

When I asked for the Daily Smart BMS manual, they sent me 4 files. I have combined 3 of them into this single file

- | | |
|--------------------------------------|------------|
| 1. SMART BMS MANUAL | Page 2-29 |
| 2. How to Operate Upper PC | Page 30-34 |
| 3. How To Connect BMS With Batteries | Page 35-36 |

The fourth file will be uploaded separately:

- | | |
|-------------------|---------------|
| 4. DL-R32S 模块用户手册 | Separate file |
|-------------------|---------------|



东莞市达锂电子有限公司

DONGGUAN DALY ELECTRONICS CO., LTD.

Smart BMS Manual

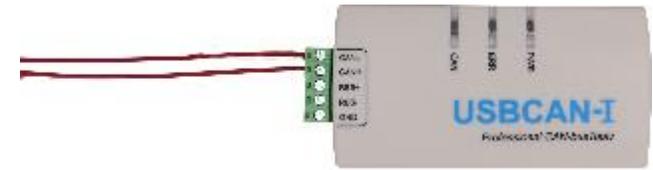
(CANbus、485、UART)



RS485
convertor



URAT to USB
wire



CANbus



NTC wire



Light board



battery pack

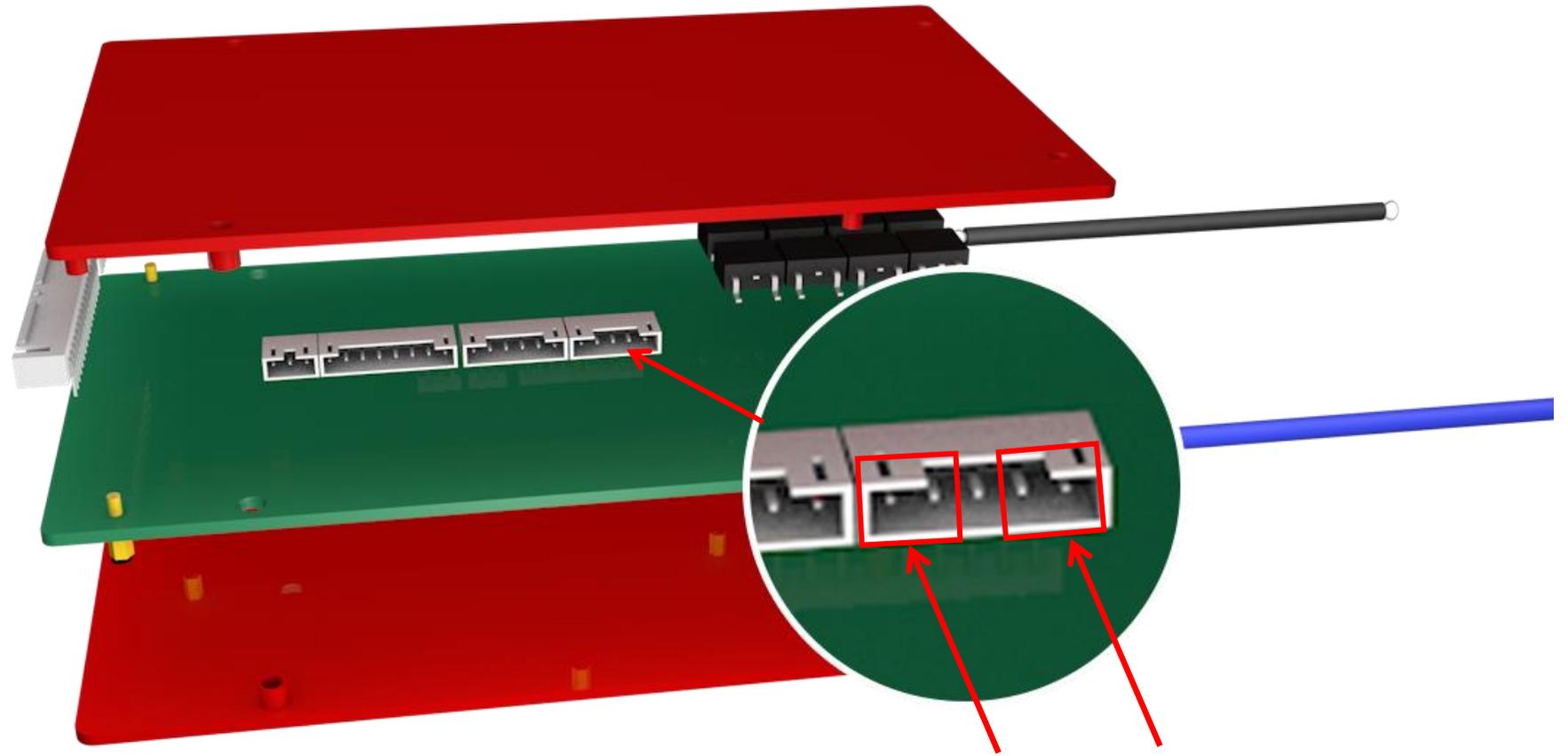


PC



Smart BMS



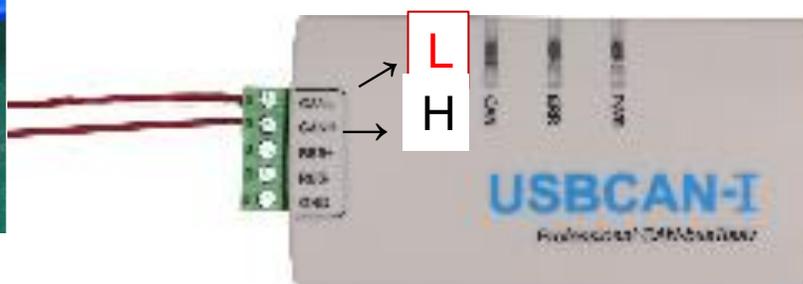


The left 2 pins are for CAN, The right 2 pins are for RS485



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How to connect CANbus with BMS

- 1、 Pls insert light board into BMS and switch on it to activate BMS at first. Then put off the light board.
- 2、 Pls connect balance wires with batteries.
- 3、 Pls connect CANbus、 light board、 balance wires、 NTC wires with BMS; And connect CANbus with PC.
- 4、 Pls open “DalyBMS” software on your PC;

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PCMaster.vshost	2014/12/24 15:00	应用程序	23 KB



How to connect CANbus with BMS

6、 Pls click the set;

The screenshot displays the DalyBMS-V1.1.2 software interface. The main window has a dark theme and includes several sections:

- Navigation tabs:** Data monitoring, Parameter settings (selected), Readparam, Engineering model, Alarm history, BMS upgrade.
- Language and Actions:** 中文, Refresh, CommSet.
- Left Panel:** Contains gauges for SumVolt (0-200V), Curr (0-300A), and SOC (0%). Below is an Alarm list section.
- Comm status:** disconnect (orange bar at the bottom left).
- Main Content Area:**
 - Battery status:** Max Volt, Min Volt, Cells num, DI1 status, Do1 status, Max Cell Pos, Min Cell Pos, NTC num, DI2 status, Do2 status, Max Temp, Min Temp, Remain cap, Do3 status, Max Temp Pos, Min Temp Pos, bms life, DI4 status, Do4 status, Chg Mos (ON/OFF), Dischg Mos (ON/OFF), Cycle Times.
 - Cell voltage:** A table with columns for cell ranges (1~10, 11~20, 21~30, 31~40, 41~48) and voltage values.
 - Battery temperature:** A table with columns for cell ranges (1~10, 11~16) and temperature values.

A **Serial port set** dialog box is open in the center, showing:

- CommPort:** COM9
- BaudRate:** 9600
- Buttons: Refresh Port, Open Port



How to connect CANbus with BMS

7、Pls click ">>" ;

The screenshot displays the DALY BMS software interface. The main window has a dark theme and includes several sections: 'Data monitoring', 'Parameter settings', 'Readparam', 'Engineering model', 'Alarm history', and 'BMS upgrade'. The 'CommSet' button is highlighted in orange. The 'Battery status' section shows various parameters like Max Volt, Min Volt, Cells num, etc. The 'Cell voltage' section has a table with columns for cell ranges (1~10, 11~20, etc.) and values. The 'Battery temperature' section also has a table. A 'Serial port set' dialog box is open in the center, showing 'CommPort' set to 'COM9' and 'BaudRate' set to '9600'. A red box highlights the '>>' button in the dialog box. The 'Comm status' at the bottom left is 'disconnect'.

中文 Refresh **CommSet**

Data monitoring Parameter settings Readparam Engineering model Alarm history BMS upgrade

Battery status

Max Volt: Max Cell Pos: Max Temp: Max Temp Pos: Chg Mos: ON OFF

Min Volt: Min Cell Pos: Min Temp: Min Temp Pos: Dischg Mos: ON OFF

Cells num: NTC num: Remain cap: bms life:

DI1 status: DI2 status: DI3 status: DI4 status: Cycle Times:

Do1 status: Do2 status: Do3 status: Do4 status:

Cell voltage

1~10:										
11~20:										
21~30:										
31~40:										
41~48:										

Battery temperature

1~10:										
11~16:										

Serial port set

CommPort: COM9

BaudRate: 9600

Refresh Port Open Port

Comm status: disconnect



How to connect CANbus with BMS

8、 Pls set “CAN device” 、 “CAN Channel” 、 “BaudRate” , then click “Open CAN” ;

The screenshot displays the DALY BMS software interface. The main window has a dark theme and includes several sections: a left sidebar with gauges for SumVolt, Curr, and SOC; a top navigation bar with tabs for Data monitoring, Parameter settings, Readparam, Engineering model, Alarm history, and BMS upgrade; and a main content area with sections for Battery status, Cell voltage, and Battery temperature. A 'CAN Set' dialog box is open in the center, with red boxes highlighting the 'CAN device' (set to 'USBCAN-I'), 'Device Index' (set to '0'), 'CAN Channel' (set to '0'), and 'BaudRate' (set to '250') fields. The dialog also features 'Refresh CAN' and 'Open CAN' buttons. The bottom status bar shows 'Comm status: disconnect'.



How to connect CANbus with BMS

9、Done,you can see the left corner shows: Comm status: CAN

中文 Refresh **CommSet**

Data monitoring Parameter settings Readparam Engineering model Alarm history BMS upgrade

Battery status

Max Volt: Max Cell Pos: Max Temp: Max Temp Pos: Chg Mos: ON OFF

Min Volt: Min Cell Pos: Min Temp: Min Temp Pos: Dischg Mos: ON OFF

Cells num: NTC num: Remain cap: bms life:

DI1 status: DI2 status: DI3 status: DI4 status: Cycle Times:

Do1 status: Do2 status: Do3 status: Do4 status:

Cell voltage

1~10:									
11~20:									
21~30:									
31~40:									
41~48:									

Battery temperature

1~10:									
11~16:									

SumVolt

Curr:

SOC: 0%

Alarm list

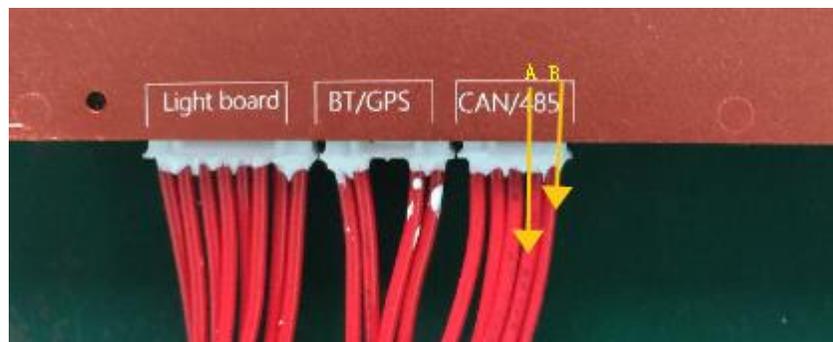
Comm status: CAN



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How to connect RS485 with BMS





How to connect RS485 modual with PC

- 1、 Pls insert light board into BMS and switch on it to activate BMS at first. Then put off the light board.
- 2、 Pls connect balance wires with batteries.
- 3、 Pls connect CANbus、 light board、 balance wires、 NTC wires with BMS; And connect CANbus with PC.
- 4、 Pls open "DalyBMS" software on your PC;

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PCMaster.vshost	2014/12/24 15:00	应用程序	23 KB



How to connect RS485 modual with PC

6、 Pls click the set

The screenshot shows the DalyBMS-V1.1.2 software interface. The main window has a dark theme and contains several sections:

- Left Panel:** Contains two gauges: 'SumVolt' (0-200) and 'Curr' (-300 to 300). Below them is a battery icon showing '0%' SOC and an 'Alarm list' section.
- Top Menu:** Includes 'Data monitoring', 'Parameter settings', 'Readparam', 'Engineering model', 'Alarm history', and 'BMS upgrade'. There are also buttons for '中文', 'Refresh', and 'CommSet'.
- Battery status:** A grid of parameters including Max Volt, Min Volt, Cells num, DI1 status, Do1 status, Max Cell Pos, Min Cell Pos, NTC num, DI2 status, Do2 status, Max Temp, Min Temp, Remain cap, Do3 status, Max Temp Pos, Min Temp Pos, bms life, DI4 status, Do4 status, Chg Mos, and Dischg Mos. The 'Chg Mos' and 'Dischg Mos' buttons are currently set to 'OFF'.
- Cell voltage:** A table with columns for cell ranges (1~10, 11~20, 21~30, 31~40, 41~48) and their corresponding voltage values.
- Battery temperature:** A table with columns for temperature ranges (1~10, 11~16) and their corresponding temperature values.

A 'Serial port set' dialog box is open in the center, showing the following settings:

- CommPort:** COM9
- BaudRate:** 9600
- Buttons: Refresh Port, Open Port

At the bottom left of the main window, the status bar shows 'Comm status: disconnect'.



How to connect RS485 modual with PC

7、The system auto-identified the RS485, you only need to set Baudrate, select "9600", then click "open"。

The screenshot displays the DalyBMS-V1.1.0 software interface. On the left, there are three gauges: '总电压' (Total Voltage) ranging from 0 to 200, '电流' (Current) ranging from -300 to 300, and 'SOC' (State of Charge) at 0%. Below these is a '告警列表' (Warning List) section. The main interface is divided into several panels: '数据监控' (Data Monitoring), '参数设置' (Parameter Settings), '参数读取' (Parameter Reading), '工程模式' (Engineering Mode), '历史告警' (Historical Alarms), and 'BMS升级' (BMS Upgrade). The '参数设置' panel is active, showing various parameters like '最高电压' (Maximum Voltage), '最低电压' (Minimum Voltage), '电池串数' (Number of Battery Strings), 'DI1状态' (DI1 Status), 'Do1状态' (Do1 Status), '最高电压位置' (Maximum Voltage Position), '最低电压位置' (Minimum Voltage Position), '温度个数' (Number of Temperature Sensors), '剩余容量' (Remaining Capacity), 'bms life' (BMS Life), 'DI2状态' (DI2 Status), 'DI3状态' (DI3 Status), 'DI4状态' (DI4 Status), 'Do2状态' (Do2 Status), 'Do3状态' (Do3 Status), 'Do4状态' (Do4 Status), '充电MOS' (Charging MOS), and '放电MOS' (Discharging MOS). A '串口设置' (Serial Port Settings) dialog box is open in the center, showing 'COM4' selected for the '串口号' (Serial Port Number) and '9600' selected for the '波特率' (Baud Rate). A red arrow points to the '9600' option in the baud rate dropdown menu. The '刷新' (Refresh) button is highlighted in orange. The Windows taskbar is visible at the bottom.



How to connect RS485 modual with PC

8、 Done,you will see the left corner shows: comm status:RS485.

The screenshot shows the DalyBMS-V1.1.0 software interface. The top navigation bar includes '数据监控' (Data Monitoring), '参数设置' (Parameter Settings), '参数读取' (Parameter Reading), '工程模式' (Engineering Mode), '历史告警' (History Alarms), and 'BMS升级' (BMS Upgrade). The 'English' language and '刷新' (Refresh) button are also visible. The '通讯设置' (Communication Settings) button is highlighted in green.

电池状态 (Battery Status):

- 最高电压: 3.975 V
- 最高电压位置: 5
- 最高温度: 24 °C
- 最高温度位置: 1
- 充电MOS: ON OFF
- 最低电压: 2.666 V
- 最低电压位置: 4
- 最低温度: 24 °C
- 最低温度位置: 1
- 放电MOS: ON OFF
- 电池串数: 15
- 温度个数: 1
- 剩余容量: 50 Ah
- bms life: 1
- DI1状态: Off
- DI2状态: Off
- DI3状态: Off
- DI4状态: Off
- 充放电次数: 0
- Do1状态: Off
- Do2状态: Off
- Do3状态: Off
- Do4状态: Off

单体电压 (Cell Voltage):

1~10:	3.32	3.316	3.317	2.671	3.971	3.318	3.322	3.317	3.316	3.217
11~20:	3.422	3.316	3.316	3.318	3.321					
21~30:										
31~40:										
41~48:										

电池温度 (Battery Temperature):

1~10:	24									
11~16:										

告警列表 (Alarm List):

- 单体电压过低二组

仪表盘 (Gauges):

- 总电压: 49.7 V
- 电流: 0 A
- SOC: 50%



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UART convertor





How to connect UART with BMS

- 1、Pls insert light board into BMS and switch on it to activate BMS at first. Then put off the light board.
- 2、Pls connect balance wires with batteries.
- 3、Pls connect CANbus、light board、balance wires、NTC wires with BMS; And connect CANbus with PC.
- 4、Pls open "DalyBMS" software on your PC;

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How to connect UART with BMS

6、Pls click the set

The screenshot shows the DalyBMS-V1.1.2 software interface. The main window has a menu bar with options: Data monitoring, Parameter settings, Readparam, Engineering model, Alarm history, and BMS upgrade. The 'CommSet' button is highlighted in orange. The interface displays various battery status metrics, including SumVolt, Curr, and SOC. A 'Serial port set' dialog box is open, showing the 'CommPort' set to COM3 and the 'BaudRate' set to 9600. The dialog box also includes 'Refresh Port' and 'Open Port' buttons. The 'Comm status: disconnect' indicator is visible at the bottom left.

Serial port set

CommPort: COM3

BaudRate: 9600

Refresh Port Open Port

Comm status: disconnect



How to connect UART with BMS

7、The PC has auto-identified the port, you only select "9600" for Baudrate, then click "Open"。





How to connect UART with BMS

8、Done,you can see the left corner shows" comm status:UART" 。

The screenshot shows the DalyBMS-V1.1.0 software interface. The top navigation bar includes '数据监控' (Data Monitoring), '参数设置' (Parameter Settings), '参数读取' (Parameter Reading), '工程模式' (Engineering Mode), '历史告警' (History Alerts), and 'BMS升级' (BMS Upgrade). The right side has 'English', '刷新' (Refresh), and '通讯设置' (Communication Settings).

Left Panel:

- Top gauge: Total Voltage (总电压): 49.7 V
- Middle gauge: Current (电流): 0 A
- Bottom gauge: SOC: 50%
- Warning List (告警列表): 单体电压过低二级 (Single cell voltage too low level 2)

Main Panel - 电池状态 (Battery Status):

最高电压: 3.975 V	最高电压位置: 5	最高温度: 24 °C	最高温度位置: 1	充电MOS: <input type="checkbox"/> ON <input type="checkbox"/> OFF
最低电压: 2.666 V	最低电压位置: 4	最低温度: 24 °C	最低温度位置: 1	放电MOS: <input type="checkbox"/> ON <input type="checkbox"/> OFF
电池串数: 15	温度个数: 1	剩余容量: 50 Ah	bms life: 1	
DI1状态: Off	DI2状态: Off	DI3状态: Off	DI4状态: Off	充放电次数: 0
Do1状态: Off	Do2状态: Off	Do3状态: Off	Do4状态: Off	

Main Panel - 单体电压 (Single Cell Voltage):

1~10:	3.32	3.316	3.317	2.671	3.971	3.318	3.322	3.317	3.316	3.217
11~20:	3.422	3.316	3.316	3.318	3.321					
21~30:										
31~40:										
41~48:										

Main Panel - 电池温度 (Battery Temperature):

1~10:	24								
11~16:									

The bottom of the interface shows a Windows taskbar with various system icons and application shortcuts.



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Failure checking



Failure checking

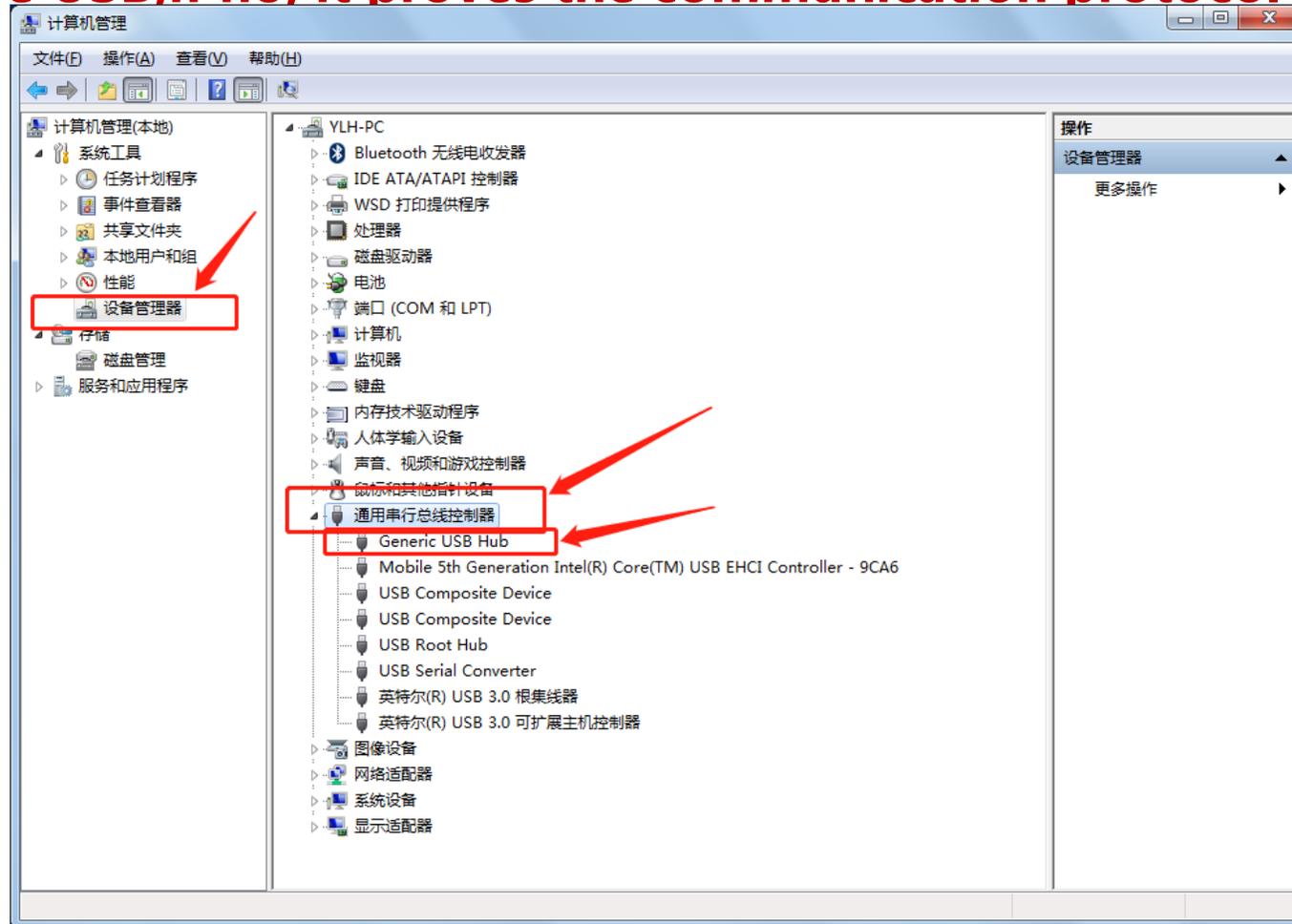
If the PC can't indentify the communication protocol,it will remind you

The screenshot shows the DalyBMS-V1.1.0 software interface. On the left, there are two gauges: '总电压' (Total Voltage) and '电流' (Current). Below them is a battery icon showing 'SOC: 0%'. The main area is divided into several sections: '电池状态' (Battery Status), '单体电压' (Cell Voltage), and '电池温度' (Battery Temperature). An 'Information' dialog box is overlaid on the '单体电压' section, with a red border. The dialog box contains the following text: 'Information', '打开设备失败, 请检查设备类型和设备索引号是否正确' (Device opening failed, please check the device type and device index number are correct), and 'No' and 'Yes' buttons. The '电池状态' section includes parameters like '最高电压', '最低电压', '电池串数', '温度个数', '剩余容量', 'bms life', '充电MOS', and '放电MOS'. The '单体电压' section has a table with rows for '1~10:', '11~20:', '21~30:', '31~40:', and '41~48:'. The '电池温度' section has a table with rows for '1~10:' and '11~16:'.



Failure checking

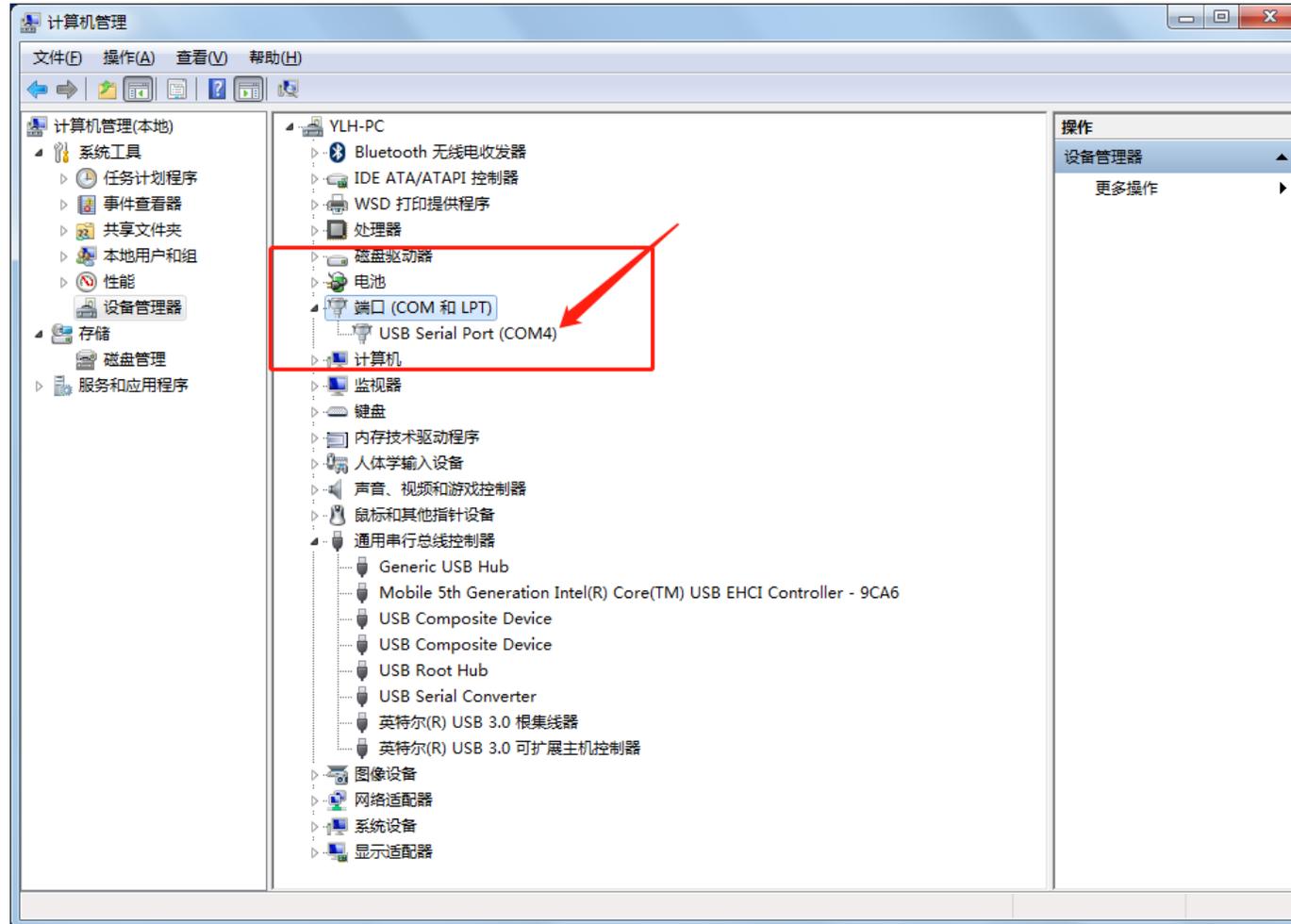
Pls find " my computer" , click right button of your mouse,select " manage" , double click, then click "device mangement" , then find the "USB controller" to check if have new more USB,if no, it proves the communication protocol connected failed.





Failure checking

Then you can find out “Port (COM和LPT) ” , then click USB Serial Port to check if have COM port, if yes, it proves it was identified.





达锂电子

dalyBms

Thanks for your reading!



Upper computer Manual

上位机操作指南



01

Which points you should ask clients? 在设置上位机参数前需问客户以下问题

- 📖 What's kind of battery?
📖 是什么类型的电池?
- 📖 How many series of battery pack?
📖 电池包是多少串?
- 📖 What's the continous discharge current of battery?
📖 电池的持续放电电流是多少?
- 📖 What's the capacity of battery?
📖 电池的容量多少?

02

How to operate Upper PC? 如何操作上位机?

- ① Double click "DalyBmsMonitor"-
- ② Double click"PCMaster"-
- ③ Select the Language you need.(EN or Eng.)-

DalyBmsMonitor

PCMaster

- ④ Set parameters-
- ⑤ Port:

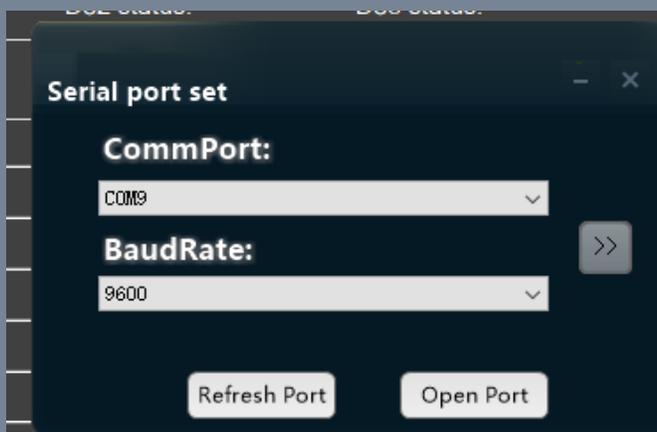
CommSet



A.UART/485(port): It will be automatic identification,no need to select port options

BaudRate:9600

Then click"Open port"



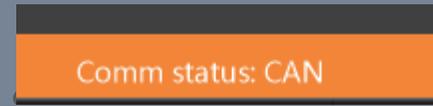
B. CAN (port) Click here to t CAN-



CAN device: Pls select USBCAN-I (We provided was this type)

CAN channel: Pls check carefully the description for CANbus, then to select correct one.

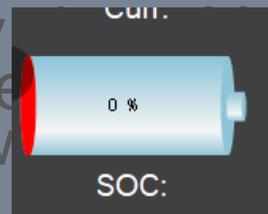
BaudRate: Select the correct options which you use.



Then click "Open CAN", you can see it be success:

6. About other parameters we would set for you before you got them.

7. **SOC**: We set it as 50% for Original factory Settings. But it wasn't accurate v you should charge batteries to 100% full. Then it can be automatic correction, you can see the correct value now



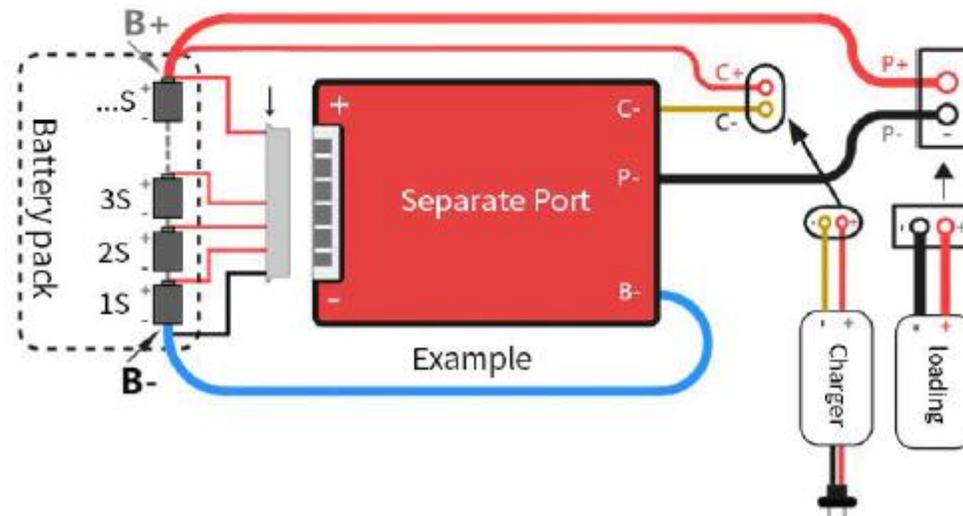
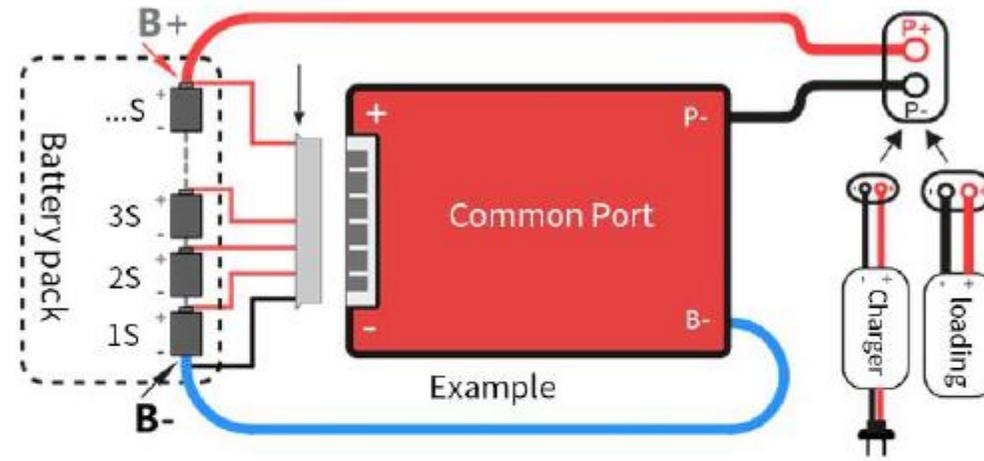
The background is a solid light blue color. In the top-left and bottom-right corners, there are decorative elements consisting of overlapping red and white diagonal stripes. On the left and right sides, there are clusters of hexagonal shapes. Some are simple black outlines, while one in each cluster is filled with solid black. The text "Thanks for your reading!" is centered horizontally in a bold, black, sans-serif font.

T h a n k s f o r y o u r r e a d i n g !

Step 1: pls connect each wire to each battery.

Pic1: common port connecting diagram

Pic2: separate port connecting diagram



Step2: turn on your Multi-meter. and turn to V(DC)

before you connecting BMS you should use Multi-meter to test the voltage if are all the same.

Step 3: if above step have no problem, pls insert balance wires into BMS.

Step4: pls turn your Multi-meter to Ω ,
put Multi-meter probe on BMS's P- and B- if shows 0 Ω it means
everything is ok.

Below is Multi-meter picture for you reference.

安全耐用 才是好工具

A GOOD TOOL IS ONE TO SAFE
匠心精神 专注细节

