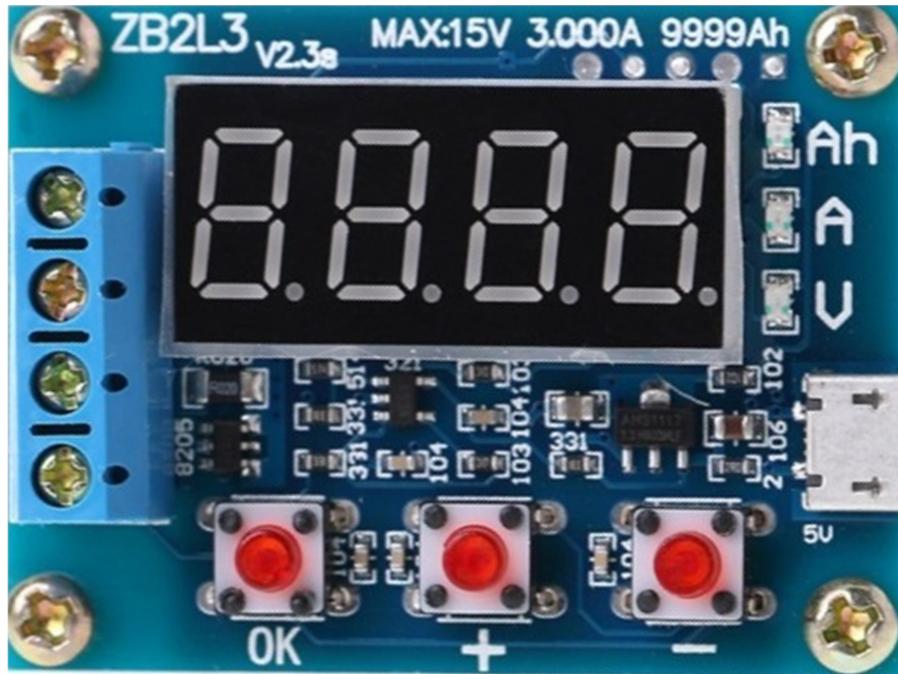# ZB2L3 Battery capacity test instrument
P/N:200240

Parameter:

Power supply voltage:DC4.5-6V(micro USB connect)

Working current: <70mA

Discharge voltage:1.00V-15.00V   Resolving ability: 0.01V

Final voltage range: 0.5-11.0V

Support passing current: Max 3.000A   Resolving ability: 0.001A

Voltage measurement max error：1%+0.02V

Current measurement max error: 1.5%+-0.008A

Highest Battery capacity range: 9999Ah（1Ah=1000mAh）Larger numerical through decimal point shifting and switching, when less than 10Ah will display X.XX, when larger than 10Ah will display XX.XX, and so on.

PCB size: 50mmx37mm

Finished size: 50mmx37mmx17mm(Length, Width, Height, maximum position size include the height of copper feet.

Attention: This circuit was especially designed a DC bias for improving voltage measurement accuracy. Terminal connect nothing will display a very small voltage that do not affect the actual measurement.

Testing:

7.5 Ohm Resistor (0.54A-0.41A)

Battery A: Discharge: 2695mAh.   Recharge: 2689mAh.

Battery B: Discharge: 2708mAh.   Recharge: 2620mAh.

3.75 Ohm Resistor (2x 7.5 ohm in parallel) (1.06A-0.81A)

Battery A: Discharge: 2633mAh.   Recharge: 2621mAh.

Battery B: Discharge: 2661mAh.   Recharge: 2702mAh.

Usage:

1. Testing battery need to be full charged first.

2. Testing battery's positive post connect to input "+", negative post connect to input"-", **do not connect reversely**(instrument will be damaged while connect reversely with load)!   And then connect load to positive post and negative post, instrument's micro USB connect with working power (do not use USB of computer or laptop to power supply), instrument display battery's voltage in this moment.

3. Start testing only need to press the button of "ok" directly, instrument can set a suitable end voltage automatically that based on battery full charged voltage, and it flashes 3 times before testing. If you need set the end voltage by yourself just only press "+" or "-" to revise while have battery voltage shown.   End voltage display "P" first, resolution is 0.1V, press "ok" to start testing after setting is done.

4. Instrument starts testing will contact electrical switch of control load, data take turn to display discharging capacity, current discharge current (A) and battery voltage (V) in this process. Instrument cuts off switch of control load when battery reaches end set voltage, displaying data stay on capacity (A) and corresponding indicate light together fast flash, it is battery actual discharge capacity in this moment, press "ok" can stop flashing and let data stable display, press "ok" again can recover to the state of power-on, you can change battery to test next......

Error code and meaning:

Err1: battery voltage higher than 15V

Err2: battery voltage lower than end setting voltage

Err3: battery can't bear load discharge current or circuitry has too large internal resistance

Err4: current too large (current more than 3.1A)

Secondary calibration operation (after self-running calibration, it means to give up the warranty):

You can access the calibration mode by holding down the three buttons and switching ON the instrument at the same time:

First displays calibration records' times, and then OuOA is displayed when access formally calibration samples program. Press "ok" then make a short connect of the battery test input between positive and negative, done will display J10u. Remove the short; Press "ok" then connect a 10.0V standard DC supply between input positive and input negative, done will display J2.0A; Press "ok" then add a 2.0A constant DC current between input positive and input negative,(use a 5Ω 50W resistor), calibrate done.   Instrument will check the calibration data in advance, it will takes turn to display 4 number and quit if data reliable; if no reliable it will discard data and quit.