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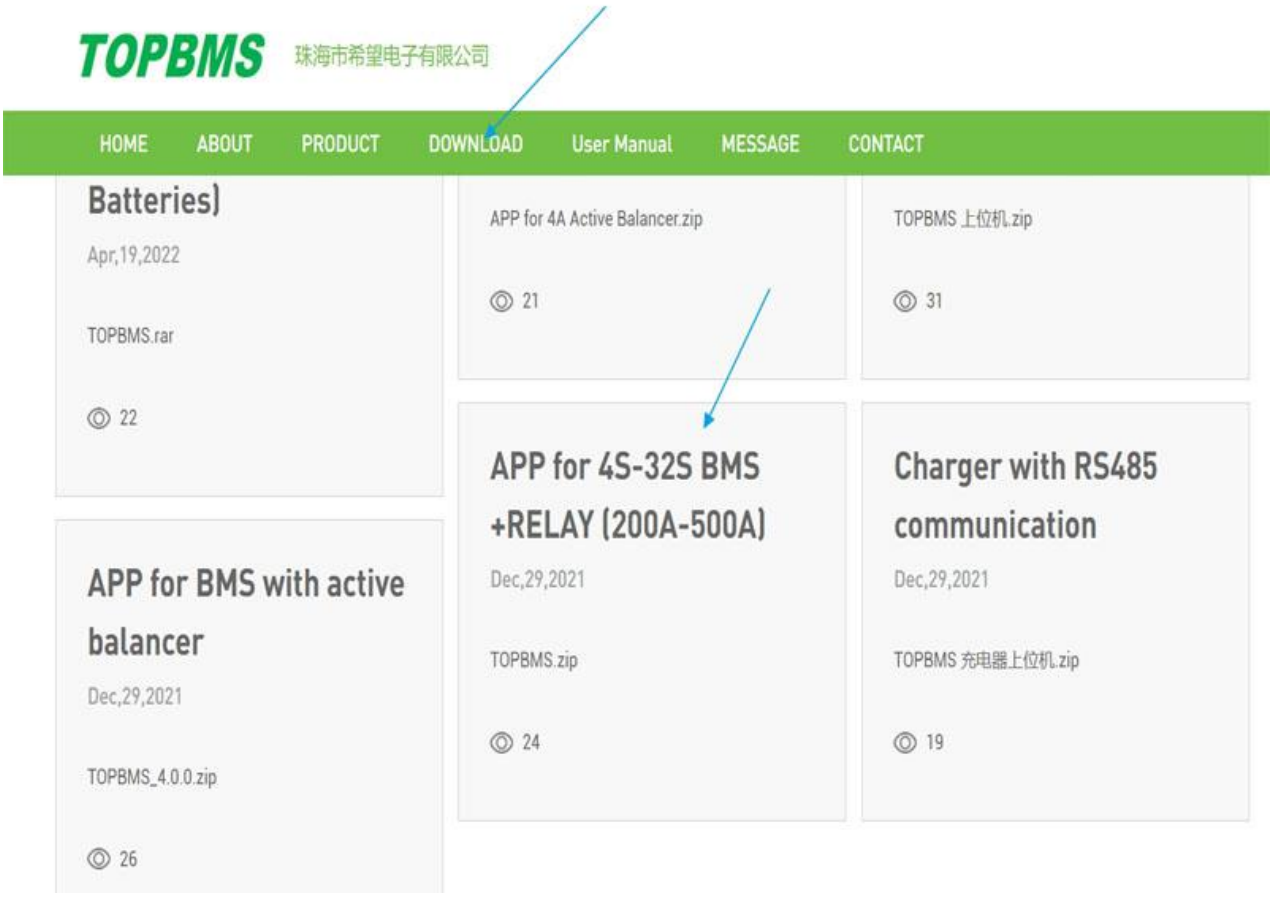
TOPBMS 3.2V LiFePo4BMS 4S-16S 200A 500A Bluetooth RS485 Modbus LiFePo4 Battery Ebike Ecar Inverter Solar

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



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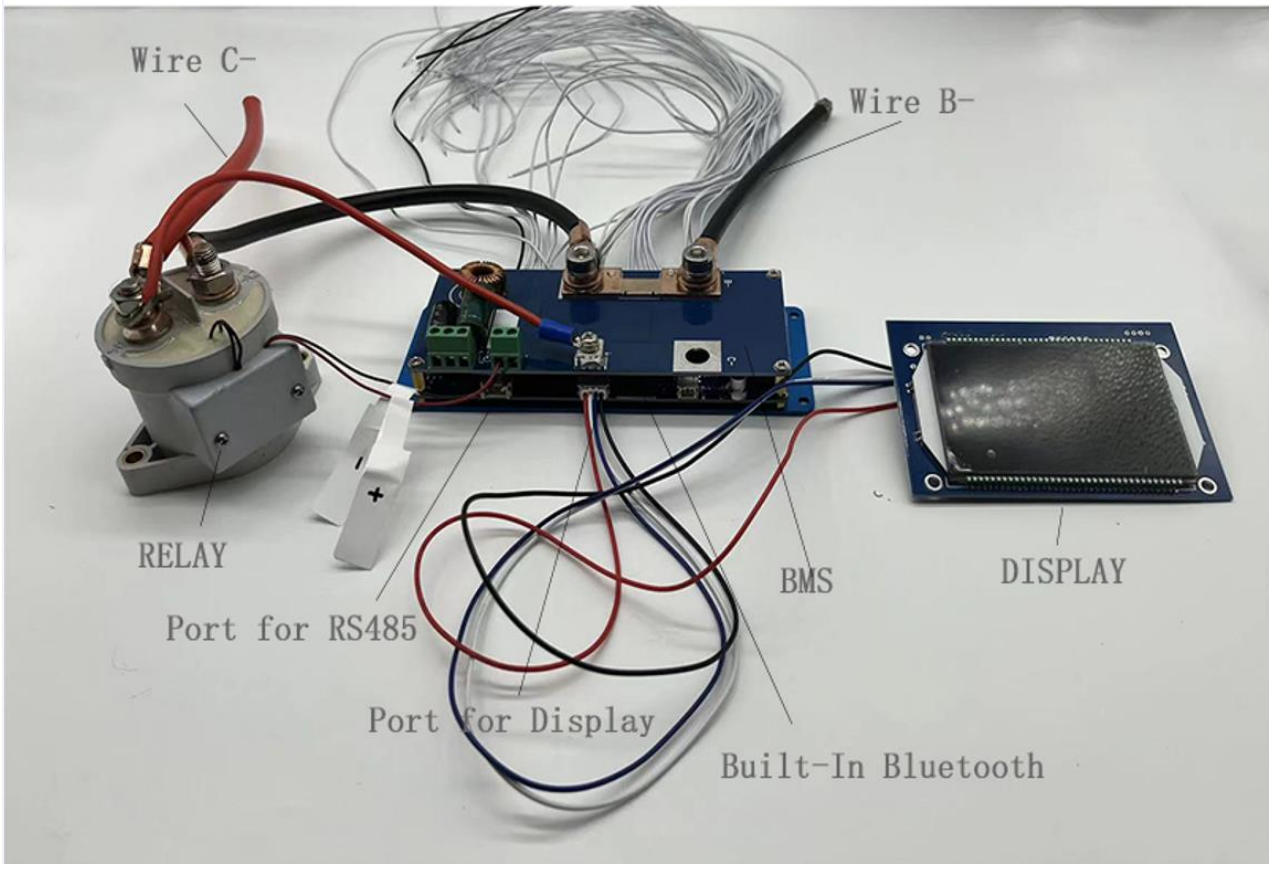
Smart LiFePo4 BMS 21S-32S（3.2V）

Bluetooth+RS485/Modubus+Alarm Buzzer

DISPLAY+ Discharging/ Charging 200A-500A



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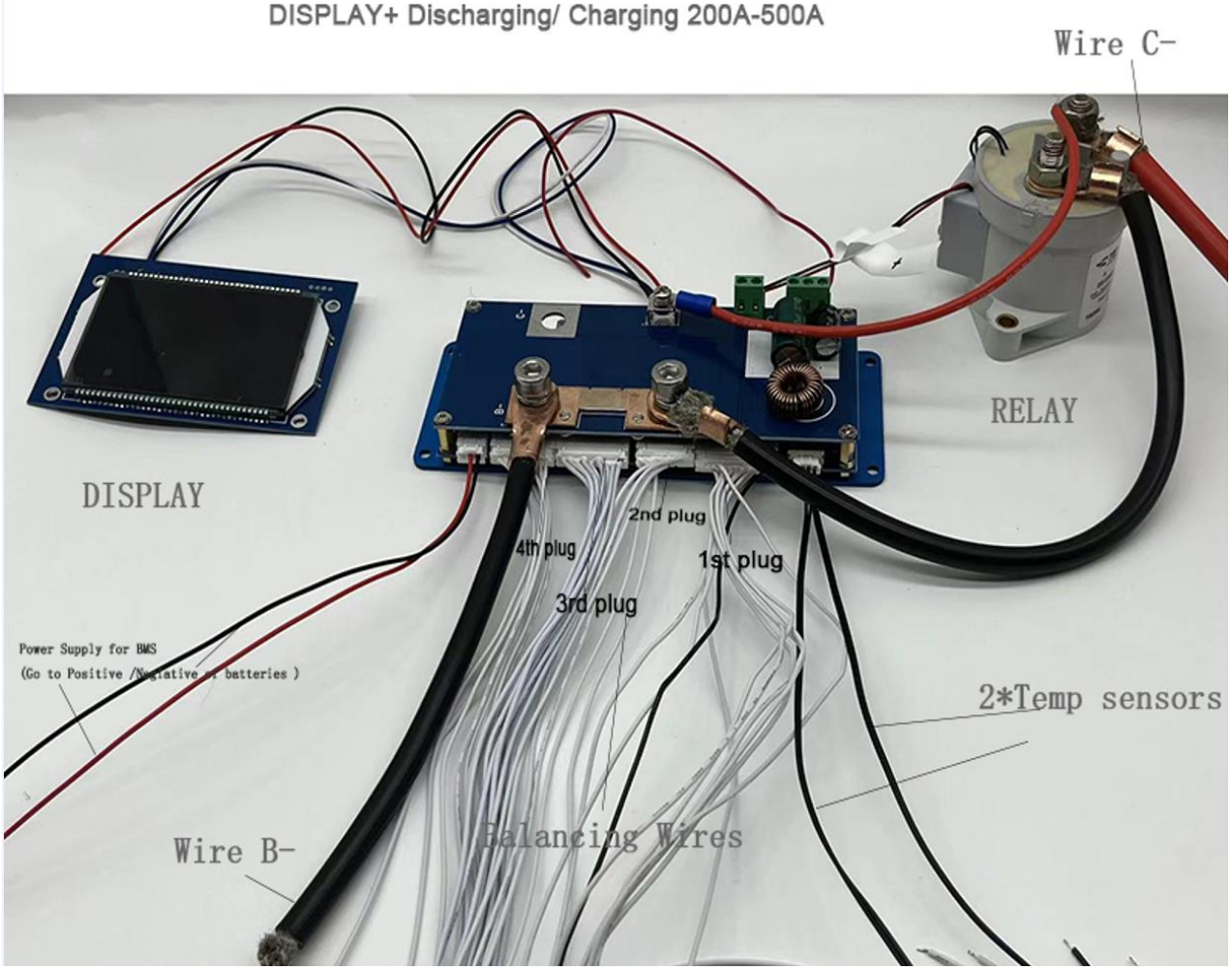

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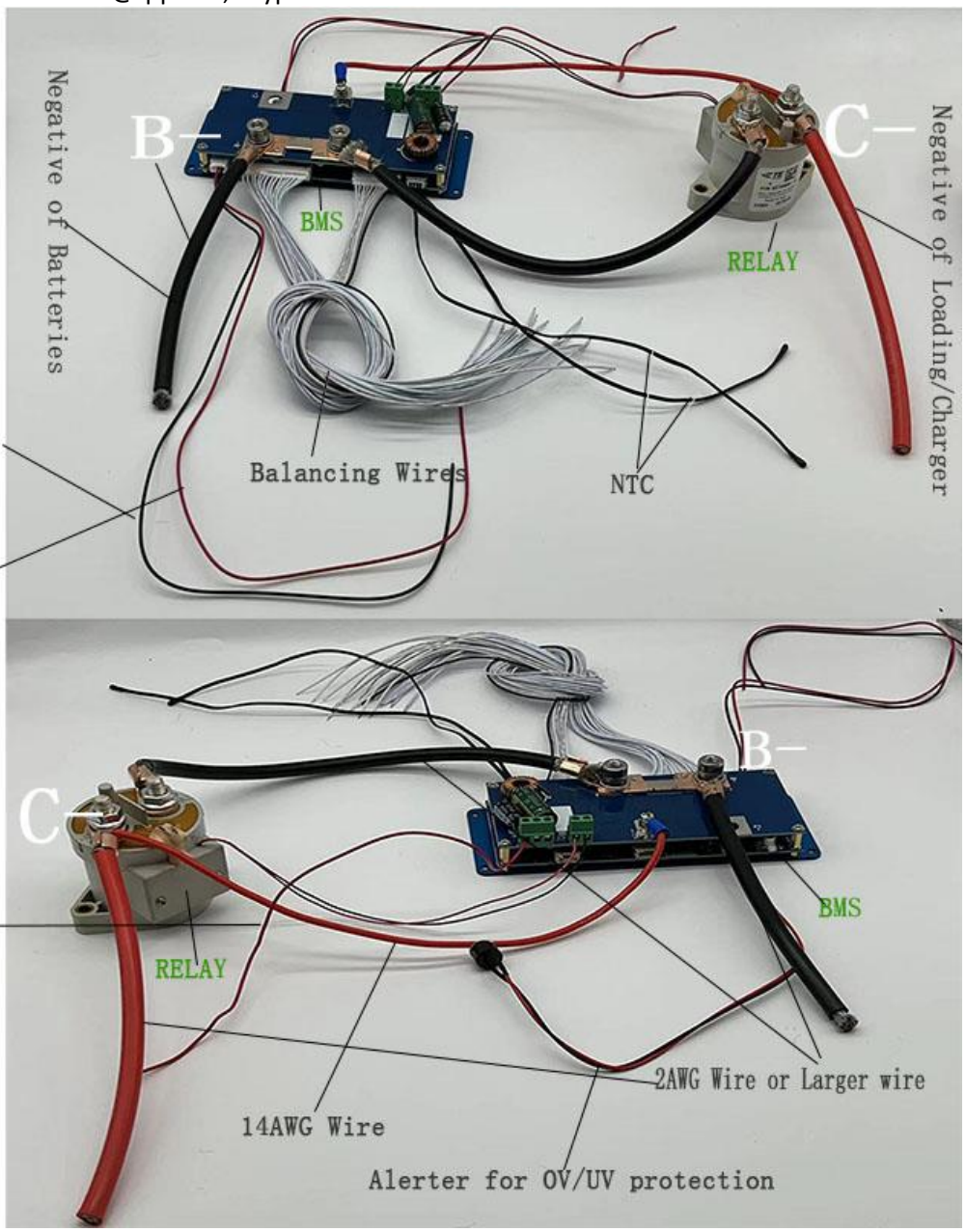

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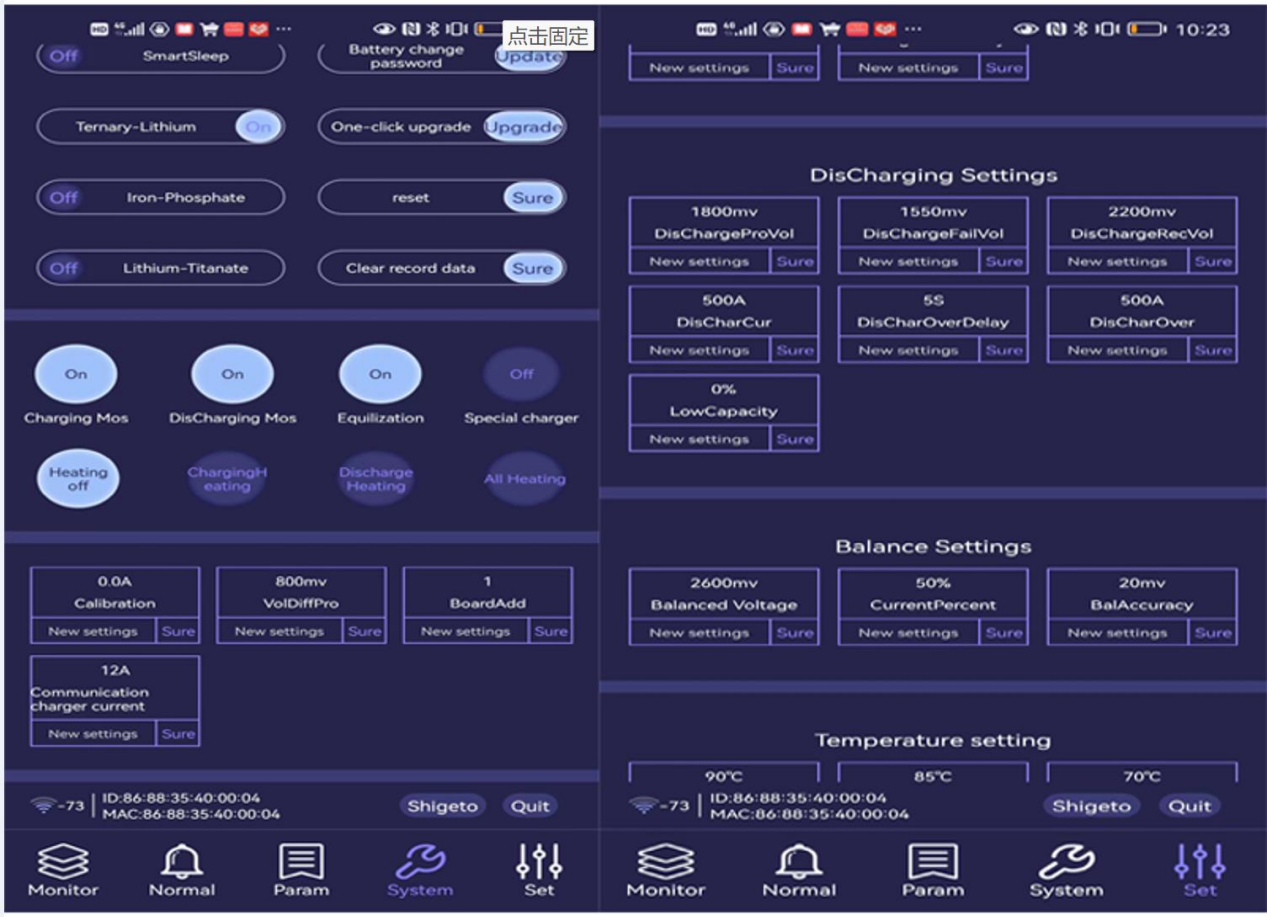
Phone APP

Password :123456



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

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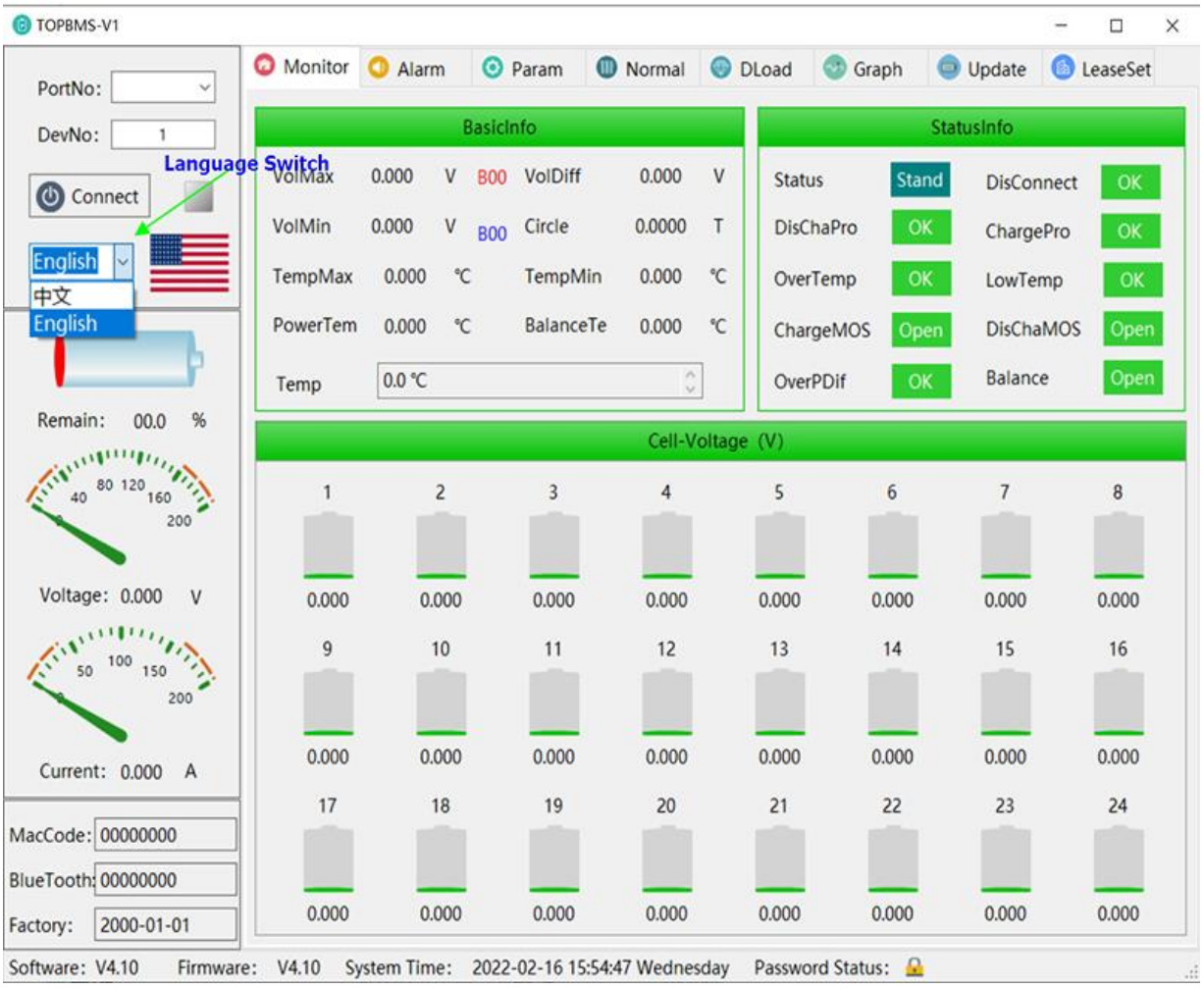
BMS RS485 communication with PC



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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

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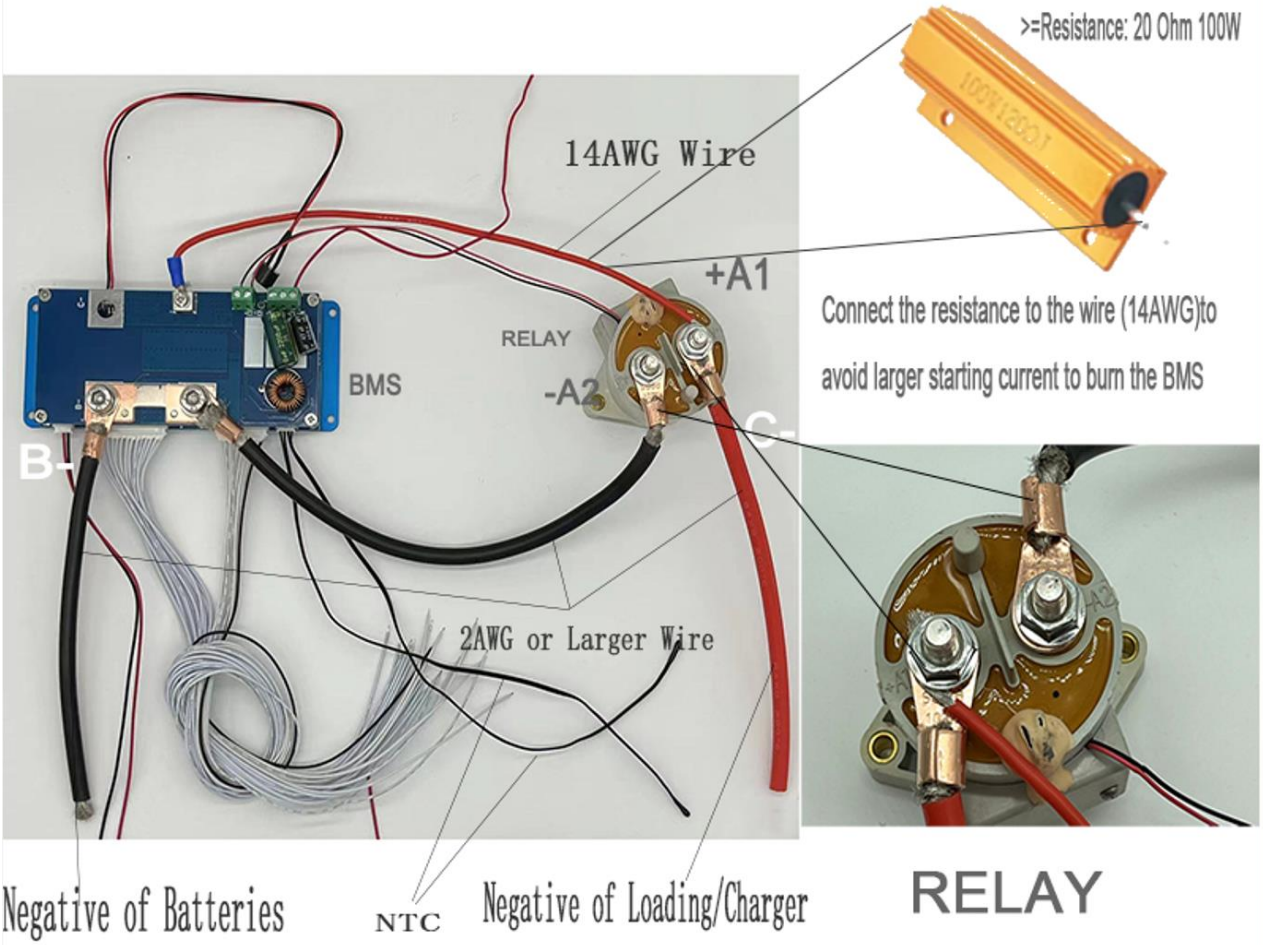
BMS RELAY Wiring Instruction



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14S-24S Wiring Diagram (Downward Compatibility)

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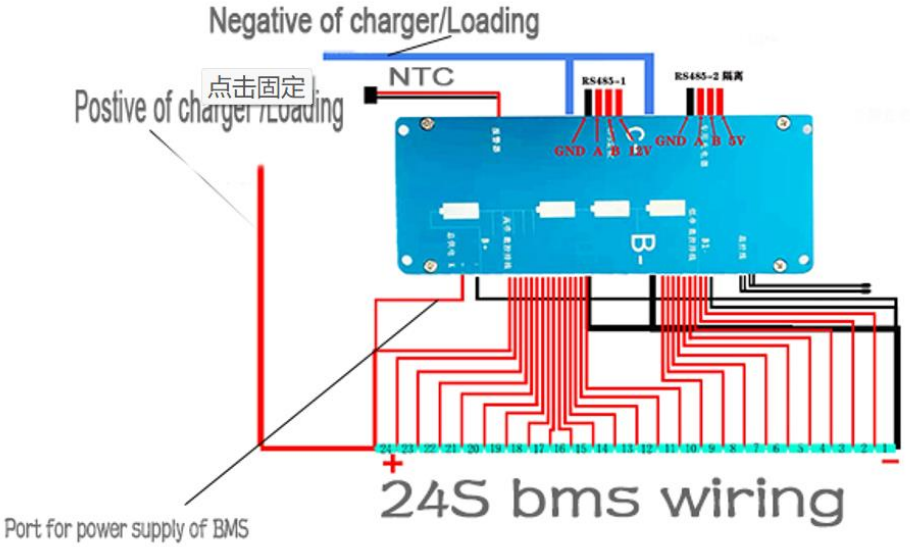

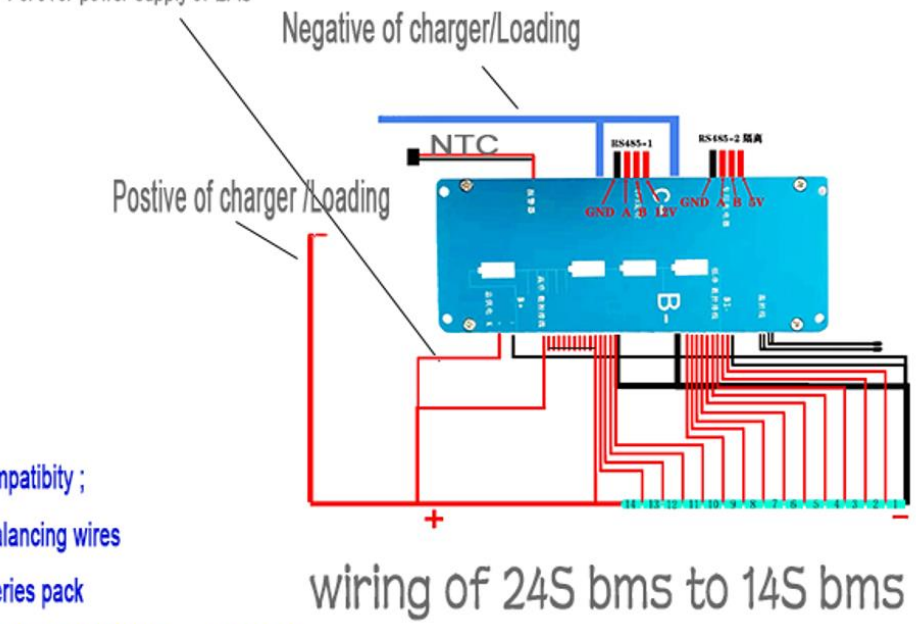

Attention :

The BMS has downward compatibity ;

Please connect the extra balancing wires

to the positive of entire batteries pack

if you use BMS 24S to be BMS 23S ,BMS 22S , ...BMS 14S.;

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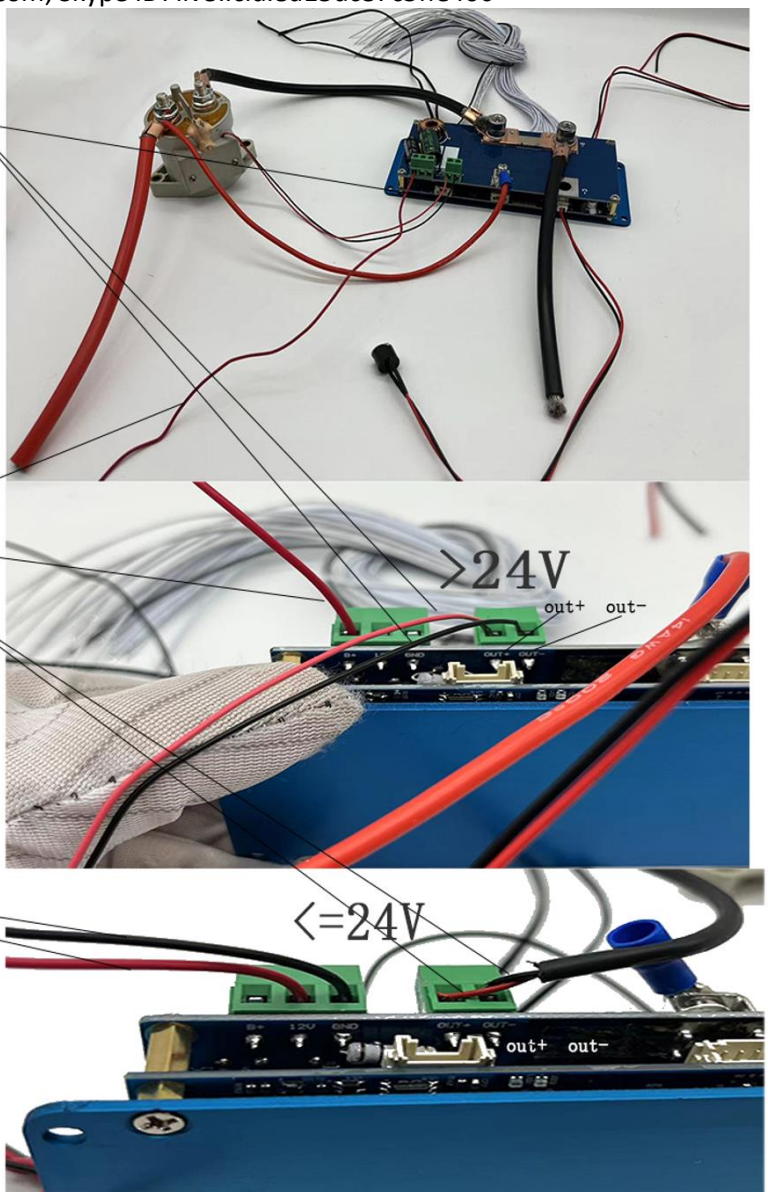
Wiring of Relay and Main Board



If Nominnal Voltage of batteries pack >24V, Wires go to the totoal positive of batteires

If Nominnal Voltage of batteries pack <=24V, Wires go to the total negative and positive of batteries

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BMS Communication Ports Description

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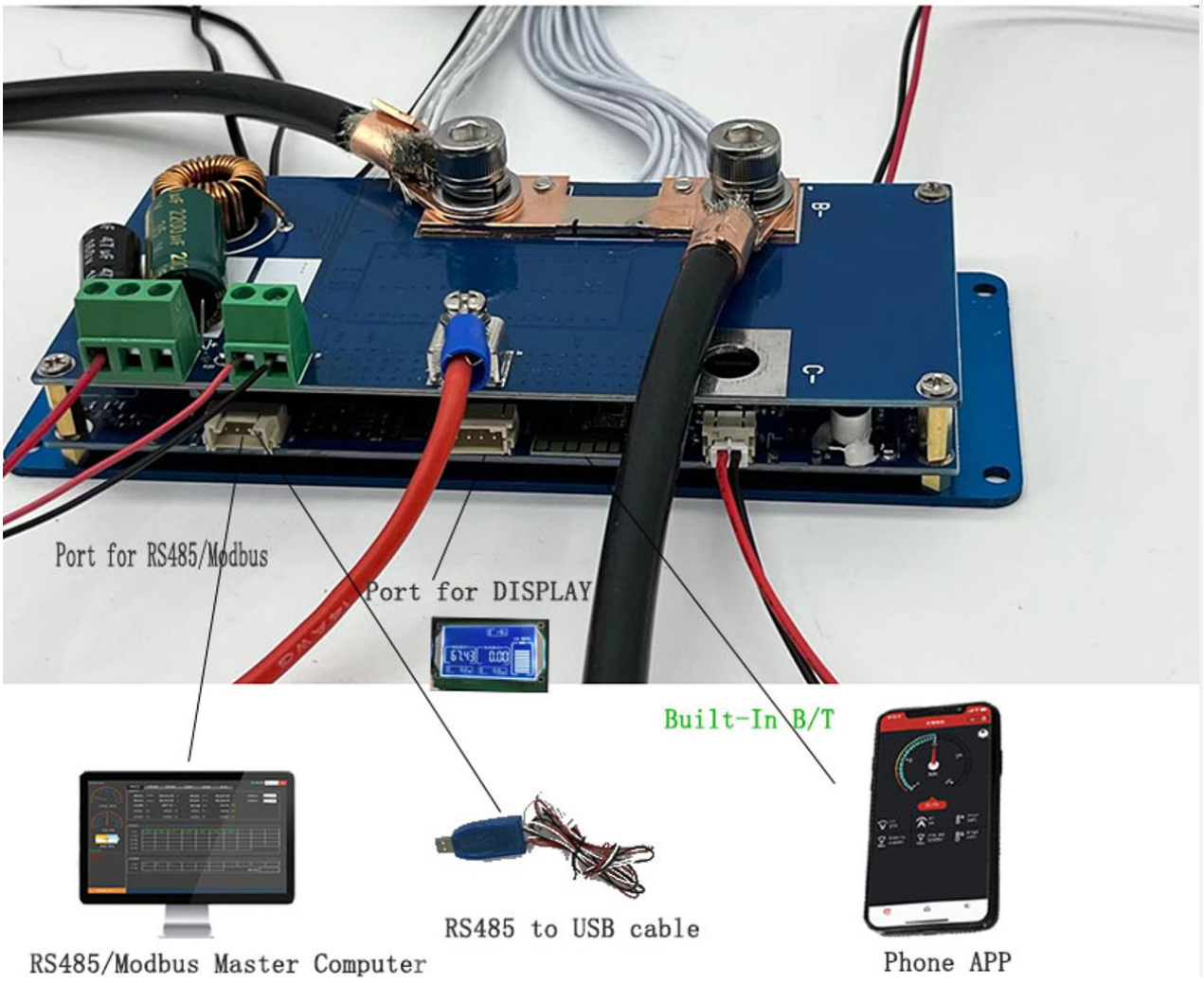

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Features Description-1

❶ CAN通讯

JN1939 协议，CAN2.0A/B通讯
用于整车控制器/电机控制器/仪表/充电机
支持客户自定义

with CAN port

❷ RS485-1通讯

支持RS485通讯，2500V 隔离
波特率标准19600
ModBus协议支持客户自定义

with RS485-1 port

❸ RS485-2通讯

带隔离，接专用充电器

with RS485-2 port for charger

❹ 板载蓝牙通讯

with built-in bluetoot

❺ GPS、GPRS远程通讯

可以链接平台、公众号，实现远程收费系统

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Features Description-2

⑥ 报警 With Alerter

充电失效报警	到二次保护电压 | 蜂鸣器长时间报警 | 同时APP显示
掉串报警	蜂鸣器不响 | APP显示
过放报警	蜂鸣器不响 | 显示
剩余容量报警	蜂鸣器叫10下 | 休40秒 | 一共循环2次 | APP显示
温度报警	蜂鸣器叫 6 下 | 休 4 秒 | 循环叫 | APP显示
充电管短路报警	叫5下 | 休5秒
放电管短路报警	叫5下 | 休5秒
充电过流保护	叫5下 | 循环10次锁死 | 关闭充电管 | 用蓝牙输入密码激活

---

⑦ 均衡 With Balancing

均衡开关 开启和关闭的情况下，任意一串超过启控电压，充电自动开启均衡
直到设置压差电压停止均衡；均衡温度到了和电池掉线会停止均衡

均衡开启
开启均衡 | 任意一串超过均衡启控电压，超过设置压差电压
自动均衡 | 到启控电压和设置压差电压
停止均衡 | 有电流和电池掉线

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Features Description-3

⑧ 电流校正 Current Data Calibration

放电情况下用仪表读取放电正确电流，APP 和上位机输入实际电流值（单位是mA）
直接按校正按钮校正 再到主页查看显示的是输入的电流就可以了
After measure actual discharging current , you can put the data shown both in the APP

and in the PC can be calibrated via pressing button of APP or PC and

then you can check the showed value in monitoring page of APP or PC

⑨ SOC校正 SOC Data Calibration

先把电池组实际容量填入容量设置里
设置好充电保护电压，再把电池充电到BMS保护，SOC就可以校正好
Please set the actual value of battery capacity in the APP;

and set the value of over-voltage protetcion in the APP and

then charge the battery untill the battery in the protection mode;

And then SOC will be automatically

⑩ 实际容量校正 Actual capacity Calibration

首先把电池充满到保护电压（最高电压不能低于充电恢复电压）
然后把电放完 （放电到设定的保护电压） 实际APP里边校准容量就会出来了
At first, please charger the battery untill the battery in the protection mode and

then discharge the battery untill the battery in the protection mode and the value of APP will be showed correctly