小程序、上位机使用说明

User Guide for Mini Programs, and Host Computers

高端锂电池均衡保护板

Premium Lithium Battery Balancing Protection Board

适用BMS：全部型号BMS

Applicable for All BMS models

四川明锂科技有限公司

目录

一、小程序使用说明Mini Program Instructions

（一）加载方式Loading method

1.1.打开微信，进入搜索界面，输入“明锂智能BMS”，点击搜索结果；Open WeChat, go to the search bar, type "Mingli Intelligent BMS", and tap the result.

1.2.直接扫描BMS或本页小程序码。Scan the BMS or this page's QR code directly.

1、搜索“明锂智能BMS”，选择黑底蓝色logo的小程序，并授权蓝牙权限；　2、直接扫描BMS或本页小程序码

Search for "Mingli Intelligent BMS", select the mini program with a blue logo on a black background, and grant Bluetooth permission. 2. Scan the BMS or this page's QR code directly.

（二）小程序使用说明－进入页Mini Program Usage Guide-Entry Page

2.1、设备序号：默认BMS序号为1，不可更改；Device serial number: The default BMS serial number is 1 and cannot be changed.

2.2、蓝牙名称说明：ML为品牌，数字编号为蓝牙设备ID；Bluetooth name explanation: ML is the brand, and the number is the Bluetooth device ID.

2.3、查找框：可以使用蓝牙名称或数字编号进行设备搜索，快速切换BMS设备 Search box: Use Bluetooth names or serial numbers to search for devices and quickly switch BMS devices；

2.4、主页悬浮按钮：可以在任意页面，点击后切换至电池状态实时页面，以方便查阅电池信息；Floating button on the homepage: Click it on any page to switch to the real-time battery status page for easy access to battery information.

2.5、菜单栏：通过点击菜单栏各个选项，切换不同功能页面；Menu bar: Click options in the menu bar to switch between different function pages.

（三）小程序使用说明-GPS使用说明Mini Program Instructions-GPS Instructions

1、因为GPS涉及个人隐私等信息，需要客户先注册，注册账号为国内手机号，滑动到“我的页面”，如图2，注册账号；Since GPS services involve personal privacy and other sensitive information, users must first register by creating an account with a domestic mobile number. To complete the registration, swipe to 'My Page' (as shown in Figure 2).

2、点击添加设备，扫描或者输入GPS编号，点击添加，成功后如图5，点击定位、轨迹及BMS按钮，查看电池轨迹及当前状态；Click 'Add Device' to scan or enter the GPS number, then click 'Add'. After successful addition (as shown in Figure 5), click the 'Location', 'Trajectory', and 'BMS' buttons to view the battery's trajectory and current status.

3、如添加时出现图4（已售或未激活），联系技术支持团队即可；If the item appears as shown in Figure 4 (sold or not activated) during addition, contact the technical support team.


明锂BMS管理系统
停止
刷新
设备序号
1
更改序号
蓝牙设备查找
输入蓝牙名称
查找
附近可连接的设备：
名称：ML21569
信号强度：-50
可连接
ID：11:22:73:02:15:69
首页
菜单
GPS设备
我的
1
用户登录
请输入手机号
请输入密码
登录
暂不登录
注册账号
其他方式登录
登录
手机号登录
2
设备列表
请输入电池编码
搜索
全部 0
在线 0
离线 0
添加设备
暂无数据
3
添加设备
设备码：026251014199
添加
设备已售出，请联系管理员
4
设备列表
请输入电池编码
搜索
全部 1
在线 1
离线 0
添加设备
026251014199
解绑
门店：明锂智能BMS
电压：77.95V
网络：在线
20%
定位
BMS
轨迹
已默认
5

（四）小程序使用说明(4) Mini Program Usage Guide

4.1、实时状态首页Real-time Status Home

链接成功后，小程序会自动进入电池实时状态页面，页面可展示剩余电量、总电压、电流、功率及当前电池各类详细信息。After the link is successful, the mini program will automatically enter the battery real-time status page, which displays the remaining battery power, total voltage, current, power, and other detailed battery information.

4.2、常规页面说明Regular page description

在电池详情页，点击“菜单”按钮，小程序将进入到电池使用及设置详情页面；**On the battery details page, click the "Menu" button to access the battery usage and settings page.**

常规页信息说明：**Description of regular page information:**

常规页面主要展示**使用日志**，可记录当前电池使用中遇到的**各种错误或警示详细信息。The regular page displays usage logs, recording various errors or warnings encountered during battery usage.**

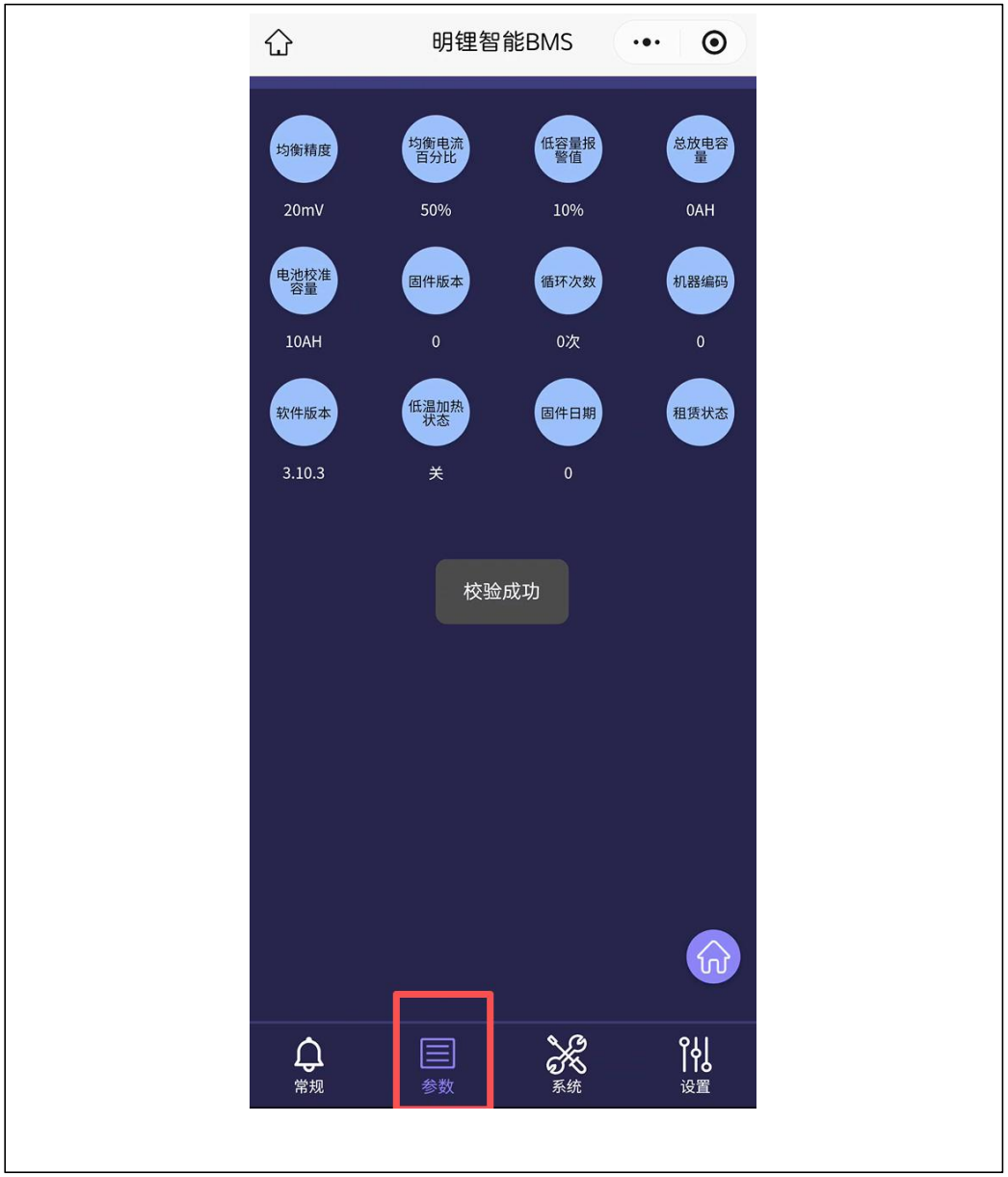
4.3、参数页面说明Parameter page description

在电池详情页，点击“菜单”按钮，小程序将进入到电池使用及设置详情页面；On the battery details page, click the "Menu" button to access the battery usage and settings page.

参数页信息说明：Parameter page description:

4.1.点击“参数菜单”，小程序将要求验证查询密码，默认密码“**123456”**，验证即可； Click "Parameter Menu" to verify the query password. The default password is "123456" -simply confirm it.

4.2.参数页面：主要展示BMS均衡精度、低容量设置信息、循环次数及租赁等信息（支持，可定制）。Parameter page: Displays BMS balancing accuracy, low capacity settings, cycle count, and leasing information (supported and customizable).



4.4、系统页面说明System page description

在电池详情页，点击“菜单”按钮，小程序将进入到电池使用及设置详情页面；On the battery details page, click the "Menu" button to access the battery usage and settings page.

系统页信息说明：System page information:

5.1.点击“系统菜单”，小程序将切换至BMS系统管理界面；Click "System Menu" to switch to the BMS system management interface.

5.2.系统页面：主要展示BMS管理涉及的电池类型、密码管理、休眠模式、MOS、均衡、加热等开关的管理等功能；System interface: This section primarily displays BMS management functions including battery types, password management, sleep mode, MOS, battery balancing, and heating control.

5.3、特别说明：special version

休眠模式：当系统检测到电芯电压低于“放电时效电压”时，BMS将自动进入休眠模式，以避免进一步放电，导致电池损坏；Sleep mode: When the system detects the cell voltage dropping below the discharge threshold voltage, the BMS automatically enters sleep mode to prevent further discharge and battery damage.

压差启控值：启动均衡时的电芯电压，**一旦电芯电压高于该值，则BMS将控制不会给该电芯进行充电，从而避免过充；Pressure differential threshold: The cell voltage at the start of balancing. If the cell voltage exceeds this threshold, the BMS will prevent charging to avoid overcharging.**

4.5、设置页面说明Set page description

6.1.读取参数：点击后系统会读取并记录当前BMS设置参数；Read parameters: Click to read and save the current BMS settings.

6.2.区域1：容量、电池串数设置区域；Area 1: Capacity and battery string settings area;

6.3.区域2：充电设置区域，主要包含充电保护电压、电流及温度保护设置；Area 2: Charging settings, primarily including voltage protection, current protection, and temperature protection configurations.

6.4.区域3：放电设置区域，主要包含放电保护电压、放电失效电压（涉及休眠模式，允许放电最低电压）、放电电流、温度及低容量报警提醒等参数设置；Area 3: The discharge configuration zone primarily includes parameters such as discharge protection voltage, discharge failure voltage (which determines the minimum allowable discharge voltage in sleep mode), discharge current, temperature, and low-capacity alarm notifications.

6.5.区域4：均衡设置区域，主要包含均衡启控压差、均衡电流百分比（0.08A的百分比）及均衡温度设置。Region 4: The balanced configuration area primarily includes the following parameters: differential pressure for balanced activation/deactivation, percentage of balanced current (0.08A), and temperature settings.

特别说明：**均衡压差启控值为**启动均衡时的电芯电压，**一旦电芯电压高于该值，则BMS将控制不给该电芯充电，从而避免过充；**

6.6.区域5：温度保护设置区，针对电池及BMS在各类环境温度下的保护启动参数；Special Note: The equilibrium voltage differential threshold is the cell voltage at the start of balancing. If the cell voltage exceeds this threshold, the BMS will prevent charging to avoid overcharging. 6.6. Zone 5: Temperature Protection Settings, which defines the activation parameters for protecting the battery and BMS under various ambient temperatures.

二、上位机使用说明Instructions of the upper computer

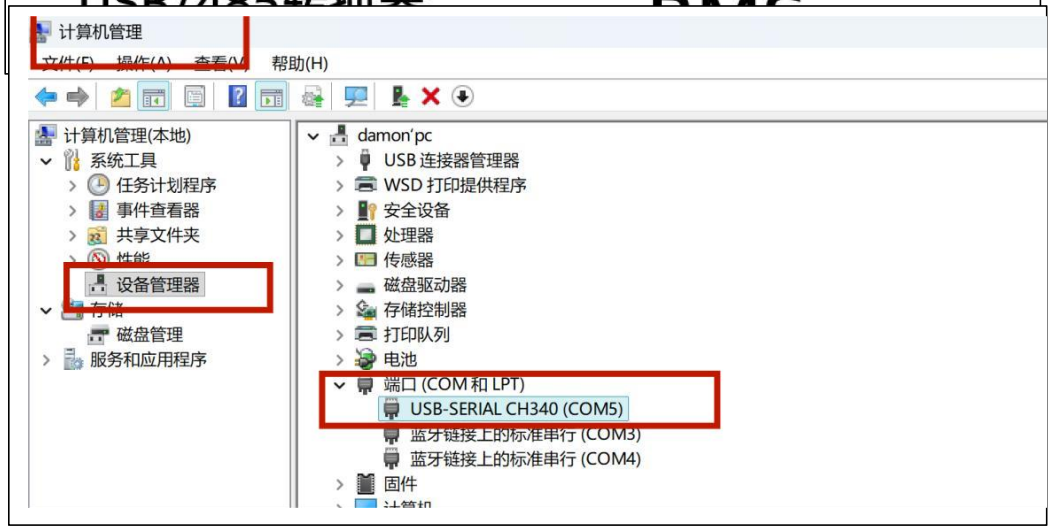
（一）上位机串口连接注意事项Precautions for connecting serial ports on the host computer

1.1.USB/485串口连接器与BMS的连接：USB/485 serial port connector and BMS connection:

默认485/USB转换器为**“4根接线”**，默认连接至BMS上**5V的485接口。The default 485/USB converter uses a '4-wire connection' and connects to the 5V 485 interface on the BMS.**

1.2.串口号确认：serial port identification

先将转换器的USB端插入电脑，然后在“我的电脑”上右键选择“管理”选项，选择“设备管理器”“点击查看“串口选项”。First, connect the converter's USB port to your computer. Then, right-click' My Computer 'and select' Manage '. Choose' Device Manager ', then click' View Options' for the serial port settings.



默认485/USB转换器为，记录下串口“CH340”序号—“COM X”。The default 485/USB converter is "CH340". Record the serial port number— "COM X"

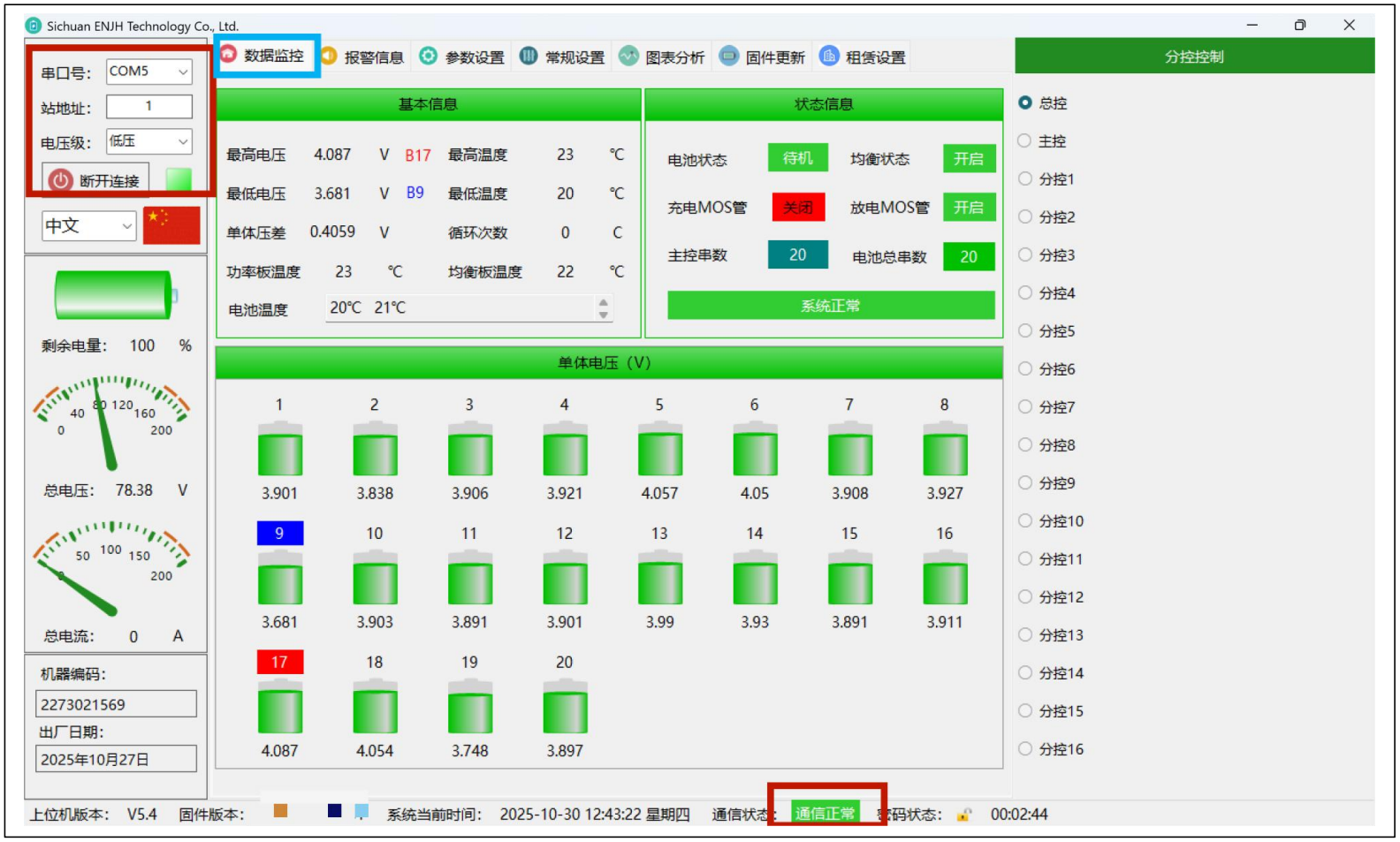
（二）上位机详细使用说明Detailed instructions for using the upper computer

1.首页说明：Home page description:

1.1.串口提前确认，并选择匹配的串口号；1.1. Confirm the serial port in advance and select the corresponding port number;

1.2.站地址默认为“1”，请勿改动；The default site address is "1". Do not change it.

1.3.点击默认“低压”，除级联板（32S及以上）外，无需改动 Click the default "Low Voltage" setting. No changes are required except for cascade boards (32S and above).；



1.4.点击建立连接/断开连接，实现上位机状态监控；特别说明：右侧分控只针对级联板，无需调整或点击；Click to establish or disconnect the connection for upper computer status monitoring. Note: The right-side sub-control applies only to the cascaded board and requires no adjustment or clicking.

底部红色框区可显示实际通讯状态；

2.报警信息页说明：Alarm message page description:

页面主要记录当前BMS工作时产生的各种警报信息日志；The page primarily logs various alarm messages generated during the BMS's operation.

3.参数设置页说明：Parameter settings page description:

3.1.充放电设置页 Charge and Discharge Settings Page

页面主要用于电池类型、串数、充放电保护及均衡等设置；The page is primarily used for configuring battery type, string number, charge/discharge protection, and balancing settings.

如需修改对应参数，双击需要修改的地方，在弹出的设置框内进行修改即可；

To modify the corresponding parameter, double-click the area you want to change and make adjustments in the settings box that appears.

3.2.温度设置页Temperature Settings

页面主要用于电池温度保护、SOC校准设置协议切换及蓝牙名称修改等设置；The interface primarily handles battery temperature protection, SOC calibration, protocol switching, and Bluetooth name modification.

如需批量修改BMS参数，可以使用一键拷贝、打开、存储及批量写入工具完成；To modify BMS parameters in bulk, use the one-click copy, open, save, and batch write tool.

3.3.温度设置页Temperature Settings

页面主要用于开启或关闭BMS温度监测功能；This page is primarily used to enable or disable the BMS temperature monitoring function.

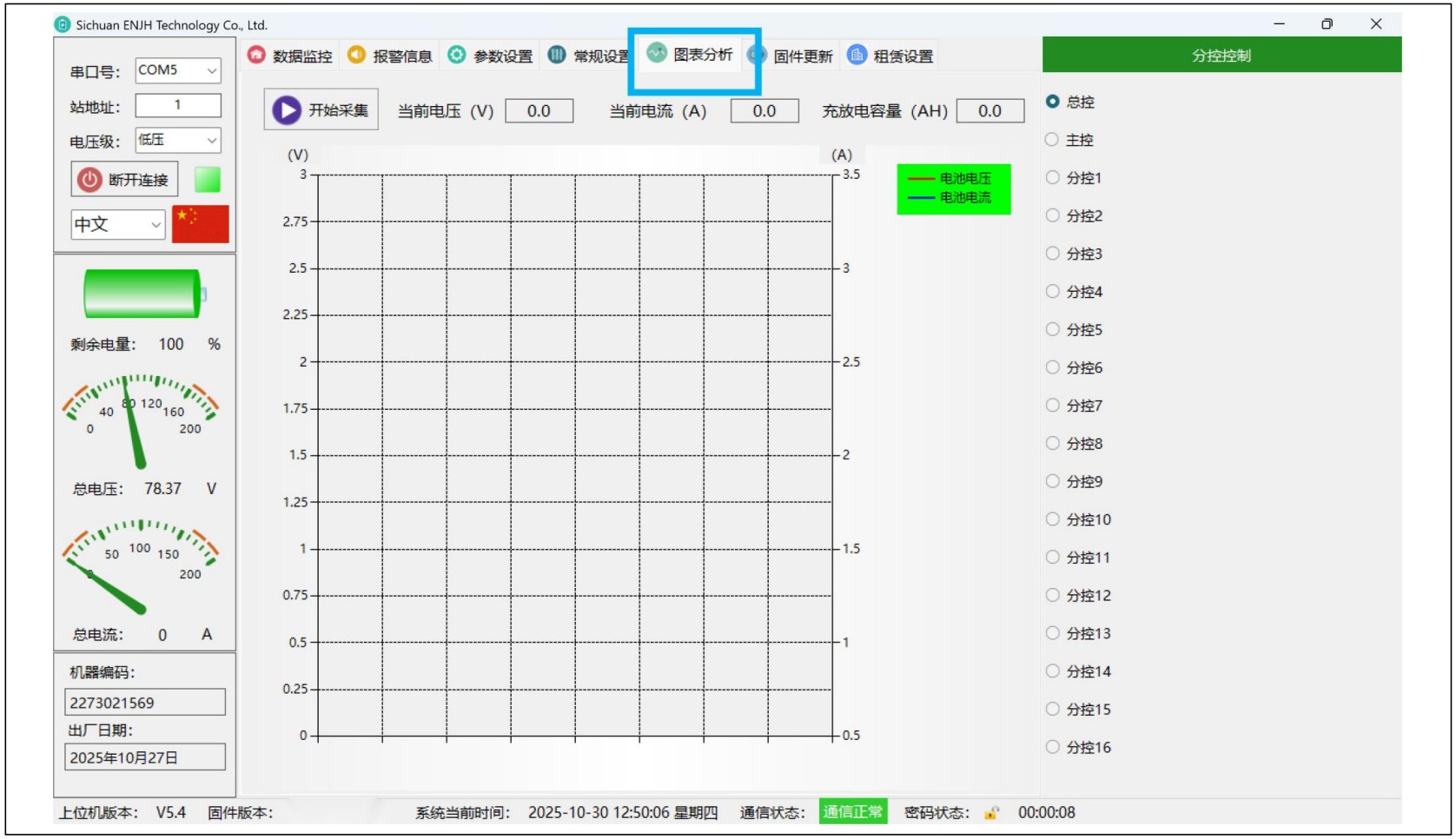
3.4.常规设置页Default Settings

页面主要用于开启或者关闭BMS充放电开关、电池类型切换等功能

This page is used to turn on or off the BMS charge/discharge switch and switch battery types.

3.5.图形分析页
Graphical Analysis Page

页面主要用于实时采集当前BMS的电压电流变化曲线；The page is primarily designed for real-time data collection of voltage and current variation curves from the current BMS.



3.6.固件更新页

Firmware update page

页面主要用于BMS固件信息更新，休眠模式启动等；The page is primarily used for BMS firmware updates and sleep mode activation.

3.7.租赁设置页

Rental Settings

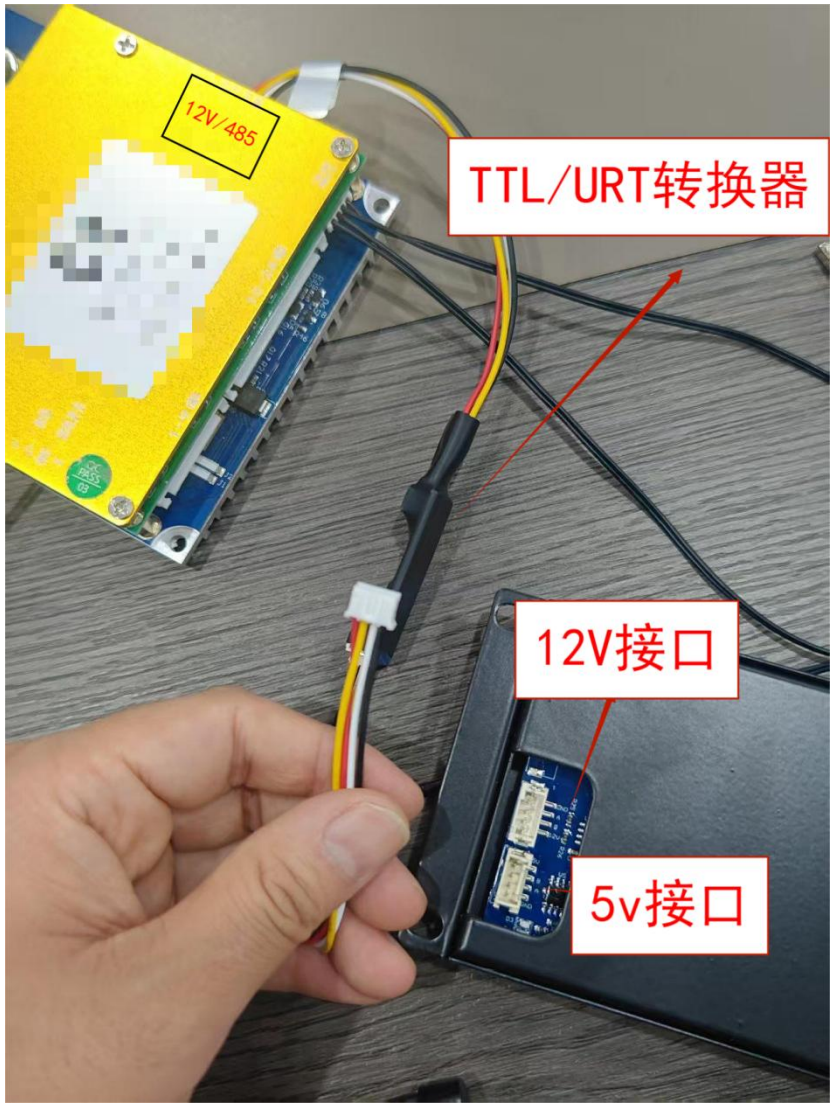
页面主要用于租赁电池的BMS信息登记、SOC校准、GPS信息查询等；This page is primarily used for registering BMS data for battery leasing, performing SOC calibration, and querying GPS information.

三、屏幕使用说明Screen Instructions

1、液晶显示屏（4.3寸彩色）LCD (4.3-inch color)

1.1. 连接说明

必须使用TTL/URT转换器（双头黑白红黄四线），接入BMS的12V/485接口，插入液晶显示屏背后的12V/5V接口均可；**A TTL/URT converter (a four-wire device with dual black, white, red, and yellow terminals) must be used. It can be connected to either the BMS's 12V/485 interface or the 12V/5V interface behind the LCD display.**



1. 2. 屏幕信息说明Screen Information

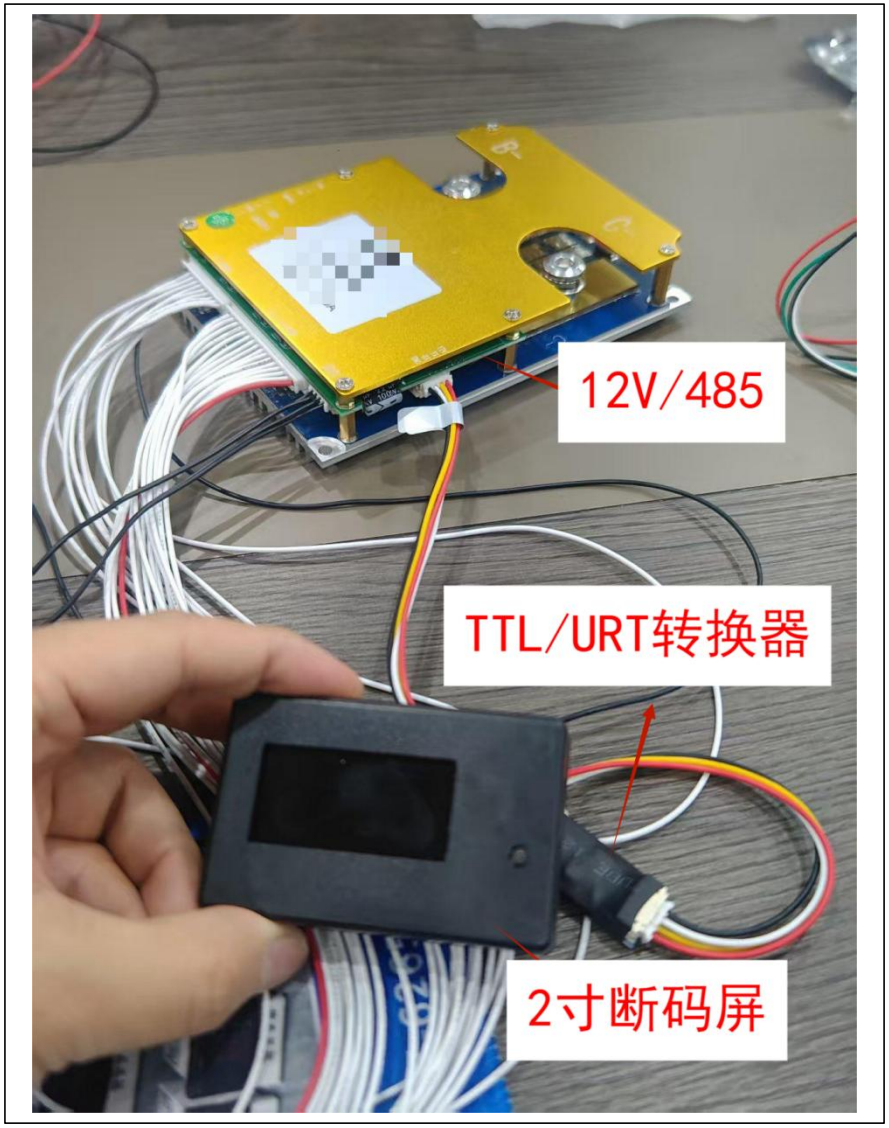
显示屏显示总电压、剩余电量、总电流信息；点击“监控”查询电池详细电压、电流等详细状态；点击“报警”可以查询BMS的工作警示日志；点击“中英”可以切换系统语言为中文/英文；

The display shows total voltage, remaining battery power, and total current. Click 'Monitor' to check detailed battery status including voltage and current. Click 'Alarm' to view BMS warning logs. Click 'Chinese/English' to switch the system language to Chinese or English.

2、断码屏（2寸黑白）Display error (2-inch black and white)

2.1、接线说明Connection Instructions

必须使用TTL/URT转换器（双头黑白红黄四线），接入BMS的12V/485接口，插入液晶显示屏背后的接口即可；Connect the TTL/URT converter (a four-wire device with dual black, white, red, and yellow terminals) to the BMS's 12V/485 interface, then plug it into the port behind the LCD display.



2.2.屏幕信息说明Screen Information

显示屏显示总电压、剩余电量、总电流、功率、电池容量等信息；The display shows the total voltage, remaining battery power, total current, power consumption, and battery capacity.