Intelligent discharge capacity detector

Intelligent discharge capacity detector is developed for our company by combining the latest standard special system and high frequency power conversion technology. The functions and operation methods of the series products are the same, ranging from low to high according to the working voltage and current, including 6 models. The product has three working modes of lead acid, lithium battery and iron lithium. Through adaptive control, different strings of lead acid or lithium battery packs are identified, and the battery packs are tested for discharge .according to the corresponding pre-stored termination voltage

The product is suitable for the overall discharge and performance testing of a variety of commonly used small and medium-sized lead-acid and lithium battery packs. It is widely used in battery, electric vehicle manufacturers and distributors to measure the discharge and capacity of a single cell or battery pack; effectively solve the production, testing and After-sales service issues.

●Advantage

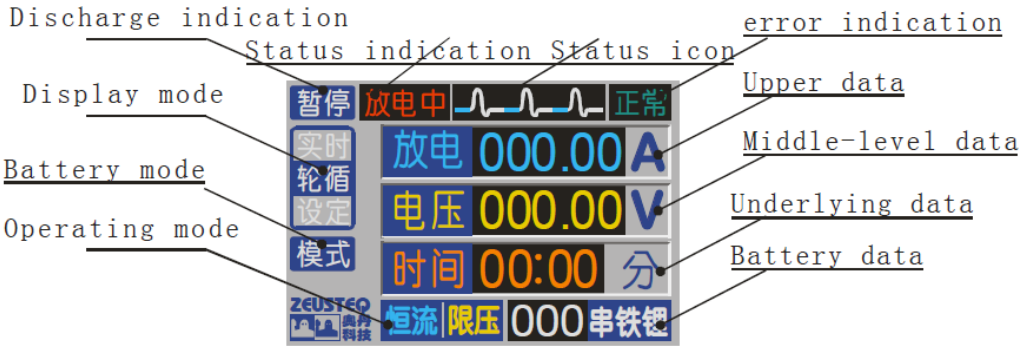
- Monitoring all parameters such as current, voltage, time, capacity and battery information
- Working with the power of the battery under test, no external power supply required, easy to use
- Universal for lead-acid / lithium / iron-lithium battery packs, automatic identification of the number of battery pack sections, automatic shifting
- Discharge time power-down storage to prevent loss of test data caused by misoperation
- Can test the lithium battery pack protection board, and expand the test battery component voltage
- Large-screen LCD display, expandable network support functions

●Basic technical parameters

Voltage test accuracy	±1%
Constant current discharge accuracy	±1%
Discharge timing range	0~99 Hours
Use ambient temperature	-5 ~ +40 ºC

Panel diagram

Show schematic



●Basic display instructions

① The entire display is divided into four areas：

a) Discharge indication, display mode, and battery mode are key indication areas；

b) Status indication, status icon, fault indication is status indication area；

c) Upper data, middle data, lower data are data display area；

d) Working mode and battery data are mode display area；

② Discharge indication shows discharge and pause. Display discharge indicates that you can operate the button to start the discharge. Pause indicates that you can press the button to pause；

③ The display mode can display three modes: real-time, round-robin, and setting. Brightness is the current display mode；

a) Real time: display current, voltage, time；

b) Round robin: Two kinds of interfaces are displayed, one is the current data interface, and the other is the set data interface. Rotate mode switches between the two interfaces every 3 seconds.；

c) Setting: Display constant current means set current, voltage means termination voltage, time means discharge time, and number of battery strings. Only in the setting mode, the up, down, and comprehensive knobs (except the exit key) can be used. The up and down keys switch the setting object, and the comprehensive knob changes the value of the setting object.；

④ Status indication shows four states: standby, discharging, pause, and stopped；

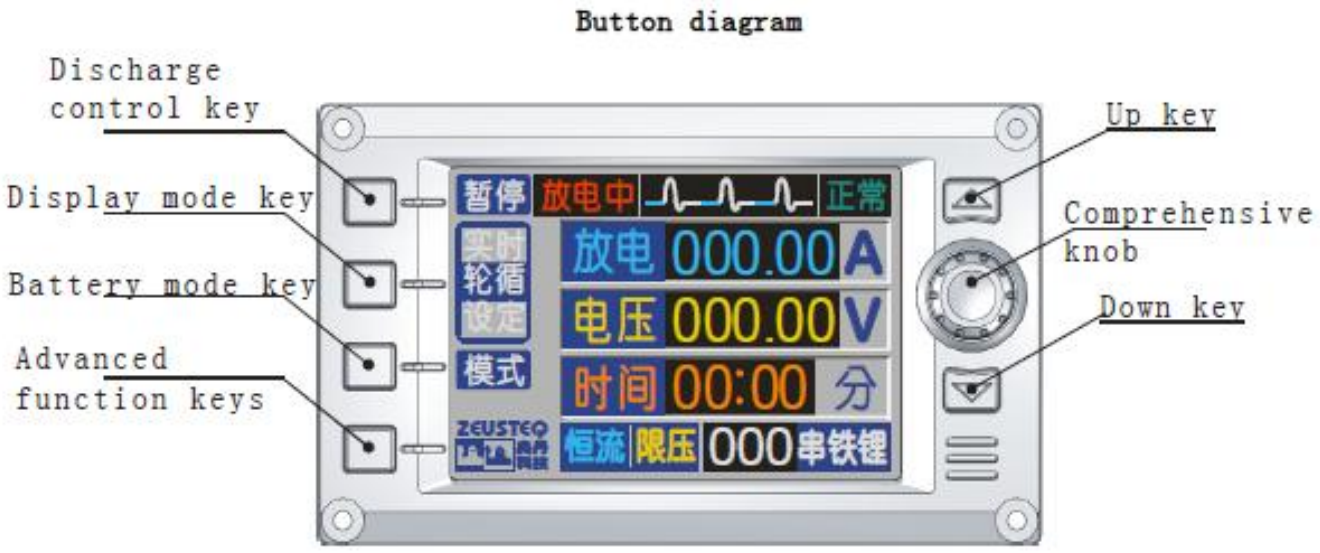
⑤ Fault indication shows four kinds of faults: normal, over temperature, offset, and over voltage；

⑥ The upper layer data can be displayed according to different display modes. Discharge is the current and constant current is the set current；

⑦ In the middle data, when the upper data shows the discharge, the voltage indicates the current voltage, and when the upper data shows the constant current, the voltage indicates the termination voltage.；

⑧ The lower layer data shows the accumulated time and capacity of the discharge；

⑨The battery data shows three types of lithium battery, iron lithium, and lead acid. The string number setting is increased or decreased by 1. The lead acid voltage value is set to five standard voltage values of 12V, 16V, 24V, 36V, and 48V；



●Basic control instructions

① Discharge control key: Control the discharge and pause. When the discharge indication shows the word discharge, press the button to start the discharge. The discharge indication display switches to pause. Press the pause discharge. If the fault indication shows overvoltage, the button is invalid；

② Display mode button: After pressing the button, you can switch between the three modes. The current display brightness is the current mode；

a) Setting the discharge current: Press the display mode button to select the setting mode, and a set value blinks. Press the up or down key to switch the setting object to constant current, that is, XX.X XA flashes. Turn the comprehensive knob to decrease counterclockwise and increase clockwise. The current value will increase or decrease by 0.5A. After the setting is completed, press the comprehensive knob to exit；

b) Set termination voltage: In the setting mode, press the up or down key to switch the setting object to voltage, that is, XX.XXV flashes. Turn the comprehensive knob to increase or decrease the lead-acid voltage by 0.025V multiplied by the set lead-acid voltage value, and increase or decrease the termination voltage of the lithium battery mode and iron-lithium mode by 0.01V multiplied by the set string value. drop out；

●Basic operation flow

① Connect the instrument to the battery, the instrument start-up display lights up, and the instrument is on standby. If there is an abnormality, check the connection；

②Display, showing real-time current and set current, real-time voltage and termination voltage,

discharge time and capacity, number of battery strings, working mode and working status；

③ According to the battery to be tested and test requirements, select the lead acid, lithium battery, iron lithium mode, and set the discharge current and termination voltage；

④Discharge current setting: about 0.5 times of Ah of battery, such as: 5A for 10Ah battery；

⑤ The battery pack is normal. Press the function control key to start discharging and accumulate time and capacity.；

⑥ When the voltage is lower than the termination voltage, the instrument stops discharging and the buzzer sounds；

⑦During operation, you can view and set various parameters such as voltage, current, time, capacity, and battery information.

●Parameter memory description

① Parameters such as the set working mode, current, voltage, and cumulative discharge time are stored in the instrument and can be remembered after power-off；

② After the instrument is powered off and restarted, the time and capacity of the previous settings and discharges are maintained. If the test requirements are the same, no reset is required.；

③ When the discharge starts, the time and capacity will be automatically cleared, and a new measurement total will be restarted；

● Lithium battery mode working instructions

① The instrument calculates the battery pack termination voltage based on the cell termination voltage and the number of battery cells.；

② Press the battery mode button to select the lithium battery mode, press the display mode button to select the setting state, and select the setting number of battery strings by turning up or down. Turn the comprehensive knob to adjust the number of strings to match the actual value. Integrated knob to exit；

● Lead-acid mode work instructions

①In standby mode, the instrument determines the nominal voltage of the battery pack by comparing the input voltage with the window voltage. Refer to the table below.：

Applicable Model	Model of 16V	Model of 16V、48V and 72V			Model of 48V	Model of 72V		
Standard Voltage	6V	12V	16V	24V	48V	48V	60V	72V
Maximum	7.3V	14.5V	19.3V	29V	58V	54.4V	67.5V	87V
Minimum	5.5V	11V	14.7V	22V	44V	44V	55V	67.8V
Initial termination voltage	5.3V	10.5V	14V	21V	42V	42V	52.5V	63V

② If the input voltage is outside the window voltage, the instrument judges that the battery voltage is abnormal；

③ The voltage is normal, the instrument selects the corresponding termination voltage according to the nominal voltage, and automatically stops when the discharge reaches the termination voltage；

④ Each nominal voltage is stored separately after the corresponding adjustment of the termination voltage, and the battery pack of the same voltage is automatically called again after testing.；

●Precautions for use

 Do not discharge the battery pack which is nominally higher than the voltage range, which may damage the instrument；

 If the instrument determines that the battery pack voltage is abnormal and discharge is prohibited, the battery pack should be inspected and it can work normally after troubleshooting；

 During the discharge process, the instrument should be well ventilated and must not be covered by foreign objects；

●Parameter calibration

① Calibration voltage: input 48V in standby mode, press the advanced function key for 3 seconds, the real-time voltage display flashes, turn the comprehensive knob to adjust the voltage value to match the actual value, press the comprehensive knob to exit the calibration ；setting

② Calibration current: in the discharging state, press the display mode key to switch to the setting mode. Select the setting current by pressing the up or down key. Turn the comprehensive knob to set the current to 8.5 (10A type) or 15A (20A type). Exit with the comprehensive knob. Press the advanced function key for 3 seconds, the current display flashes, turn the comprehensive knob to adjust the actual value to match the set value, and after confirming, press the comprehensive knob to exit the calibration：