2 寸蓝牙显示屏

2-inch Bluetooth display screen

LCD-2.0-LY

使用维护说明书

Operation and maintenance manual

成都极空科技有限公司

Chengdu Jikong technology co., LTD

1. 产品简介（**Product Introduction**）

本产品为一款 2 英寸蓝牙 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-inch Bluetooth 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 或蓝牙通信（二选一），根据实际需求可灵活选择通信方式。供电电压范围为 9V 至 100V，适配多种电池供电系统。

The display supports RS485 or Bluetooth communication (selectable), offering flexible data connectivity options depending on your application needs. It is powered by a wide input voltage range of 9V to 100V, making it suitable for various battery-powered systems.

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

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3. 接口与线缆（**Interface and cables**）

3.1. RS485 通信方式（**RS485 communication mode**）

线缆总长 3.5M
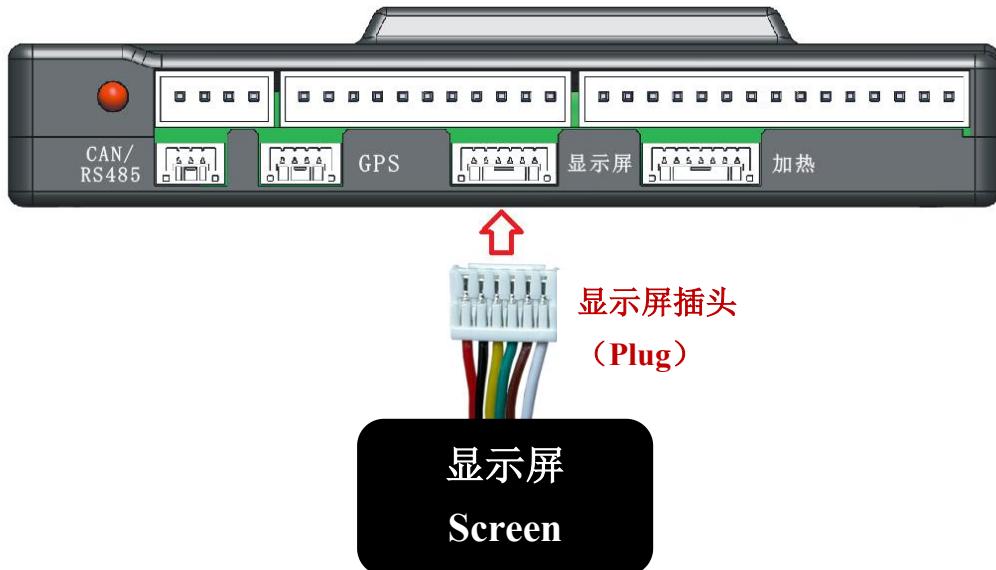
3.2. 蓝牙通信方式（**Bluetooth communication mode**）

线缆总长 40CM

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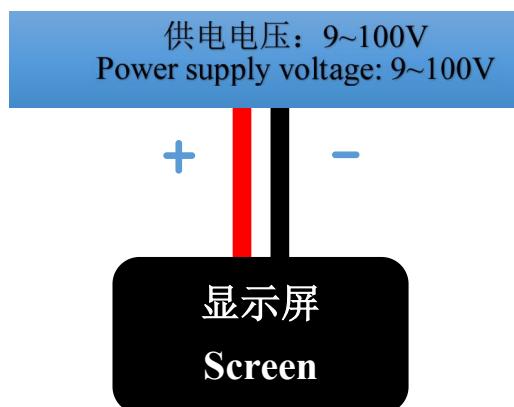
# 4. 接线图（Connection diagram）
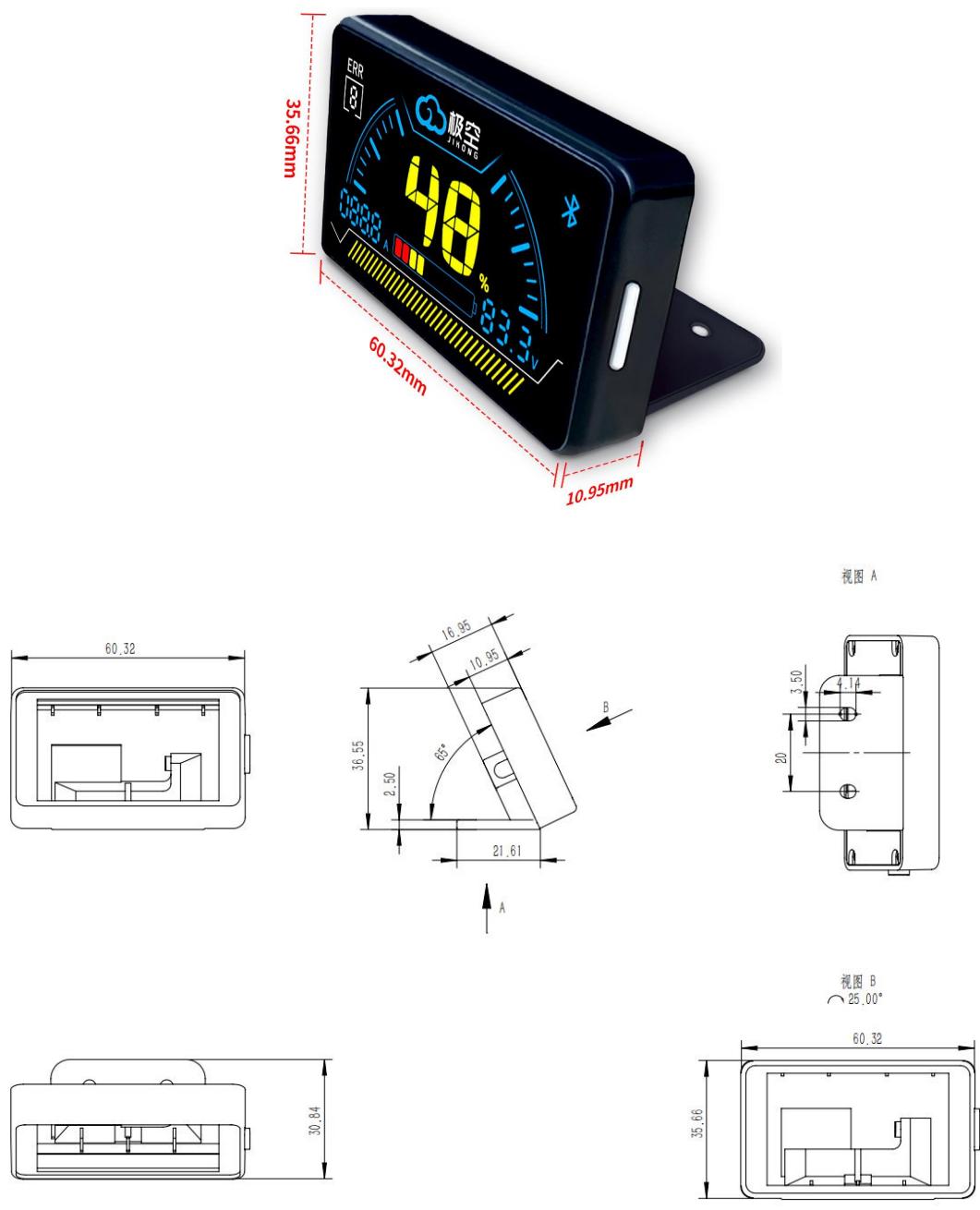
4.1. RS485 通信方式接线图（RS485 communication wiring diagram）

4.2. 蓝牙通信方式接线图（Bluetooth communication mode wiring diagram）

5. 产品尺寸(Product Dimensions)

产品尺寸图

Product Dimension Drawing

6. 按键操作与显示说明（**Operation and display instructions**）

6.1. RS485 通信方式按键操作（**Operate in RS485 communication mode**）

开机：按 RS485 通信方式接线完成后，短按显示屏右侧白色按钮 1~2 秒可控制保护板开机。

Power on: After the RS485 communication connection is complete, press the white button on the right of the display for 1 to 2 seconds to control the power on of the protection board.

关机：在开机状态下，长按显示屏右侧白色按钮 5 秒左右可控制保护板关机。

Shutdown: In the startup state, long press the white button on the right side of the display for about 5 seconds to control the shutdown of the protection board.

6.2. 蓝牙通信方式按键操作（**Bluetooth communication mode operation**）

绑定蓝牙:蓝牙图标慢闪时，长按按键(听到蜂鸣器提示音后松手)开启蓝牙扫描。当扫描到蓝牙名称为"JKJK666888"的保护板时，将建立蓝牙连接并且存储保护板蓝牙 MAC 地址。

Bind Bluetooth: When the Bluetooth icon blinks slowly, hold down the key (release after hearing the buzzer tone) to enable Bluetooth scanning. When a protection board with a Bluetooth name of "JKJK666888" is scanned, a Bluetooth connection is established and the Bluetooth MAC address of the protection board is stored.

解绑蓝牙：当蓝牙图标常亮，也就是蓝牙已连接时，长按按键(听到蜂鸣器提示音后松手)将进行解绑操作。此时显示屏与保护板断开蓝牙连接，并且擦除保护板的蓝牙 MAC 地址。

Unbind Bluetooth: When the Bluetooth icon is steady on, that is, when the Bluetooth is connected, long press the key (release after hearing the buzzer) to unbind the operation. In this case, the Bluetooth connection between the display and the protection board is disconnected, and the Bluetooth MAC address of the protection board is erased.

6.3. 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：蓝牙图标，会随不同的场景变换相应状态，具体状态如下表所示：

Area 2: Bluetooth icon，the state will change according to different scenarios, as shown in the

following table:

通信方式 Communication mode	场景 Application scenario	蓝牙图标状态 Bluetooth icon status
RS485 通信 RS485 communication	/	熄灭 Extinguish
蓝牙通信 Bluetooth communication	未绑定保护板 The protection board is not bound	慢闪，频率 1Hz Blink slowly at a frequency of 1Hz
蓝牙通信 Bluetooth communication	蓝牙正在扫描 Bluetooth scanning	快闪，频率 5Hz Blink quickly at a frequency of 5Hz
蓝牙通信 Bluetooth communication	蓝牙已连接 Bluetooth connected	常亮 Steady on

区域 3：电量显示区域，当前显示值为 88%。

Battery Percentage: Current battery SOC 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.

6.4. 显示屏亮灭逻辑（Display on/off logic）

为了降低功耗，特定义以下逻辑：

In order to reduce power consumption, the following logic is specified:

➤ 静态：无充/放电电流、未操作按键，30 秒后自动灭屏；

➤ Static: no charge/discharge current, no operation button, 30 seconds after the screen automatically off;

➤ 放电：当电流大于 0 时，显示屏常亮；

➤ charge/discharge: When the current is greater than 0, the display is steady on.

➤ 按键：静态下屏幕熄灭后，按一下按键又会亮屏 30S。

➤ Button: After the screen is off in static mode, the screen will light up for 30S after you press the button.