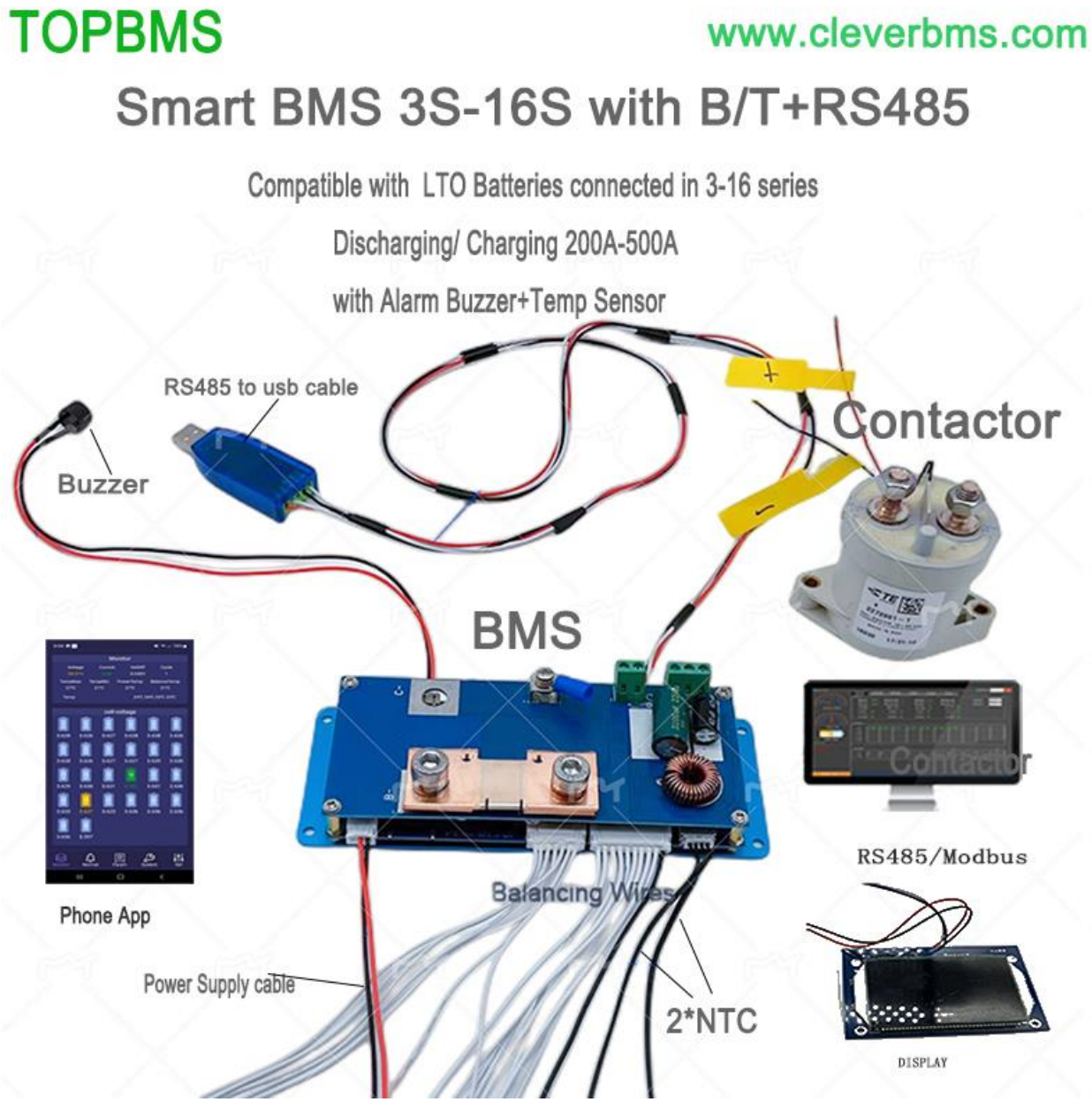
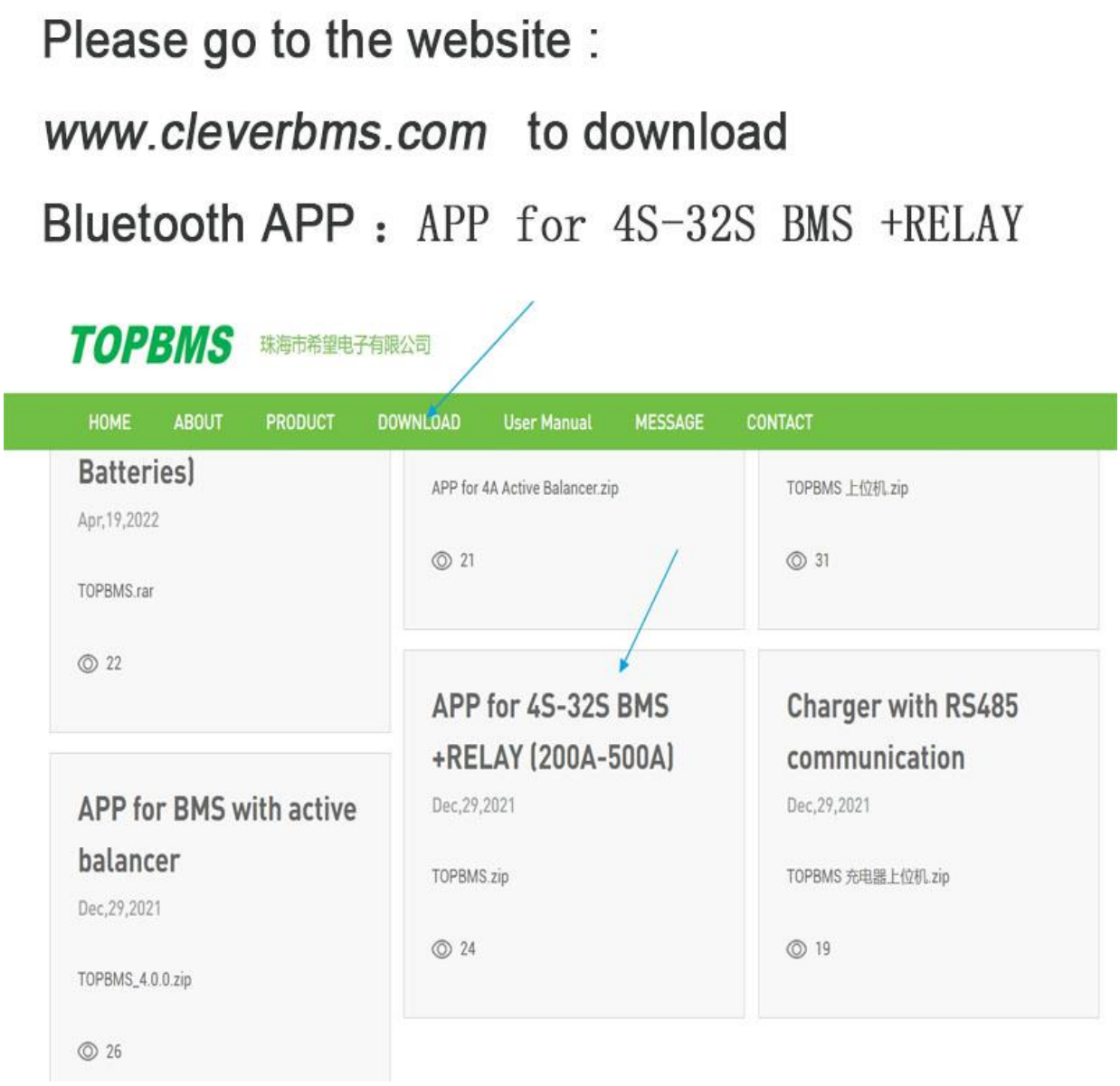
TOPBMS LTO BMS 5S-12S 5S 6S 12V10S 11S 12S 24V 15S 36V 200A 500A Bluetooth RS485 Modbus NTC Lithium Titanate Battery 2.3V 2.8V EV Solar E-Bike



Please go to the website :www.cleverbms.com to download bluetooth APP and rs485 software for PC



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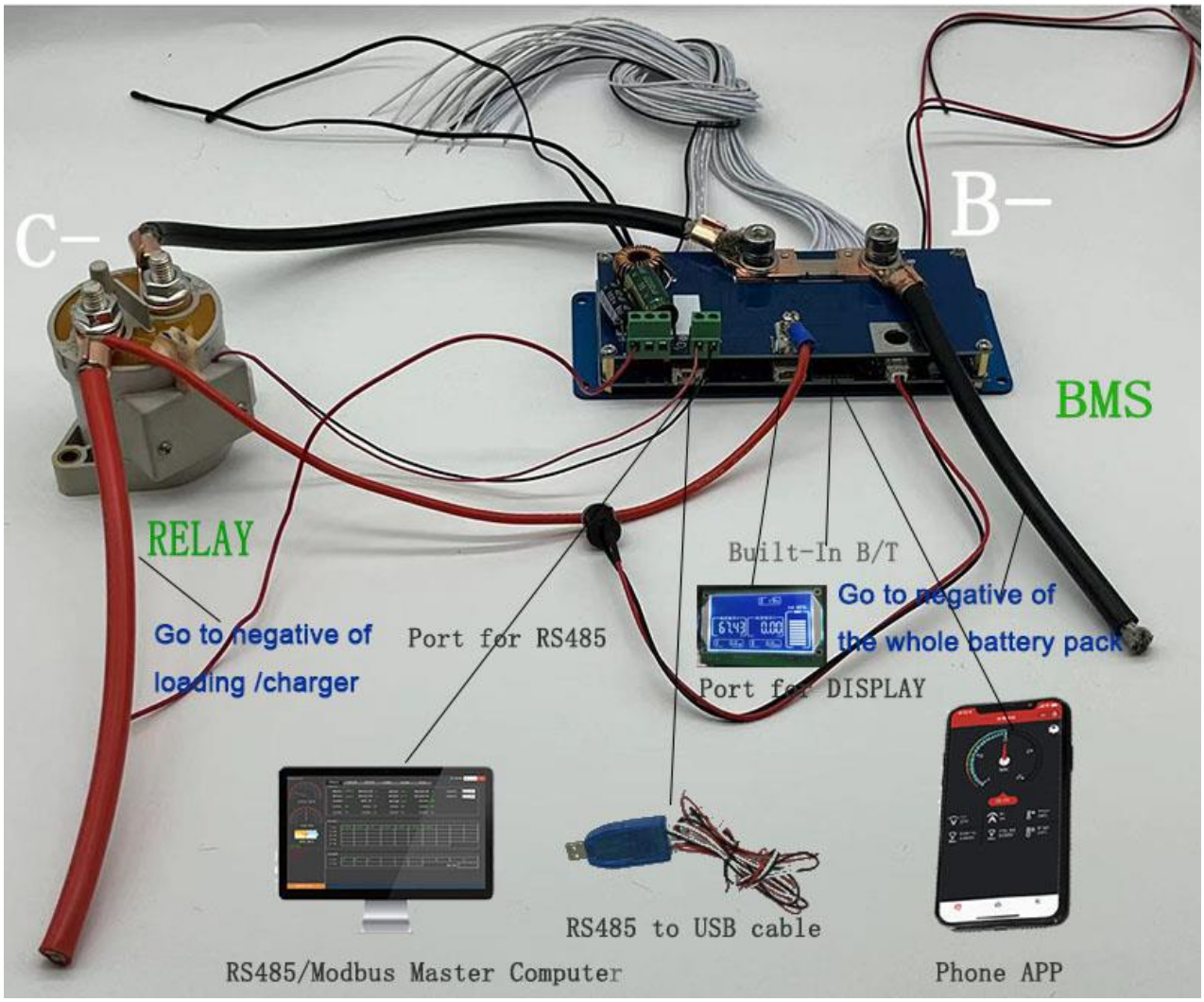
BMS with Bluetooth +RS485/Modbus-1



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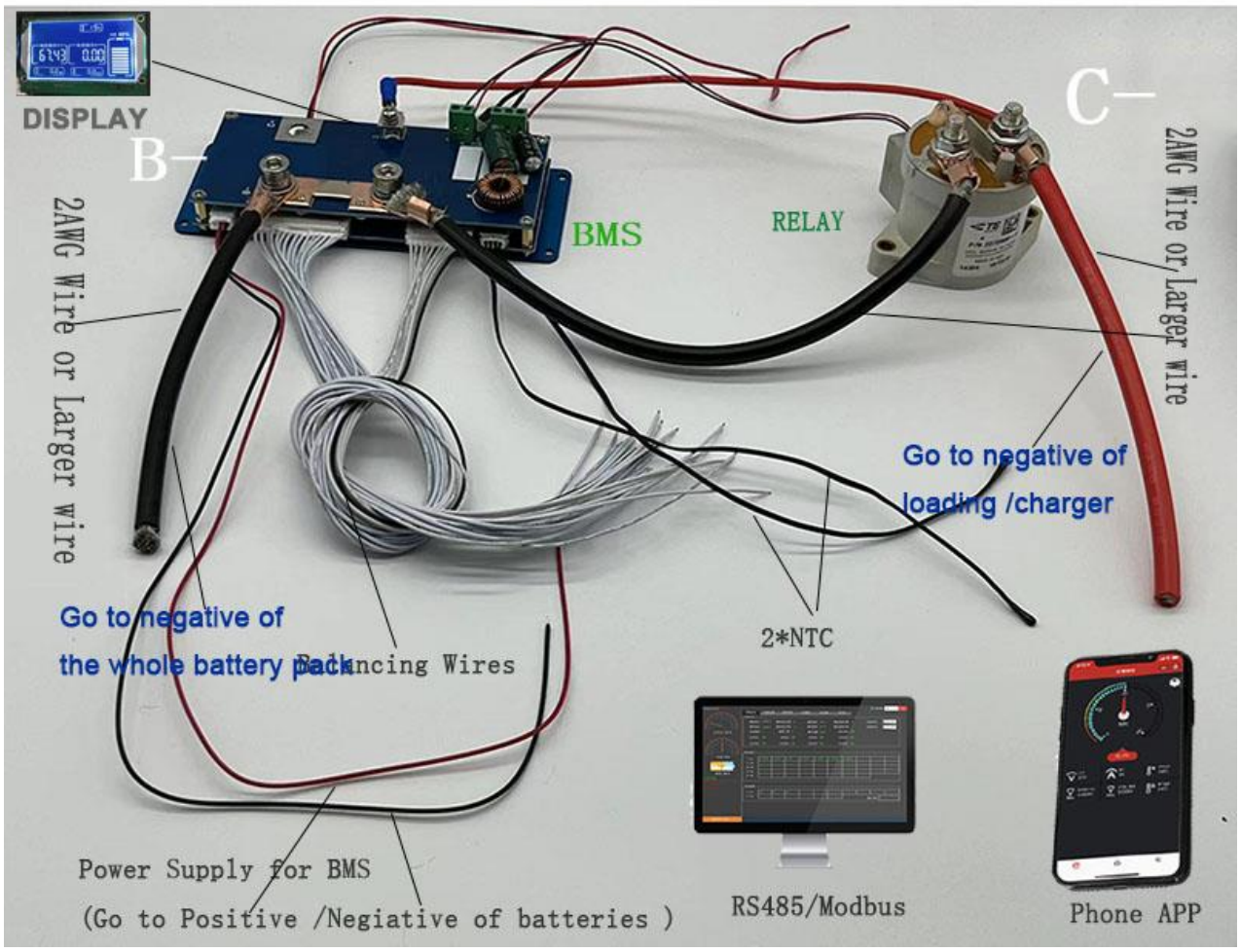
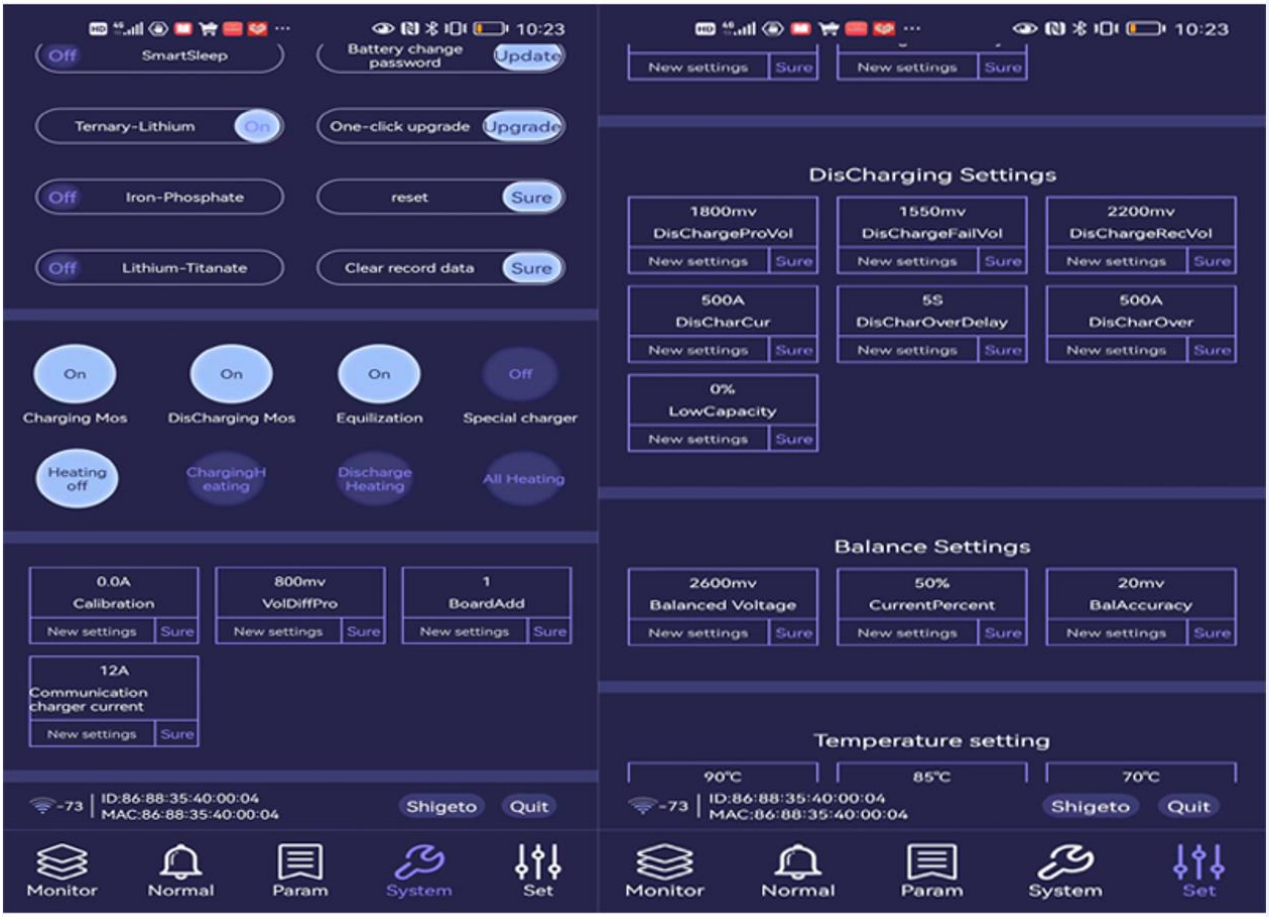
BMS with Bluetooth +RS48/Modbus-2



Phone APP

Password :123456



Note: Go to website(www.cleverbms.com) to see video of Phone APP Instrcution

PC Software of BMS talk to PC

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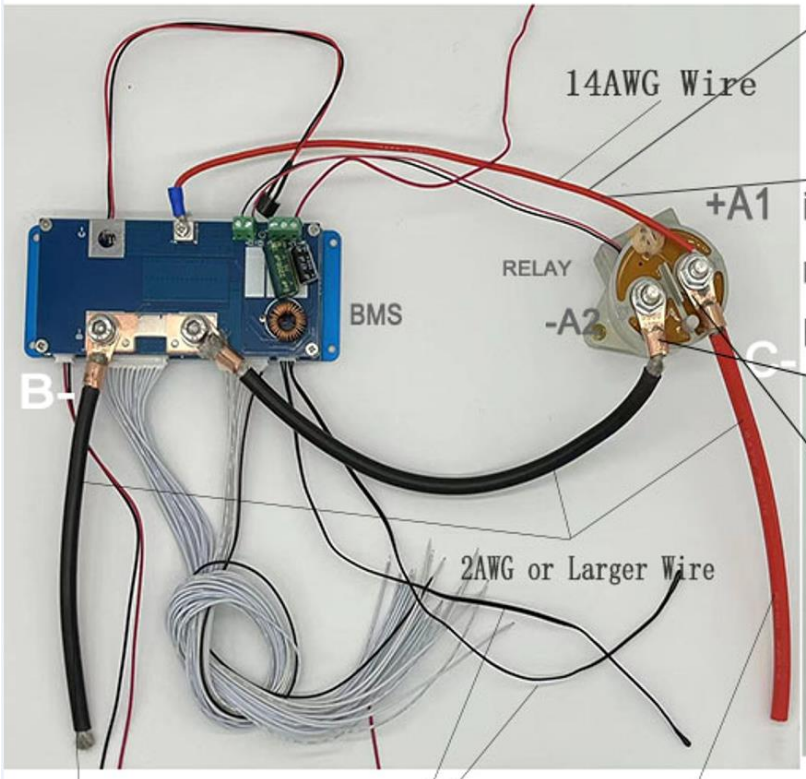
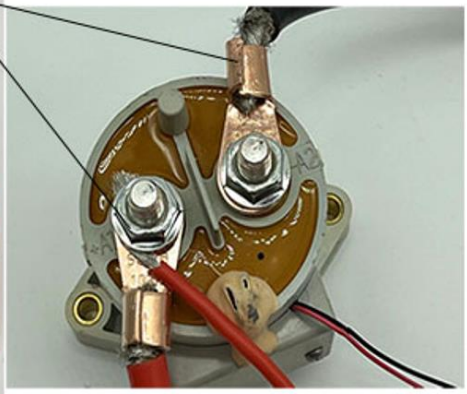
BMS RELAY Wiring Instruction



=Resistance: 5~10 Ohm 100W

if charging current <=25A, Don't need to connect resistance to wire 14AWG;

If charging current >25A, Connect resistant to wire 14AWG

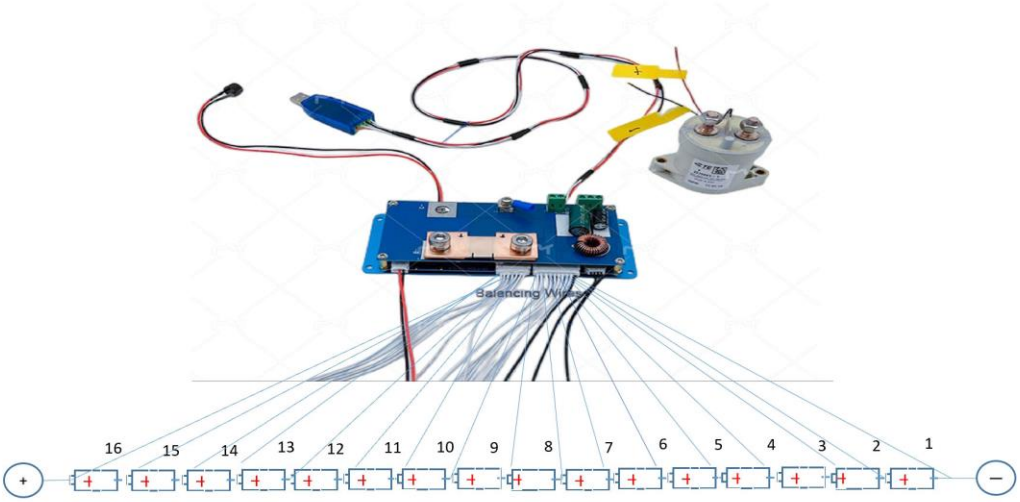


Negative of Batteries

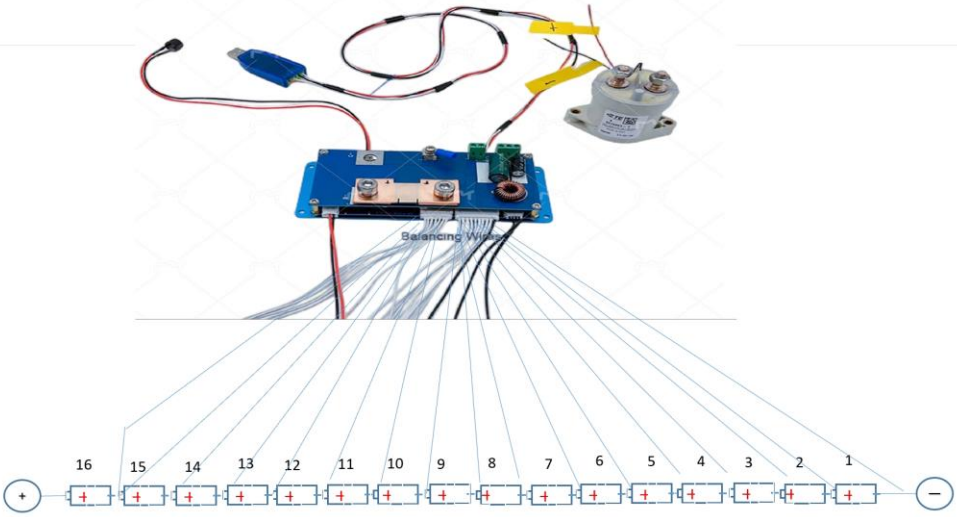
NTC

Negative of Loading/Charger

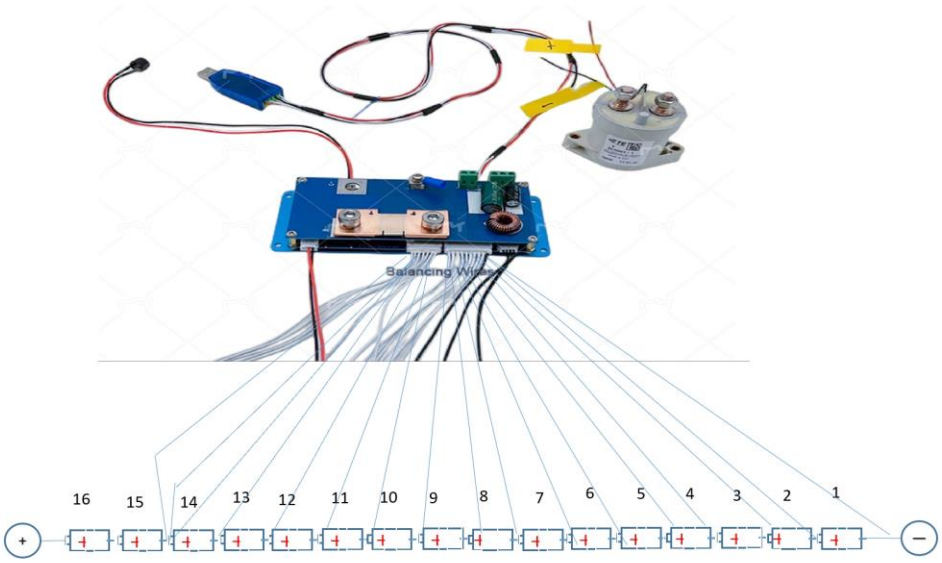
RELAY



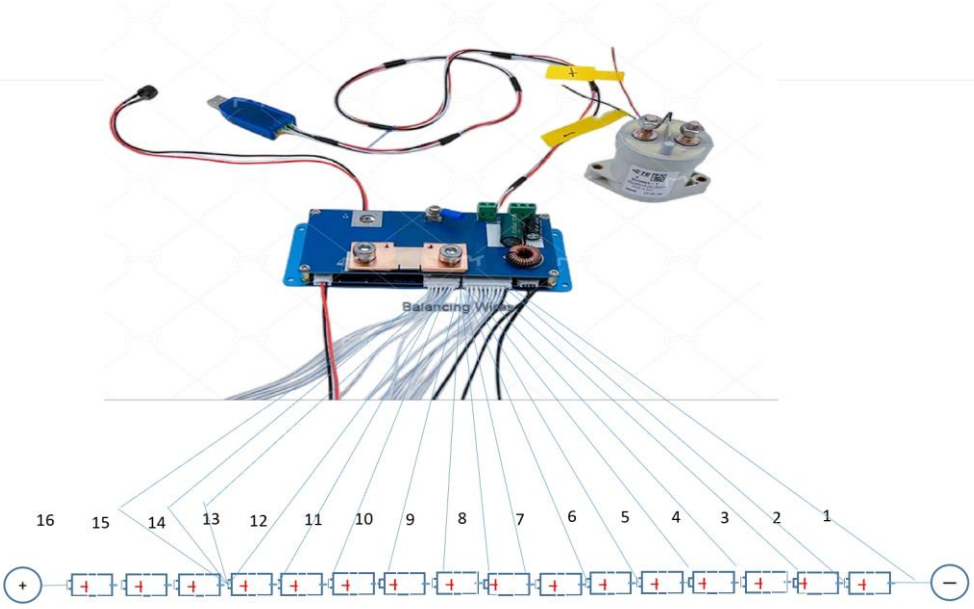
Wiring Diagram of BMS 16S



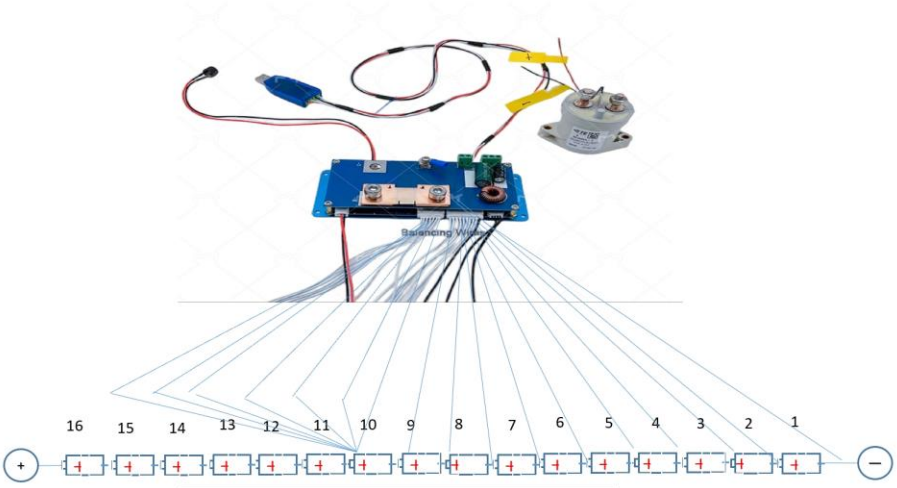
Wiring Diragram of BMS 16S is changed to BMS 15S



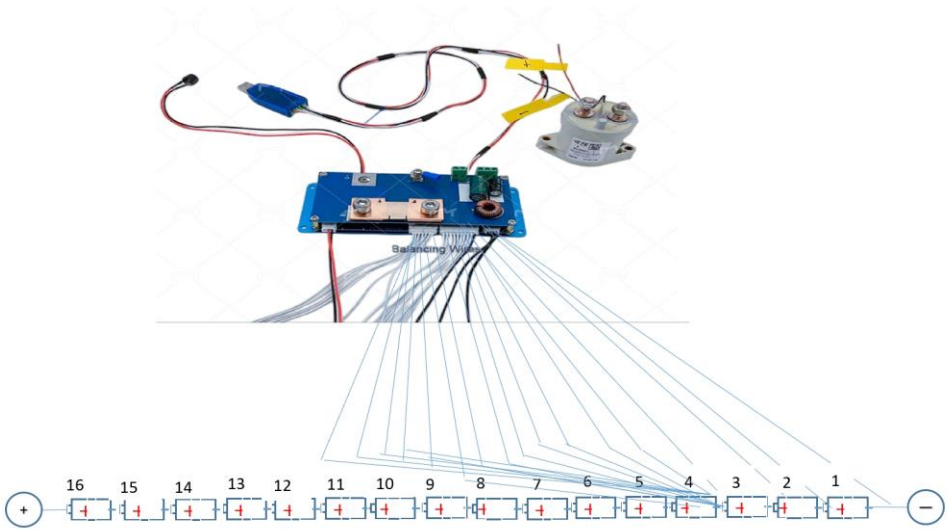
Wiring Diragram of BMS 16S is changed to BMS 14S



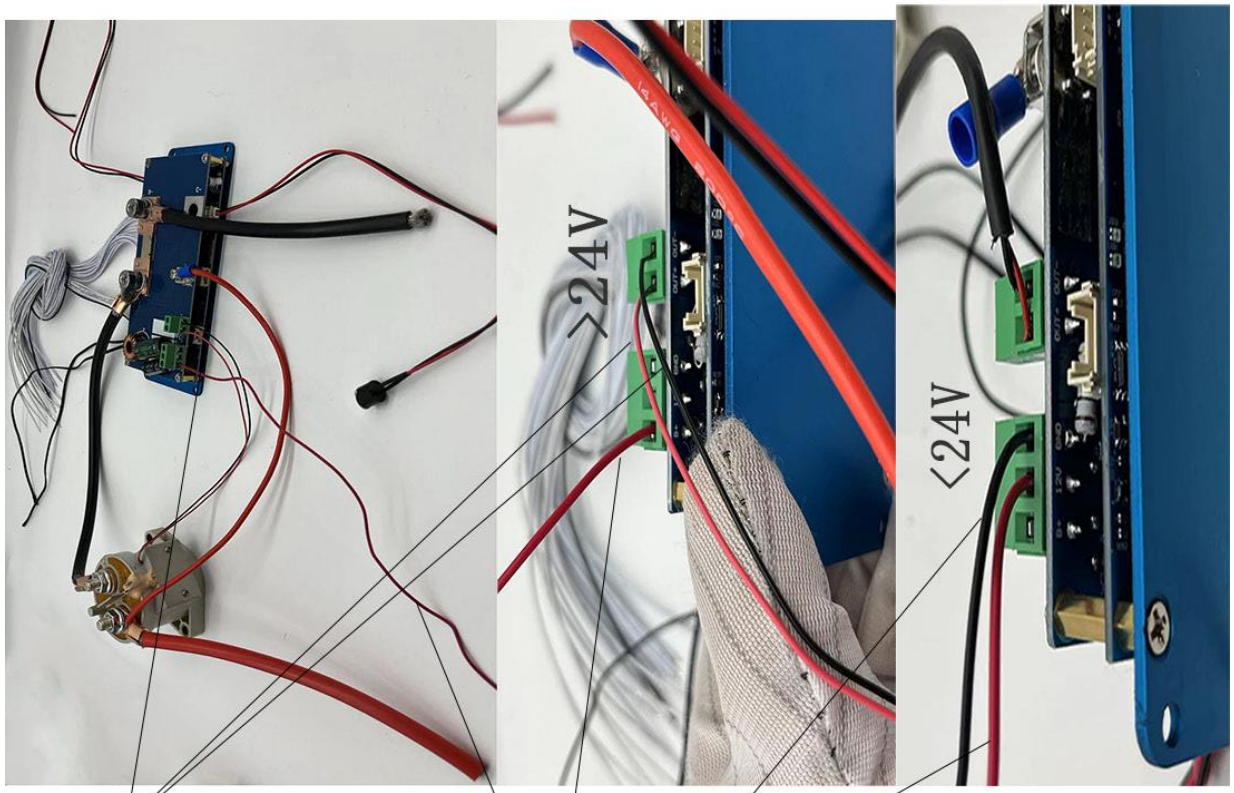
Wiring Diragram of BMS 16S is changed to BMS 13S



Wiring Diragram of BMS 16S is changed to BMS 10S



Wiring Diragram of BMS 16S is changed to BMS 3S

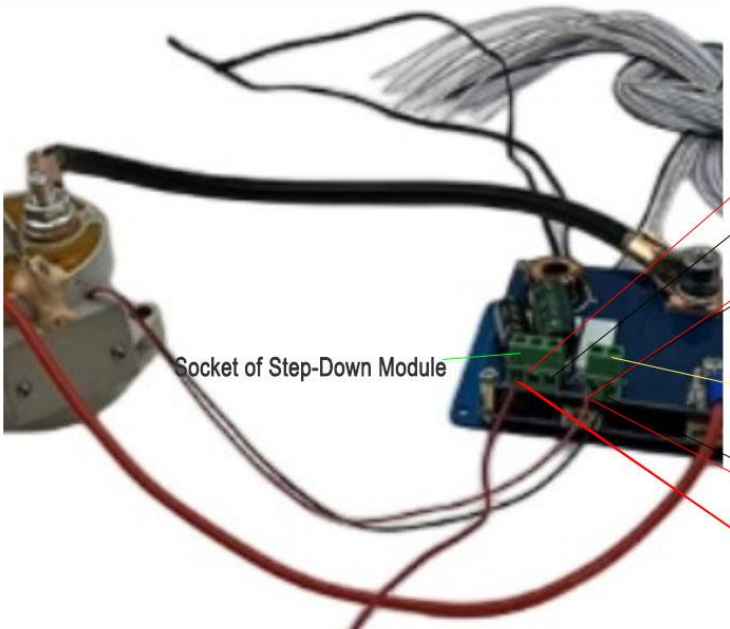


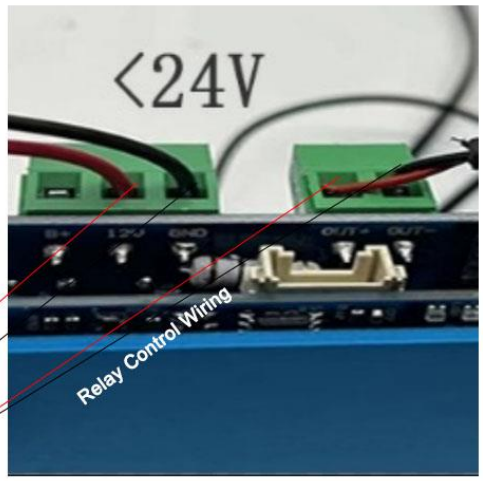
Wires goes to RElay

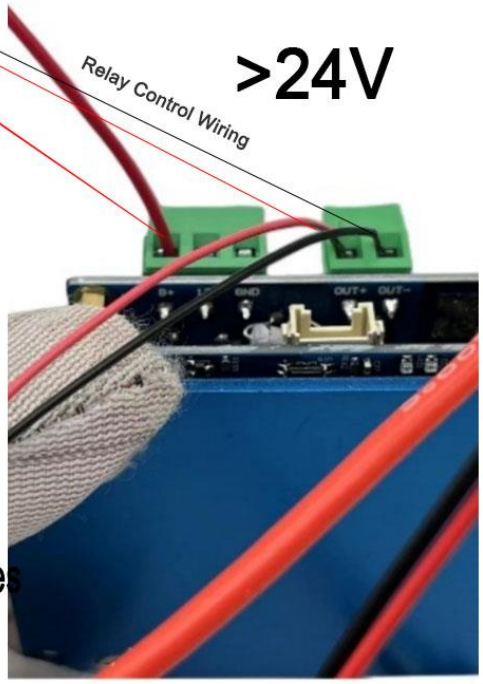
Wires go to the totoal positive of batteires(>24V)

Wires go to the total negative and positive of batteries (<24V)

TOPBMS







Step-Down Module Wiring :

If Nominal Voltage of batteries pack >24V,

Wires go to the totoal positive of batteires

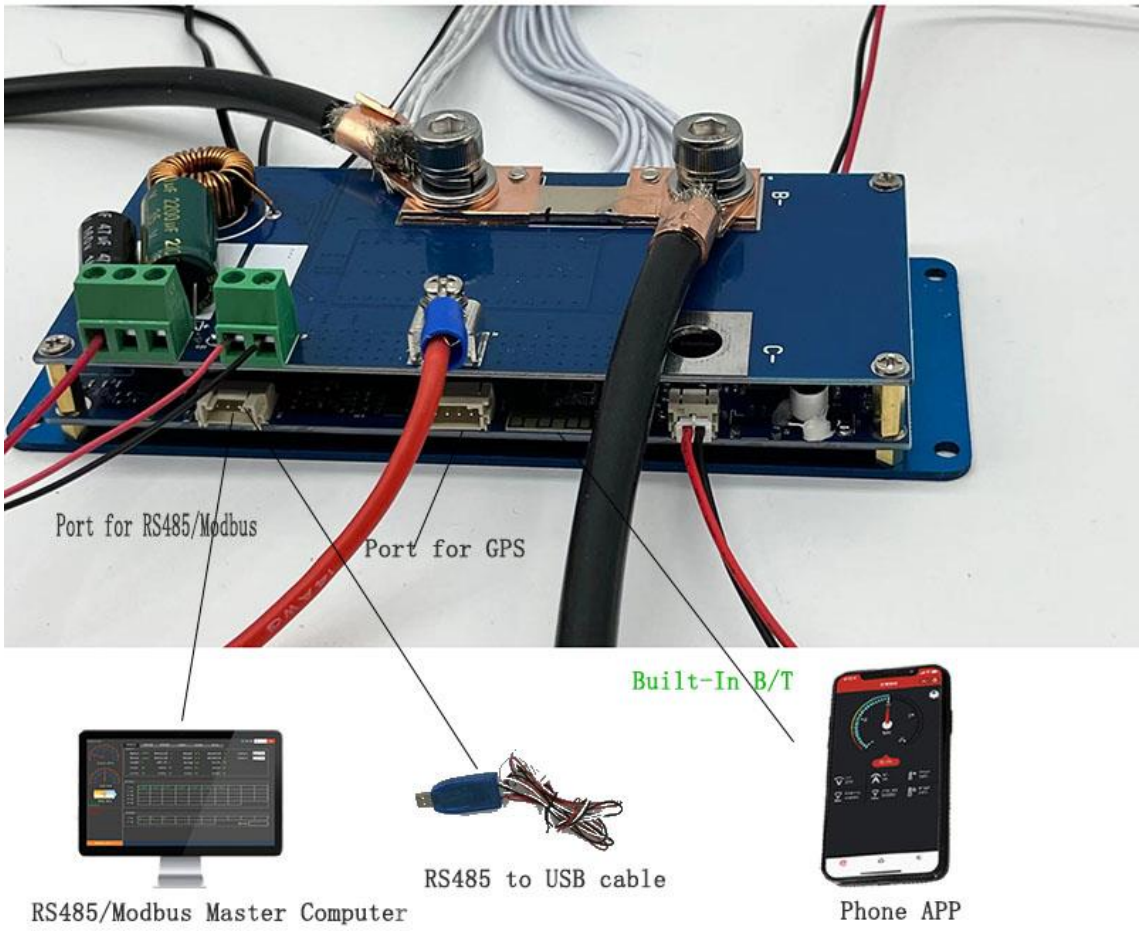
If Nominal Voltage of batteries pack <=24V,

Wires go to the total negative and positive of batteries

TOPBMS

BMS Communication Ports Description

Email: 66057580@qq.com

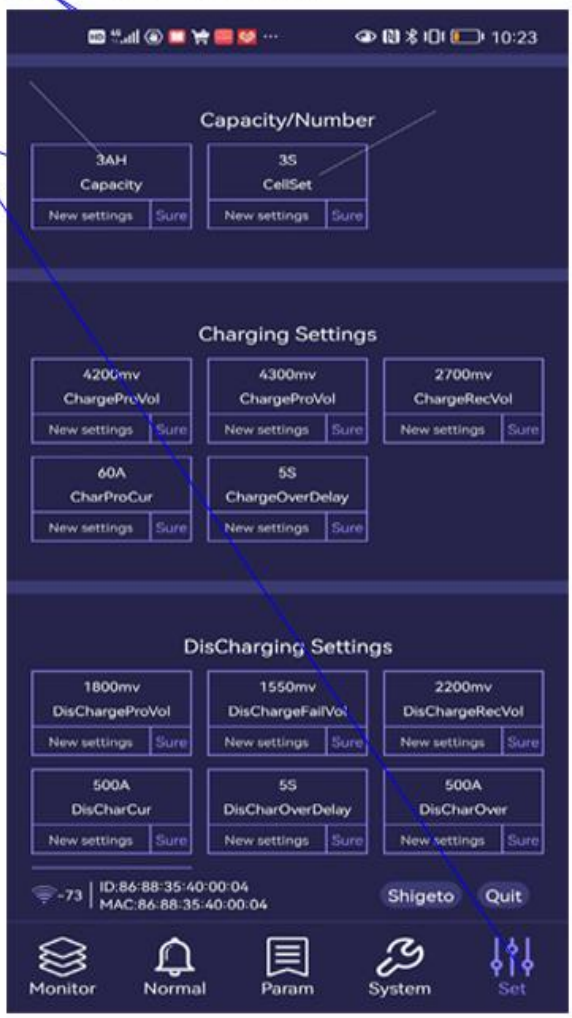


四 Parameters Sheet

TOPBMS 3S-32S BMS 200A-500A						
L*W*H 165*65*35mm						
功能	项目	功能	Voltage			Comment
		Batteries Type	Li-ion (3.7V)	LiFePo4 (3.2V)	LTO (2.3V)	
Over Voltage Protection	Level 1 Charging Protection	1500mV-4500mV	4200mV	3650mV	2800mV	Level 1 protection Voltage
	Level 2 Charging Protection	2950mV-4800mV	4300mV	3750mV	2950mV	Level 2 Protection voltage shall be set larger than Level 1 protection Voltage
	Over-charging Protection Delay Time	4S-10S				
	Over-charging Protection Recovery Volatge		4100mV	3550mV	2700mV	充电恢复设置电压必须小于充电保护电压 Over-charging Protection recovery Voltage shall be set smaller than Level 1 protection Voltage
Under Voltage Protection	Level 1 Discharging Protection	1500mV-4500mV	2750mV	2500mV	1800mV	
	Level 2 Discharging Protection		2500mV	2250mV	1600mV	Level 2 discharging protection shall be set smaller Level 1
	Over-discharging Protection Delay Time	4S-10S				
	Over-discharging Protection Recovery Volatge		3100mV	2900mV	2200mV	Over-discharging Protection Recovery Volatge shall be set larger than Level 1 Discharging Protection Voltage
High Temperature Protection	Power Module of BMS		90℃			
	Balancing Module of BMS		70℃			
			65℃			
High Temperature Protection Recovery	Power Module of BMS		85℃			
	Balancing Module of BMS		65℃			
	Batteries		60℃			
Low Temperature Protection		-30degree Max				MANUAL SET
Low Temperature Protection Recovery		-10degree Max				MANUAL SET
Current	Charging Current	0-500A				For example :If you order bms 40A , you can set the max value of charging current to 40A
	Continuous discharging current	0-500A				For example :If you order bms 40A , you can set the max value of discharging current to 40A
	Peak discharging current	600-1500A				For example :If you order bms 40A , you can set the max value of peak current to 120A
Balancing	Balancing start Volt	1000mV-4300mV	4100mV	3400mV	2600mV	
	Voltage Diff	1-30MV	20mV	20mV	20mV	
	Balancing Current	2-40mA	40mA	40mA	40mA	
Voltage acquisition resolution		5mv				
Temp Acquisition Tolerence		1-5%				
SOC Acquisition Tolerence		1-10%				
BMS Communication	Bluetooth					
	485-1					The port for charger with RS485
	485-2					The port for PC
	CAN					Not Applicable
Consumption	BMS +Bluetooth	2.5mA				
	BMS+CAN	7.5mA				
	Sleep Mode	50uA				
供电		*20V-150V*				电池组供电

STEP1 Start Up of BMS and Relay

After you enter the phone app, please go to the button “SET” and then set the correct batteries capacity and cell series in the app.



Step 2:How to Set Discharging /Charging

Charging Setting:

Please make sure to set charging current larger than actual one in the charging settings

Dischagring Setting ：

Please make sure to set discharging current larger than the actual one in the discharging settings;

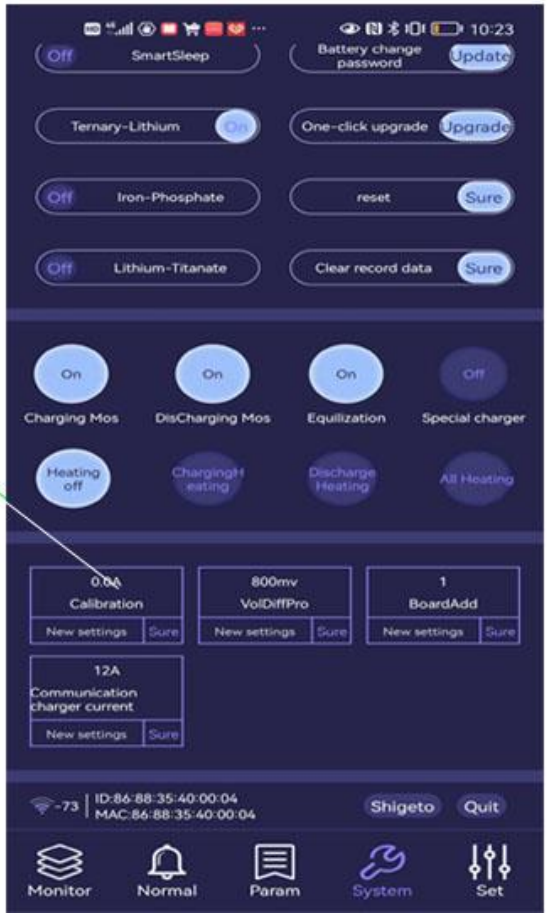
Discharging over current is 2 times larger than discharging current

Attention:the bms will be dead if the set discharging/charging is less than actual one !!

Step 3.1

Current Calibration-1

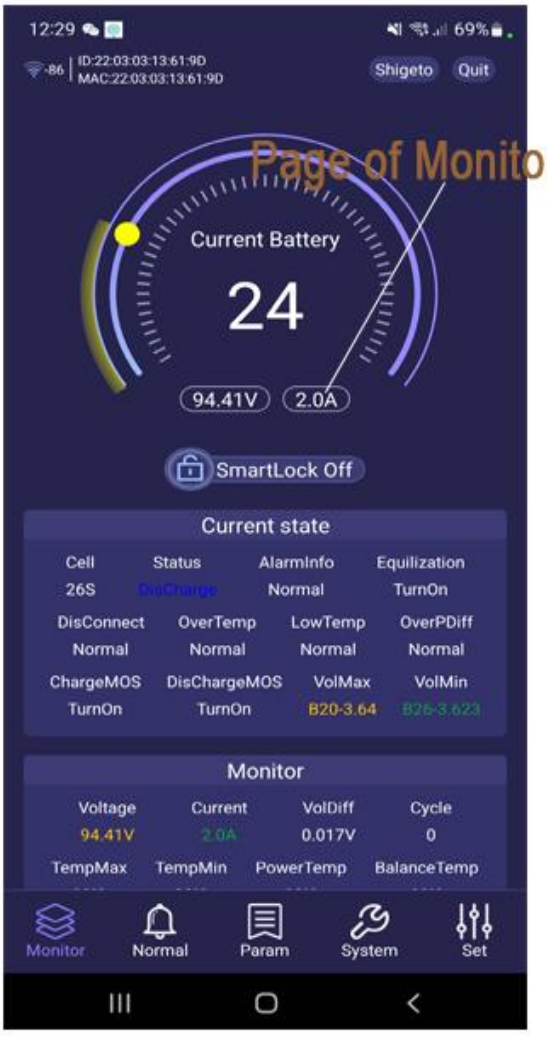
In the begining.The BMS and relay can't work without the loading and without *current calibration*; Please set the correct discharging current in the *current calibration* after connect loading;Afterwards, the BMS and relay works



Step 3.2 Current Calibration-2

Enter 2A in calibration and check if page of “monitor”shows 2A;

If yes, the calibration is completed sucessfully



Attention:you can enter 2~more in the calibration

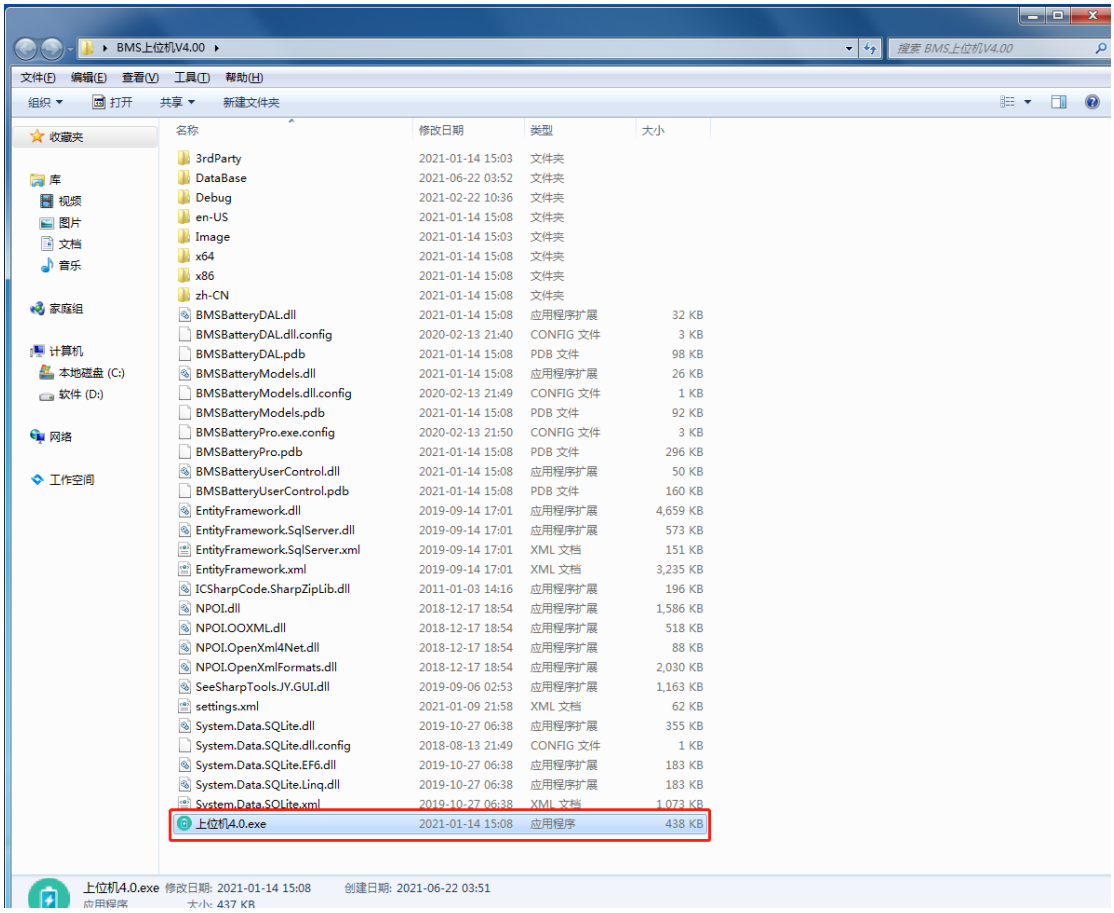
STEP 4 SOC Calibration

Set the actual capacity of the batteries pack in the phone APP ,and Discharge the batteries to under-voltage protection and then Charge batteries to the over voltage protection and then SOC can be corrected and calibrated

PC Software Instruction OF

BMS talk to PC

Step1：PC Software Installation



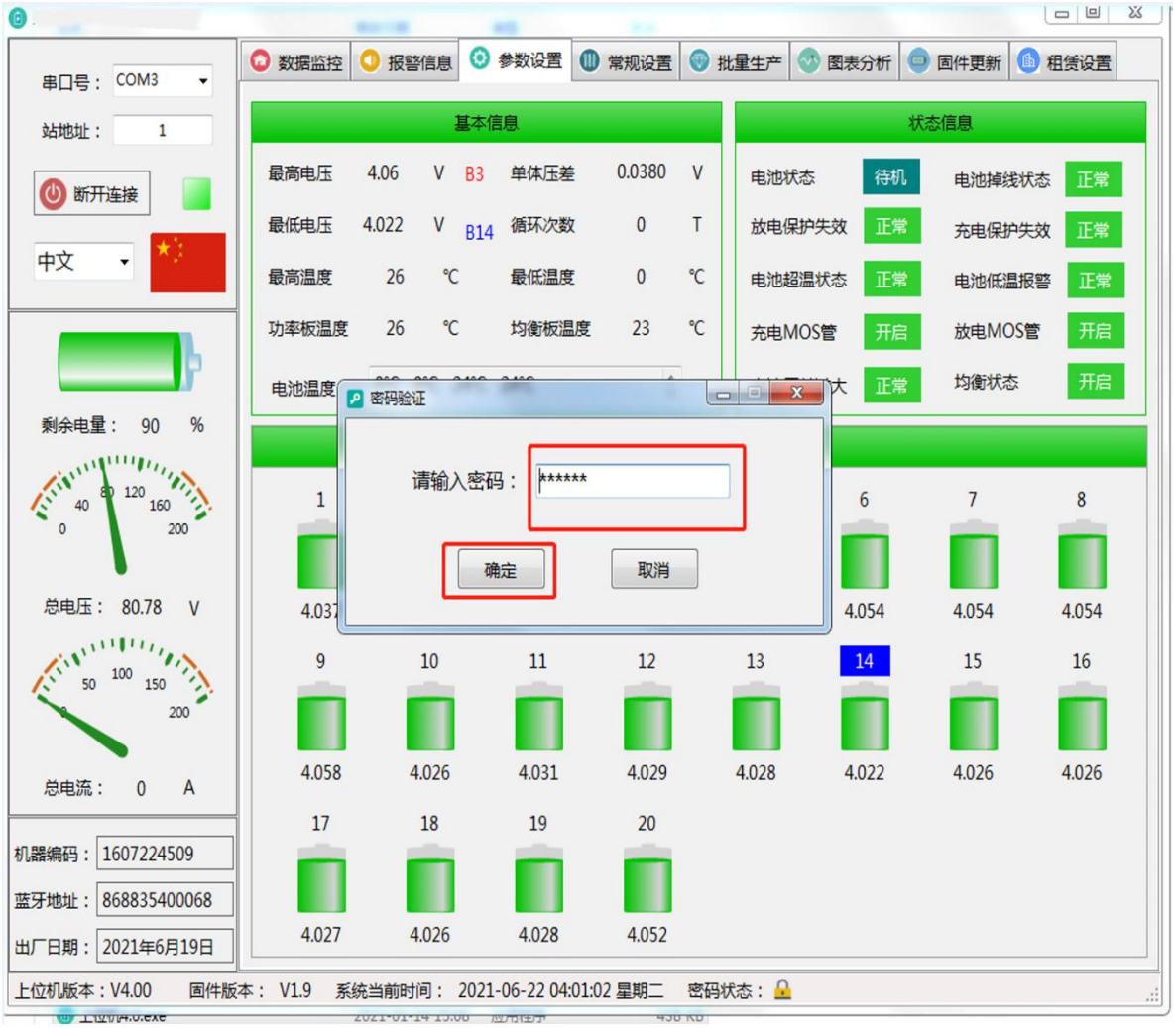
Step2 : Select the correct Port

Step3 : The address “ 1 ”cannot be changed. After this, press the botton "Connect"

Step 4: According to different customers ,the PC software has English and Chinese version ; The monitoring can be used to check the data of each cell, battery situation

Step 5: if you want to set the parameters， please enter

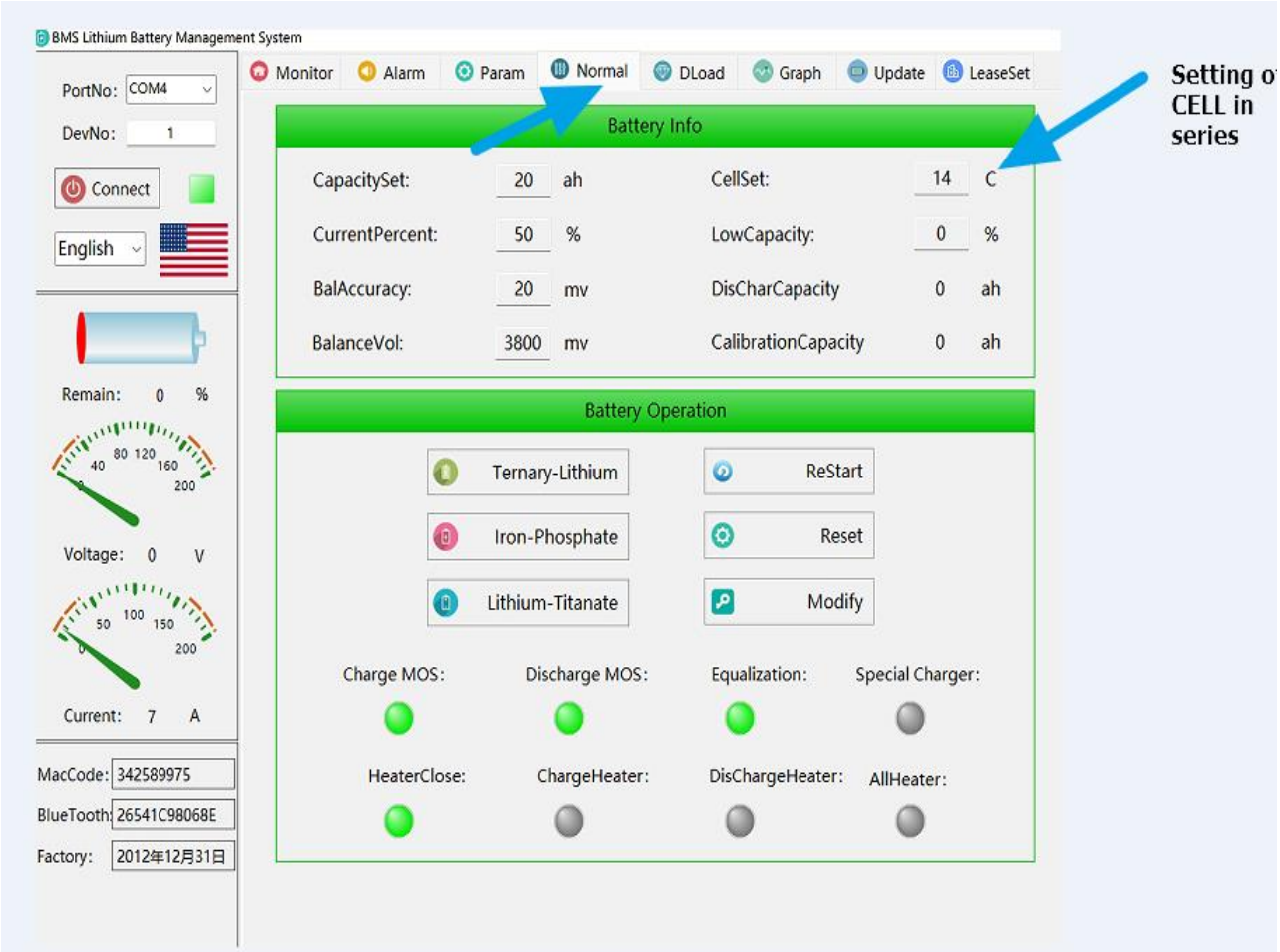
password :123456



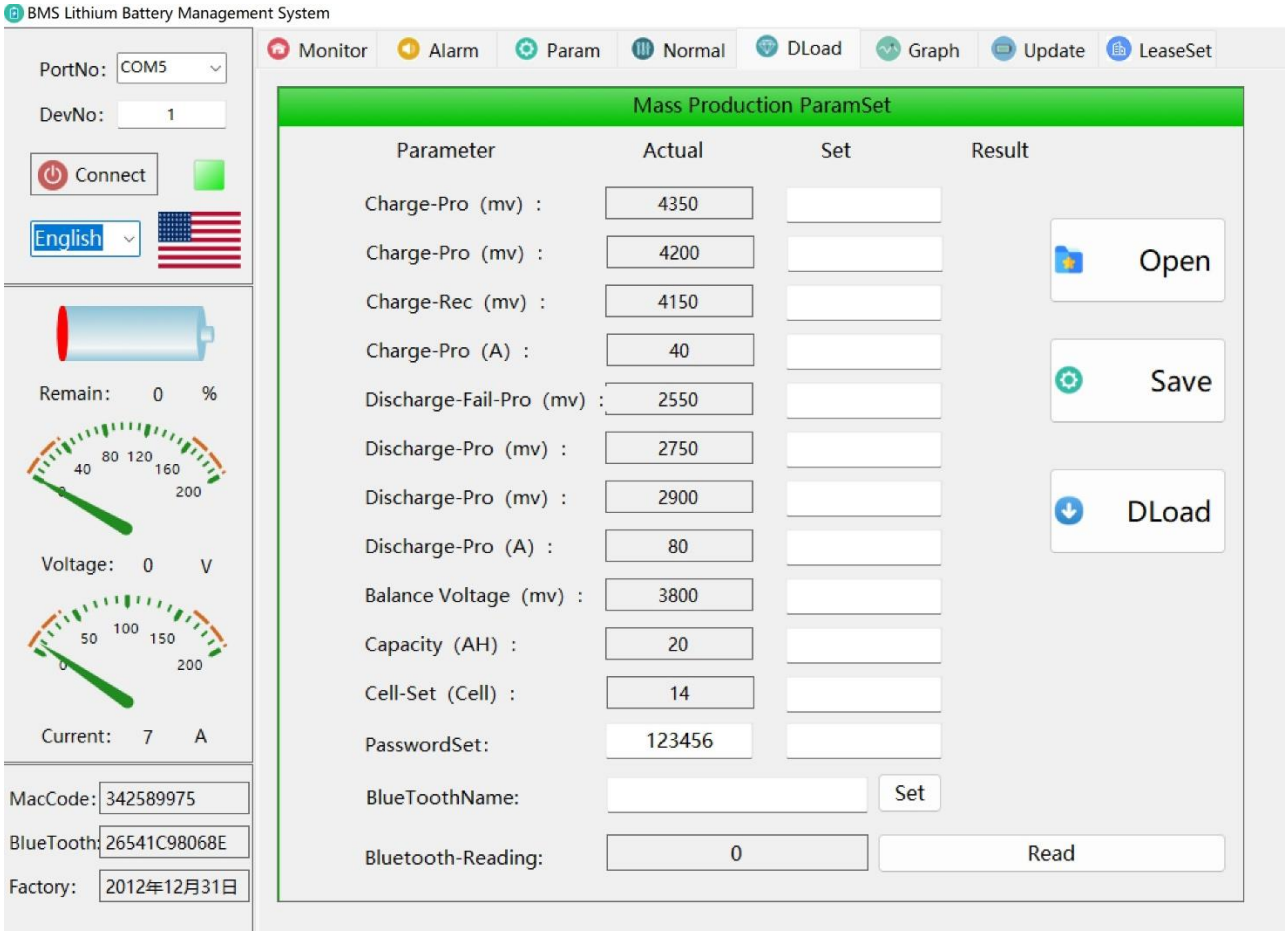
Step6 :Enter data to be set to confirm the modification. The

modification is successful

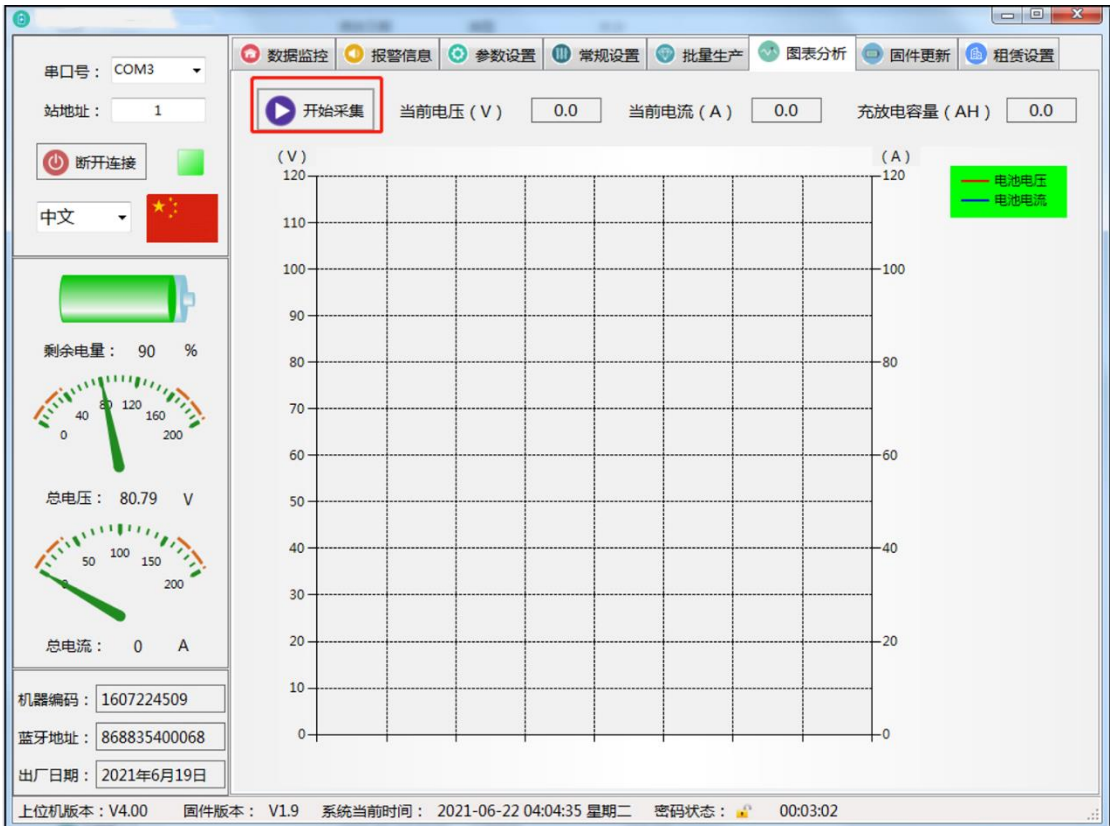
Step7 In the "Normal:,No of battery in series can be set based on the actual situation ; In the meanwhile, according to the battery properties you can select the protection mode



Step 8: you can set the protection parameters you expect



Step9:可以查看电压电流曲线



Step 10 可以更新固件一键休眠