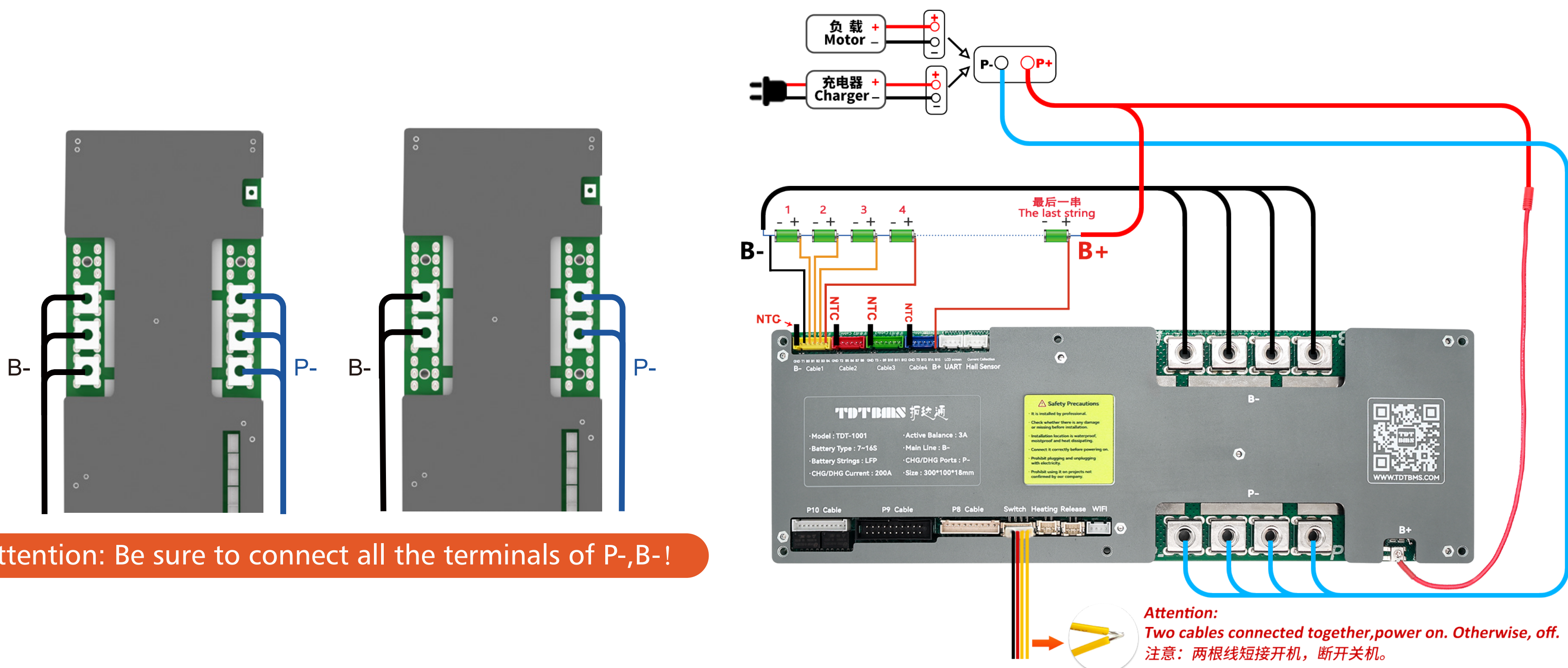


INSTRUCTIONS ABOUT 1001

Taking 16S BMS as an example, other string numbers follow the same principle.



1 Precautions for connecting cables to the

- ① Use the correct signal cable, as cables from different manufacturers are not interchangeable.
- ② When connecting the signal cables to the battery pack, do not insert the signal cable to the BMS.
- ③ Follow the strict battery signal cable insertion order on the BMS: connect B- first, then insert the battery cables from B0 to B+ in ascending order, and finally connect B+. Only connect the load or charger after all cables are installed. When disassembling, first unplug the charger or load, then remove the battery signal cables from B+ to B0 in descending order, and finally remove B-.

Attention

- When connecting the battery signal cable, ensure that there is no wrong connection or reverse connection. If it is indeed misconnected, the board may be damaged and needs to be re-tested before it can be used.
- When assembling, the BMS should not touch the cell's surface directly so as not to damage the cell. Assembly should be firm and reliable.
- Pay attention to not letting the cables, soldering iron, solder, etc. touch the components on the circuit board. Otherwise, it may damage the circuit board.
- Pay attention to anti-static, moisture-proof, waterproof protection when using the BMS.
- Please follow the designed parameters and working conditions, and do not exceed the range in this specification. Otherwise, it may damage the protection board.
- After connecting the BMS with the battery pack well, if there is no voltage output or charge for the first time, please check whether the cable connection is correct.



TDT website



Alibaba shop

Shenzhen Tuodatong Electronics Co., Ltd.

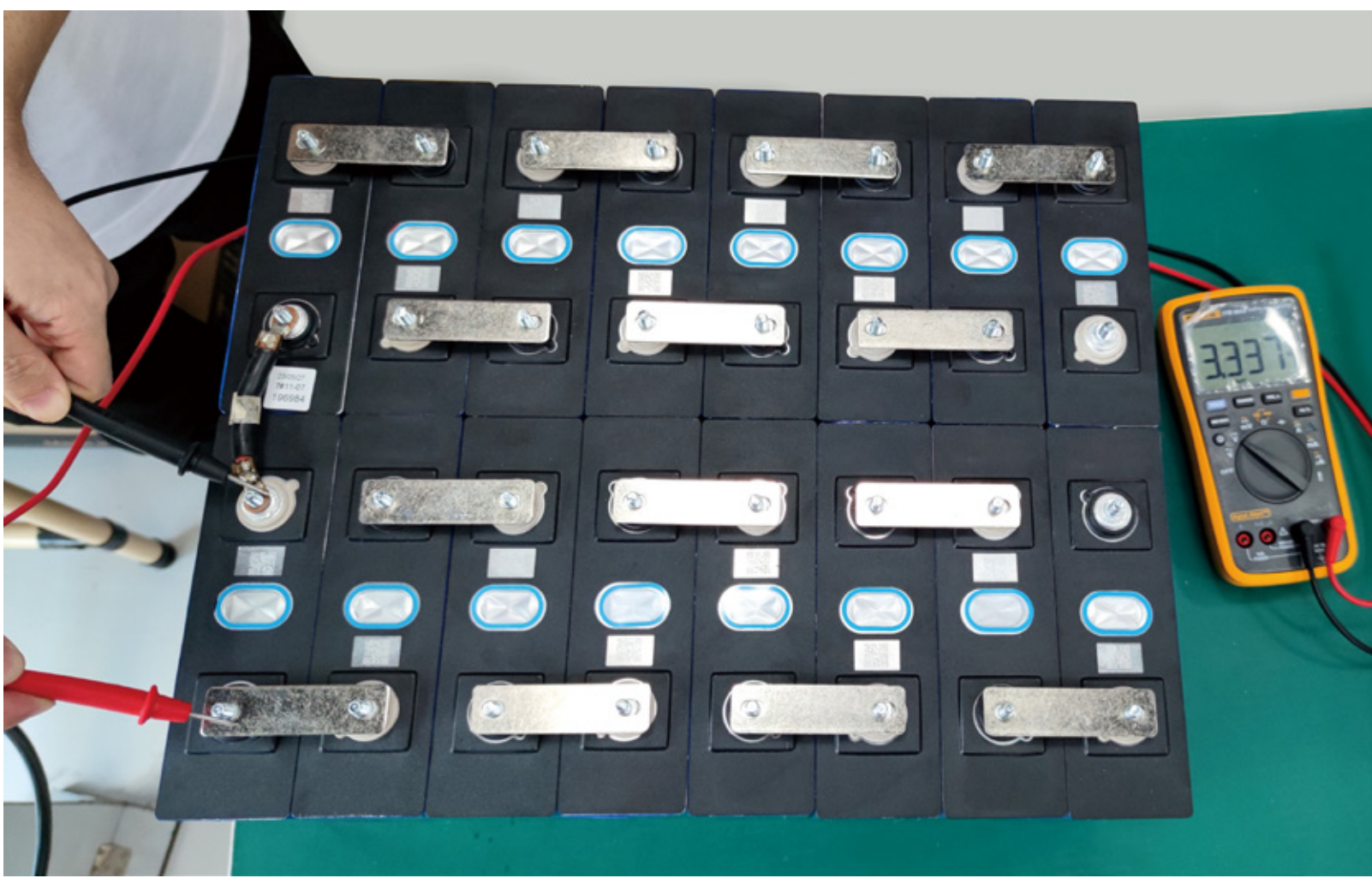
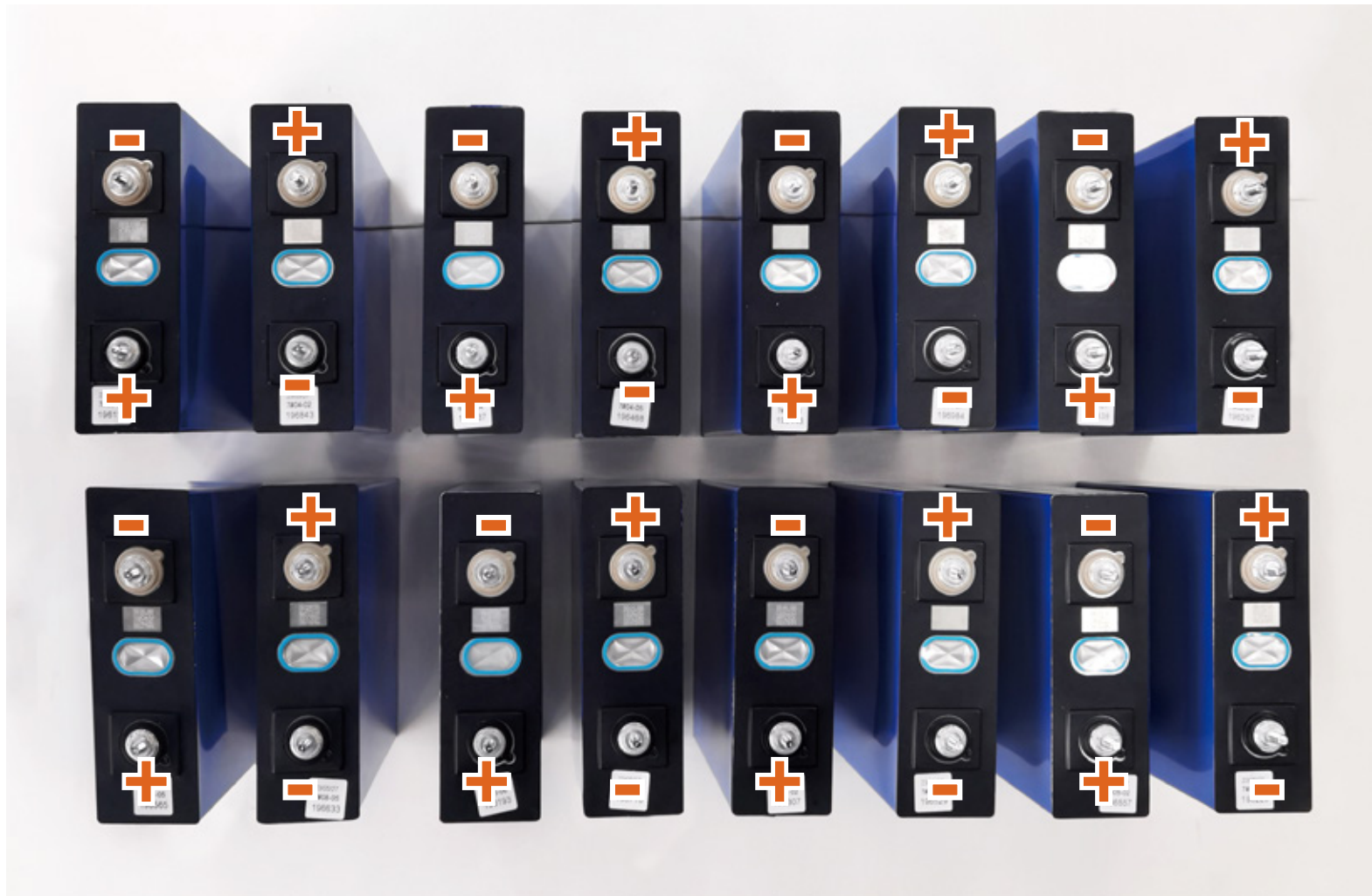
Website: www.tdtbms.com

Address in China:

3th and 4th Floor, Building A9, Xinghuaxiong Industrial Park, Guangming Street,
Guangming District, Shenzhen

2 Battery pack connection diagram

Install the battery pack as shown below. Use a multimeter to check the voltage of each battery to ensure consistency.



3 Connect the battery signal cable to the battery pack

When connecting the signal cable, don't plug the cable jack into the BMS, otherwise the BMS will be damaged!

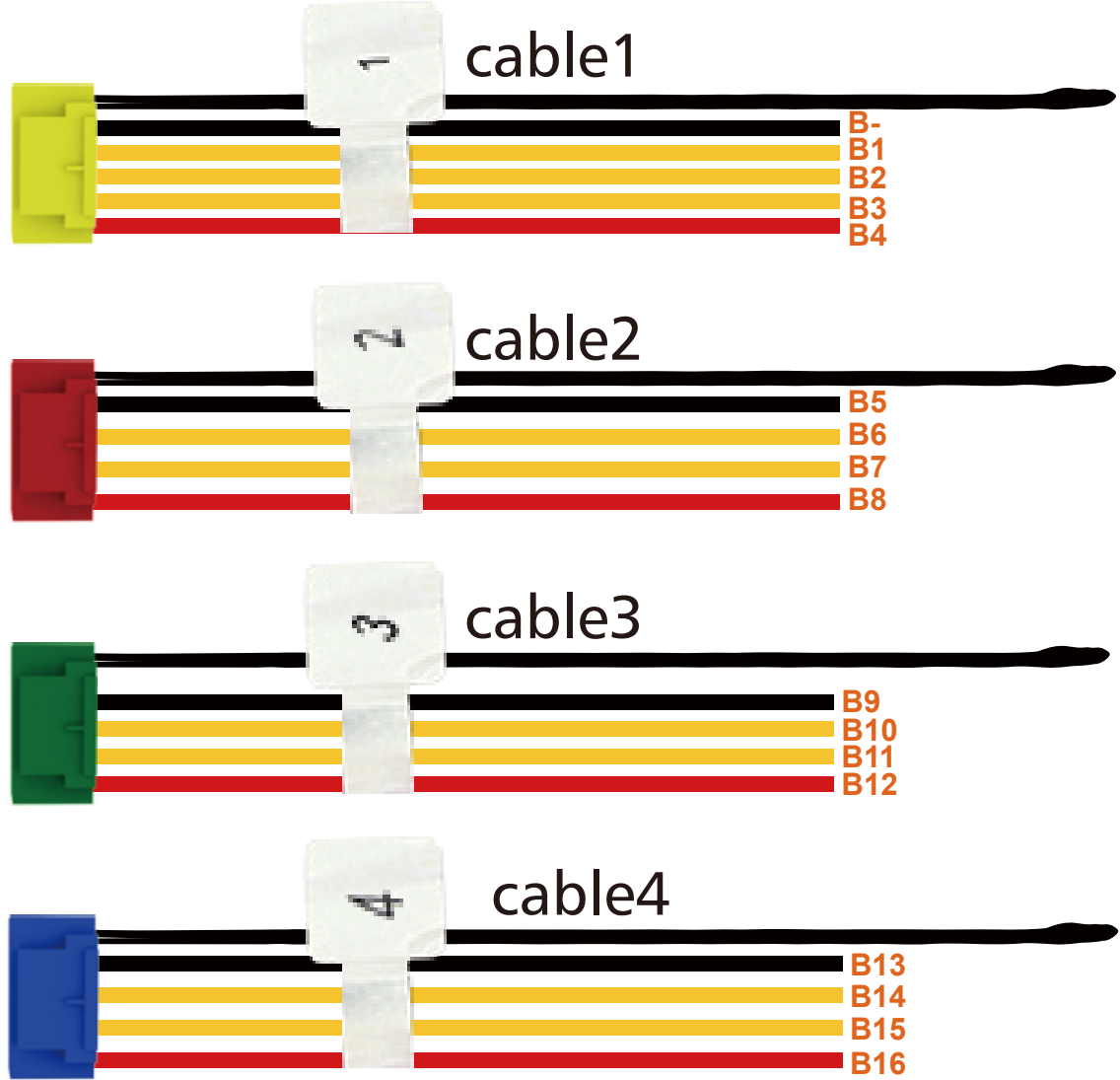
Connect the signal cable:

1 from B- to B4

2 from B5 to B8

3 from B9 to B12

4 from B13 to B16.



4 Verify that the signal cable is connected correctly

Place the black probe on the metal terminal labeled B- located on the back of the signal cable 1's insertion port. Place the red probe on the metal terminals labeled B1 to B16 respectively and record the data for each group.

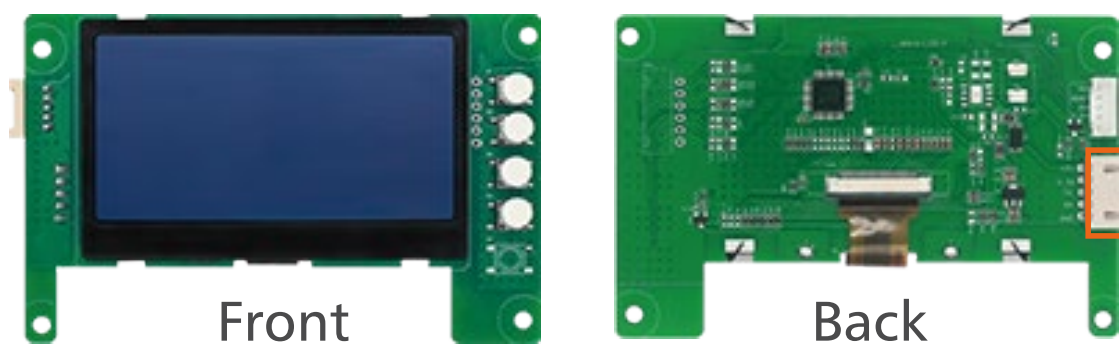


5 The voltage we collect in turn through the wire port:

String1: 3.338V	String2: 6.67V	String3: 10.01V	String4: 13.35V
String5: 16.69V	String6: 20.03V	String7: 23.37V	String8: 26.71V
String9: 30.05V	String10: 33.39V	String11: 36.73V	String12: 40.07V
String13: 43.40V	String14: 46.75V	String15: 50.10V	String16: 53.45V

The multimeter displayed a voltage increase of 3.335-3.338V, indicating no wiring issues or disconnections. (NMC battery: 3.0-4.15V; LFP battery: 2.5-3.6V.) Once confirmed, proceed to the next step.

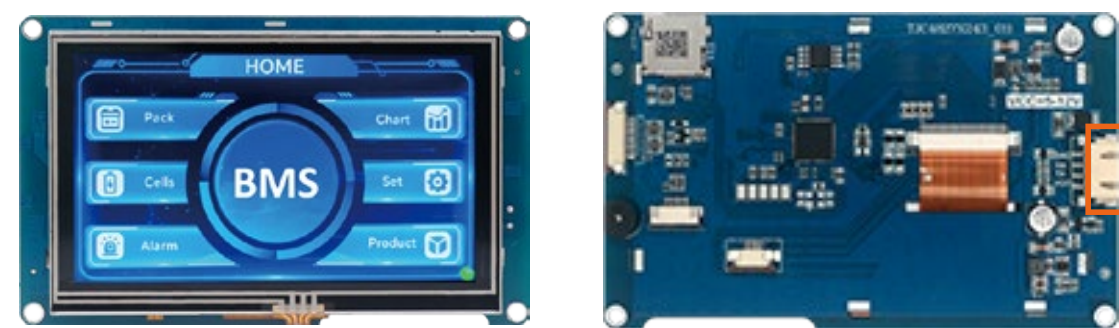
6 All port cables connecting to BMS (except 4 singal cables)



Front

Back

Key screen(optional)

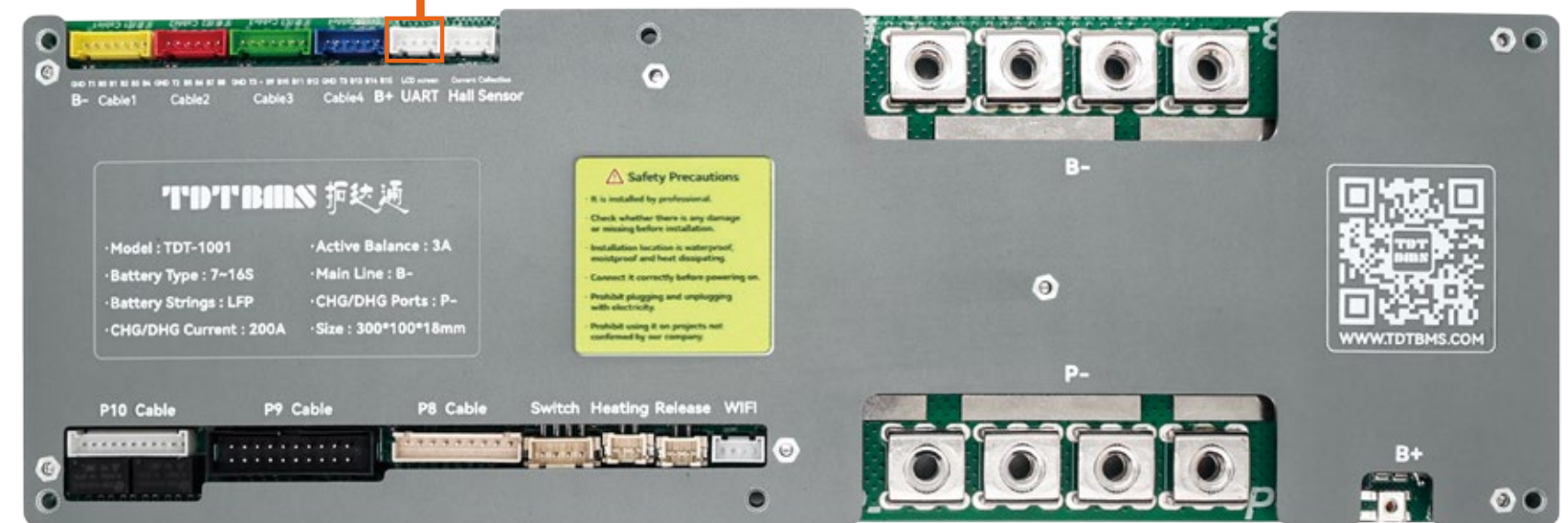


Front

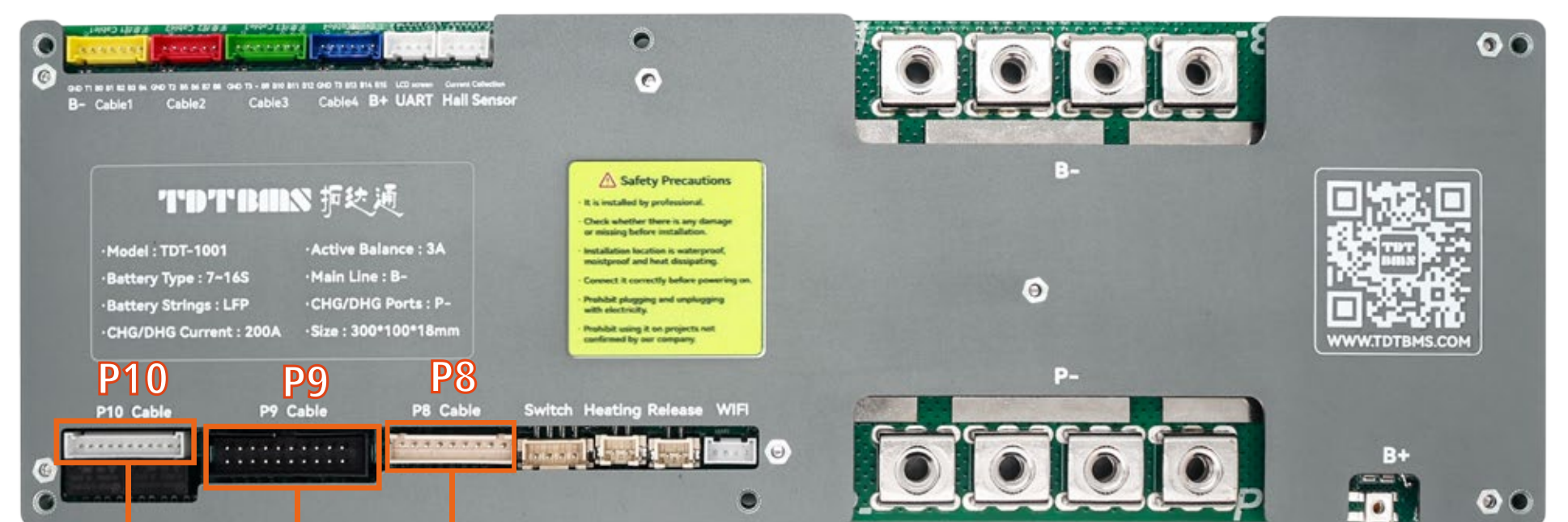
Back

Color touch screen(optional)

1001 port indication chart



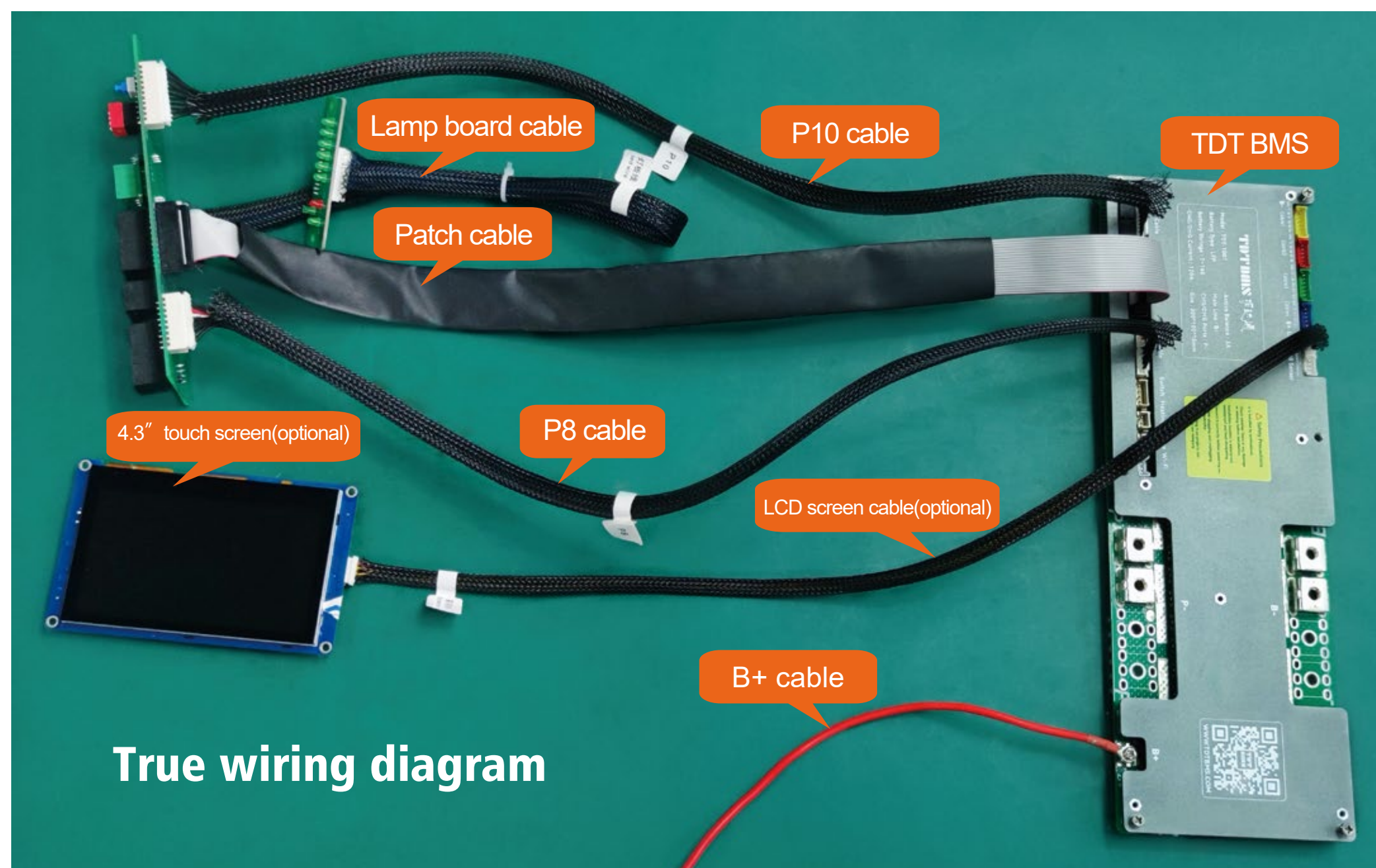
Motherboard



Back

Front

Communication board



True wiring diagram

Attention

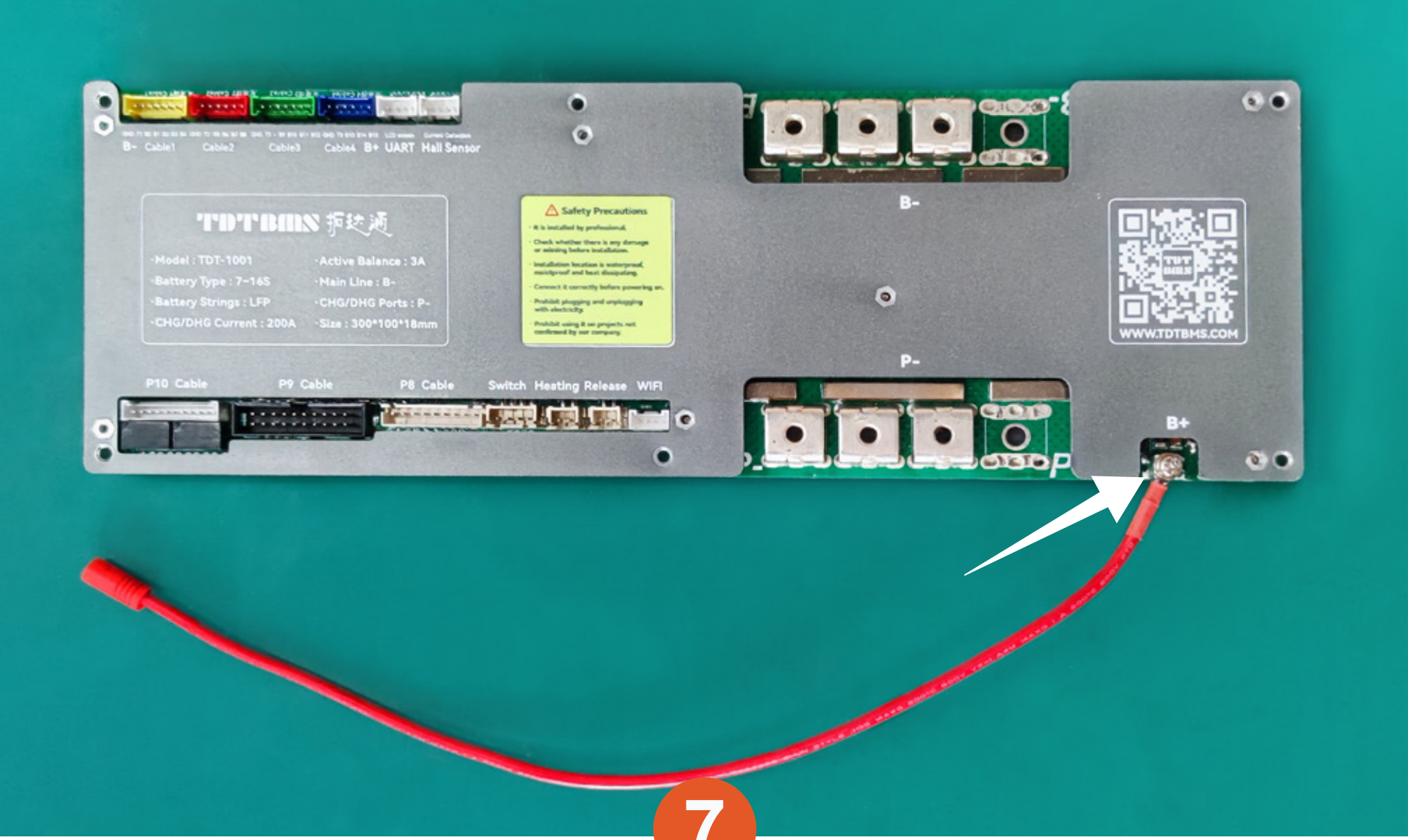
About On/off switch(S3), Please note the following.



If you don't have a switch, then connect these two yellow cables (as shown)



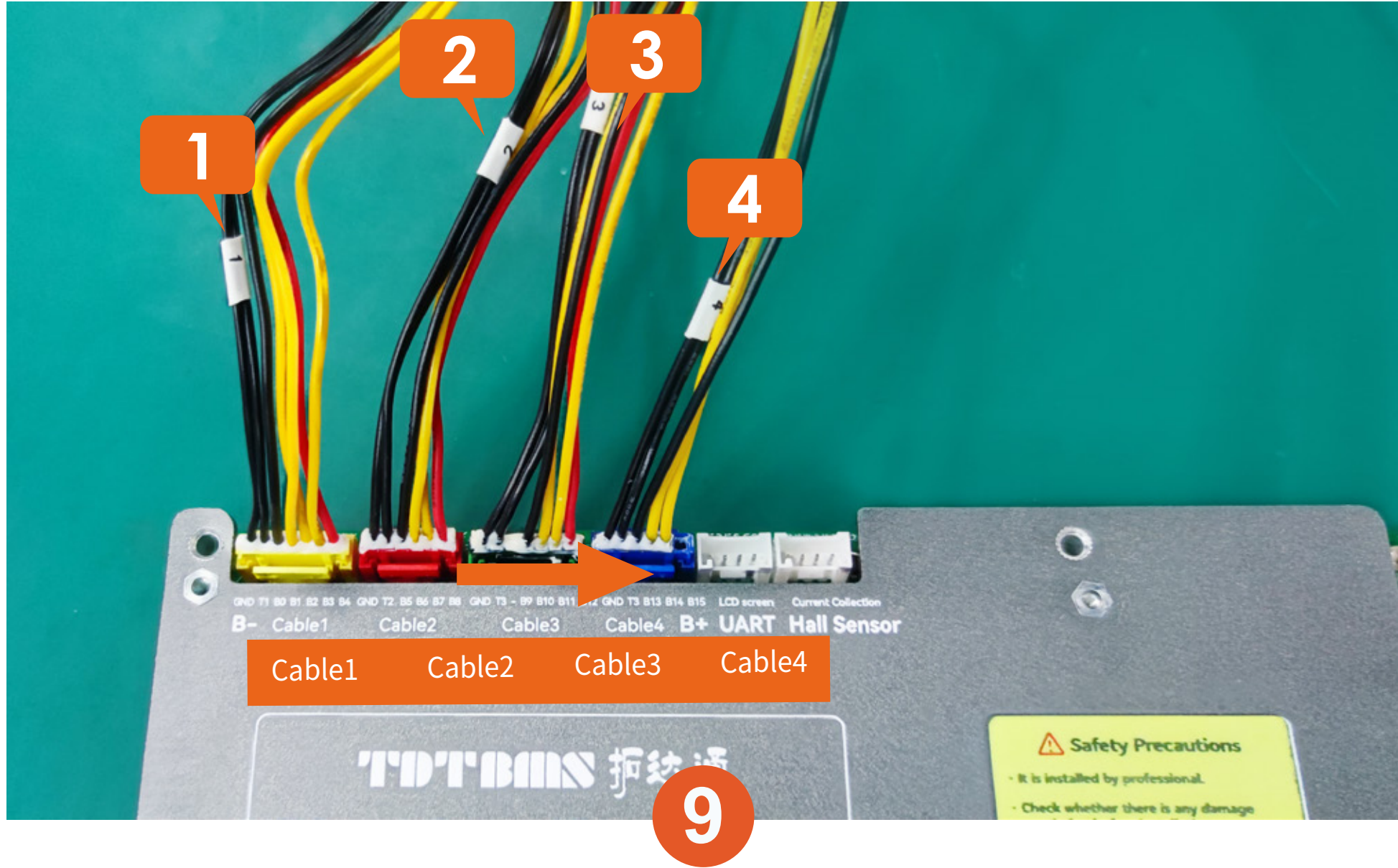
If you need to connect the switch button, please purchase a separate switch button and connect it, and then press the button.



Connect the red B+ cable



Connect the B- end of the BMS to the total negative terminal of the battery pack with thick silicone wires



Insert the cables to the ports of the BMS strictly in the sequence of 1-4



Connect the P- end on the BMS to the negative end of the inverter and charger load with thick silicone wires.

Attention

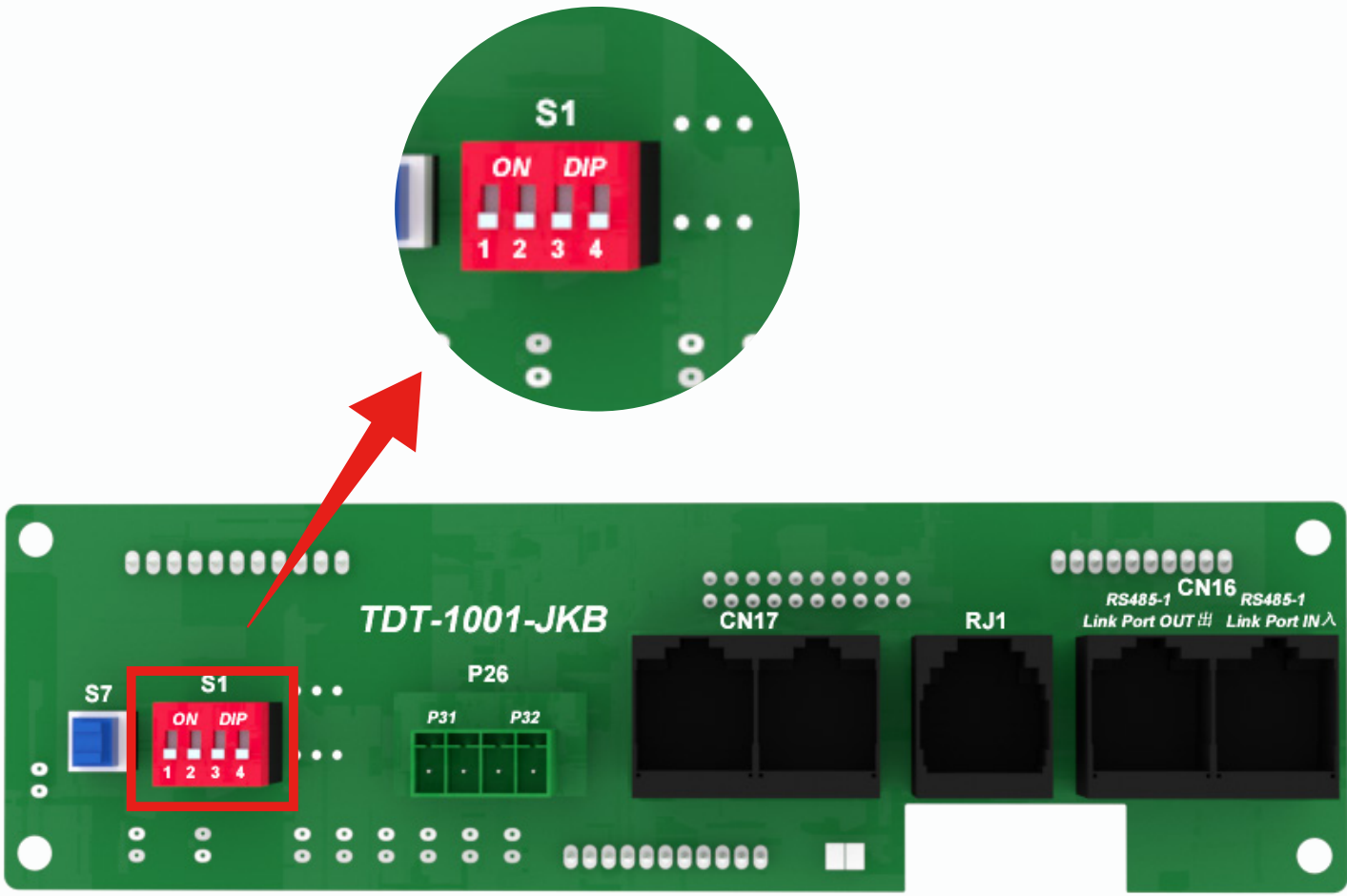
11

Connect the (Bold red) B+ cable

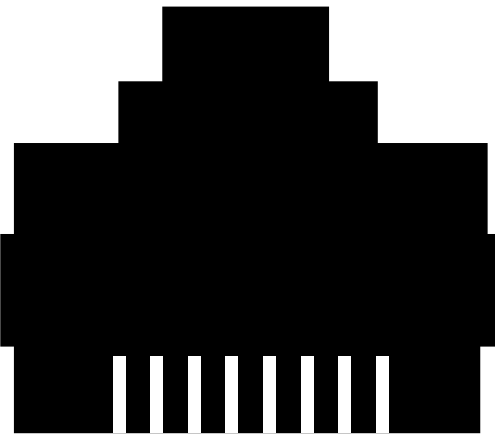


12

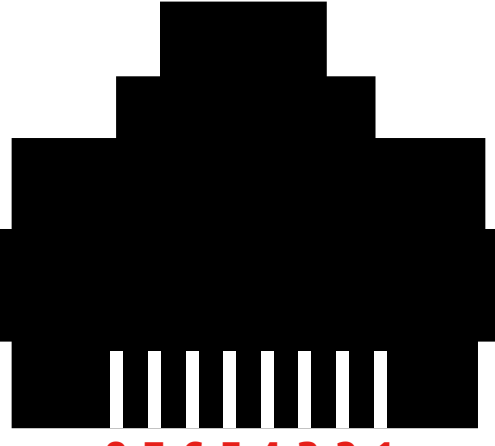
Initial positions of DIP switches 1, 2, 3, 4 (As shown in the picture below)



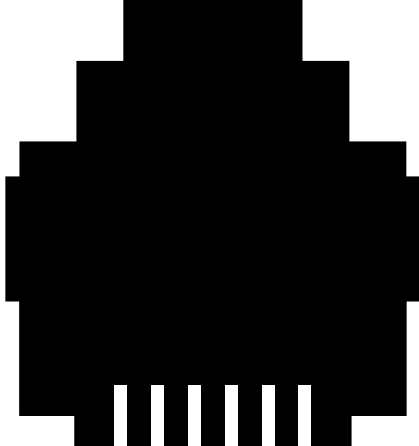
13 Description of interfaces on the communication board



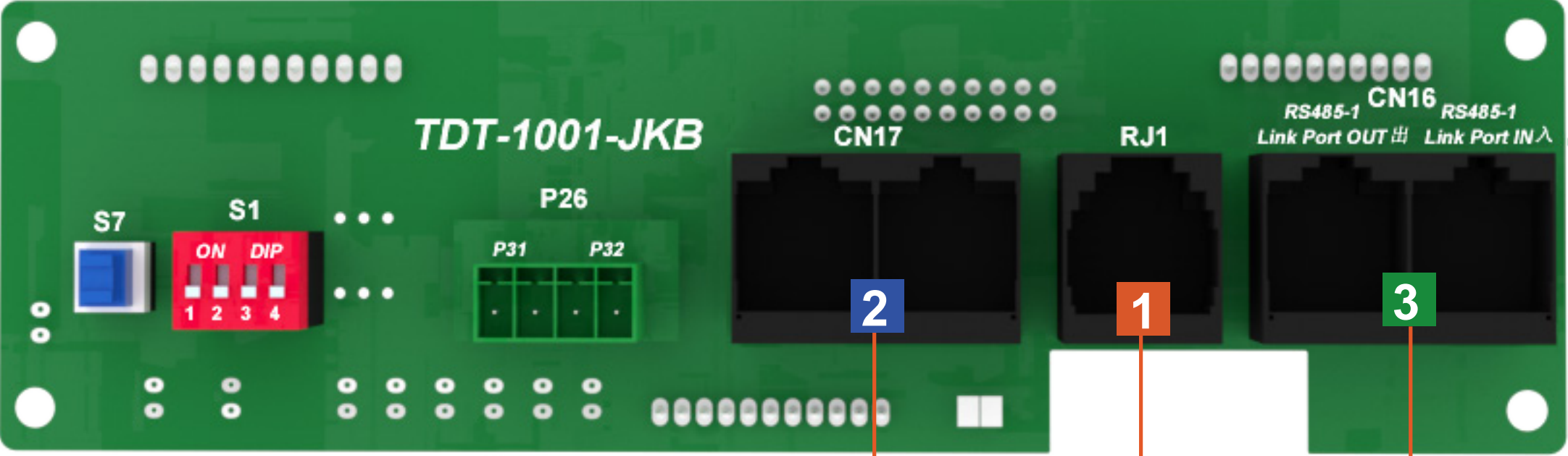
RS485



CAN



RS232



RS485-2 CAN RS232 RS485-1

1

RS232 -- using 6P6C vertical RJ11 sockets

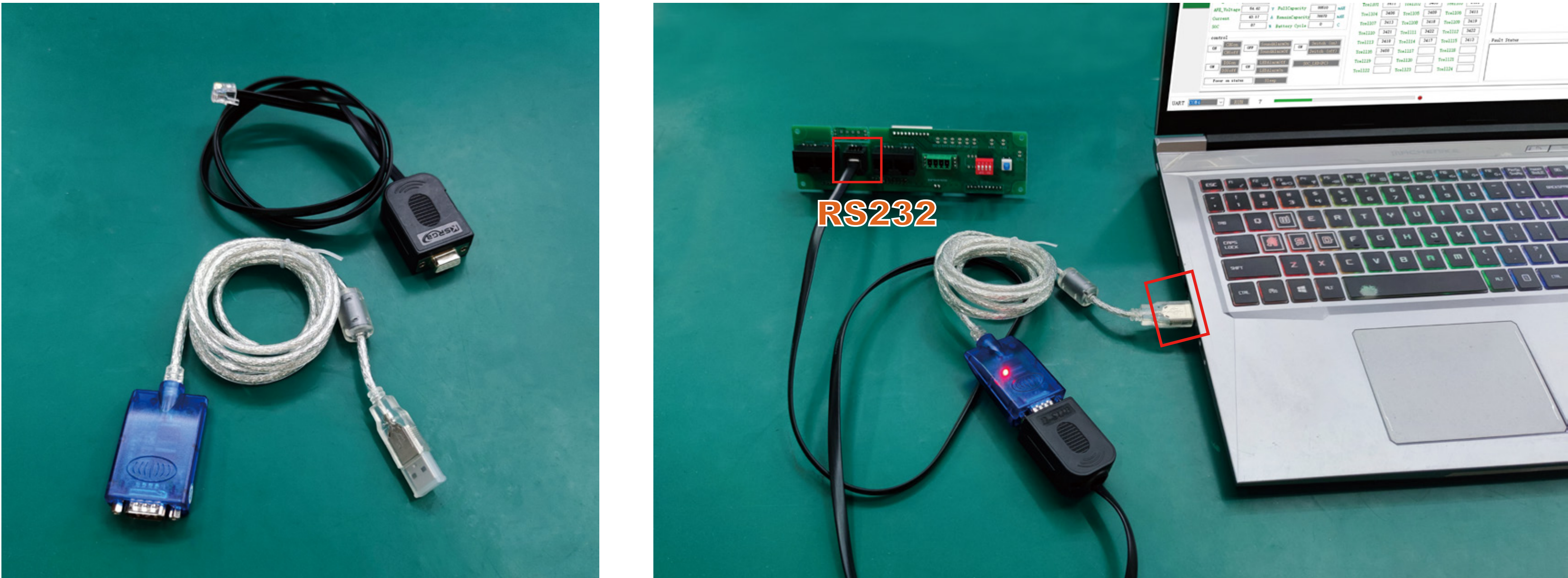
RJ11 pin	Definition Description
2	NC
3	TX (vener)
4	RX (vener)
5	GND

2 RS485--Using 8P8C vertical RJ45 sockets		CAN -- using 8P8C vertical RJ45 sockets	
RJ45 pin	Definition Description	RJ45 pin	Definition Description
1, 8	RS485-B1	1, 2, 3, 6, 8	NC
2, 7	RS485-A1	4	CANH
3, 6	GND	5	CANL
4, 5	NC	7	GND

3 RS485--Using 8P8C vertical RJ45 sockets		RS485 -- using 8P8C vertical RJ45 sockets	
RJ45 pin	Definition Description	RJ45 pin	Definition Description
1, 8	RS485-B	1, 8	RS485-B
2, 7	RS485-A	2, 7	RS485-A
3, 6	GND	3, 6	GND
4, 5	NC	4, 5	NC

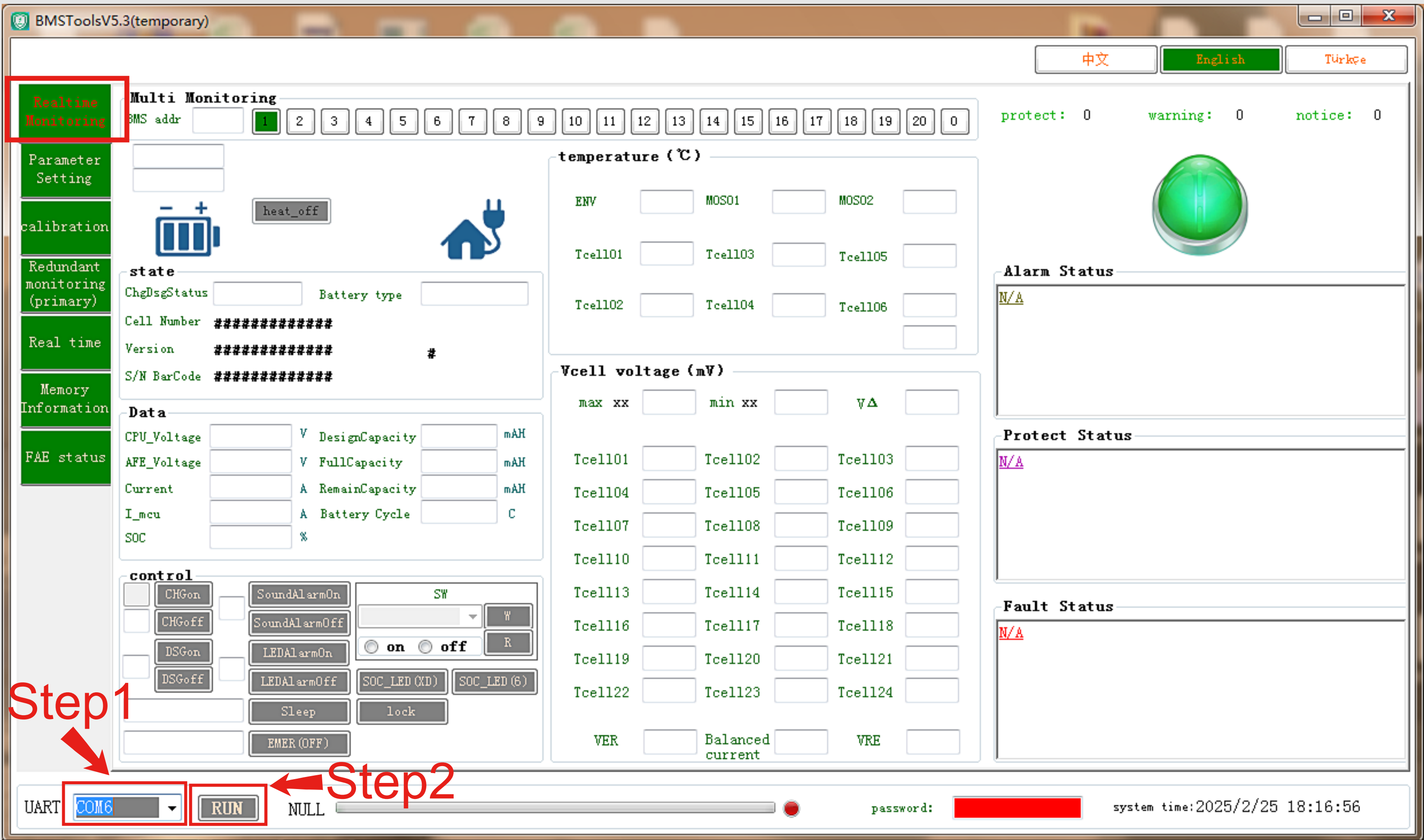
14 RS232 Connect to the host computer operation in-

①The port connection of RS232 adapter is shown in the following picture



15 Instructions for host computer

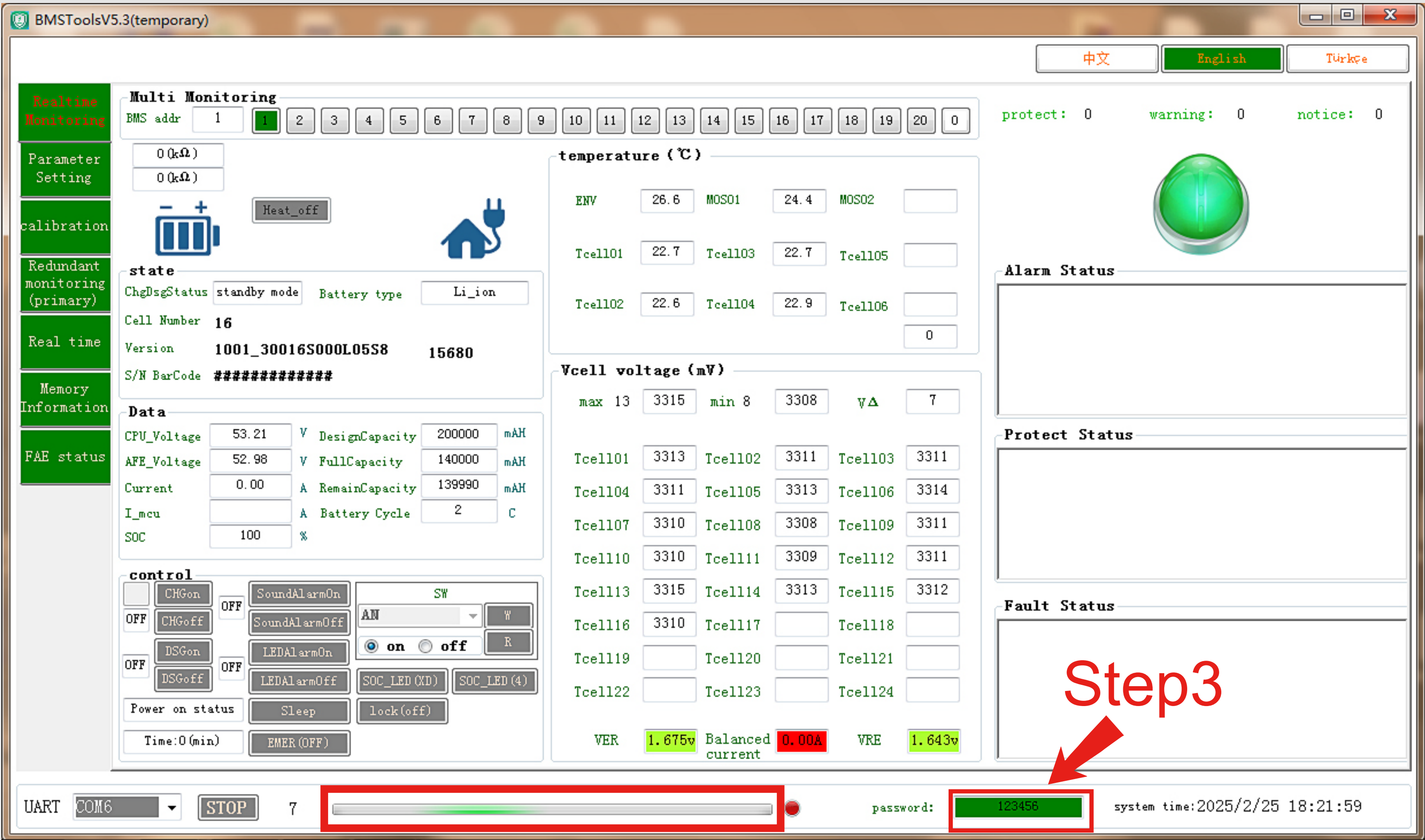
①Steps to enable communication normally



Step1: Select the appropriate one for "UART "

Step2: Click "RUN"

1

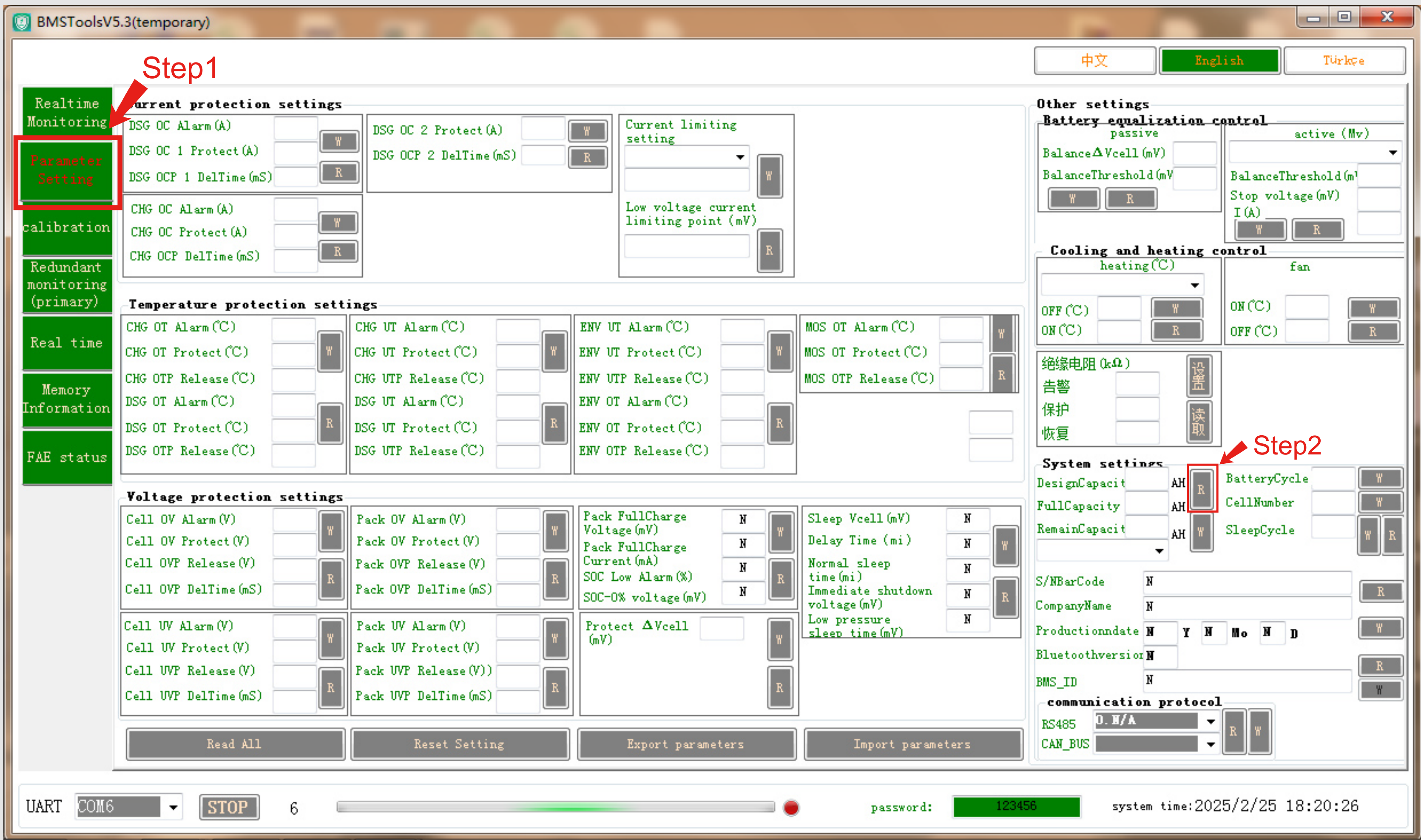


Step3: Input password"123456"

If the progress bar scrolls properly, the communication is normal

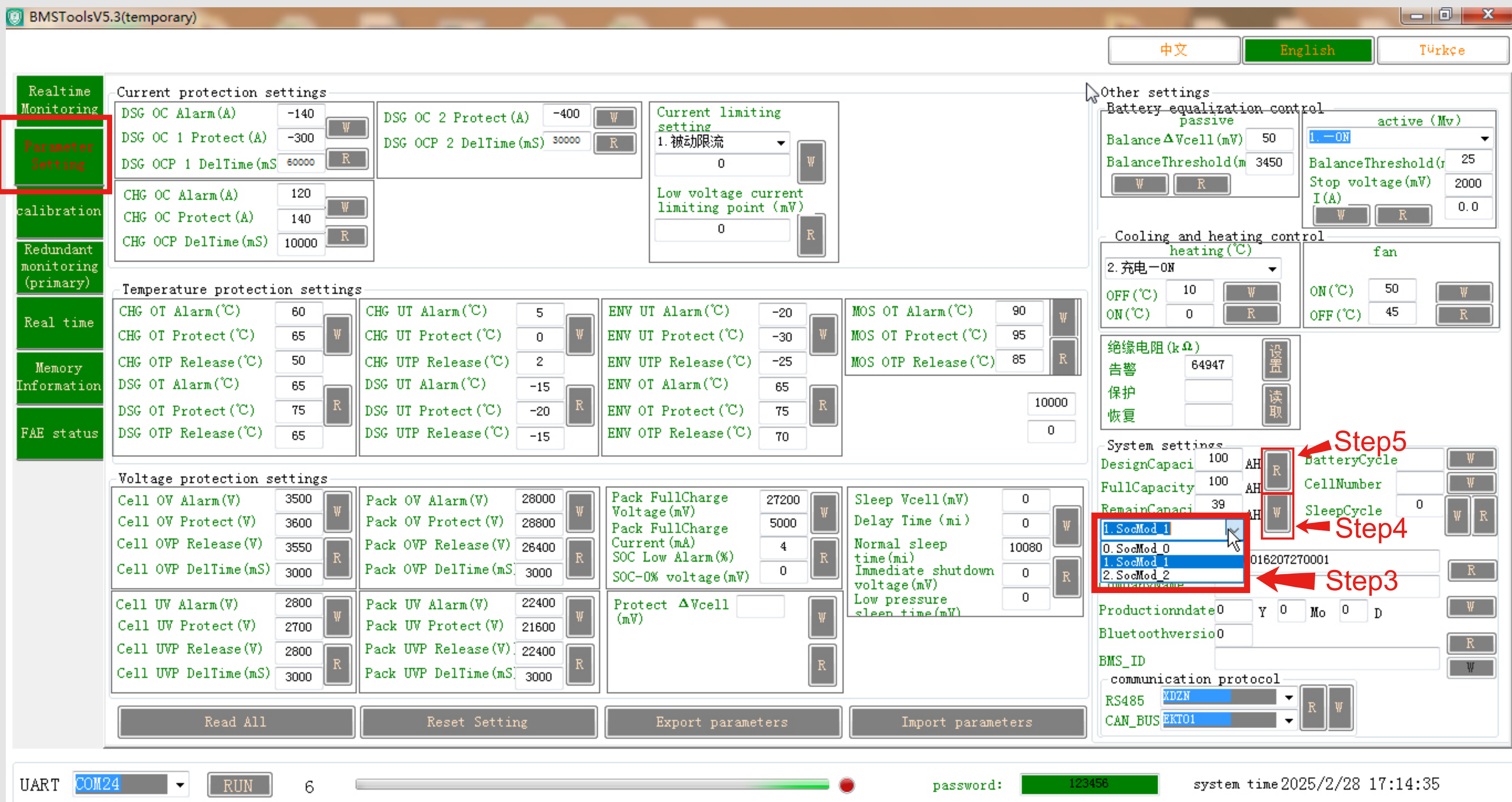
2

②About the choice of SOC mode



Step1: Open "Parameter Setting" page
Step2: Click "R"

1



Step3: Please select the appropriate SOC mode, such as SOC Mode1
Step4: Click "W" to read the set mode
Step5: Finally, click "R" to confirm that the mode is set successfully or not

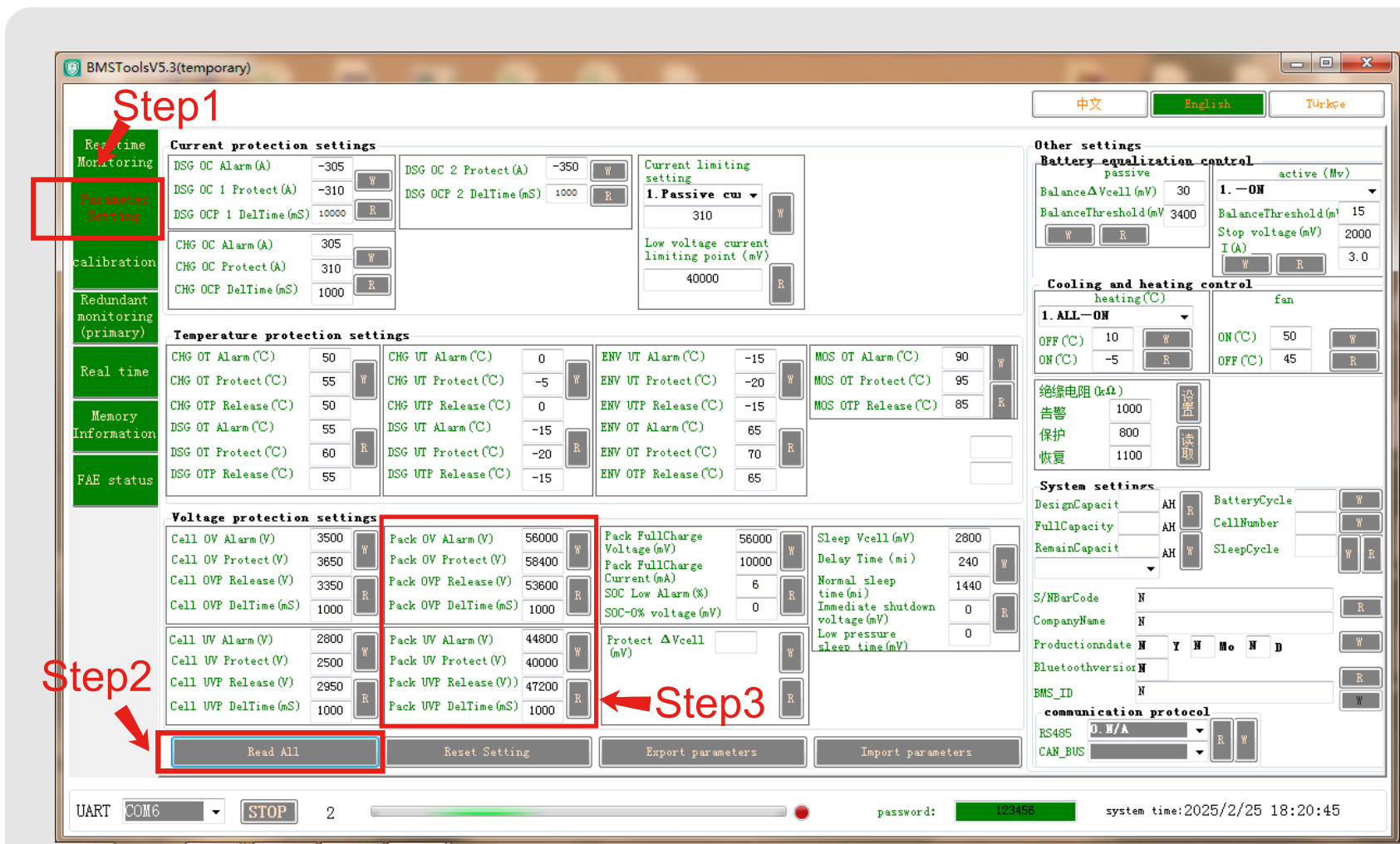
SOC Mode 0: It means auto-cycle mode

SOC Mode 1: It means that the design capacity in this mode is always equal to the full capacity

If you want to design capacity to always equal to the full capacity, please select Mode 1

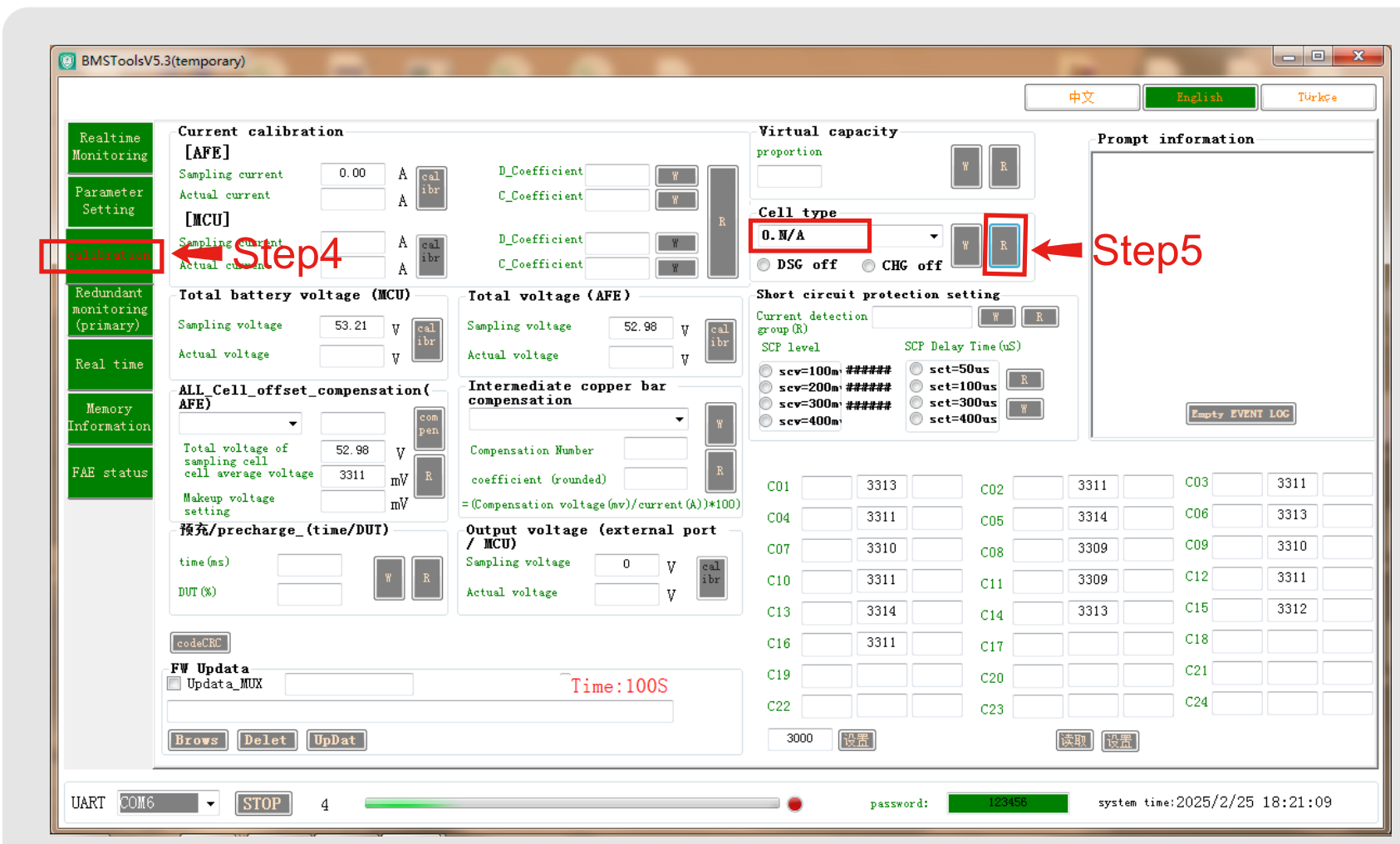
2

③Steps of modifying the battery type



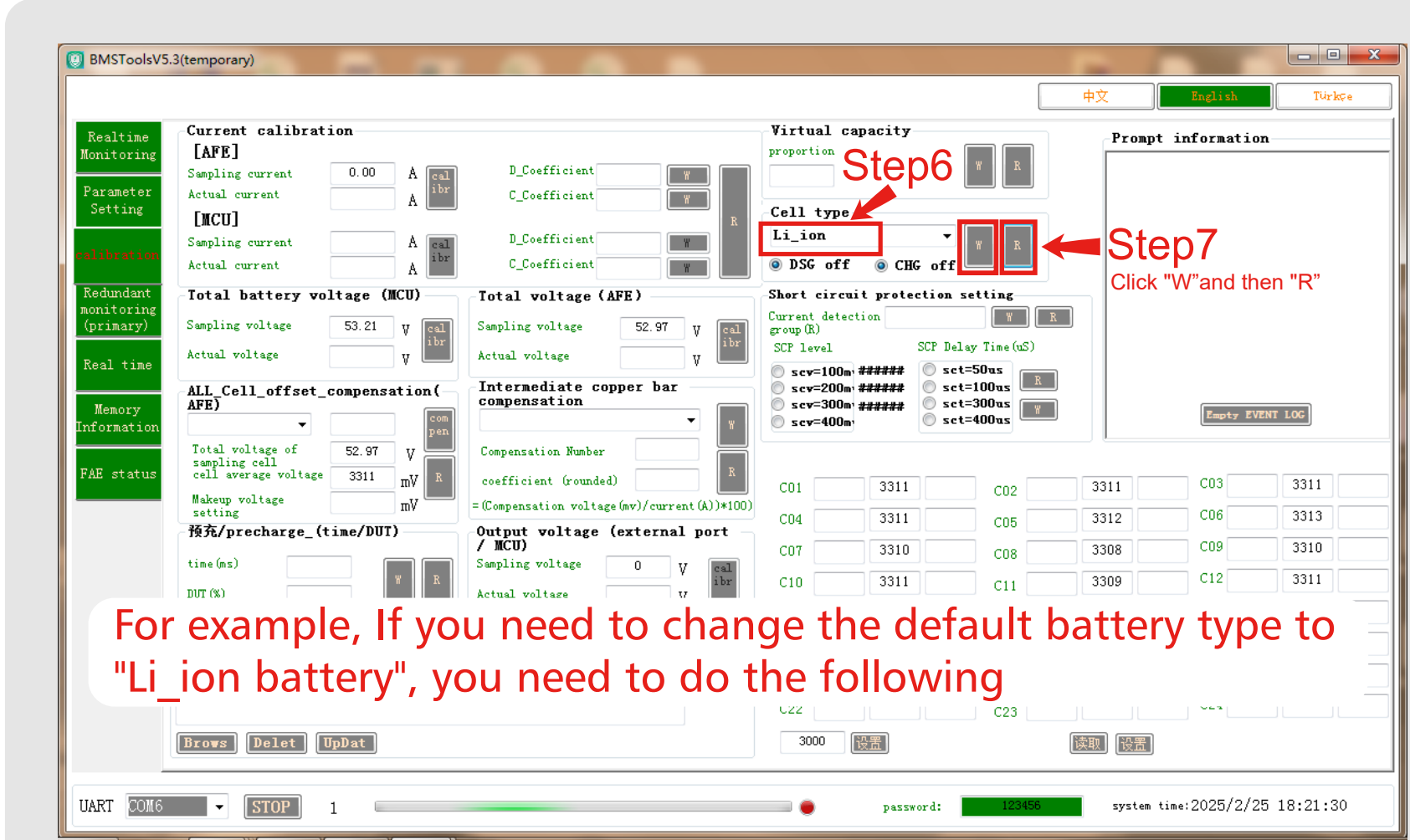
Step1: Open the "Parameter Setting" page
Step2: Click "Read ALL"
Step3: View voltage parameters

1



Step4: Open "calibration" page
Step5: Click "R" to display the default battery type

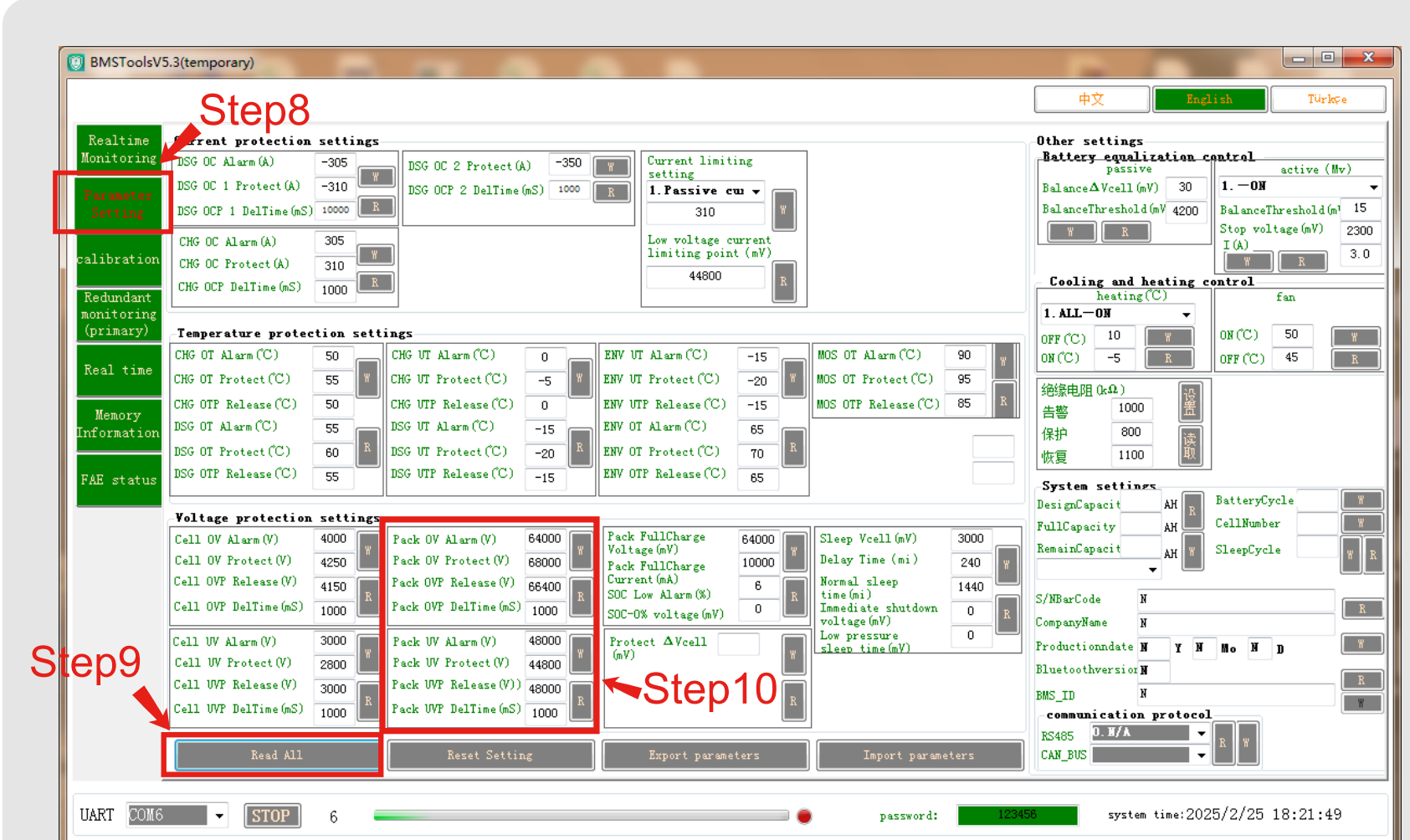
2



For example, If you need to change the default battery type to "Li_ion battery", you need to do the following

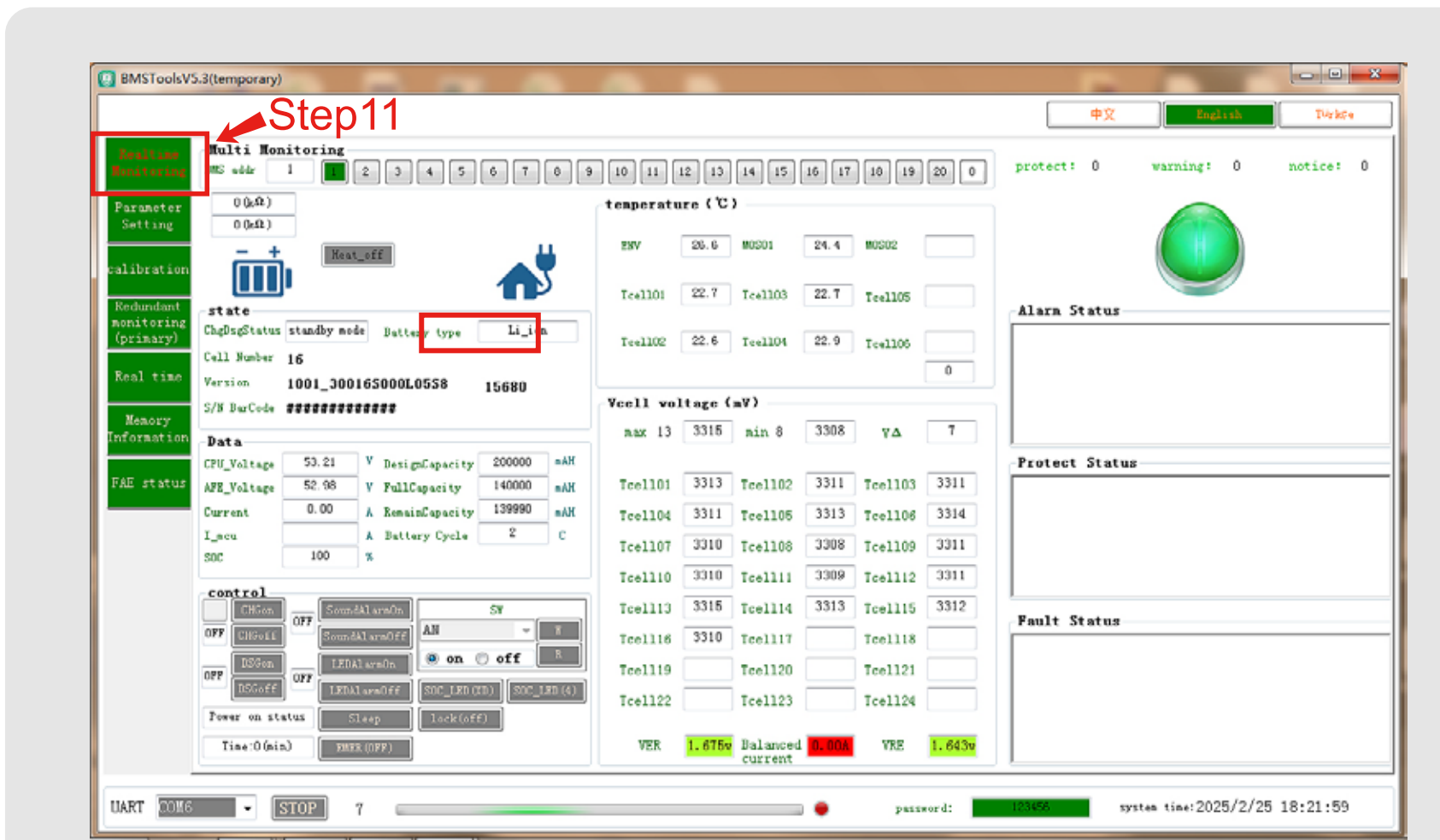
Step6: Choose cell type "Li_ion"
Step7: Click "W" and then "R" to complete the operation

3



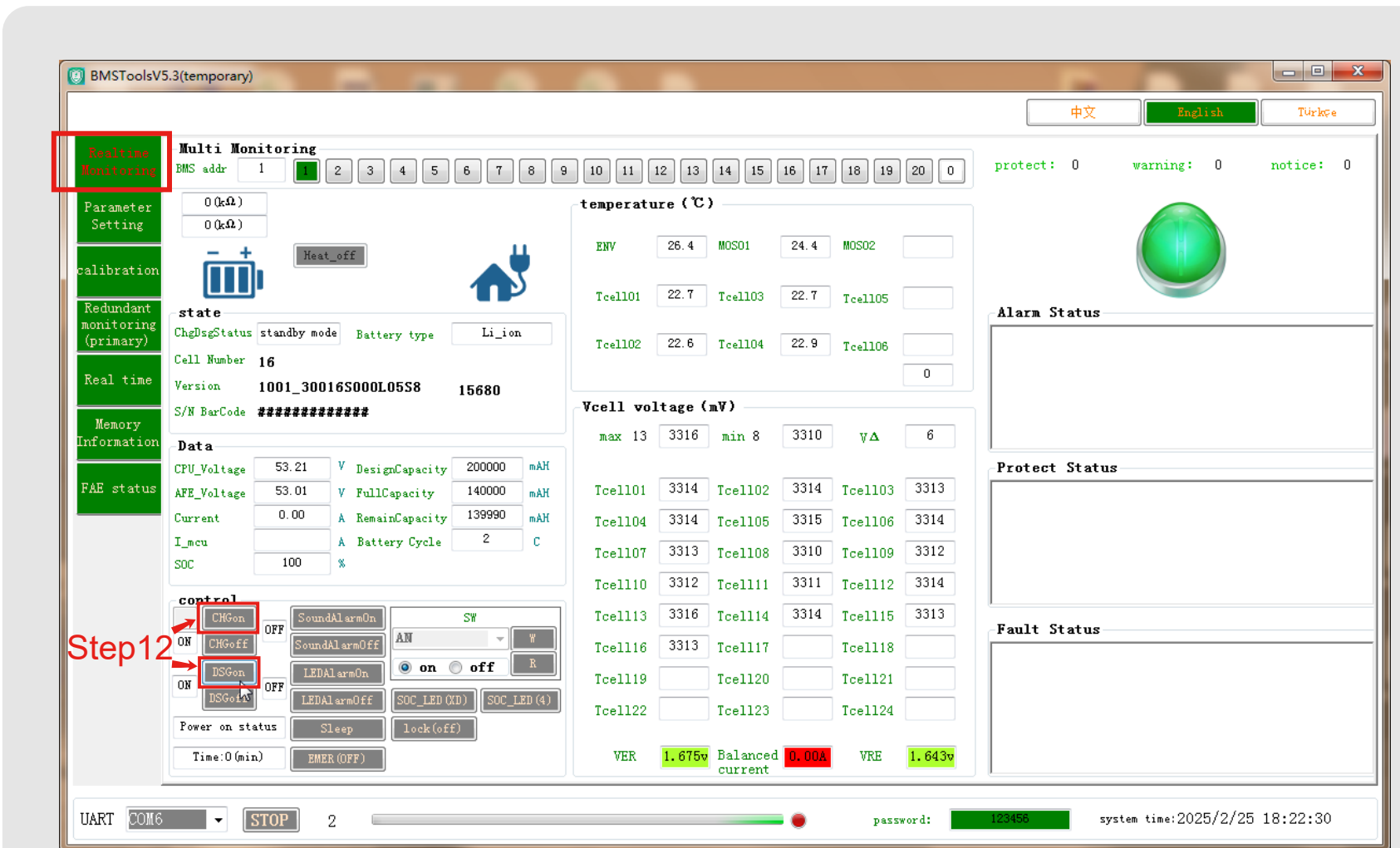
Step8: Go back to page "Parameter Setting"
Step9: Click "Read ALL"
Step10: Check whether the voltage parameter is modified after changing the battery type

4



Step11: Go back to page "Realtime Monitoring" and check whether the settings are successful or not

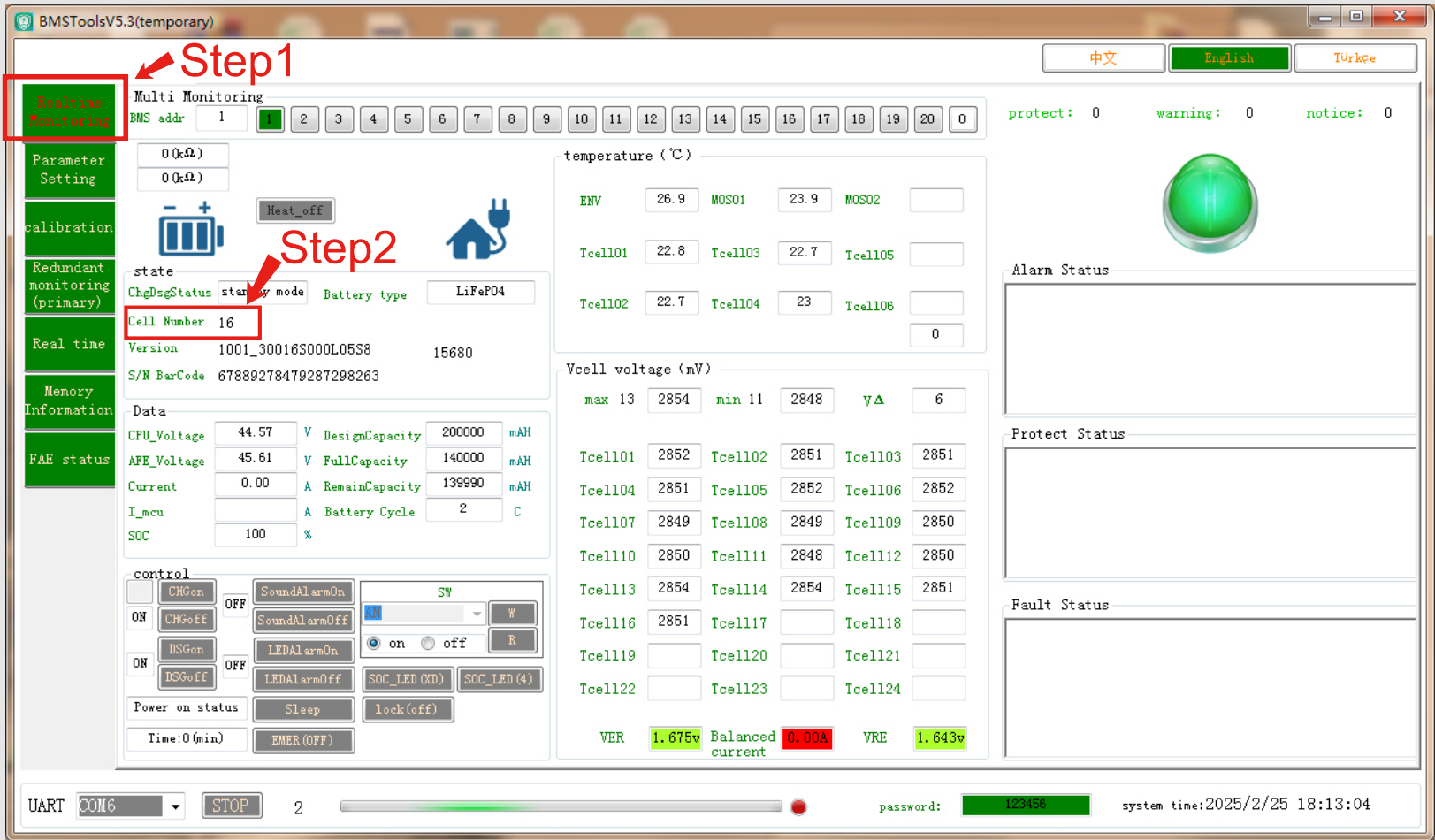
5



Step12: Click "CHGon" and "DSGon" to ensure BMS running successfully

6

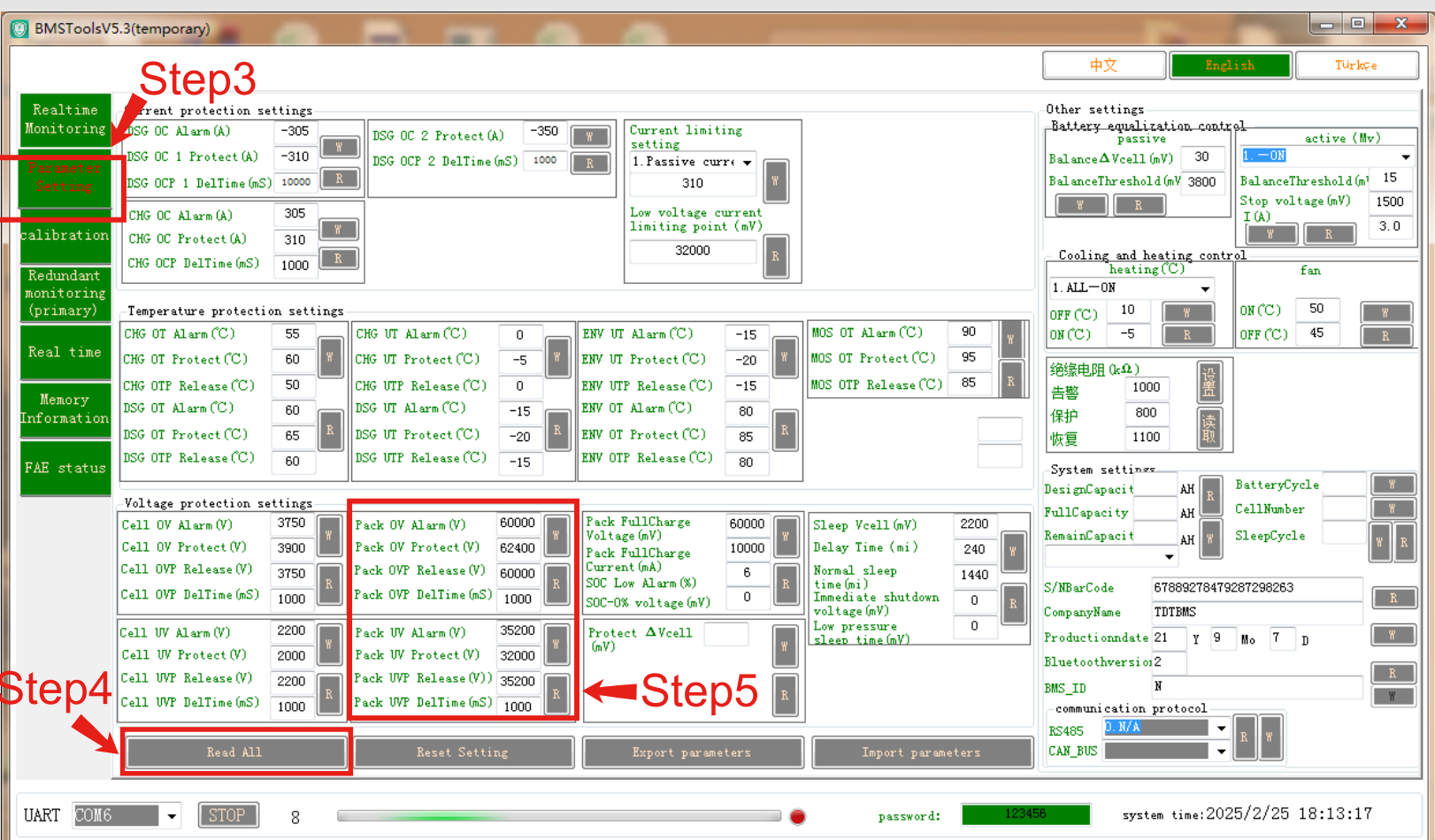
④Steps of adjusting the cell's number(For example, changing battery cell number 16 into 14)



Step1: Open the "Realtime Monitoring" page

Step2: View the default battery cell number

1

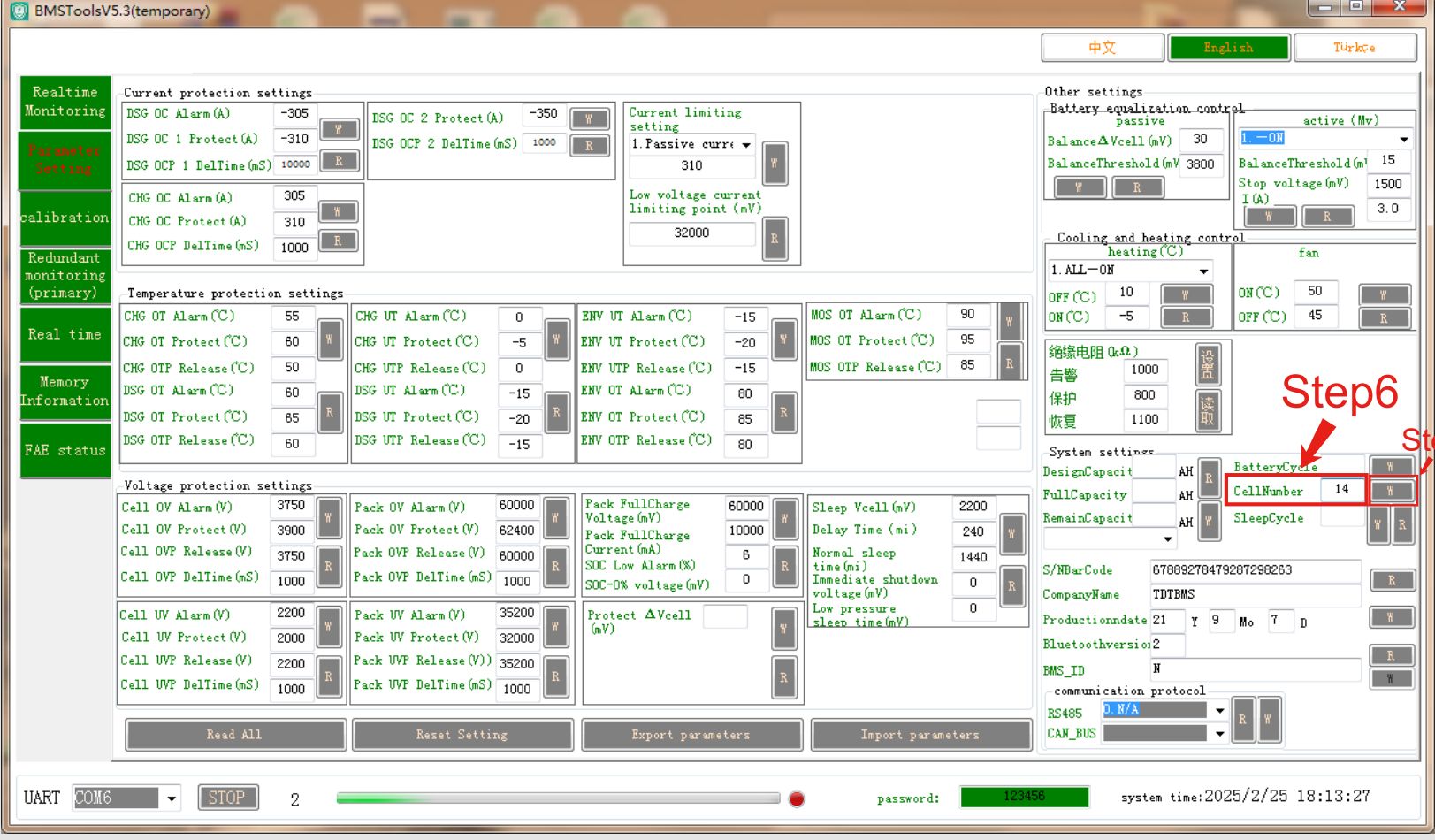


Step3: Open the "Parameter Setting" page

Step4: Click "Read ALL" to read the default battery voltage.

Step5: View voltage parameters

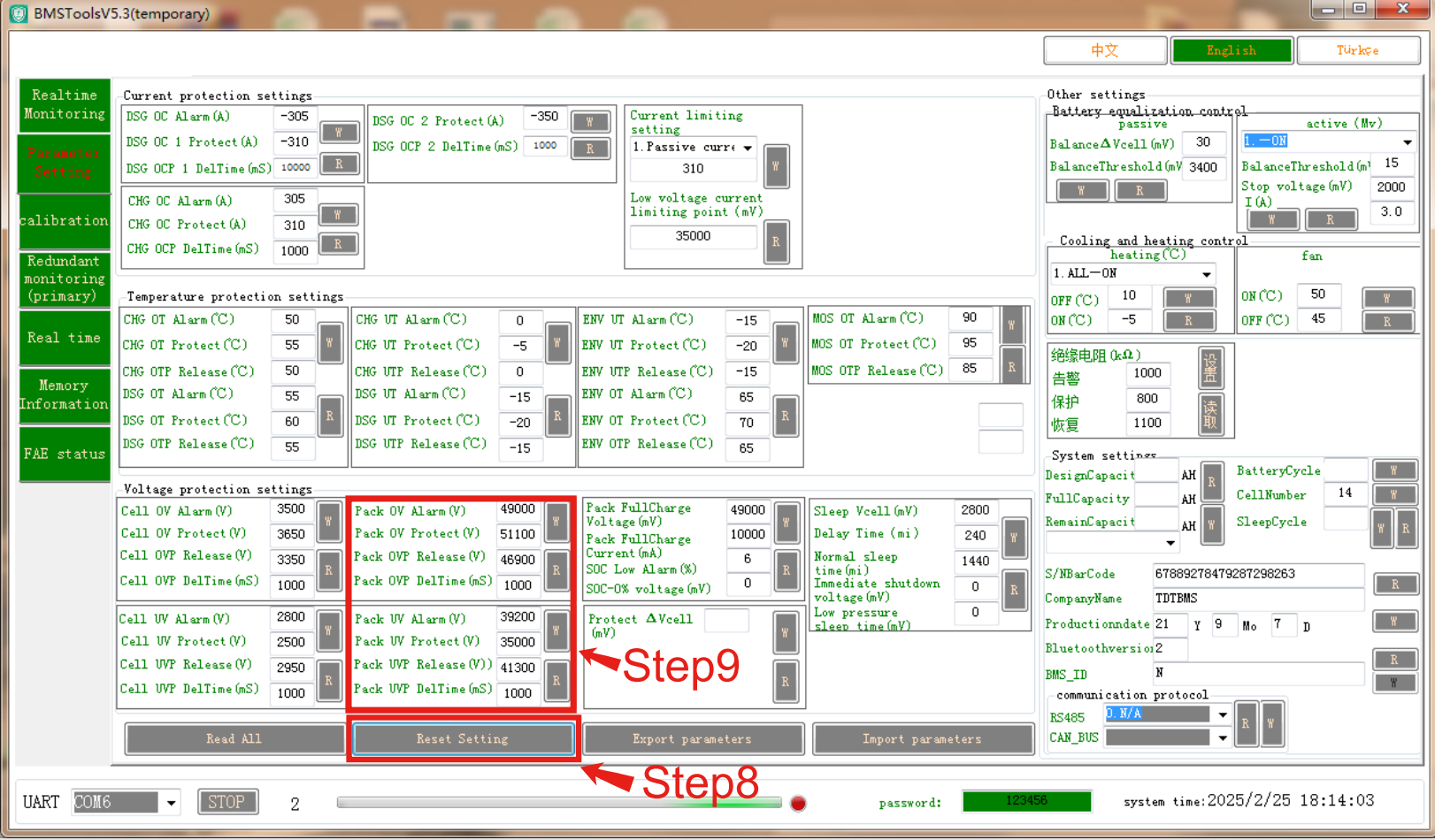
2



Step6: Input cell number

Step7: Click "W"

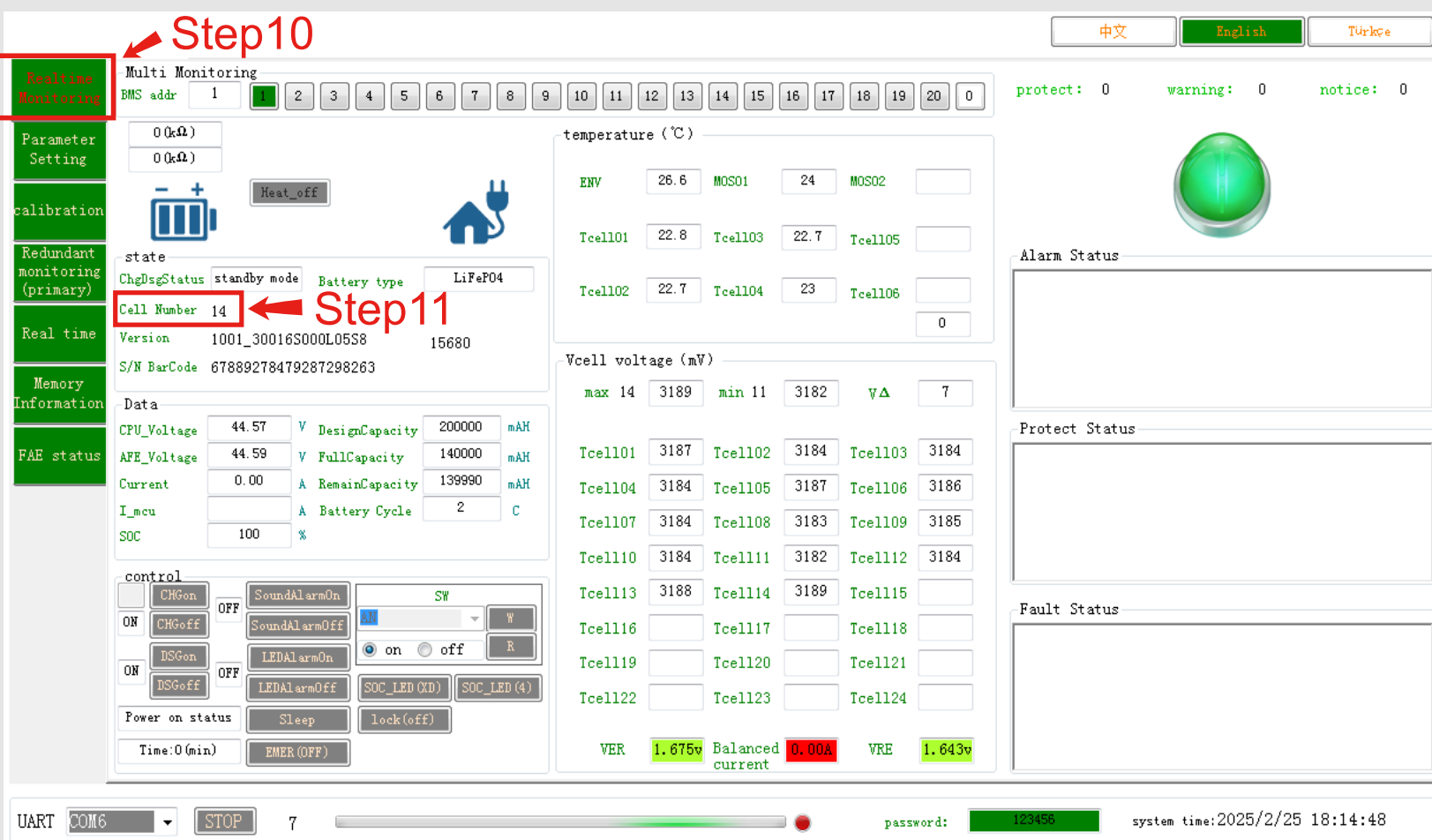
3



Step8:Click "Reset Setting"

Step9: Check whether the voltage parameter is modified

4

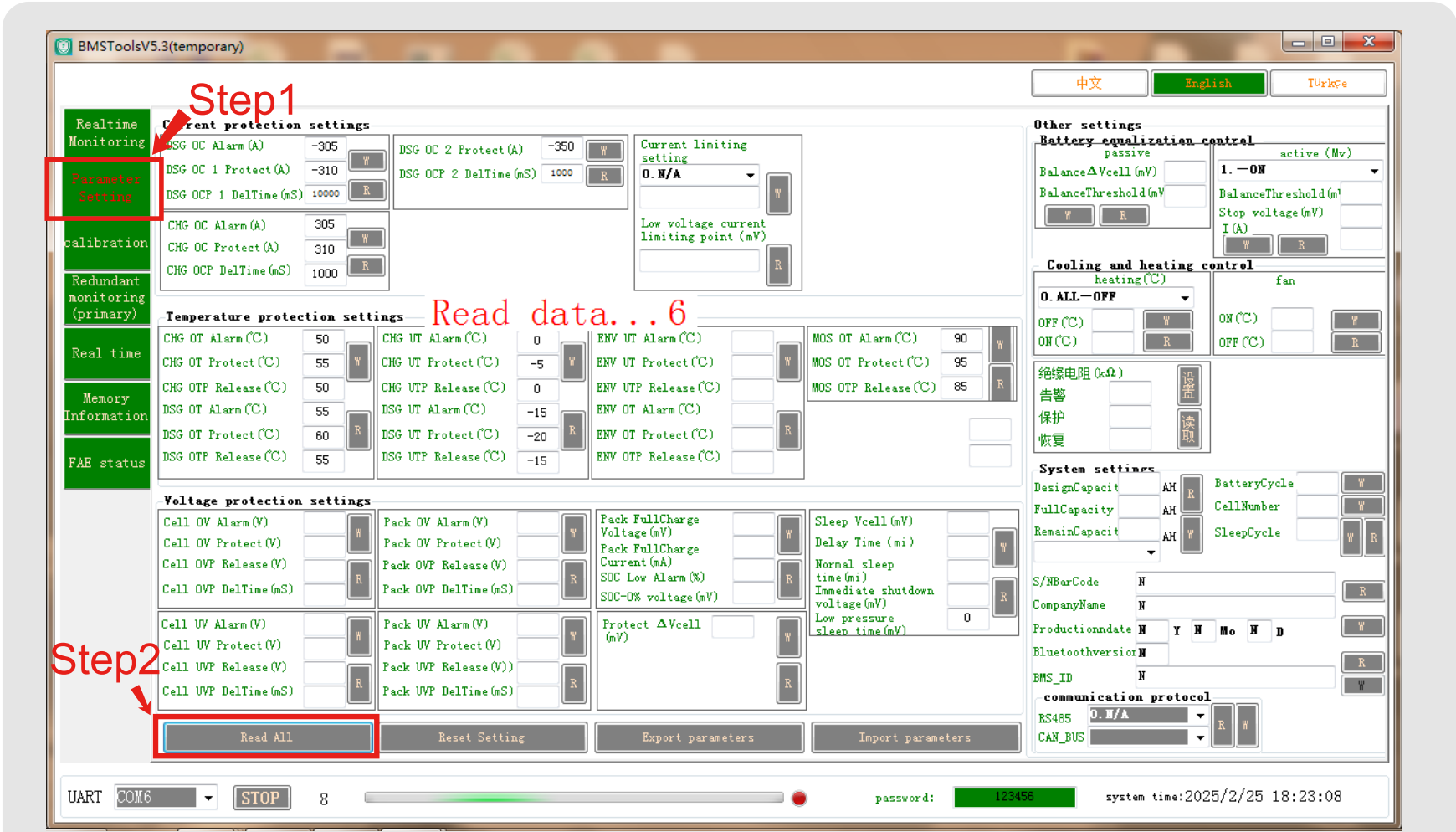


Step10: Go back to "Realtime Monitoring" page

Step11: Check whether the number of battery cells is successfully modified

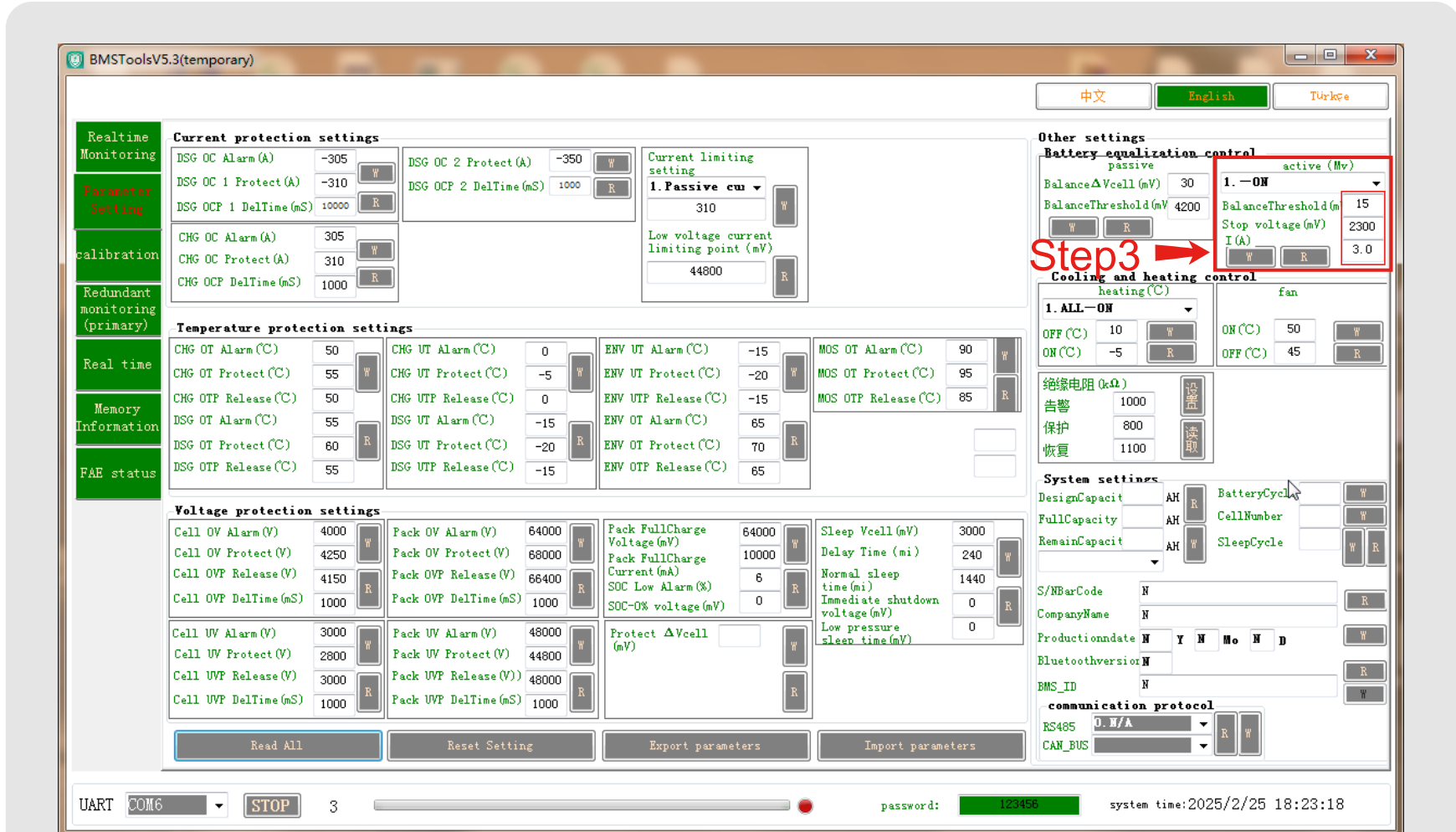
5

⑤Steps of adjusting active balancer parameters



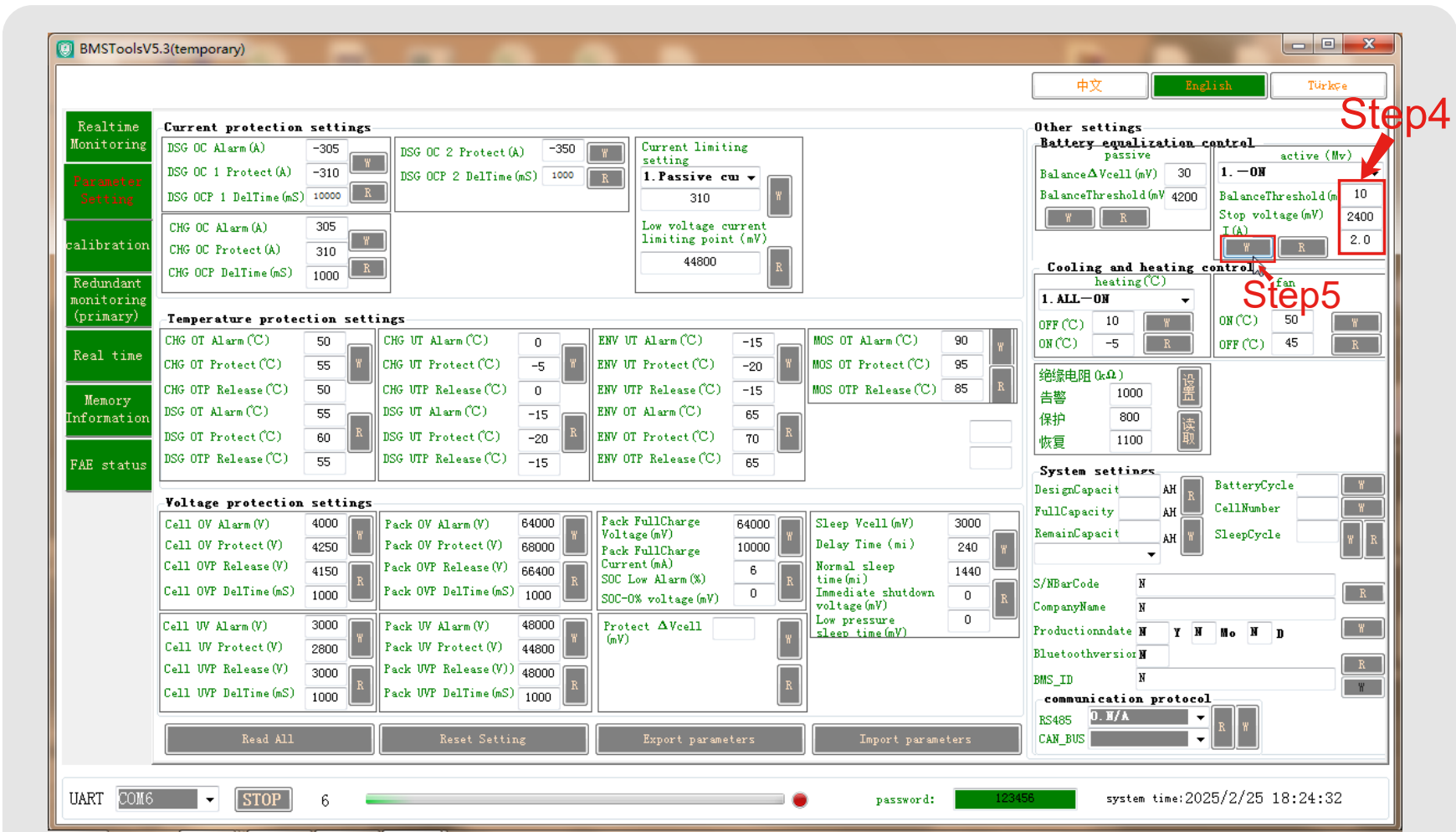
Step1: Open the "Parameter Setting" page
Step2: Click "Read ALL" to read all data on the page

1

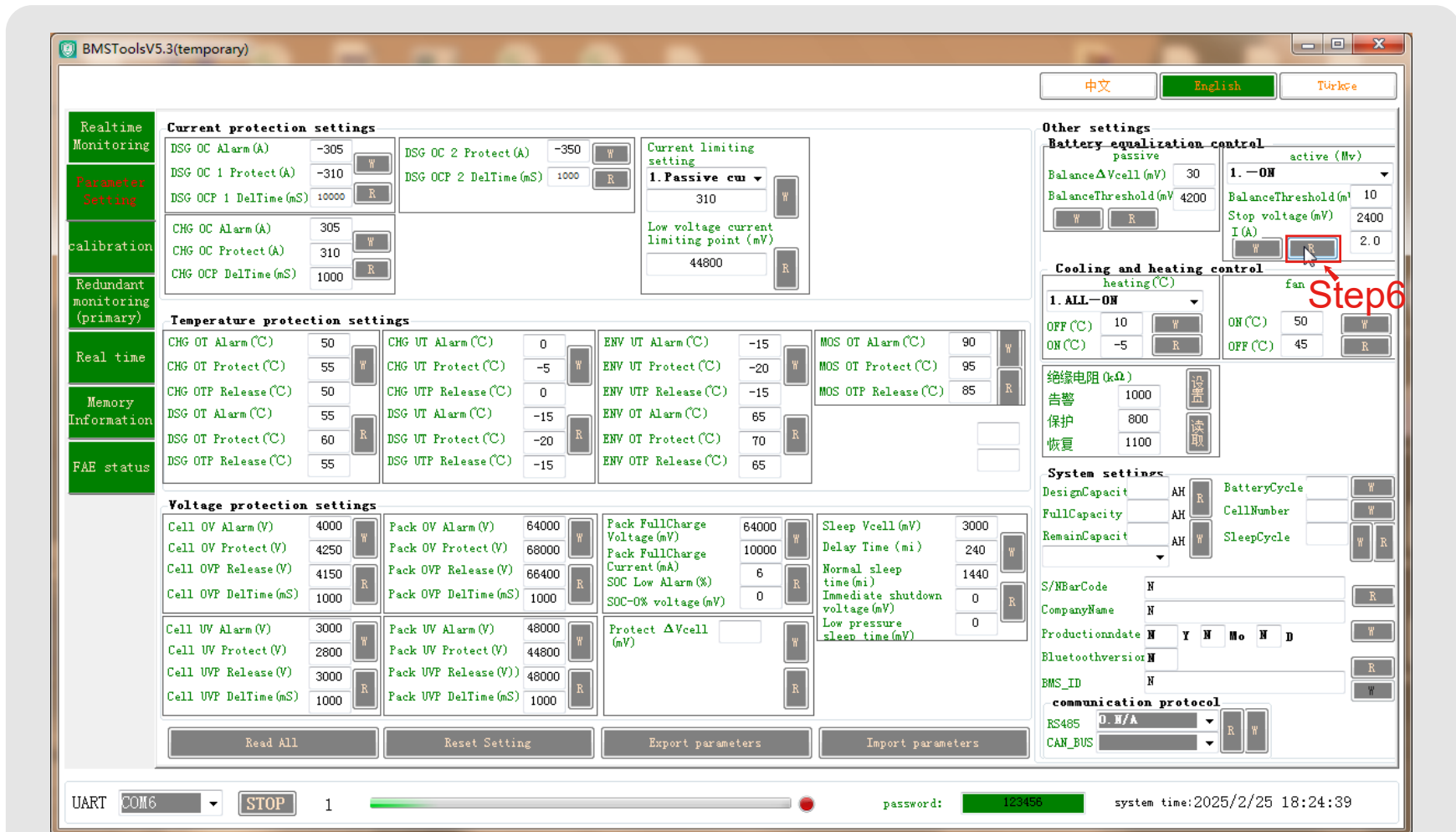


Step3: Then you can view data such as active balancer protection voltage, stop voltage and balance current.

2



Step4: Please input the current or voltage you want to set
Step5: Click "W"



Step6:Click "R" to read, indicating that the active balancer parameters are successfully modified.

4

Note:
Suggested parameters:
Balance threshold(mV) from 5mV to 50mV;
Stop voltage (mV) from 1.5V to 4V
Balance current from 0.5A to 3A

3