BMS app for MWLJ series battery

XiaoXiangElectric (v3.2.038)

The app mainly displays: lithium battery voltage, current, capacity, temperature and other curves, charge and discharge switch control, SOC, battery voltage, charge and discharge current, protection status, basic parameters, etc., through the background permission operation, the parameters of the lithium battery protection board can be set to make the health status of the lithium battery more transparent and ensure the safety of the use of the lithium battery.

1. Application download (Android & iOS)

Scan the code to jump to the download address and follow the instructions to complete downloading and installing.

2. Login and account registration

Once the app has been successfully installed, open the app, Bluetooth to be turned ON, and obtain location information, the app will automatically jump to the account registration page, enter your email and password. If you don't have an account, please register.
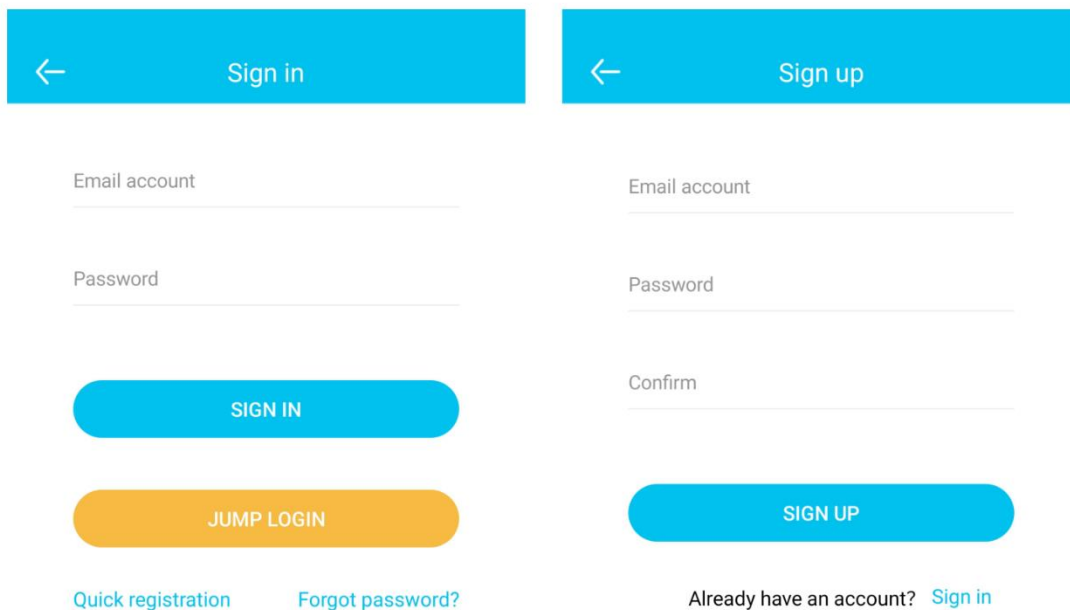

Fig. 1. Example screenshot of sign in/up tab

3. Device list

3.1. After successful login, the App will jump to the Bluetooth list, select Bluetooth MAC address that need to be connected to connect.

3.2. Switch battery: when there are multiple batteries, you can check the choose multiple Bluetooth MAC adddresses in the list, and quickly switch the battery to be connected on the real-time interface.

3.3. In the upper rifht cornet of the real-time interface, click the scan code button to connect directly by scanning Bluetooth MAC address the bar-code.

3.4. On the devide list page, when there are multiple batteries, you can quickly find the battery that needs to be connected by searching for the Bluetooth MAC address.

Note:
• *Bluetooth MAC address:* is assigned to the battery. It can be found on the battery case.
• *Singal:* This is a measure of the strength of the signal being received. A high signal level (e.g. -30) means the signal is good, the battery is close and the signal is strong and stable. A low signal level (e.g. -80) means that the signal is weak, which can lead to unstable connections or low throughput.
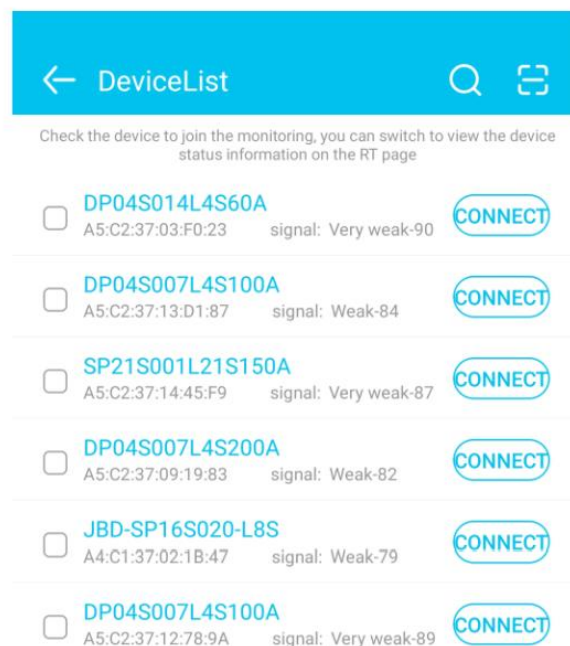

Fig. 2. Example screenshot of device list

4. RT (Battery parameters in real time)

4.1. *Capacity information:* only the SOC percentage and remaining capacity of the battery are displayed when static; the estimated full time is displayed when charging; the estimated empty time is displayed when discharging.

4.2. *Switch and protection status:* the current status of the charge and discharge switch is displayed, when the switch is turned on, it is on, otherwise it is off; the balance status display, the balance is turned on, it is on, and vice versa; the protection status display, when the

protection board triggers the protection threshold or manual control when charging and discharging, the protection state displays the corresponding protection state, and it displays off when the protection state is not triggered.

4.3. *Battery information:* total voltage, current, power, maximum single-cell voltage, minimum single-cell voltage, average voltage, voltage difference, cycle times, read or calculated through the protection board, and the above data is displayed on the App.

4.4. *Temperature and humidity:* the MOS temperature is the ambient temperature of the protection board, the others are the external NTC temperature, and the temperature of the cell is detected; the humidity is the ambient humidity, which needs to be installed with a humidity probe to display.

4.5. *Rated parameters:* rated charging voltage, current, rated discharge current, rated discharge power.

4.6. *Single string voltage:* single string cell voltage, the protection board collects cell information, the highest voltage is displayed in green, the middle value is displayed in blue, and the lowest voltage is displayed in gray.
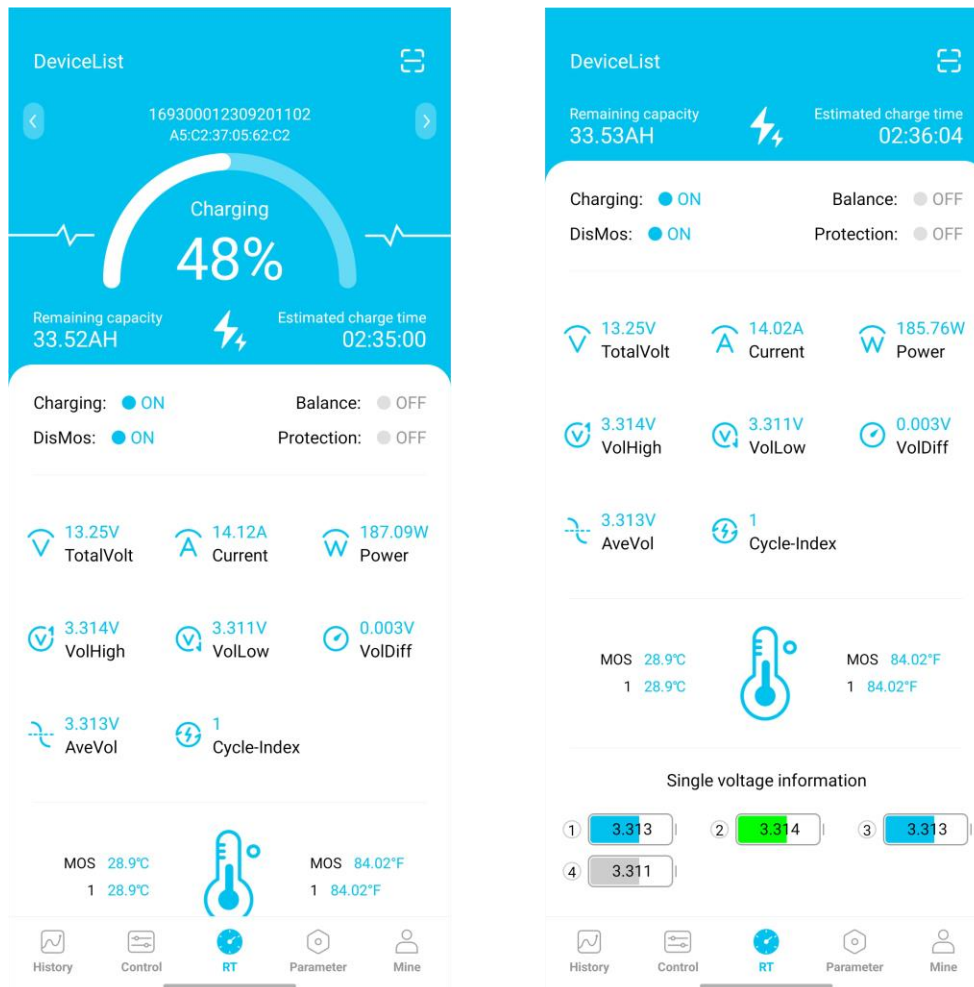

Fig. 3. Example screenshot of real-time battery parameter

5. Control

5.1. *Charge and discharge switch:* through the App, you can directly control the charge and discharge switch to open or close, and control the charging/discharging of the battery.

5.2. *Automatic equalization:* forcibly open the equalization function. When the opening is successful, the real-time interface equalization status will be displayed.

5.3. *Current calibration:* when there is a deviation between the charging/discharging current and the actual value, the current value can be calibrated through the App.

5.4. *Voltage calibration:* when there is a deviation between the voltage of a single string and the actual one, the voltage value can be calibrated through the App.

5.5. *Clear alarm:* clear alarm data.

5.6. *Reset capacity:* re-estimate the remaining capacity through the current voltage value.
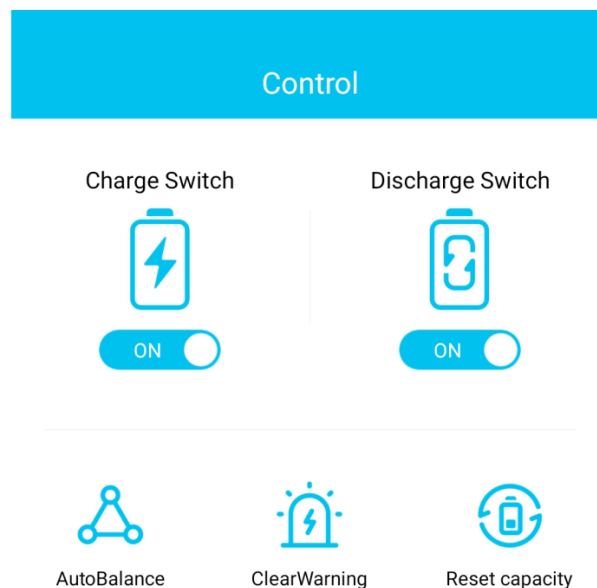

Fig. 4. Example screenshot of control tab

6. Parameter and mine (user interface)

6.1. *Perfect data:* phone number and email address.

6.2. *Device management:* disconnection of a saved device in memory App.

6.3. *Ignore battery optimization:* stop optimising battery usage. The application can run in the background. Its battery consumption is not limited.

6.4. *Exit account:* sign out of account.

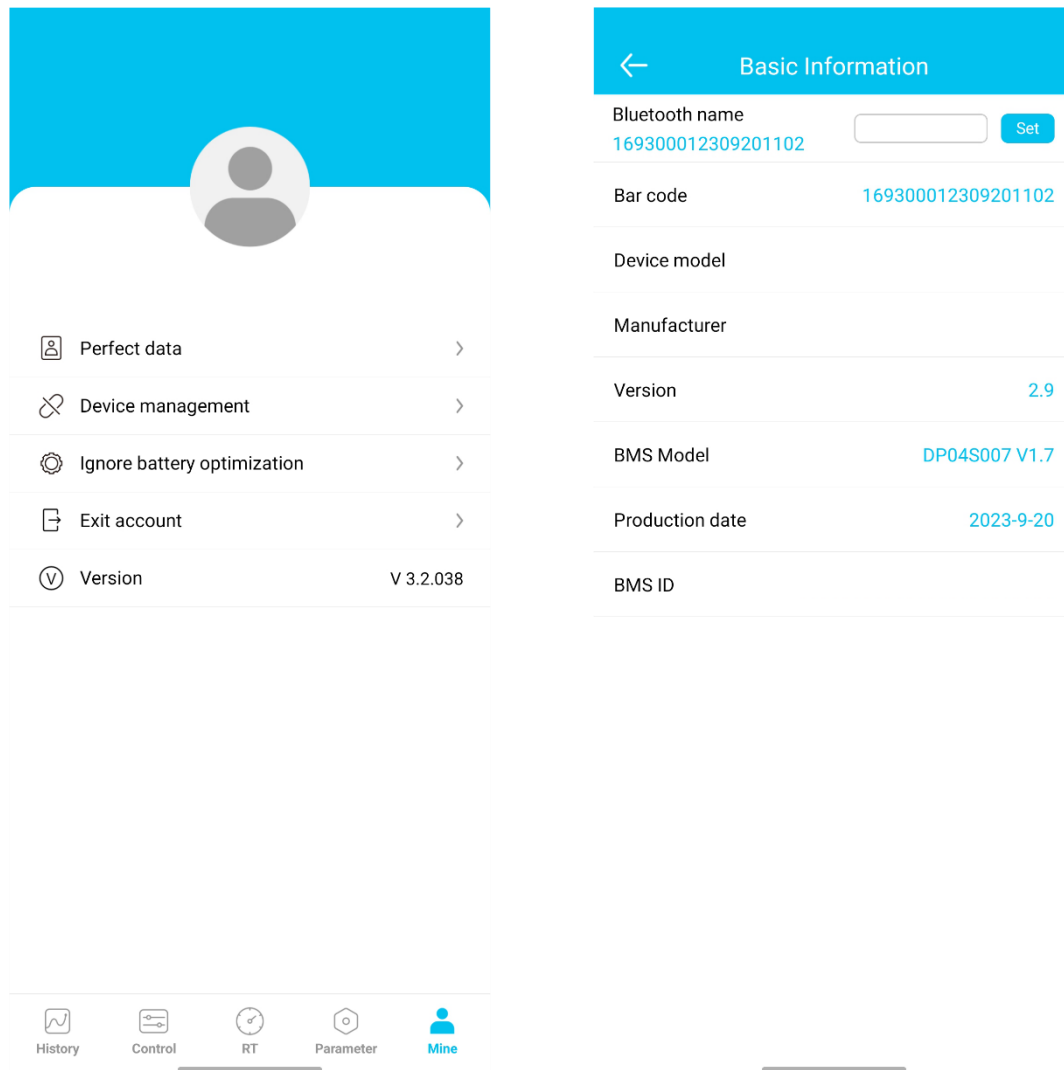6.5. *Version:* version of the App.

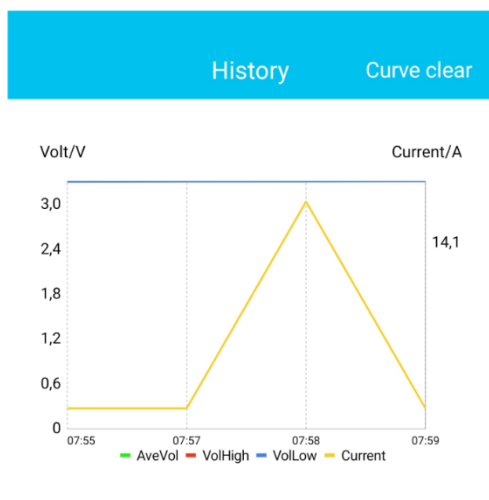Fig. 5. Example screenshot of parameter and mine tab

7. History

The battery's Volt/V, Current/A, Cap/AH, Temp/°C data is displayed in real time in the plot history application.

The data is not stored. The chart is reset when the connection with battery is reconnected.

Fig. 6. Example screenshot of battery history

8. Reset password

If you have forgotten your login password, you can reset a new one via your email. The steps are as follows:

1. Open the login interface, find the forgotten password, click on it and the reset password interface will pop up.

2. Enter the relevant binding email and click *Send Verification Code*. Generally, you will receive the verification code within 60s, make sure to open the mailbox to check.

3. Enter the verification code, set a new password.