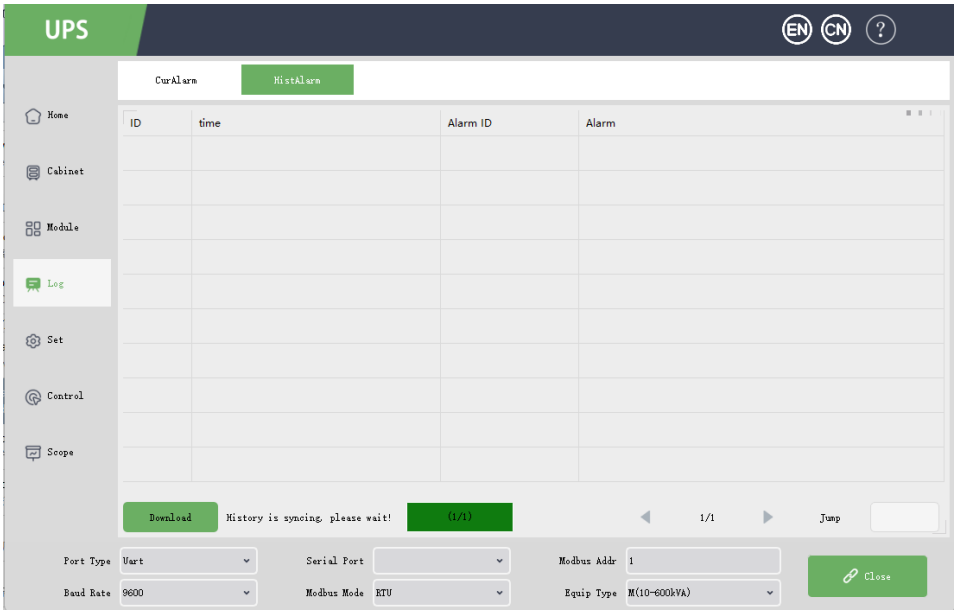


Fig 3-8 History log download interface

3.6 Set

Under the setting menu, there are the following grading sub-menus, which are language setting, system function, change password, communication setting, battery setting, system setting, calibration function and dry contact setting. The Set page is shown in Fig 3-9 below.

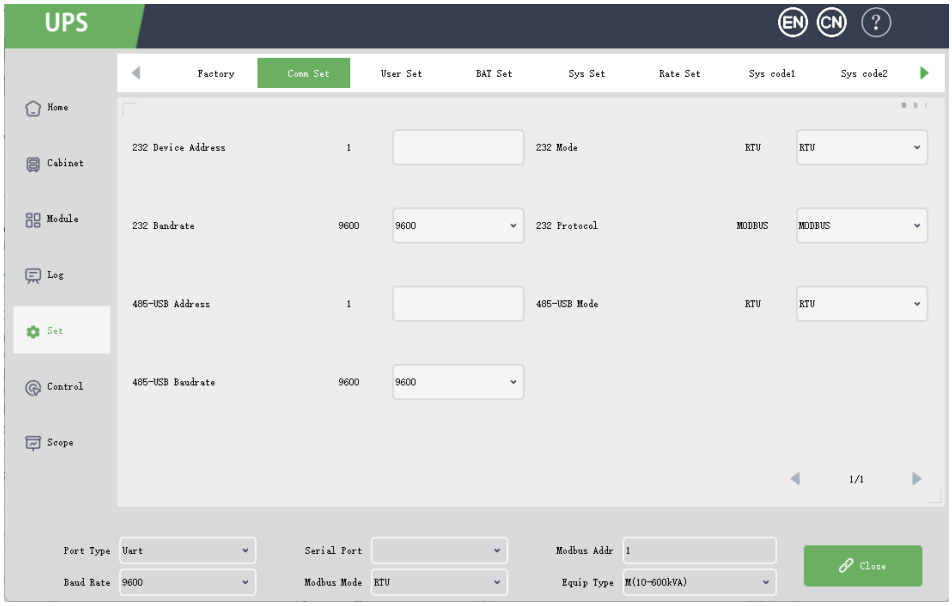


Fig 3-9 Set Menu

Sub-menu	Contents	Description
Language	Current language	Displays the currently selected language
	Optional language	Simplified Chinese, English and other languages for choice
Sys Func	System function setting	Setting screensaver, system time, check memory and software version
Display Set	Display Setting	Homepage UPS model
Comm Set	Comm. interface	Include RS232,RS485,USB
	Protocol	Include MEGA protocol,ModBus_ASCII protocol,ModBus_RTU protocol
	Baud-rate	Setting the baud-rate
	Device Address	Setting the Device address
	Battery Number	Setting the number of the battery（12V）
	Battery Capacity	Setting of the AH of the battery
	Float Charge Voltage/Cell	Setting the floating Voltage for battery cell (2V)
	Boost Charge Voltage/Cell	Setting the boost Voltage for battery cell (2V)
	EOD Voltage（0.6C）	EOD voltage for cell battery,@0.6C current
	EOD Voltage（0.15C）	EOD voltage for cell battery,@0.15C current

Battery Set	Charge Current Percent Limit	Charge current (percentage of the rated current)
	Battery Temperature Compensate	Coefficient for battery temperature
Sys Set	System Mode	Setting the system mode: Single , parallel, Single ECO, parallel ECO,LBS, parallel LBS
	United Number	Set the number of UPS in parallel system
	Cabinet ID	For parallel system, the ID starts from 0
	Output Voltage Adjustment	Setting the Output Voltage
Dry contact	Configuration the dry contact	Configuration the dry contact

3.7 Control Menu

The control menu include "Func key" & "Test key", as it is shown in Figure 3-10& Figure 3-11.

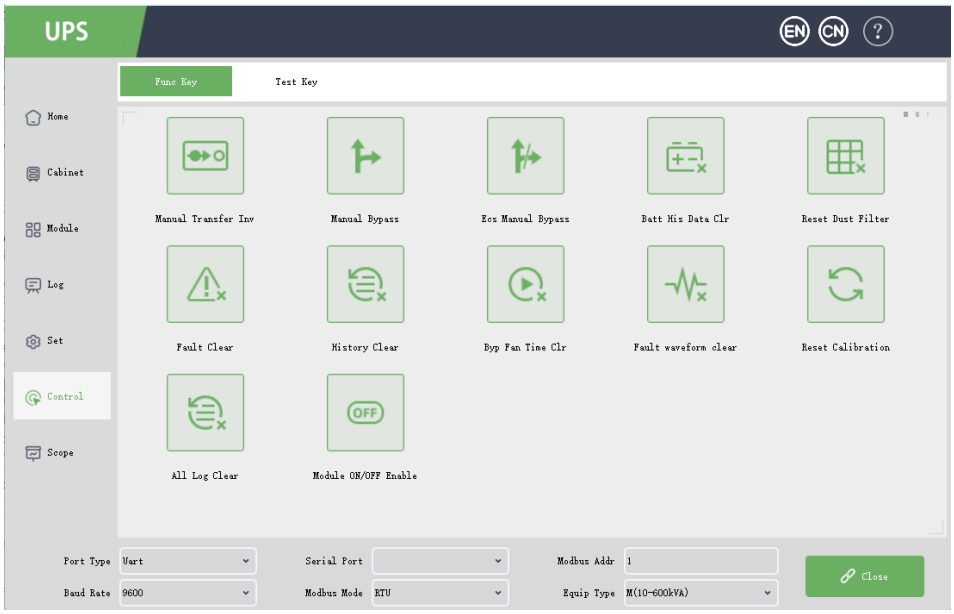


Figure 3-10 Control-Function key menu

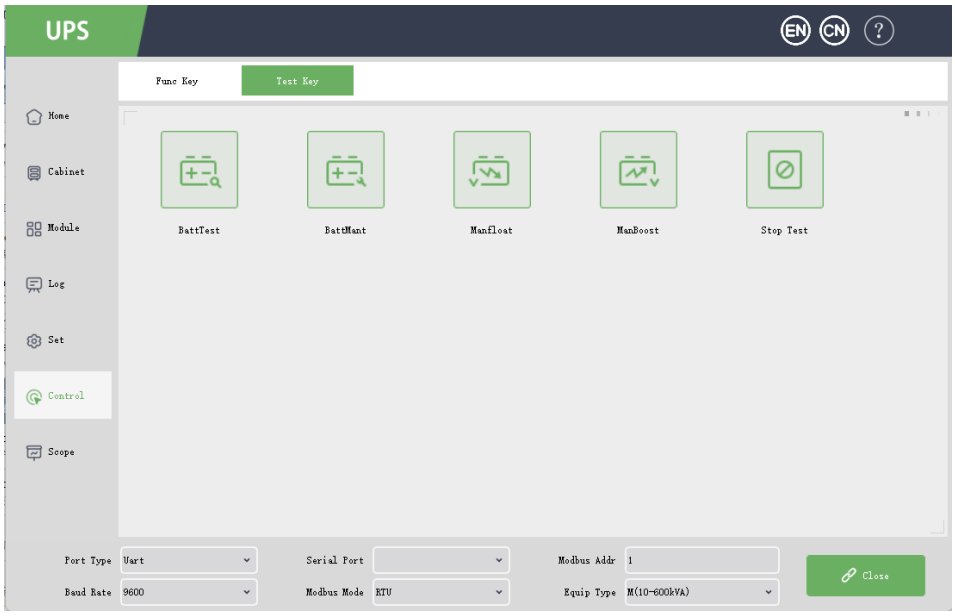


Figure 3-11 Control-Test key menu

The "Control" menu includes "Func Button" and "Test Command". The contents are described in details below.

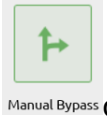
Function Button

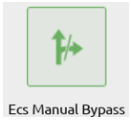
Fault Clear

Clear the faults by touching the icon 

.

Manual Bypass and ESC Manual Bypass

Transfer to bypass mode or cancel this command by touching the icon 

or 

.

Manual Transfer Inv

Transfer the bypass mode to Inverter Mode by touching the icon 

.

Battery History Data Clear

Clear the battery history data by touching the icon 

, the history data includes the times of discharge, days for running and hours of discharging.

Reset Dust Filter

Reset the time of dust filter using by touching the icon 

, it includes the days of using and maintenance period.

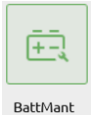
Test Command

Battery Test

By touching the icon 

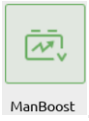
, the system transfer to the battery mode to test the condition of the battery. Ensure the bypass is working normally and the capacity of the battery is no less than 25%.

Battery Maintenance

By touching the icon 

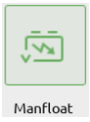
, the system transfer to the battery mode. This function is used for maintaining the battery, which requires the normality of the bypass and minimum capacity of 25% for the battery.

Battery Boost

By touching the icon 

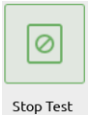
, the system starts boost charging.

Battery Float

By touching the icon 

, the system starts float charging.

Stop Test

By touching the icon 

, the system stops battery test or battery maintenance.