

SPECIFICATION FOR APPROVAL



MODEL	BQ33-08S-025A-T-CAN
RESUME	8 series of any chemical batteries, rated discharge 25A, charging 25A, with the mouth, there is a balanced. with isolation CAN
Customer material code	

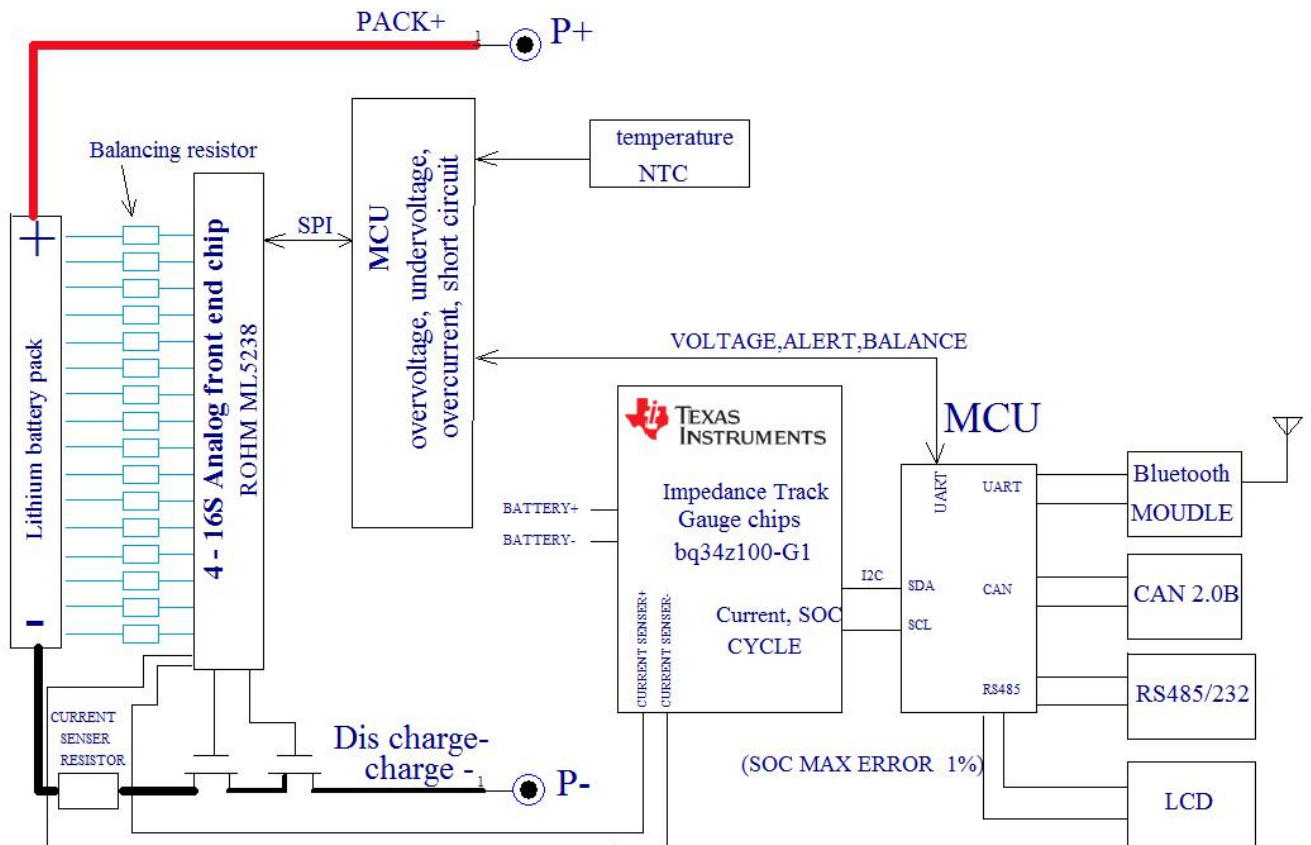
CUSTOMER		DATE			
DESCRIPTION	BMS of 08 Cell LI-on Battery				
Customer confirmation		Vendor confirmation			
APPROVED	VERIFIED	APPRODATE	APPROVED	VERIFIED	PREPARED

Please confirm the sample back to our specifications. THKS!

■ main features

1. Professional Gauge meter chip bq34z100g1 of TI (Texas Instruments) company, the maximum error of SOC is not more than 1%
2. PC terminal monitoring of the host computer software, with the RS232/RS485/CAN interface (Optional), easy to connect with the computer, read the single battery voltage, the entire group of capacity, charge and discharge cycles, battery pack temperature, SOH, SOC, etc..
3. With a mobile phone Bluetooth client, can install the APP software to monitor the battery pack state by phone.
4. The protection parameters can be modified flexibly and stored in the memory chip, and the data can be kept for 50 years without loss.
5. Integral algorithm for power meter display function, with temperature compensation, self discharge compensation, etc..
6. Voltage difference protection, the voltage difference between the two parts of the electric core is more than 0.8V (fixed value), charge and discharge protection, and alarm.
7. After 10 seconds, the electric core voltage is automatically discharged, without breaking the load.
8. Charge / discharge temperature protection
9. Switch intermittent equalization circuit, to prevent the balance circuit severe fever.
10. With weak switch alone control discharge circuit, save electric lock, save cost, prolong the life of the parts (optional)

■ **block diagram :**



■ Special attention:

1. Voltage discharge after 10 seconds did not recover to discharge voltage, enters power down low-power sleep state only consume less than 2 microamps of current. Must be activated.
2. over discharge, over current, short circuit 10 seconds after the recovery function, without breaking the load.
3. power is shown as automatic mode, that is, charging and discharging current, and more than 500 mA, the power is displayed automatically, without charge discharge current, automatically shut down the battery, such as in a static state, can be closed / open the weak switch, the activation energy of 10 seconds.
4. charge record to continue to charge for more than 5 minutes until full, and the current is greater than 500 mA, will be deemed as a charge.
- 5 discharge recording to stop discharge interval after 10 minutes, began recording the discharge To prevent the intermittent discharge, record too many problems.
- 6 BMS no need to reset button, because there is a watchdog to monitor the real-time monitoring of power on reset and sleep power on reset.
- 7 SOC capacity indicator of the BMS just on the electricity as the default, to put the electricity, and then full, is 100%, and then do more than 3 cycles, more accurate.

8. Optional time limits, limited battery group to use a one day a month end use, this feature is heavily dependent on the time system, if the system time error can not be normal use. Please choose carefully.
- 9 this BMS has a standard RS232 communication interface, without the need for expensive adapter board, just a RS232 turn USB adapter to connect the PC USB interface.
- 10 RS232 USB adapter must be installed correctly, the correct driver, you can connect the upper computer in the notebook.

■ SOC learning method

1. Discharge to full empty, and the vacancy is more than 5 hours
2. The charging current confirmed by the battery supplier shall be charged to the overcharge protection, and then it shall be idle for another 5 hours
3. 0.5C current discharge to over discharge protection

■ Application range

Lithium bicycle, electric motorcycle, Robot

Lithium tools , storage battery,

Lithium UPS, backup power field,

Lithium battery solar energy, wind energy street lamp, etc.

■ Maximum applicable range

Parameter	Rating	unit
Working temperature	-40~85	°C
Working environment humidity	≤ 85% RH	%RH
Storage environment temperature	-40~125	°C
Storage environment humidity	≤ 85% RH	%RH
Normal Charge voltage	Self defined voltage value	V
Maximum Charge voltage	80	V

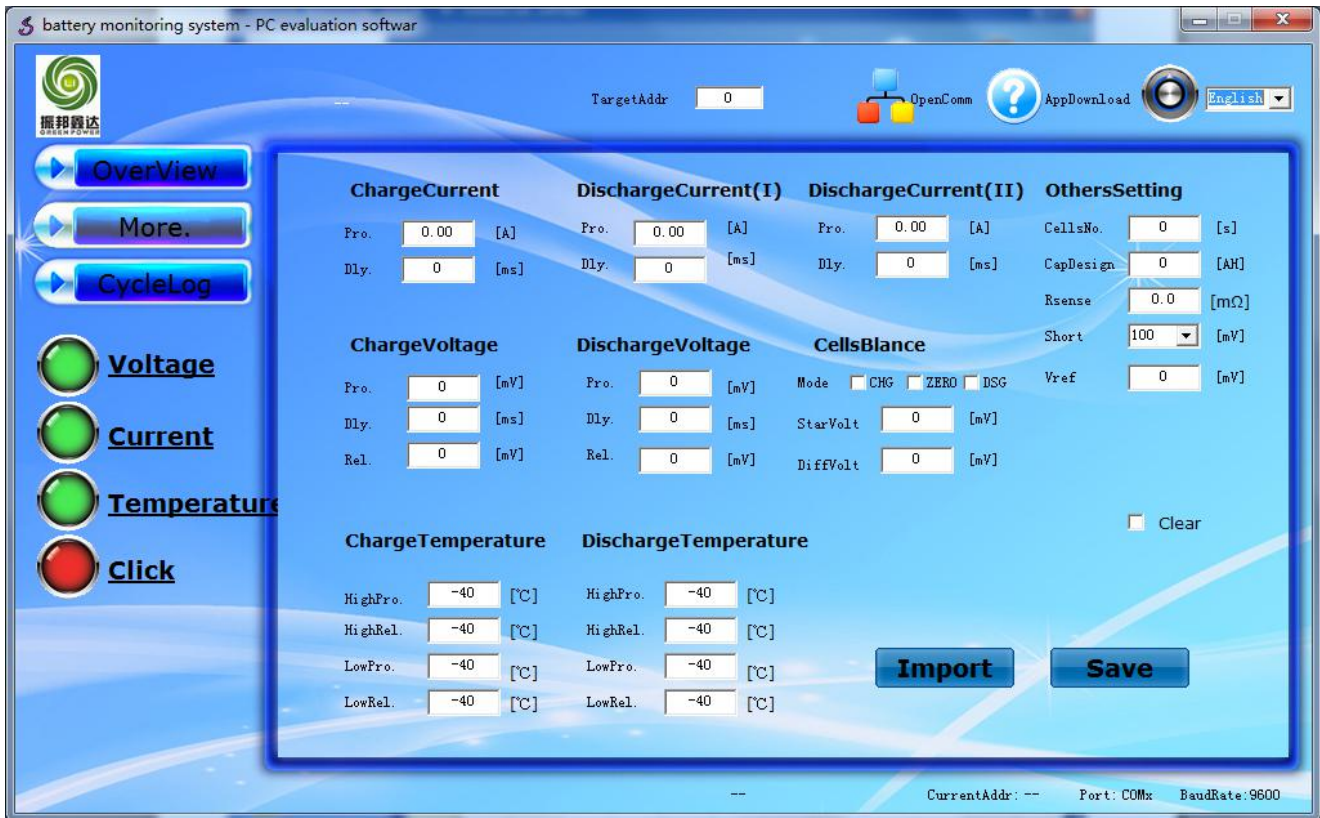
Electrical characteristics

Item	Content	Standard
Over charge Protection	Over charge detection voltage	3.75 V Can be set
	Over charge detection delay time	2 S Can be set
	Over charge release voltage	3.55V Can be set
Over discharge protection	Over discharge detection voltage	2.5V Can be set
	Over discharge detection delay time	2 S Can be set
	Over discharge release voltage	2.9 V Can be set
Charge Over current protection	Charge Over current detection current	15 A Can be set
	Charge Over current detection delay time	0.5 S Can be set
Discharge Over current Protection1	Discharge Over current detection current1	35 A Can be set
	Discharge Over current detection delay time1	8 S Can be set
Discharge Over current Protection2	Discharge Over current detection current2	100 A Can be set
	Discharge Over current detection delay time2	1 S Can be set
Short protection	Short protection detection delay time	250 u S
	Detection condition	The battery B+ of P-connection thread of short circuit
	Short release condition	REMOVE LOAD
Interior Resistance	Main loop electrify resistance	3.0 mOhm
Current consumption	Current consume in normal operation	3 mA Type
Current consumption	Current consume in sleep operation	30 uA Type
charge high temperature protection		65°C Can be set
charge high temperature protection recovery		55°C Can be set
Charge low temperature protection		0 °C Can be set (This setting value matches the heating module)
Charge low temperature protection Recovery		5 °C Can be set (This setting value matches the heating module)
Discharge high temperature protection		70°C Can be set

Discharge high temperature protection recovery		65°C Can be set
DisCharge low temperature protection		-40°C Can be set
DisCharge low temperature protection Recovery		-30 °C Can be set
Balanced open voltage		3.50V Can be set
Balance current		20mA
Rated discharge current		50A

■ computer interface





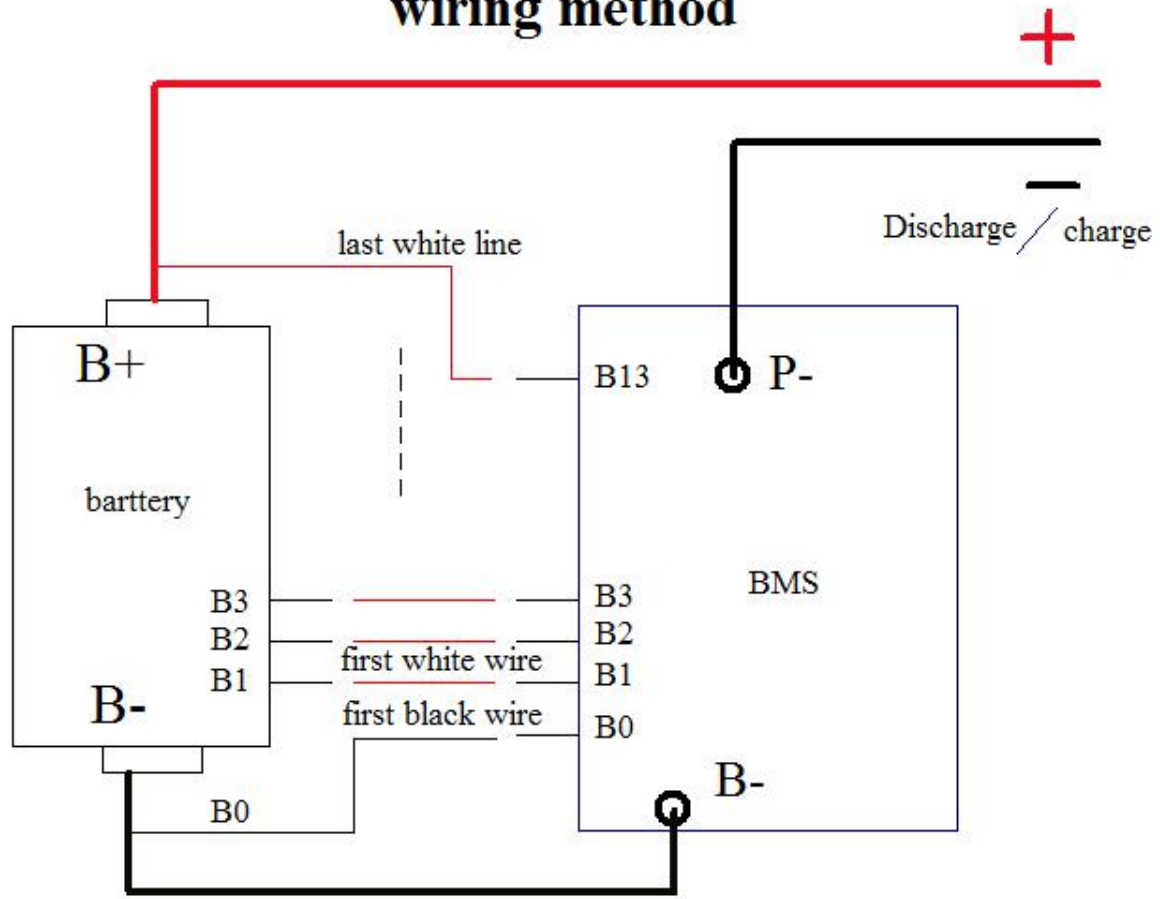
■ BULETOOTH

1. Android APP DOWNLOAD :

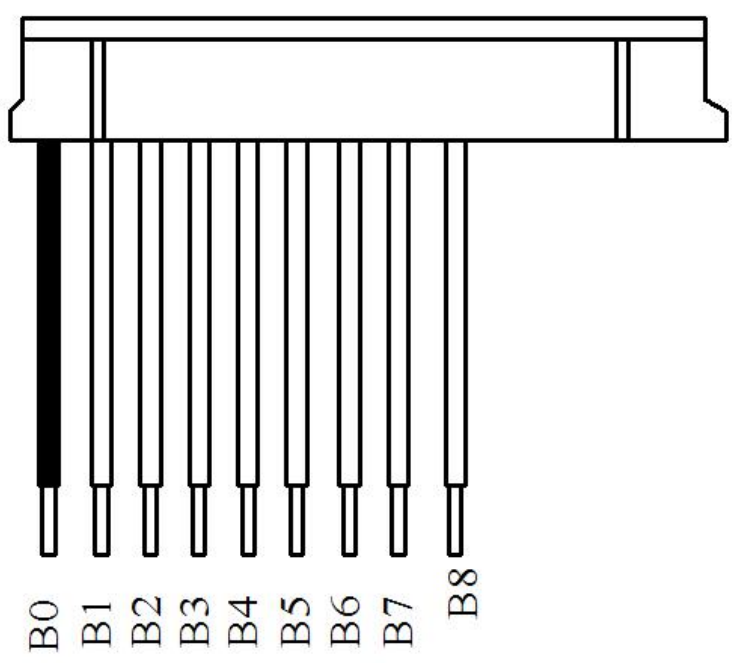
2. IOS APP DOWNLOAD :

■ Wiring diagram

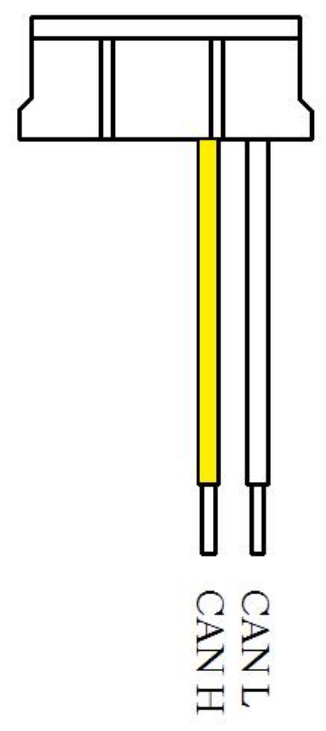
wiring method



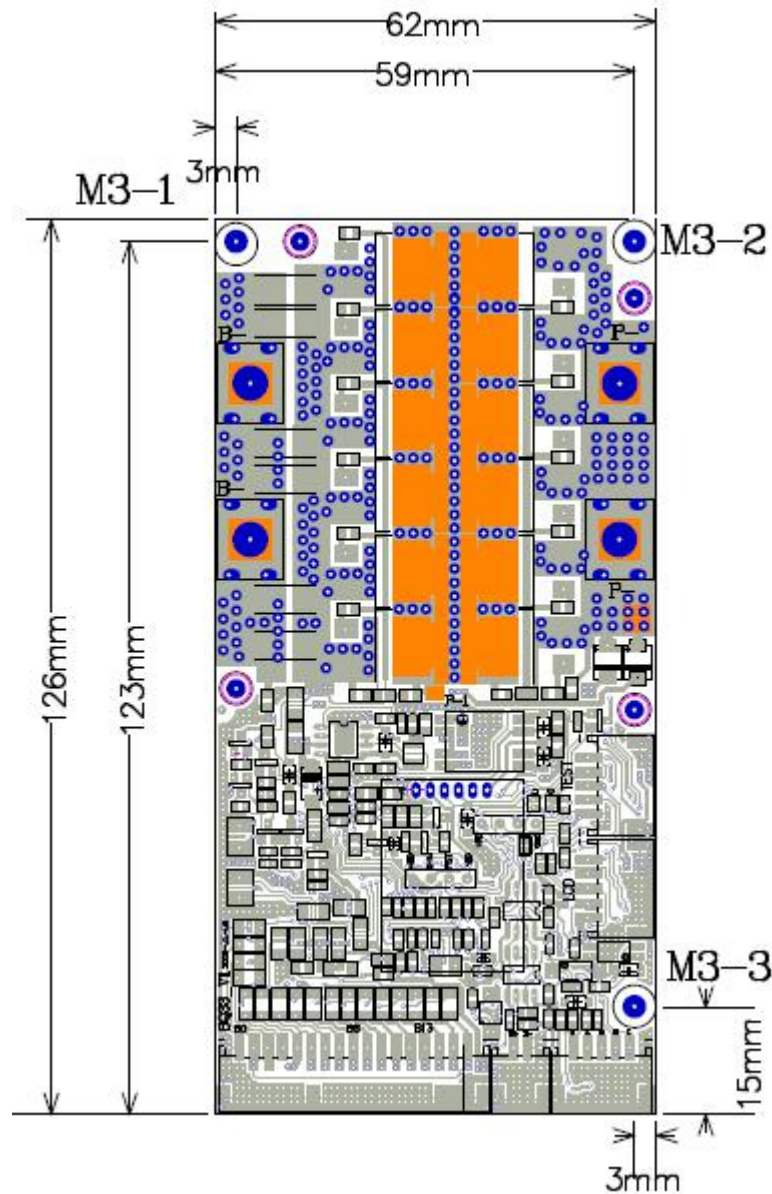
14 pin 2.0mm PITCH Plug



CAN



■ PCBA SIZE 62mm (W) 126mm(L) 10 mm(H)



■ use matters needing attention

1. The use of the process must follow the design parameters and working conditions, shall not violate the specification parameters used, or easy to damage the protective plate, and damage to the battery pack.
- 2 use the process to prevent static electricity, in the test, the installation, contact the protection board, to have the corresponding measures of electrostatic discharge.
- 3 charge port can withstand the 80V DC voltage, higher than the charger, can not guarantee the protection board is not damaged, please use the charger in this specification

The best choice with 4 charger charging current at the end of the trickle off function, in order to achieve double insurance. Do not have a trickle off function charger is designed for lead-acid batteries, does not comply with the use of lithium.

5. Pay attention to lead the first, electric iron, tin slag, etc. do not touch the components on the circuit board, otherwise may damage the protection board.

6 on the charger current, the protection board to do the charging current limit, please select the charger in this range, because the big current charger, the protection board will protect the action, prohibit large current charging, protect the battery pack. The value of the charge current can be changed according to the requirement.

7 maximum discharge current for the duration of a few seconds, the maximum current, the test, the time is not too long, so as to avoid power MOS overheating damage.

8 when the protective plate and battery pack assembly work, do not put the heat sink close to the surface of the electric core, otherwise, the heat will pass to the electric core, which affects the safety of the battery pack.

9 in the use of abnormal conditions, please stop using it, return to the original factory or professional maintenance personnel for maintenance.

10 the protection board has done a lot of reliability test, the reliability is far higher than the general protective board on the market, the technology of the electric core should also be guaranteed, will be as much as possible to reduce the occurrence of combustion.

■ Safety Precautions

The company is committed to quality, reliability, but in general, electrical parts, will happen a certain probability of failure, the use of environment, conditions, the durability will be different, the use of a long design, to avoid the use of overload caused by abnormal heat, smoke, and even personal accident, fire accident, social damage and so on. Our company is not responsible