



# 蓝猫动力 APP

## User's Manual



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## 一、蓝猫动力 APP Introduction

蓝猫动力 APP is an independently developed and designed app by the Shenzhen Saihang technology company specifically designed for monitoring lithium batteries. It is mainly used to read the real-time status of lithium batteries, such as the voltage of each series of batteries, charging and discharging current, alarm prompts, protection status, etc., allowing users to clearly understand the health status of lithium batteries and ensure their safe use.

This APP is suitable for the following models of LiFePO<sub>4</sub> Battery:

SM-12100001、SM-24100001、SM-36100001、SM-48100001

## 二、蓝猫动力 APP Installation

### 2.1 APP Operating environment

蓝猫动力 APP can be installed on Android version 4.3 or above and can be used on devices that support Bluetooth 4.0. The APP can only run after obtaining Bluetooth and GPS usage permissions.

### 2.2 APP Download

- 1、Open Wechat on your phone, scan the QR code below, and then jump to the download page of the 蓝猫动力 APP.



蓝猫动力 APP download link

2、Click on the upper right corner of the screen and select Open in Browser (as shown in Figure 1);

3、After jumping to the browser interface, click the **【Download and install】** button to install it (as shown in Figure 2);

IOS users can directly enter the App Store and search for ‘蓝猫动力’ to download and install.

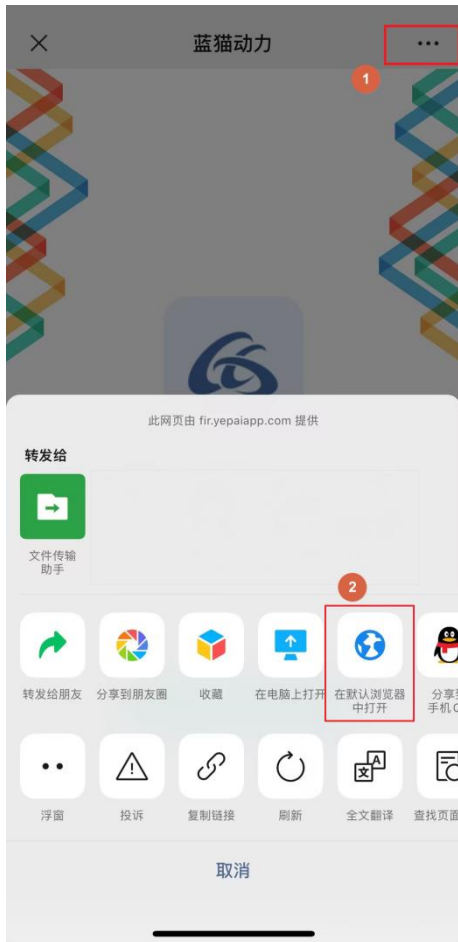


Figure 1



Figure 2

- 4、After installation is completed, when entering the APP for the first time, a pop-up window will prompt you to obtain Bluetooth usage permission. Please select agree to use and then click 'cancel account' in the upper right corner (as shown in Figure 3);
- 5、Then a login window will pop up, click 'Cancel' to enter the Bluetooth connection interface (as shown in Figure 4) .



Figure 3

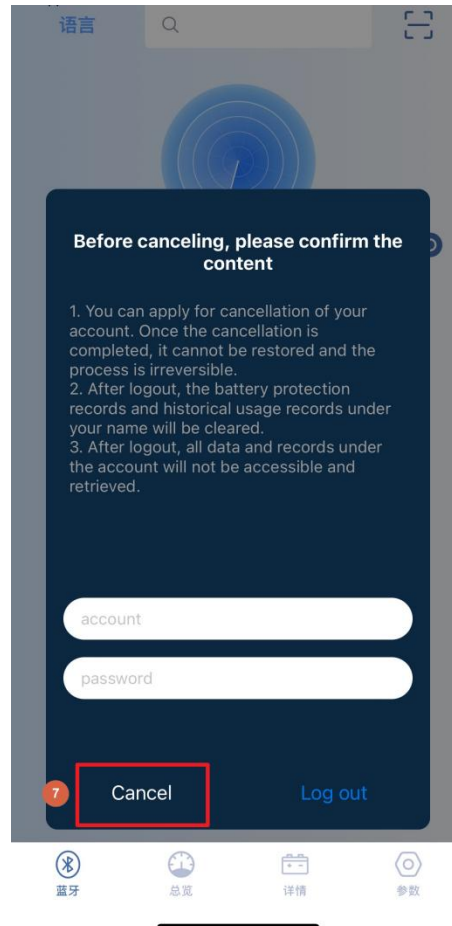


Figure 4

### 三、蓝猫动力 APP Usage

#### 3.1 Bluetooth connectivity

Select the name of the battery pack that needs to be connected on the Bluetooth connection on the Bluetooth connection interface, and click on the Bluetooth connection switch on the right to complete the connection, as shown in Figure 5.

(NOTE: Please confirm that the Bluetooth and GPS switches on your phone are turned on when connecting to Bluetooth, otherwise you will not be able to connect.)



The upper left corner of the Bluetooth interface allows for language switching, and the APP supports multiple languages such as English, Japanese, German, etc.

APP supports search function, where you can enter the battery name in the search bar above to quickly find the target battery pack.

After a successful Bluetooth connection, you can click the button below the main interface to switch between different display interfaces and learn more about the detailed data of the battery pack.

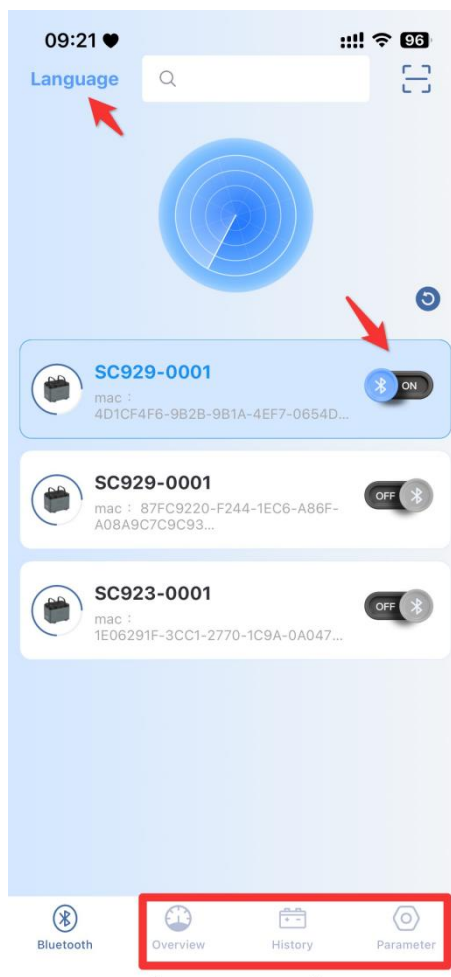


Figure 5 Bluetooth interface



### 3.2 Overview of battery usage status

The following data can be viewed in the overview interface, as shown in Figure 6:

- 1、Display the battery level and percentage, allowing users to better grasp the real-time battery level;
- 2、Display the total battery voltage;
- 3、Display the magnitude of charging and discharging current, and the opening or closing status of charging or discharging MOS;
- 4、Display power value;
- 5、Display the number of battery pack cycles.



Figure 6 Overview interface



### 3.3 View battery details

The following data can be viewed in the details interface, as shown in Figure 7:

- 1、Display the highest and lowest voltage in the battery cell, as well as the voltage difference and average voltage value;
- 2、Display the voltage of each string of battery cells;
- 3、Display the current MOS temperature, ambient temperature, and NTC measured cell temperature of the battery, including two modes: Celsius and Fahrenheit;
- 4、When the battery pack experiences over-voltage and over-current, an alarm message will be displayed in the blank space below the temperature data.

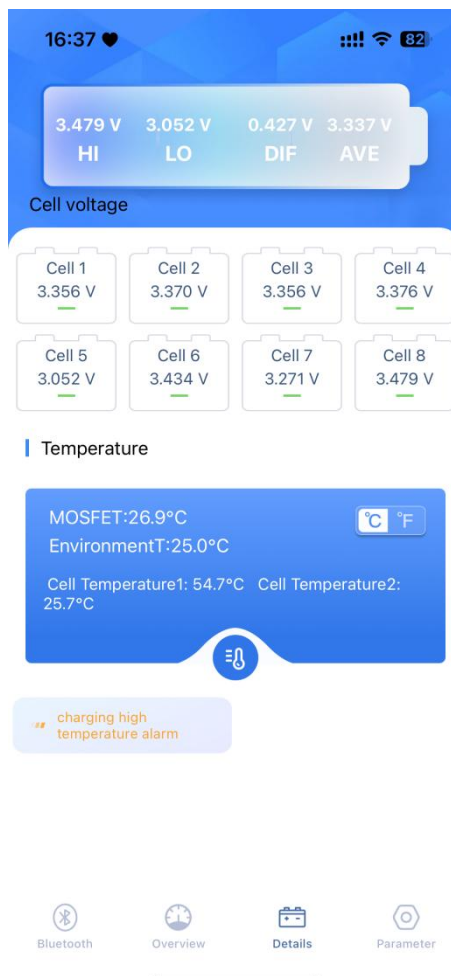


Figure 7 details interface



3.4 View battery protecting parameters

Users can click 【Voltage Parameters】 , 【Current Parameters】 , 【Temperature Parameters】 , and 【Other Parameters】 on the parameter page to enter the secondary page to view the protection parameters of the protection board, as shown in Figure 8, Figure 9, Figure 10 and Figure 11, so as to clearly understand the protection action opening conditions of the protection board.

09:22 ♥ <span>📶 96</span>	
< Voltage parameter	
Pack OV alarm	28.800 V
Pack OV protection	29.200 V
Pack OV release Protection	27.040 V
Pack OV protection delay time	1.0 S
Cell OV alarm	3.600 V
Cell OV protection	3.650 V
Cell OV release Protection	3.380 V
Cell OV protection delay time	1.0 S
Pack UV alarm	23.200 V
Pack UV protection	22.400 V
Pack UV release Protection	24.000 V
Pack UV protection delay time	1.0 S
Cell UV alarm	2.900 V
Cell UV protection	2.800 V
Cell UV release Protection	3.000 V
Cell UV protection delay time	1.0 S

Figure 8

09:22 ♥ <span>📶 96</span>	
< Current parameter	
Charging OC alarm	105.0 A
Charging OC protection	110.0 A
Charging OC protection delay time	1.0 S
Discharging OC alarm	105.0 A
Discharging OC protection	110.0 A
Discharging OC protection delay time	1.0 S
Discharging OC-2 Protection	300.0 A
Discharging OC-2 protection delay time	0.100 S

Figure 9



<div> <div>09:22</div> <div> <div></div> <div></div> <div></div> </div> <div>96</div> </div>	
<div> <div>Temperature parameter</div> </div>	
Charging OT alarm	50.0 °C
Charging OT protection	55.0 °C
Charging OT release protection	50.0 °C
Discharging OT alarm	55.0 °C
Discharging OT protection	60.0 °C
Discharging OT release protection	55.0 °C
Charging UT alarm	5.0 °C
Charging UT protection	-10.0 °C
Charging UT release protection	-8.0 °C
Discharging UT alarm	-15.0 °C
Discharging UT protection	-20.0 °C
Discharging UT release protection	-15.0 °C
MOSFET OT alarm	90.0 °C
MOSFET OT protection	100.0 °C
MOSFETOT release protection	85.0 °C
Environment OT alarm	65.0 °C
Environment OT protection	70.0 °C

Figure 10

<div> <div>09:23</div> <div> <div></div> <div></div> <div></div> </div> <div>96</div> </div>	
<div> <div>Other parameter</div> </div>	
Balance start cell voltage	3.400 V
Balance start delta voltage	0.030 V
Pack full- charge voltage	28.000 V
Pack full- charge current	2.0 A
Cell sleep voltage	3.150 V
Cell sleep delay time	5 min
Short circuit protect delay time	250 uS
SOC alarm threshold	5 %
Charging OC- 2 protection	144.0 A
Charging OC-2 protection delay time	0.500 S
Version information	8100-0913001V0.01
Model SN	0929-8100-000000001
PACKSN	0123456789
Protocol Version	BLE V2.2
Pack name	SC000V001
Change password	

Figure 11



### 3.5 Set the Bluetooth name

After the battery is connected to the Bluetooth APP, the user can click 【Pack Name】 on the parameter page to set the current battery name, as shown in Figure 12 and Figure 13.

**NOTES:** ● The number of characters entered in the Bluetooth name  $\leq 9$ , and the displayed name is the same as the entered name.

● The number of Bluetooth name characters entered = 10, and the displayed name is based on the entered name, and the serial number is added to the 5-digit serial number (the serial number is taken from the last 5 digits of the BMSN character) as a suffix.

● After changing the Bluetooth name, the Bluetooth will restart, and it will be displayed normally if it is reconnected.

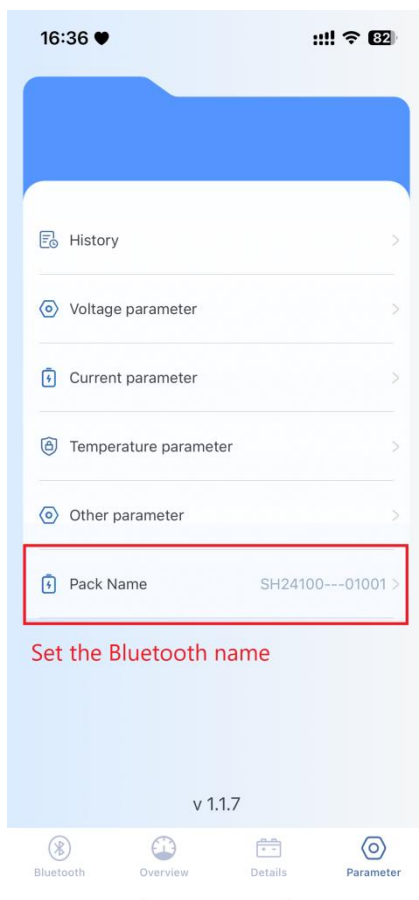


Figure 12

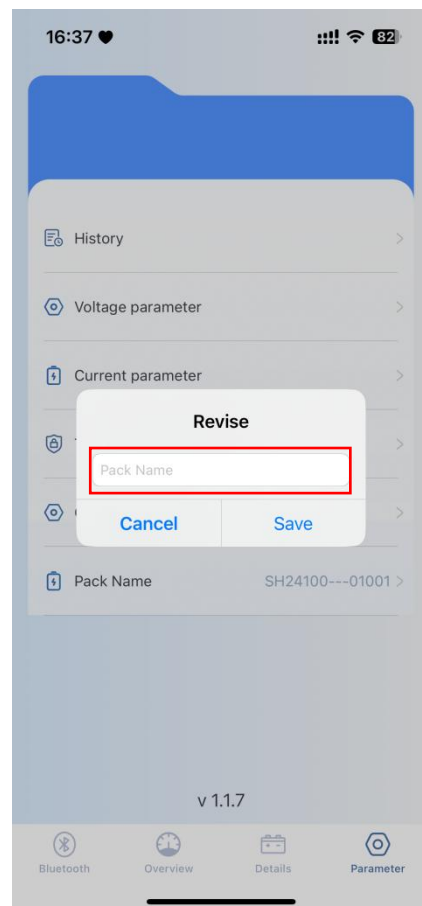


Figure 13



### 3.6 FCC Warning Statement

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

The device has been evaluated to meet general RF exposure requirement.