

TOPBMS 3.2V LiFePo4BMS 4S-16S 200A 500A

Bluetooth RS485 Modbus LiFePo4 Battery Ebike Ecar

Inverter Solar

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

TOPBMS

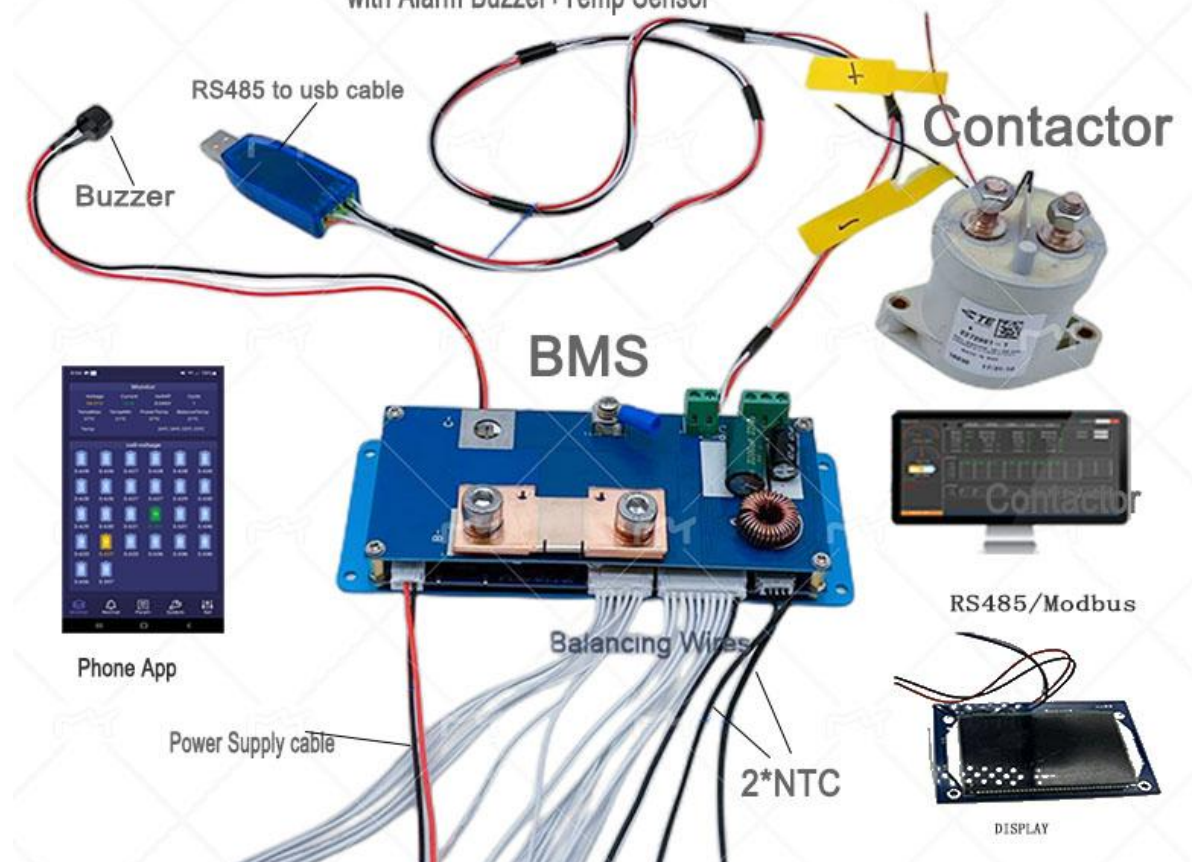
www.cleverbms.com

Smart BMS 3S-16S with B/T+RS485

Compatible with Li-ion NMC Battery/Lifepo4Battery

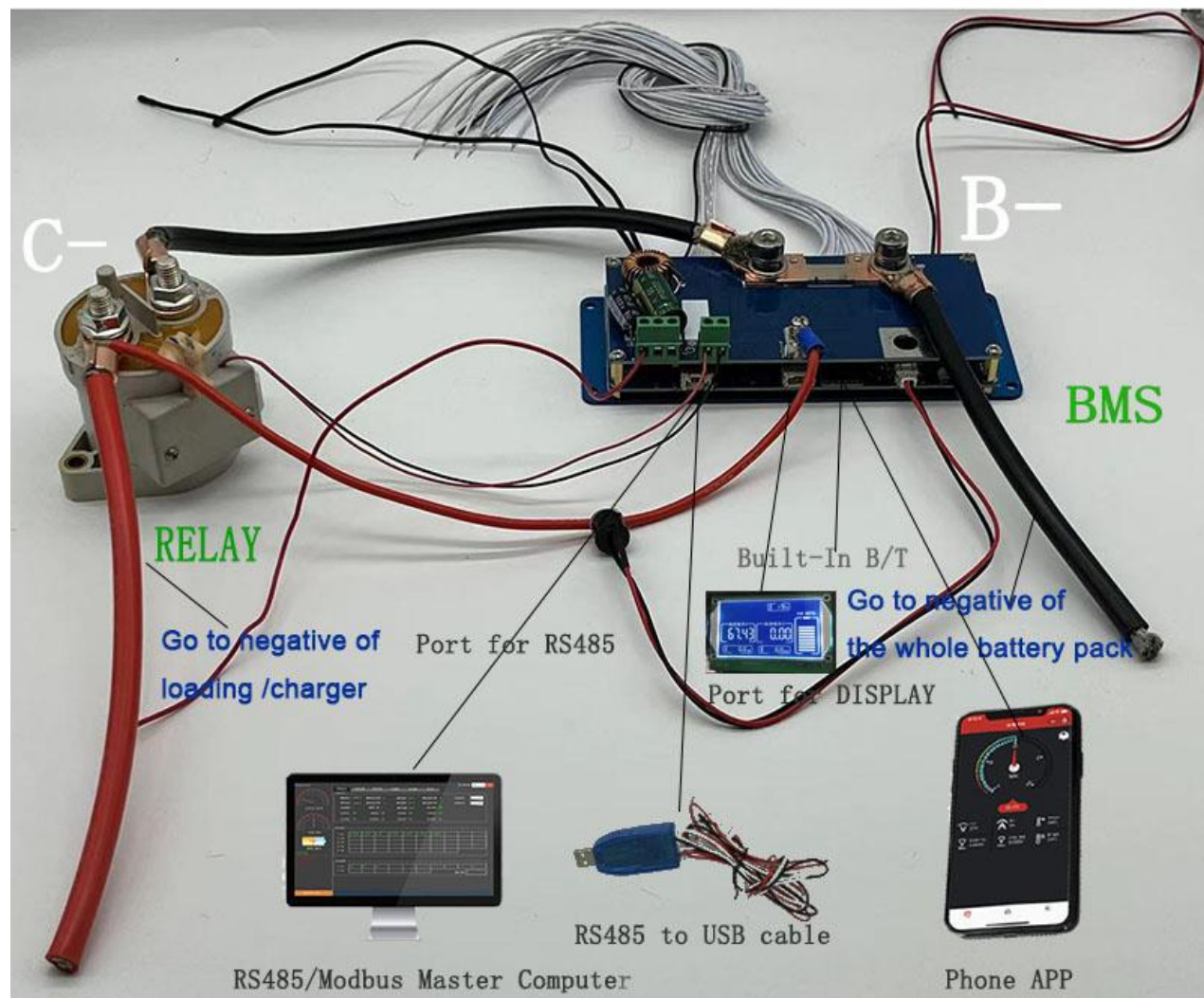
Discharging/ Charging 200A-500A

with Alarm Buzzer+Temp Sensor



TOPBMS

BMS with Bluetooth +RS485/Modbus-1

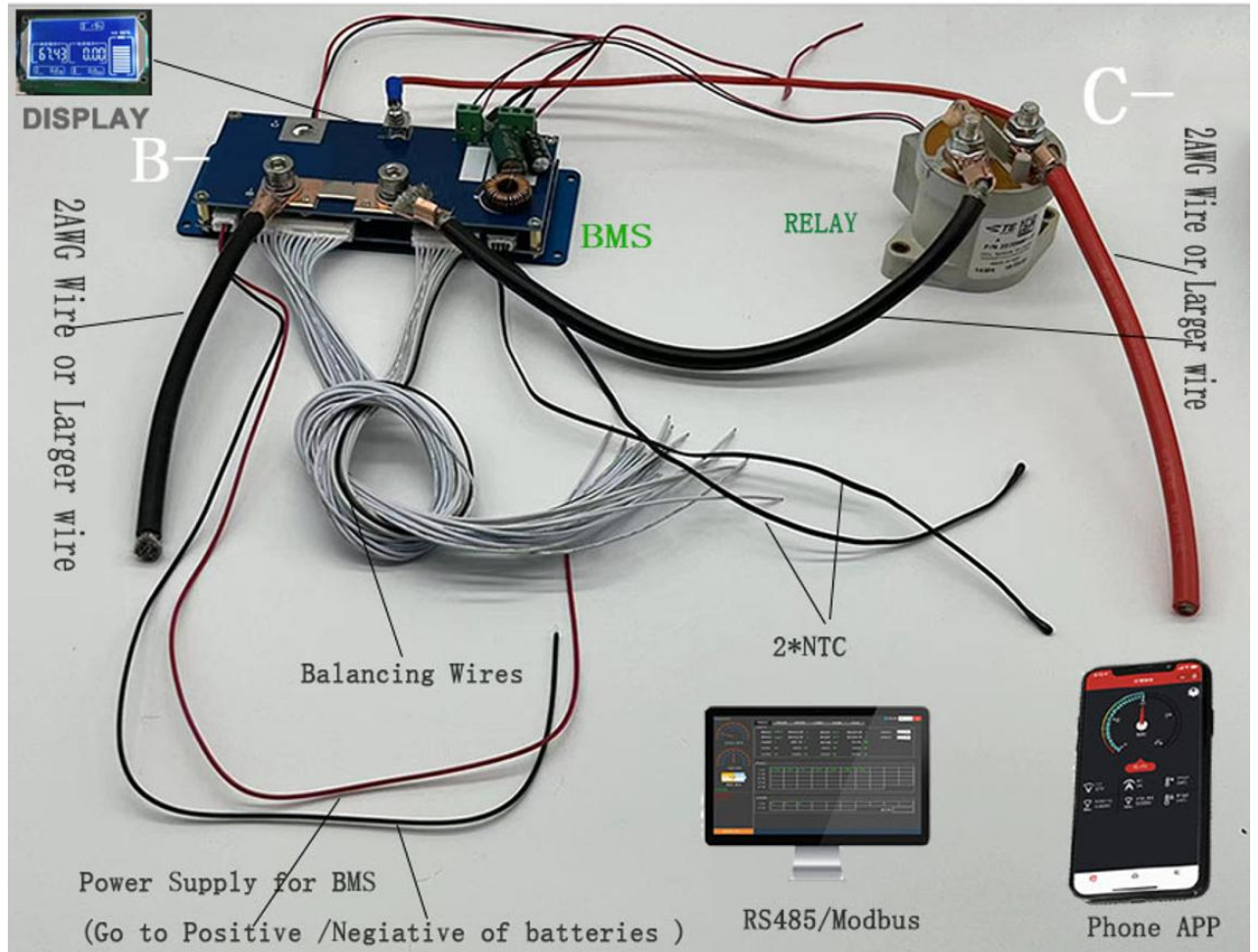


TOPBMS

3.7V Li-ion BMS with Bluetooth +RS48/Modbus-2

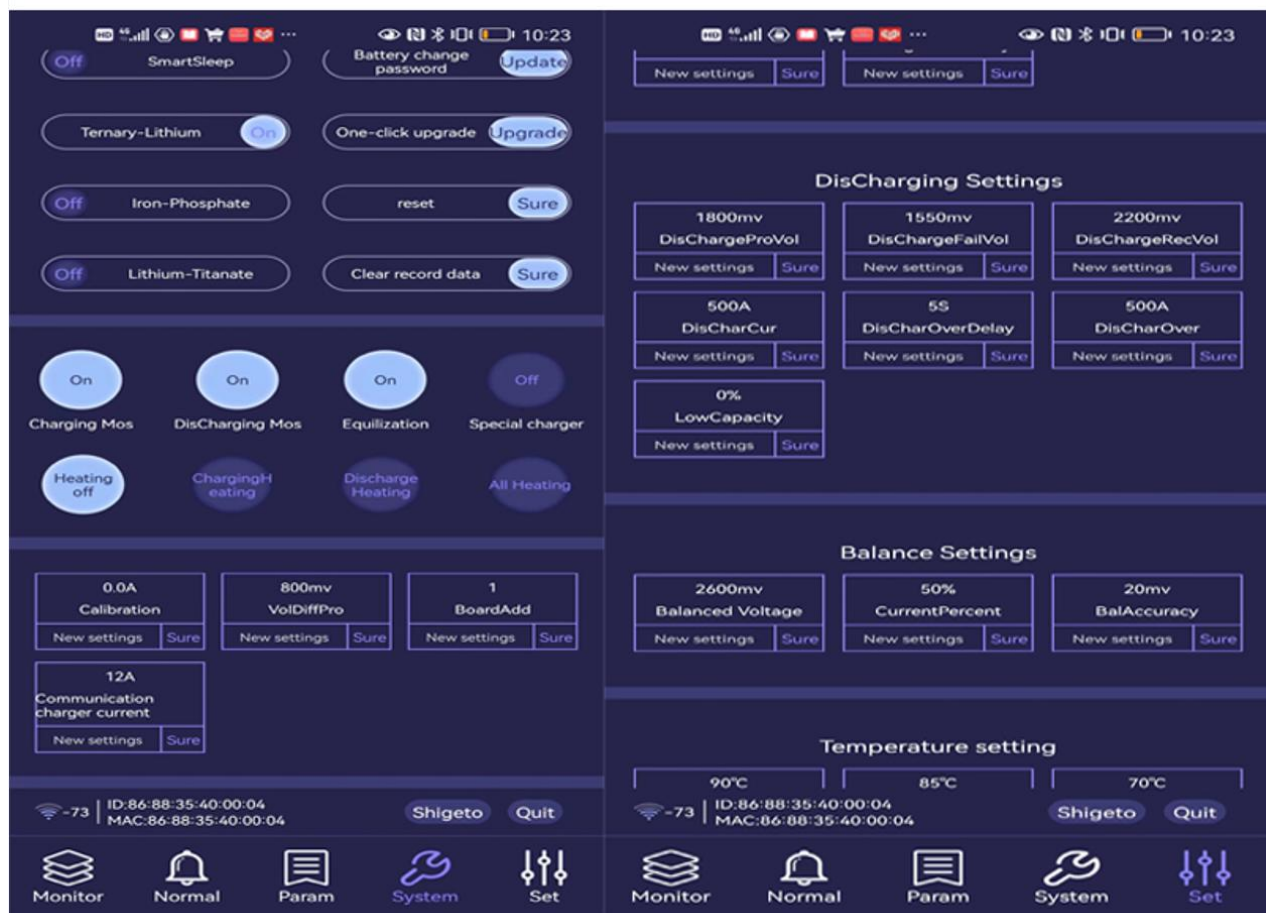
Balancing +Charging/Discharging Current : 500A

Peak Current: 1500A



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

BMS Lithium Battery Management System

PortNo: COM4
DevNo: 1

Connect

English

Remain: 0 %

Voltage: 0 V

Current: 7 A

MacCode: 342589975

BlueTooth: 26541C98068E

Factory: 2012年12月31日

Monitor Alarm Param Normal DLoad Graph Update LeaseSet

Battery Info

CapacitySet:	20	ah	CellSet:	14	C
CurrentPercent:	50	%	LowCapacity:	0	%
BalAccuracy:	20	mv	DisCharCapacity	0	ah
BalanceVol:	3800	mv	CalibrationCapacity	0	ah

Battery Operation

Ternary-Lithium
Iron-Phosphate
Lithium-Titanate

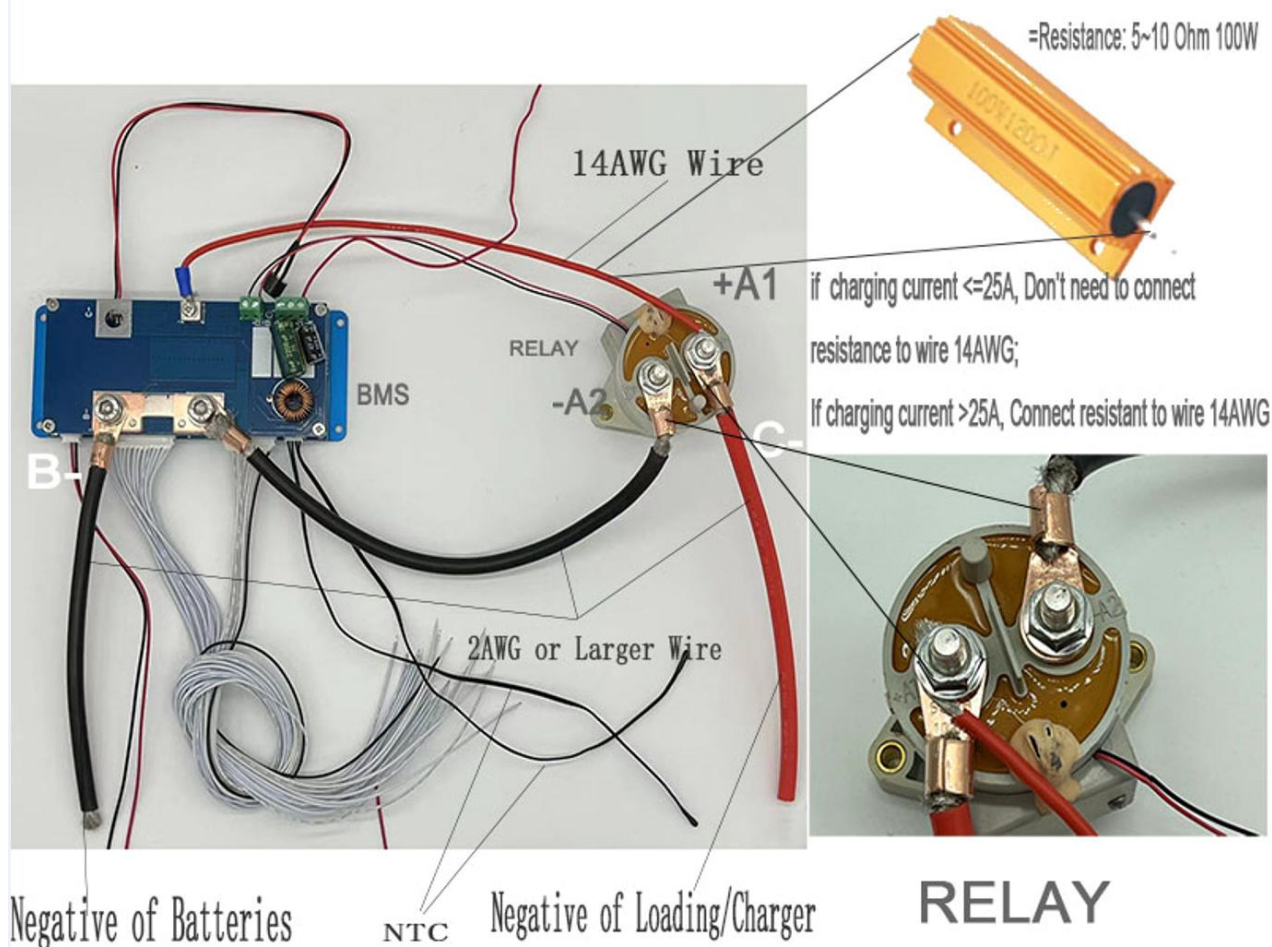
ReStart
Reset
Modify

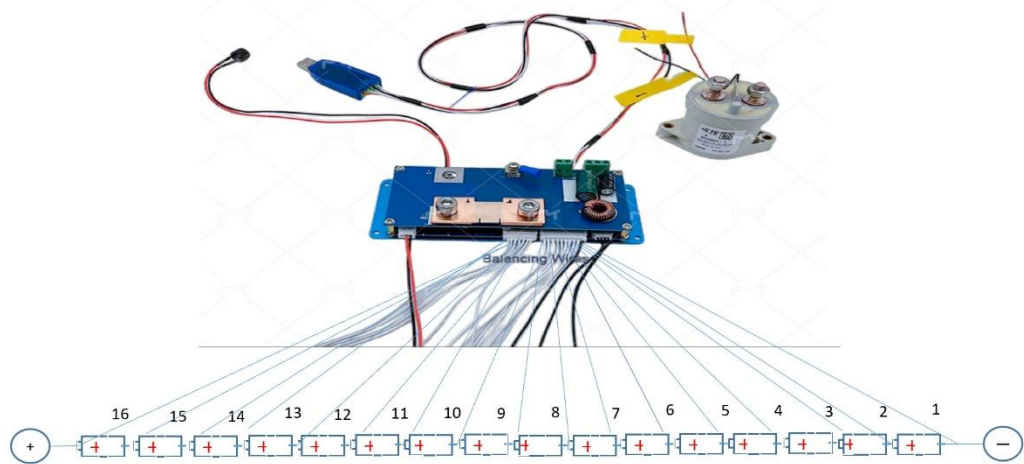
Charge MOS: Discharge MOS: Equalization: Special Charger:

HeaterClose: ChargeHeater: DisChargeHeater: AllHeater:

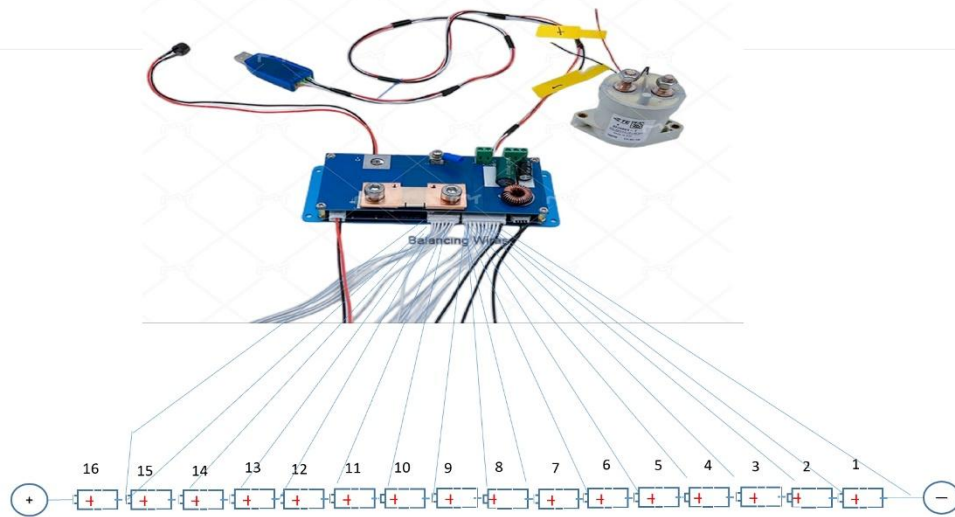
TOPBMS

BMS RELAY Wiring Instruction

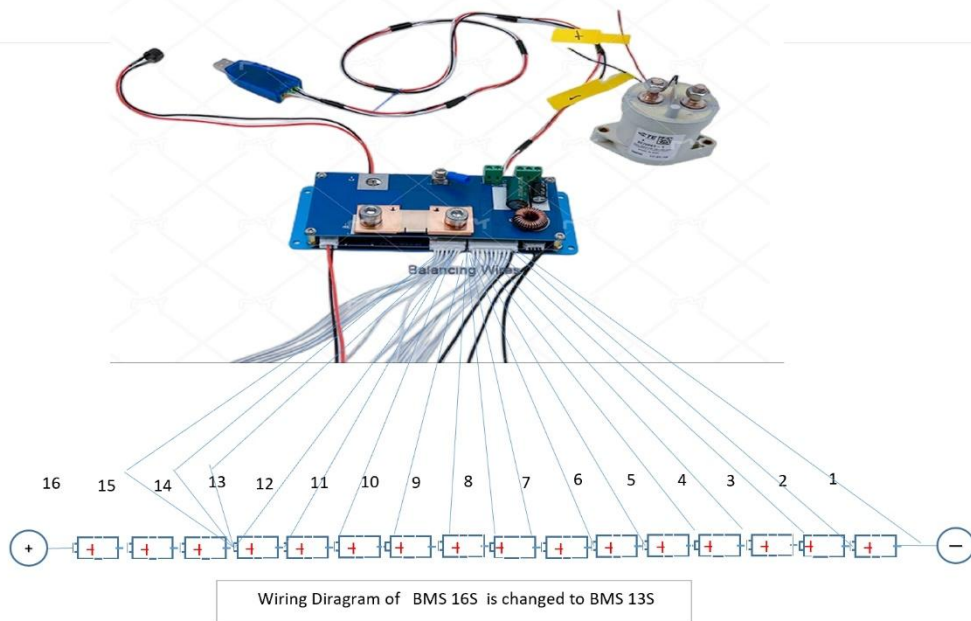
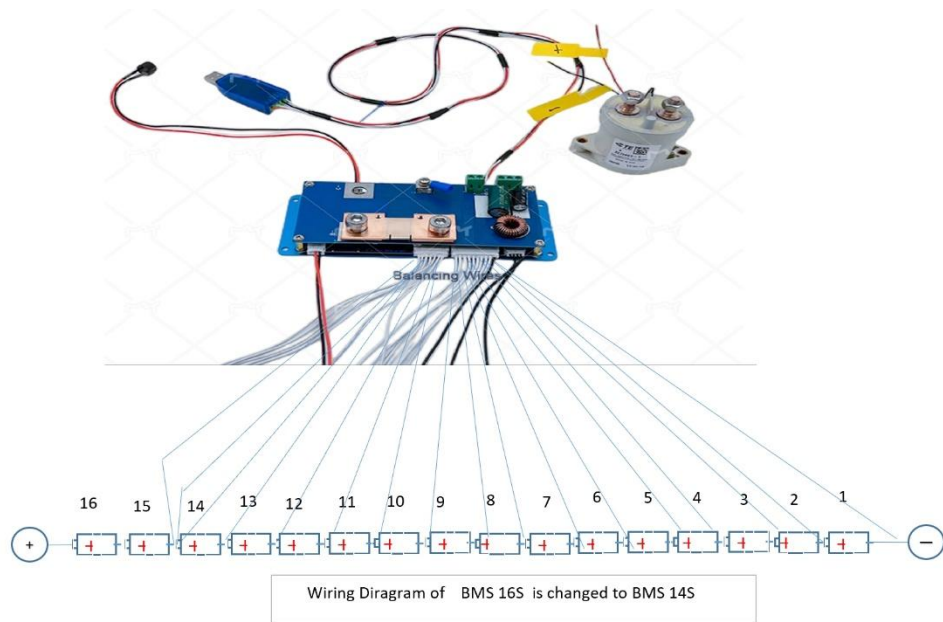


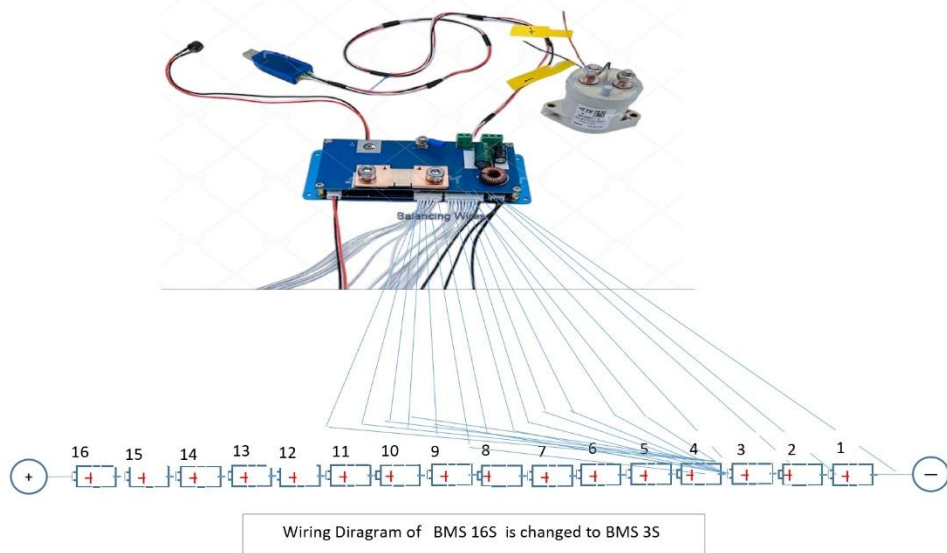
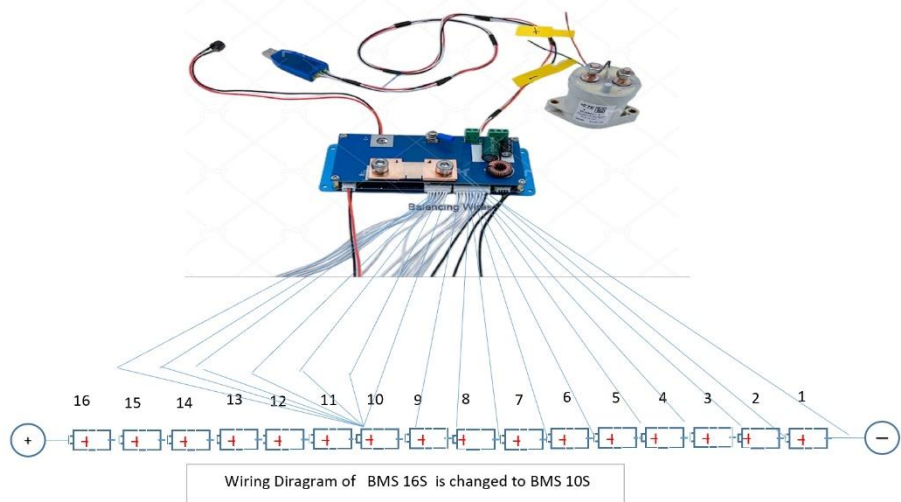


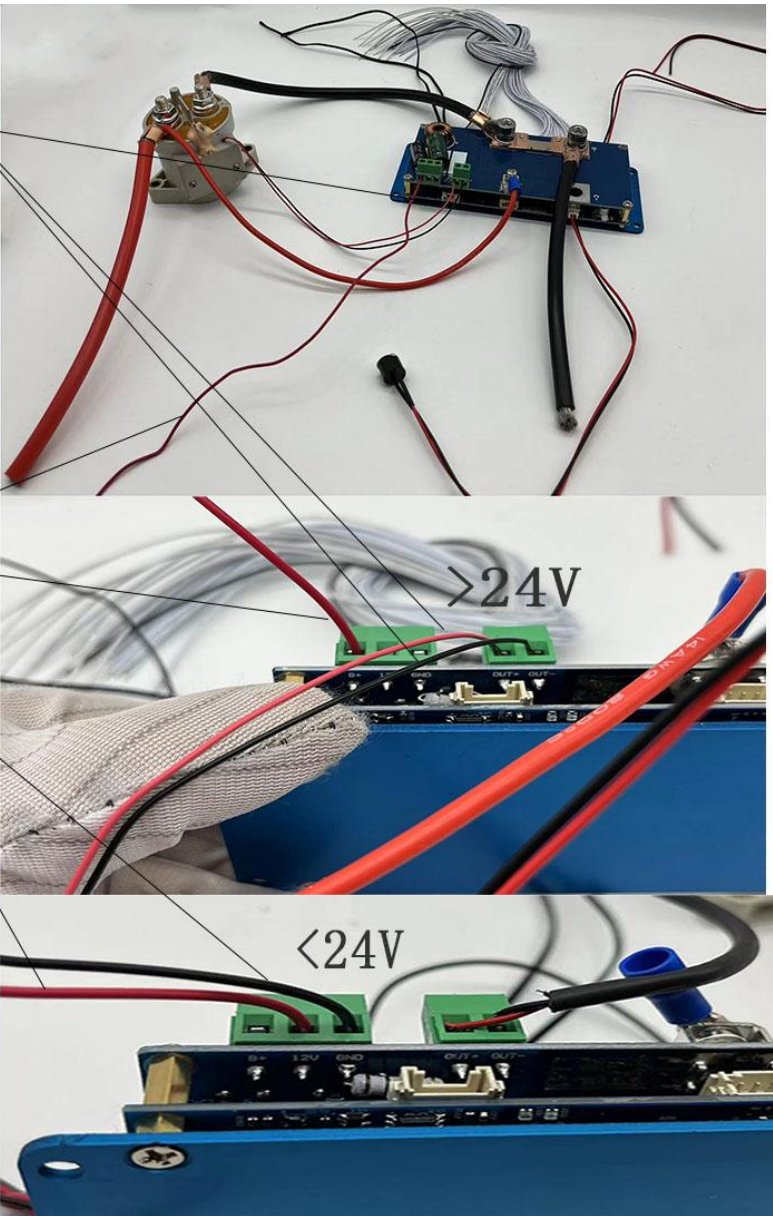
Wiring Diagram of BMS 16S



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





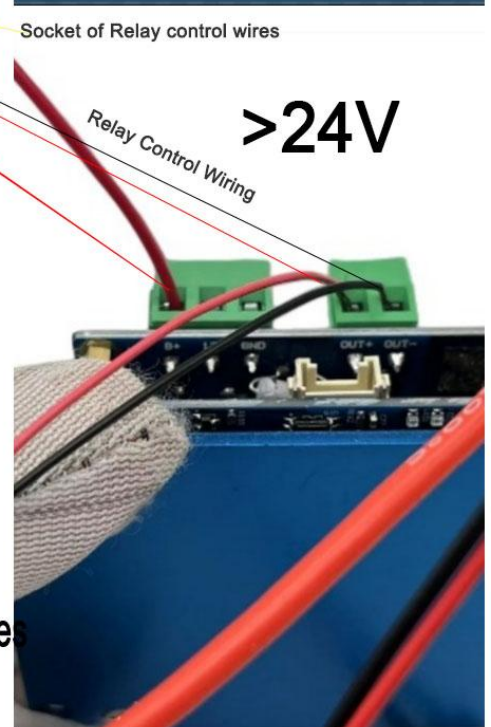
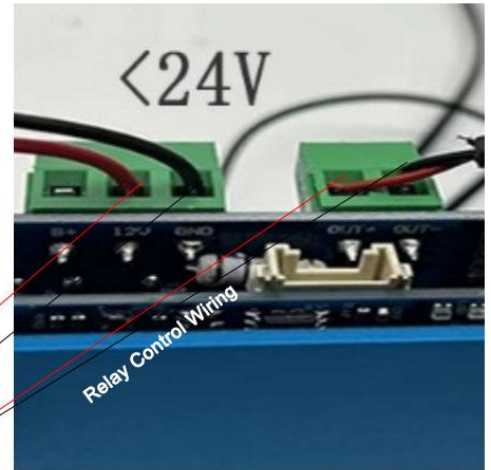
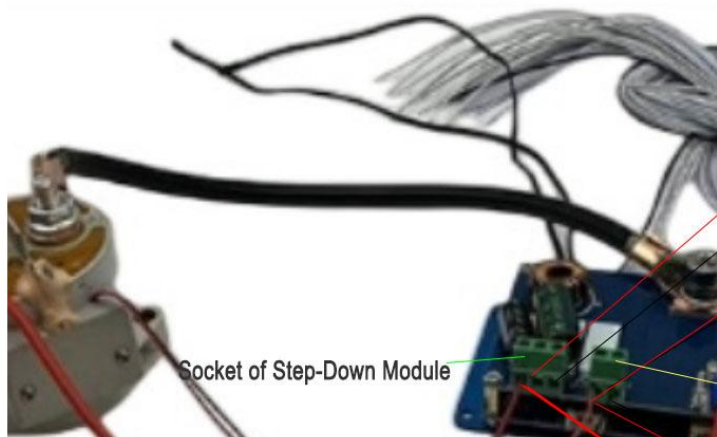


Wires goes to RELay

Wires go to the totocal 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 total positive of batteries

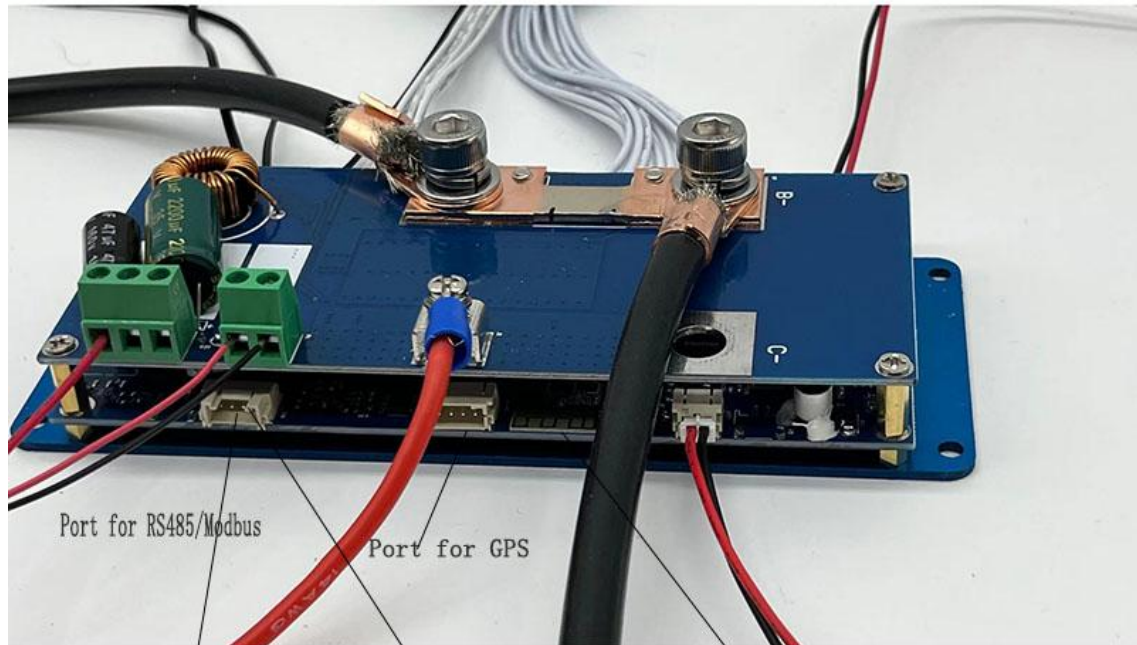
If Nominal Voltage of batteries pack $\leq 24V$,

Wires go to the total negative and positive of batteries

TOPBMS

BMS Communication Ports Description

Email: 66057580@qq.com



RS485/Modbus Master Computer



RS485 to USB cable



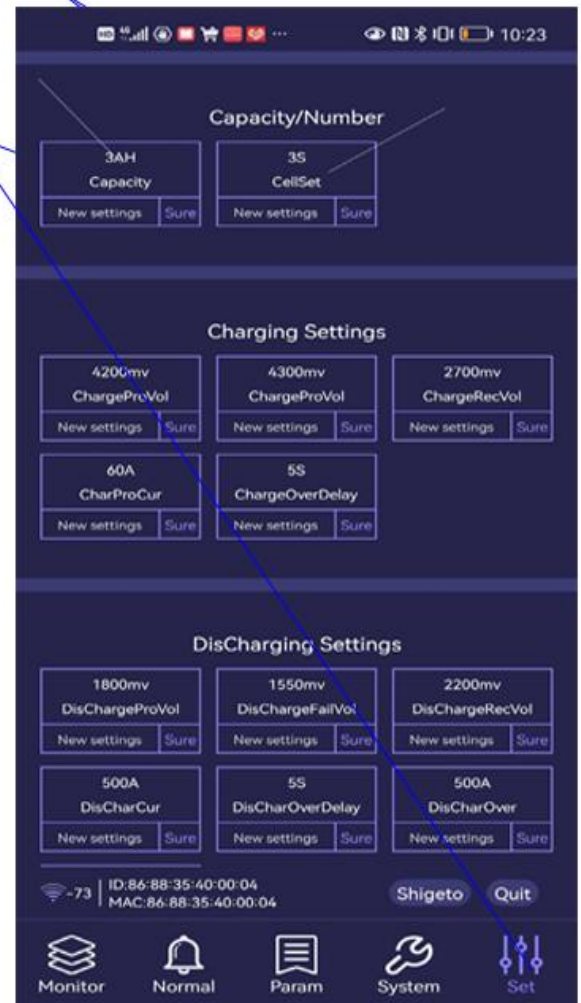
Phone APP

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)	LT0 (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 Voltage		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 Voltage		3100mV	2900mV	2200mV	Over-discharging Protection Recovery Voltage 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 Tolerance		1-5%				
SOC Acquisition Tolerance		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 !!

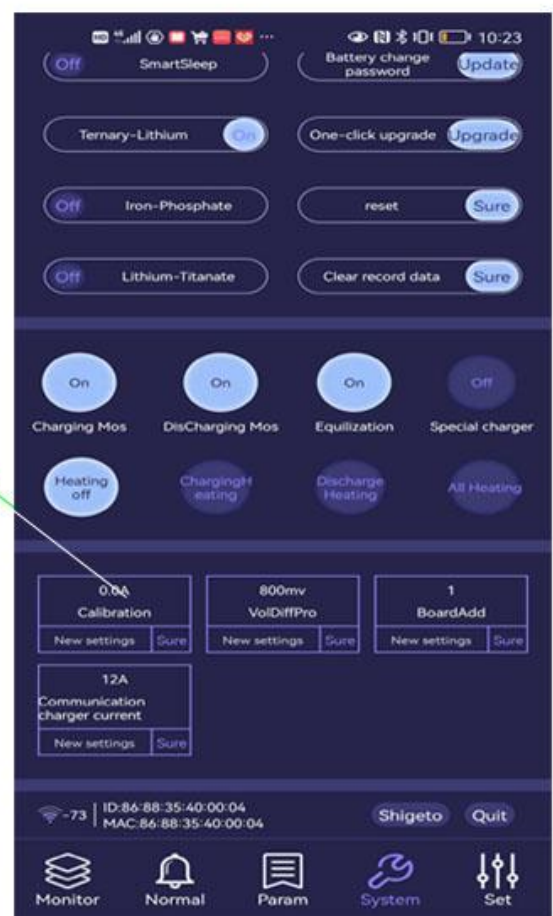


Step 3.1

Current Calibration-1

In the begining.The BMS and relay can't work without the loading and without *current calibration*;

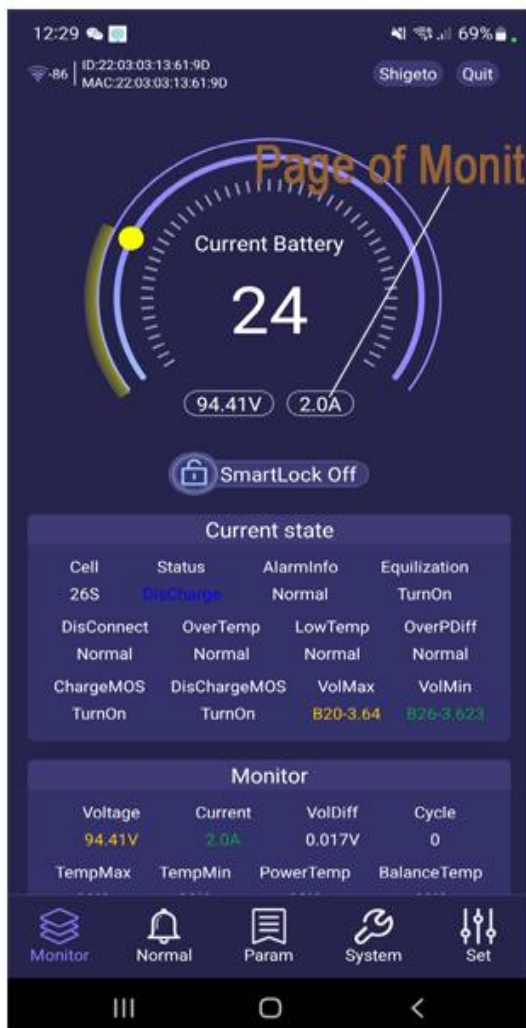
Please set the correct discharging current in the *current calibration* after connect loading;Afterwards, the BMS and relay works



Step 3.2

Current Calibration-2

Enter 2A in calibration and check if page of “monitor” shows 2A;
If yes, the calibration is completed successfully



Attention: you can enter 2~more in the calibration

STEP 4 SOC Calibration

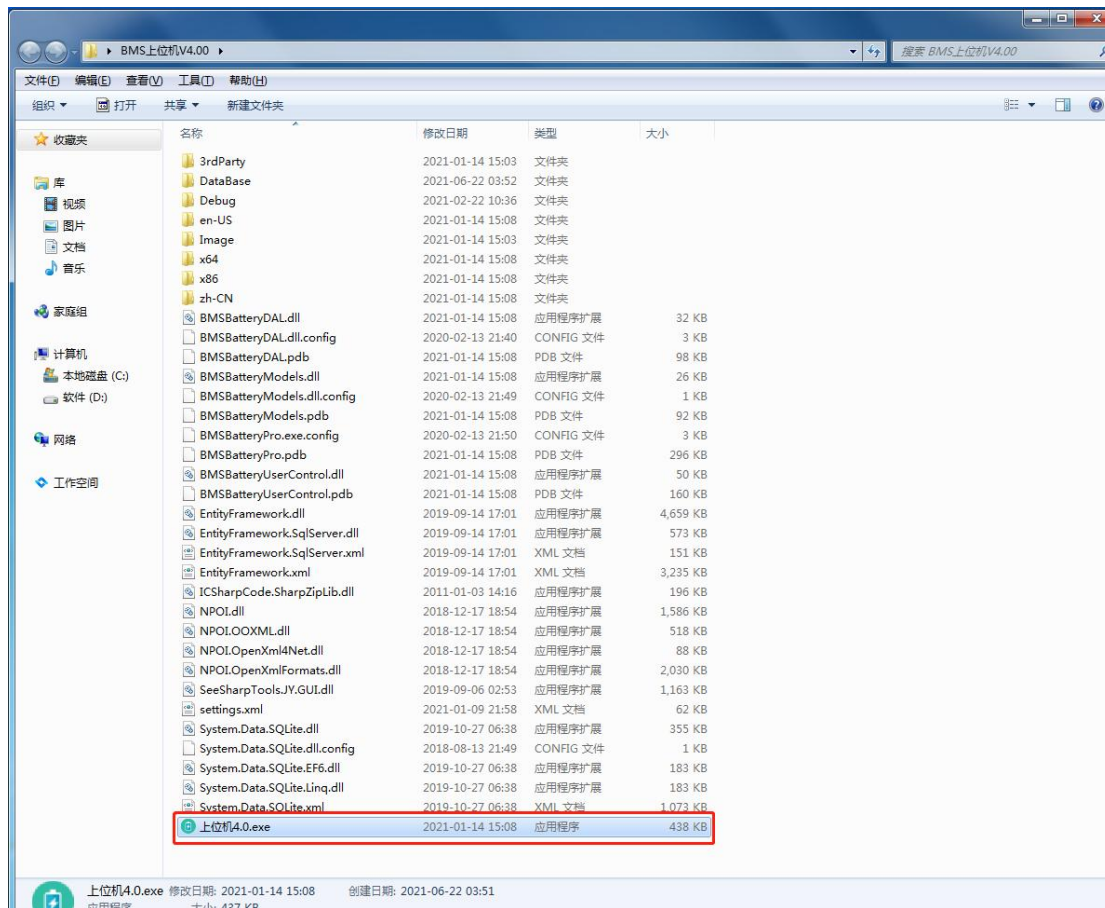
Set the actual capacity of the batteries pack in the phone APP ,and Discharge the batteries to under-voltage protection and then Charge batteries to the over voltage protection and then SOC can be corrected and calibrated



PC Software Instruction OF

BMS talk to PC

Step1 : PC Software Installation



Step2 : Select the correct Port

BMS Lithium Battery Management System

PortNo: COM4
DevNo: 1

Remain: 0 %
Voltage: 0 V
Current: 7 A

MacCode: 342589975
BlueTooth: 26541C98068E
Factory: 2012年12月31日

Monitor Alarm Param Normal DLoad Graph Update LeaseSet

Battery Info

CapacitySet:	20	ah	CellSet:	14	C
CurrentPercent:	50	%	LowCapacity:	0	%
BalAccuracy:	20	mv	DisCharCapacity	0	ah
BalanceVol:	3800	mv	CalibrationCapacity	0	ah

Battery Operation

Ternary-Lithium

Iron-Phosphate

Lithium-Titanate

ReStart

Reset

Modify

Charge MOS: ☒

Discharge MOS: ☒

Equalization: ☒

Special Charger: ☐

HeaterClose: ☒

ChargeHeater: ☐

DisChargeHeater: ☐

AllHeater: ☐

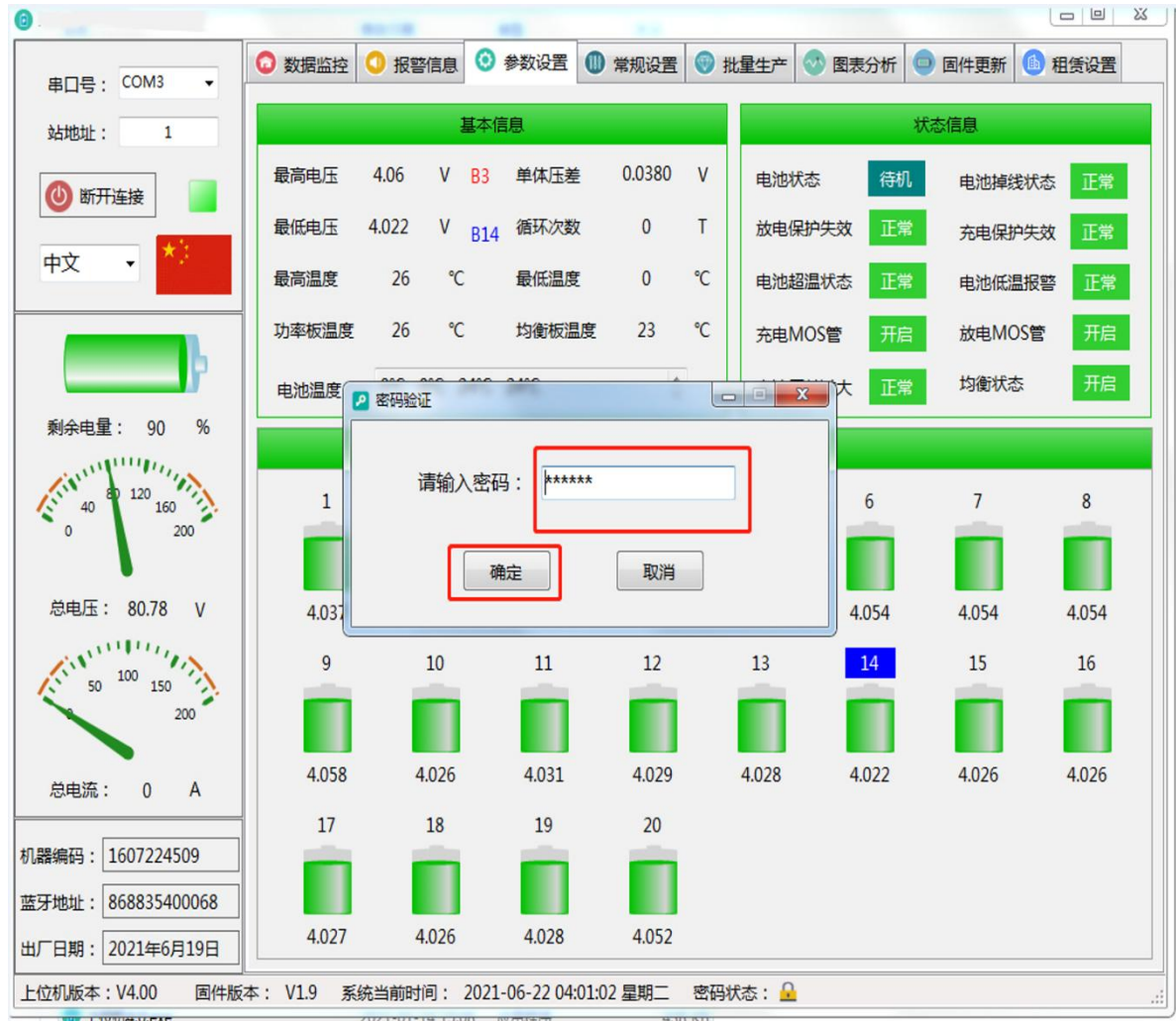
Step3 : The address “ 1 ” cannot be changed. After this,
press the button "Connect"



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

The screenshot displays the BMS Lithium Battery Management System interface. The 'Normal' tab is selected, and the 'Battery Info' section is visible. The 'CellSet' field is set to 14, and the 'CapacitySet' field is set to 20 ah. The 'Battery Operation' section shows various settings and status indicators.

Battery Info

Parameter	Value	Unit
CapacitySet:	20	ah
CurrentPercent:	50	%
BalAccuracy:	20	mv
BalanceVol:	3800	mv
CellSet:	14	C
LowCapacity:	0	%
DisCharCapacity	0	ah
CalibrationCapacity	0	ah

Battery Operation

CellType: Ternary-Lithium, Iron-Phosphate, Lithium-Titanate

Buttons: ReStart, Reset, Modify

Charge MOS: ☒ Discharge MOS: ☒ Equalization: ☒ Special Charger: ☐

HeaterClose: ☒ ChargeHeater: ☐ DisChargeHeater: ☐ AllHeater: ☐

Left Panel:

PortNo: COM4
DevNo: 1
Connect
English
Remain: 0 %
Voltage: 0 V
Current: 7 A
MacCode: 342589975
BlueTooth: 26541C98068E
Factory: 2012年12月31日

Right Panel:

Monitor Alarm Param Normal DLoad Graph Update LeaseSet

Setting of CELL in series

Step 8: you can set the protection parameters you expect

BMS Lithium Battery Management System

PortNo: COM5
DevNo: 1
Connect
English

Remain: 0 %
Voltage: 0 V
Current: 7 A

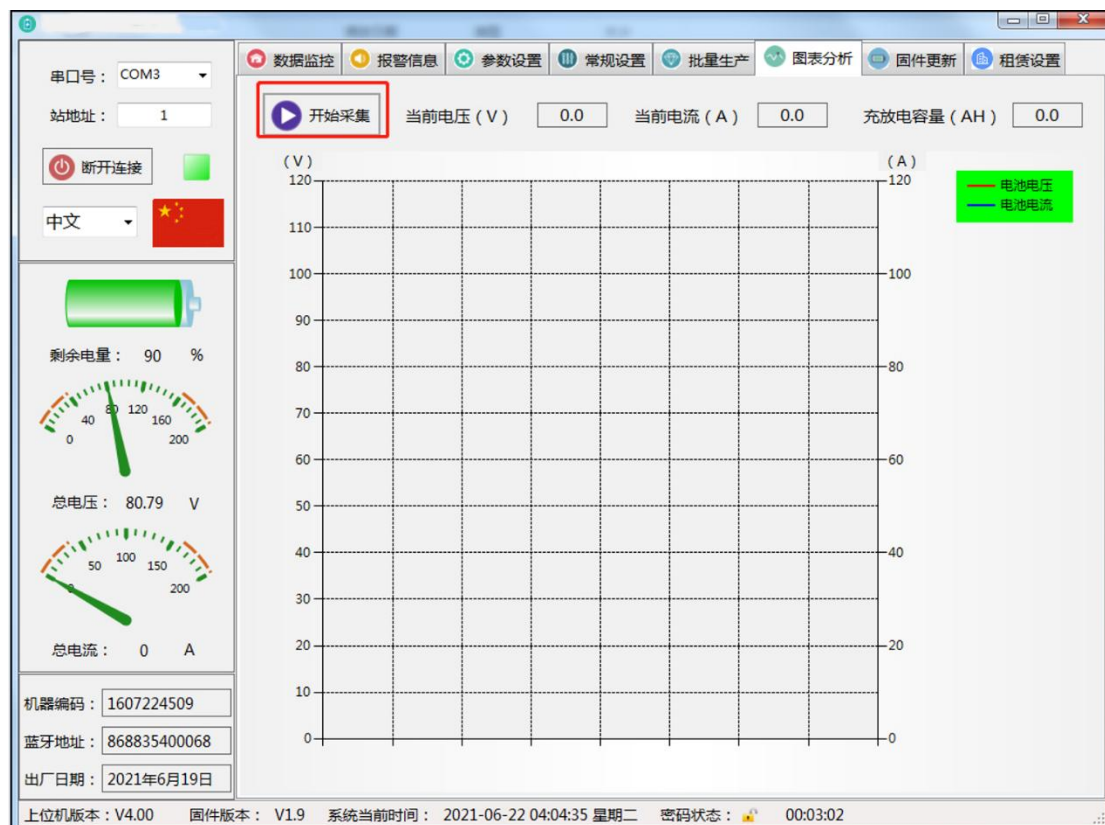
MacCode: 342589975
BlueTooth: 26541C98068E
Factory: 2012年12月31日

Monitor Alarm Param Normal DLoad Graph Update LeaseSet

Mass Production ParamSet

Parameter	Actual	Set	Result
Charge-Pro (mv) :	4350		Open
Charge-Pro (mv) :	4200		
Charge-Rec (mv) :	4150		
Charge-Pro (A) :	40		Save
Discharge-Fail-Pro (mv) :	2550		
Discharge-Pro (mv) :	2750		DLoad
Discharge-Pro (mv) :	2900		
Discharge-Pro (A) :	80		
Balance Voltage (mv) :	3800		
Capacity (AH) :	20		
Cell-Set (Cell) :	14		
PasswordSet:	123456		
BlueToothName:		Set	
Bluetooth-Reading:	0		Read

Step9:可以查看电压电流曲线



Step 10 可以更新固件一键休眠





Official website: www.cleverbms.com ; Wechat: +8617841591535

Aliexpress website: <https://www.aliexpress.com/store/4687150>

Email: 66057580@qq.com; Skype ID: live:.cid.8a15dc87c5ffe40c