V1.1

2.5 英寸显示屏

2.5-inch display screen

LCD-2.0-RS485(带圈)

使用维护说明书

Operation and maintenance manual

成都极空科技有限公司

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1. 产品简介（Product Introduction）

本产品为一款 2.5 英寸 LCD 显示屏，专为配套我司锂电池保护板使用而设计。可实时显示电池的电压、电流、电量（SOC）以及报警状态等关键信息，界面清晰直观。

This 2.5-inch LCD display is designed to work seamlessly with our company’ s lithium battery protection boards. It provides real-time monitoring and clear visualization of key battery parameters, including voltage, current, state of charge (SOC), and alarm status.

显示屏支持 RS485 通信。

The display supports RS485 communication.

该显示屏外观小巧，色彩鲜明，适用于电动车、储能系统等对电池状态有可视化需求的场景，具备高可靠性和易用性。

With its compact design and vibrant interface, this display is ideal for electric vehicles, energy storage systems, and other applications requiring reliable and intuitive battery status monitoring.

2. 显示屏外观（Display appearance）



产品外观图

Product Appearance Diagram

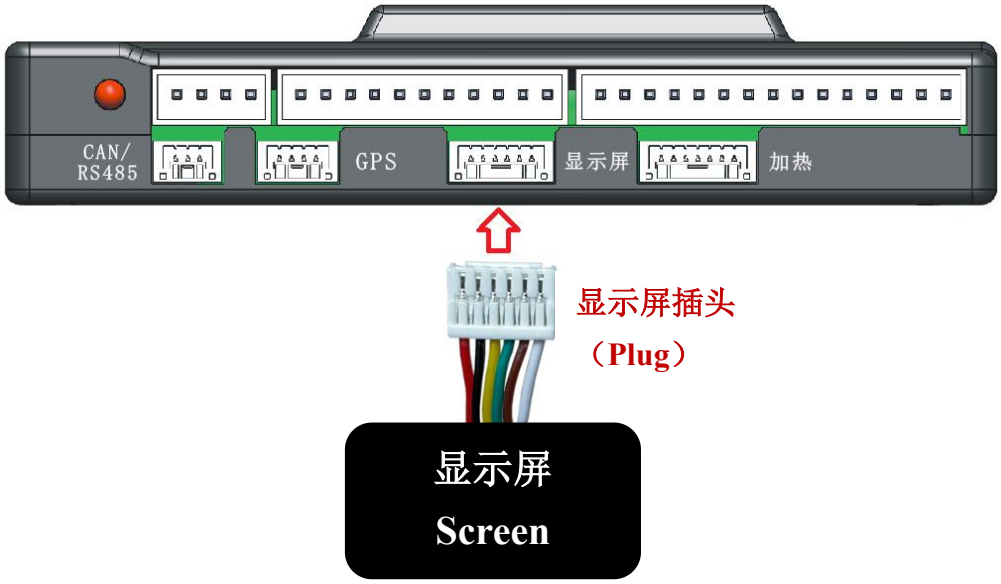
3. 接口与线缆（Interface and cables）



线缆图

Cable Diagram

4. 接线图（Connection diagram）

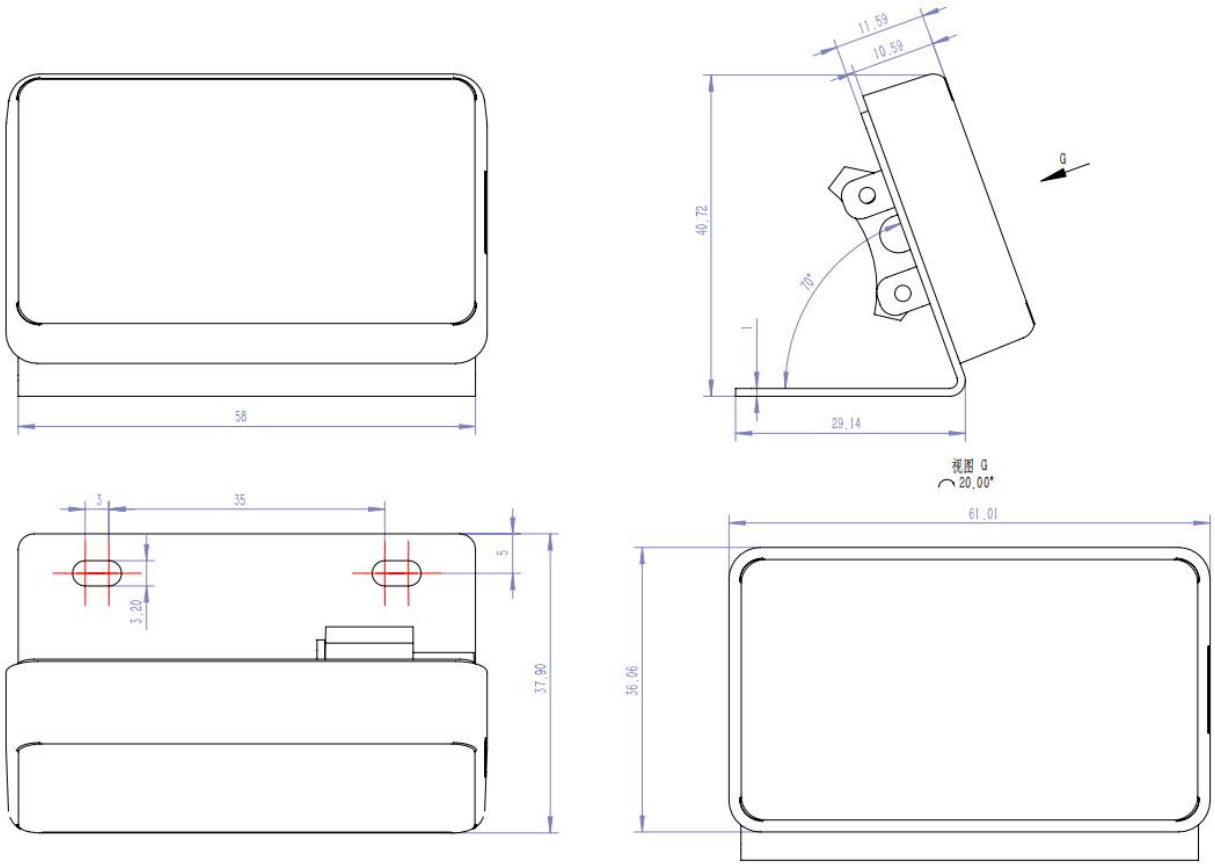


产品接线图

Product Wiring Diagram

5. 产品尺寸(Product Dimensions)

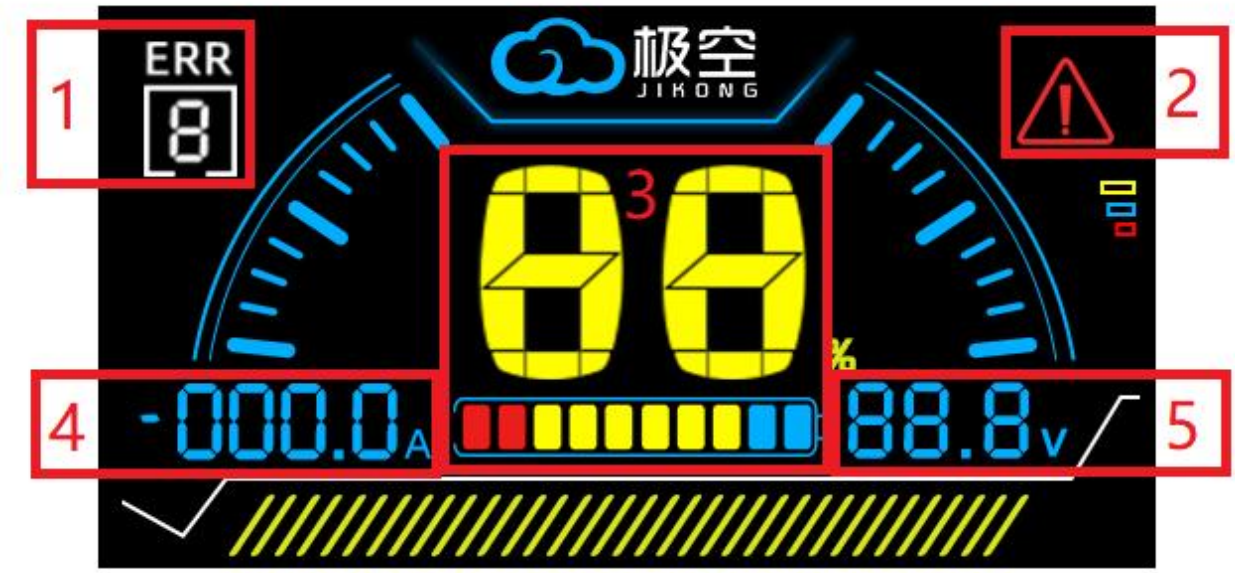




产品尺寸图

Product Dimension Drawing

6. 显示内容说明（Display description）



区域 1：故障代码显示，当该图标亮起时，下方显示的数字为故障代码，当前显示故障代码为 8，如有多个故障信息，则会滚动显示，故障代码对照表如下表所示。

Area 1: Fault code display,when this icon is illuminated, the number below indicates the fault code. The current fault code is 8. If there are multiple fault conditions, the codes will scroll automatically. The corresponding fault codes are listed in the table below.

故障代码 Fault code	报警内容 Alarm description	故障代码 Fault code	报警内容 Alarm description
1	单体过放报警 Single cell undervoltage alarm	6	短路报警 Short circuit alarm
2	单体过充报警 Single cell overvoltage alarm	7	内部通讯异常报警 Internal communication failure alarm
3	过流报警 Overcurrent alarm	8	均衡线电阻过大报警 Balancing line resistance too high alarm
4	MOS 过温报警 MOS overtemperature alarm	9	掉串 Cell string loss
5	电池过温报警 Battery overtemperature alarm		

区域 2：故障提示，当该图标亮起时，说明有异常警告。

Area 2: Fault Alert. When this icon lights up, it indicates an abnormal warning.

区域 3：电量显示区域，当前显示值为 88%。

Area 3: Power display area, current display value is 88%

区域 4：充放电电流显示，最左边“-”表示电流为负值，此时显示值放电电流；若没有“-”，电流显示为正值，此时显示电流为充电电流。

Area 4: Charge/Discharge Current Display,“－” sign on the far left indicates a negative current value, meaning the battery is discharging. If there is no “－” sign, the current is positive, indicating the battery is charging.

区域 5：电池总电压显示。

Area 5: Total battery voltage display.

6.1. 显示屏亮灭逻辑(Display On/Off Logic)

为了降低功耗，特定义以下逻辑：

To reduce power consumption, the following logics are specifically defined:

- 静态：无放电流、未操作按钮、充电时，10 秒后灭屏；
- Static state: When there is no discharge current, no buttons are operated, and the device is charging, the screen will turn off after 10 seconds.
- 放电：当放电电流大于 0 时，显示屏常亮；
- Discharging: When the discharge current is greater than 0, the display screen remains on.
- 按键：当按下显示屏按键后，显示屏亮灭状态切换，如按键按下前是亮屏状态，按键后则会灭屏；如按键按下前是灭屏状态，按键后则会亮屏。
- Button operation: Pressing the display button toggles the screen's on/off state. If the screen is on before the button is pressed, it will turn off after pressing; if the screen is off before the button is pressed, it will turn on after pressing.