

东莞市讴驰电子科技有限公司

Dongguan Ouchi Electronic Technology Co., Ltd

产品规格书

Product specification

客户名 Customer Name:	
产品名 Product Name:	24S / 32S 20A Balancer
产品型号 Product model:	QP2420 /QP3220
版本 Edition:	V3
日期 Date	2024/10/05

1 产品描述 Product description

适用于三元、铁锂、钛酸锂等电池组，产品结构小巧，通过 LCD 触摸屏设置参数，电池组可实现充电电压上限对齐，平衡极限可放电电压下限对齐，原理同 BMS 调整参数相同。

新品亮点：操作方式简单，电阻放电使用更安全，并且精度高，具有误操作保护。

It is suitable for NMC, LFP, LTO and other battery packs. The product structure is compact. By setting the parameters through the LCD touch screen, the battery pack can achieve the alignment of the upper limit of charging voltage and the lower limit of the balance limit dischargeable voltage. The principle is the same as that of BMS adjustment parameters.

Highlights of the new product: simple operation mode, safer use of resistance discharge, high precision and misoperation protection.

2 产品信息 Product information



2.1 组件支持 Component support

名称 NAME	型号 MODEL	备注 NOTR
Battery balancing equipment	QP2420 and QP3220	1
Battery cell cable	14AWG 900mm XT90-Alligator Clip	24S 13 / 32S 17
Charging cable	14AWG 900mm DC-Alligator Clip	1
Power adapter	AC 220V DC 12V7A	1

3 产品参数 Product parameter

项目 PROJECT		参数 PARAMETER
Model 型号	QP2420-V3/QP3220-V3	24S 20A / 32S 20A
Battery type / String number compatibility 电池类型/串数兼容		NMC LFP LTO / 2S~32S
Custom parameters 自定义参数		LCD Settings 设置
Power supply adapter 供电适配器		AC220V / DC12V 7A
Cell channel number 电芯通道数		24x / 32x Cell
Misoperation protection 误操作保护		Channel relay isolatio 通道继电器隔离
Cell connector 电芯连接器		XT60-Crocodile clip 鳄鱼夹
Monitor 显示屏		7-inch touch LCD 8-触摸液晶屏
Control unit 控制单元	MOS	20A Withstand voltage \leq 135V 耐压
	Balance 平衡	Pulse resistance type \leq 20A \pm 2A 脉冲电阻式
		Resistance-type 10% 30%...100% 电流可设置
	Dissipate heat 散热	Wind cooling 风冷
	Buzzer 蜂鸣器	LCD integration 集成
	Switch wake-up 开关唤醒	Self - locking switch 自锁开关
Acquisition unit 采集单元	Total pressure 总压	\pm 100mV FS
	Battery cel 电芯	0~5V \pm 10mV FS
	Resolution accuracy 分辨精度	0.001V
	Current 电流	Integrated shunt resistor \pm 2%FS 集成分流电阻
Size and weight 尺寸重量	QP2420-V3	320*290*190mm \approx 4kg
	QP3220-V3	380*290*190mm \approx 6kg

4 液晶触摸屏 LCD touch screen

4.1 开机界面设置屏幕亮度

Boot interface sets screen brightness.



4.2 快速设置界面 Quick setup interface

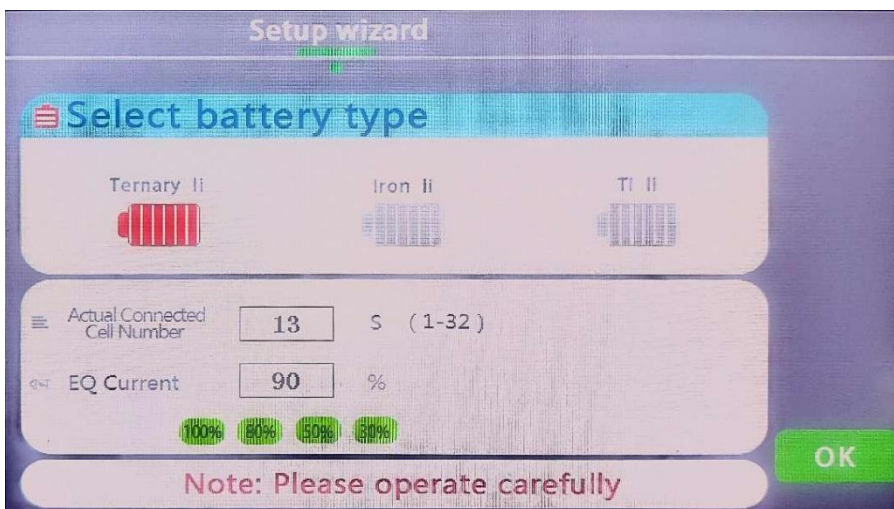
选择对应电池类型，设置电池串数和平功率。

Select the corresponding battery type, set the number of battery strings and balance power.

Ternary li=Li-ion=NMC=3.7V

Lron li=Li fepo4=LFP=3.2V

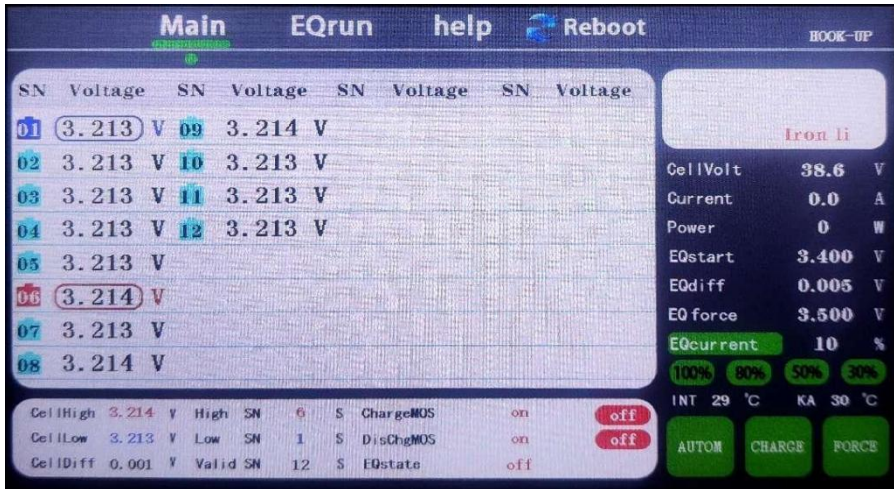
Ti li=LTO=2.2V



4.3 首页面预览 Preview of home page

用于观察电池电芯电压，执行平衡控制。

It is used to observe the battery cell voltage and perform balance control.



4.4 参数设置界面 Parameter setting interface

功能和软件 BMS 类似，防止电池过充和过放电。

非必要，请勿修改参数。

The function is similar to that of software BMS, which prevents the battery from overcharge and overdischarge.

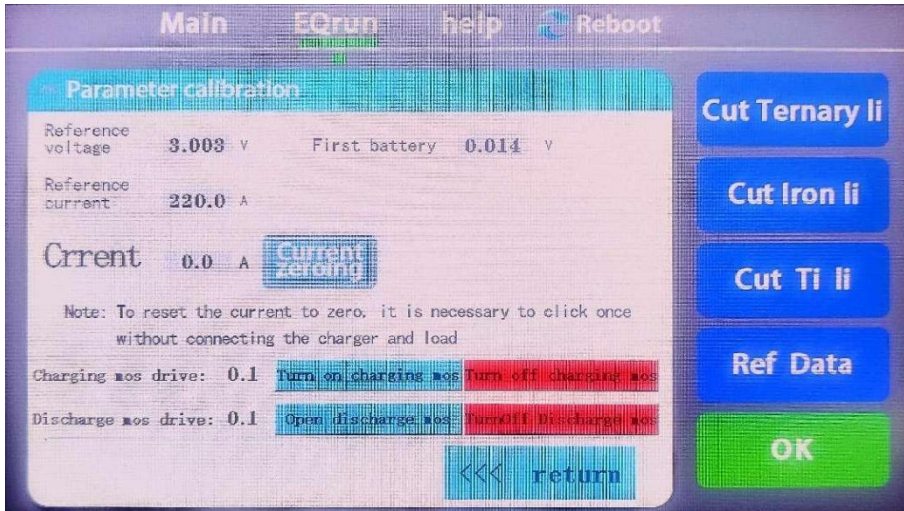
Do not modify the parameters unless necessary.



4.5 校准采集界面 Calibration acquisition interface

校准电池电压和电流，控制 MOS 开启和关闭。

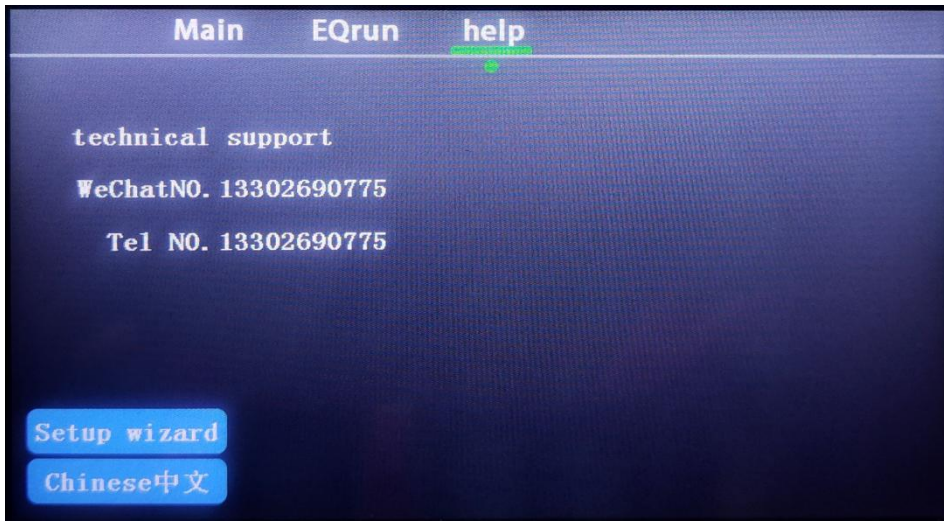
Calibrate battery voltage and current, and control MOS on and off.



4.6 语言切换功能 Language switching function

支持中文和英文两种语言。

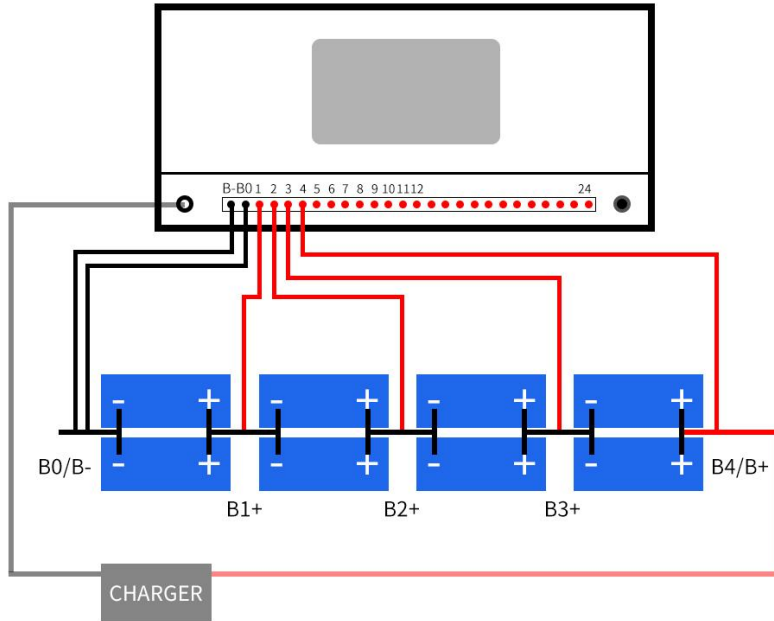
Support both Chinese and English languages.



5 线缆连接方式 Wire connection method

注：请勿反序连接采集端口线缆，请勿短路，防止短路或高压损坏。

CELL has misoperation protection function, but please always pay attention to short circuit.



6 注意事项 Matters need attention

- 1 第一次连接电池工作，等待 1 分钟让固件读取激活后再操作。
- 2 对容量高的电池组进行 20A 以上电流充电时，充电器可外接电池正负极。（充电电压要符合电池标准）。
- 3 根据电池容量，电压差值，内阻，调整平衡电流，过大的平衡电流对容量小或者内阻高的电池产生误差。
- 4 判断损坏的电池：充电电压立刻升高，放电电压立刻降低，内阻高。

- 1 Connect the battery to work for the first time, and wait for 1 minute for the firmware to read and activate before operating.
- 2 When the battery pack with high capacity is charged with a current of more than 20A, the charger can be externally connected with the positive and negative poles of the battery. (The charging voltage should meet the battery standard).
- 3 Adjust the balance current according to the battery capacity, voltage difference and internal resistance. Excessive balance current will cause errors for batteries with small capacity or high internal resistance.
- 4 Judging the damaged battery: the charging voltage immediately rises, the discharging voltage immediately drops, and the internal resistance is high.

7 产品责任 Product liability

产品使用前，请用户仔细阅读产品规格书，了解产品的使用方法；若出现产品使用方法错误、电路连接不对或采用的输入电源、负载功能参数与产品规格书所标性能参数不符等现象均属使用不当，由使用不当造成产品、负载及周边连接件的损坏，本公司均不承担相关责任。

Before using the product, please carefully read the product specification sheet to understand the usage method of the product; If there are errors in the use of the product, incorrect circuit connections, or discrepancies between the input power supply and load functional parameters used and the performance parameters specified in the product specifications, it is considered improper use. If the product, load, and surrounding connectors are damaged due to improper use, our company will not be held responsible.

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