



AT1187

Reed switch integrated tester

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1. Definition of nouns

1.1. VB

The DC breakdown voltage short for VB.

Refers to the breakdown voltage characteristic of the discharge tube at a certain slope voltage (200V/mS).

Usually refers to the dc breakdown voltage. In the actual production test, 100V/mS - 2000V/mS will be used.

1.2. CR

The Conduction resistance short for CR.

Refers to the contact resistance between the contacts of the dry reed tube under a certain voltage and current condition.

2. Test content

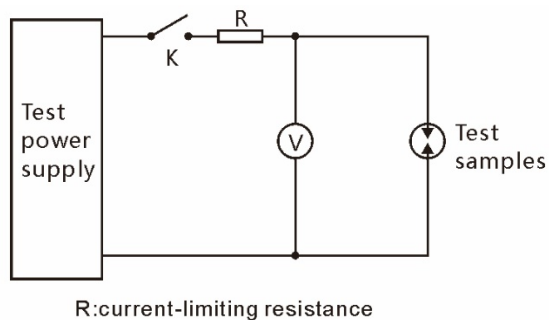
The test consists of three parts:

- a). DC breakdown voltage test
- c). Contact resistance test
- c). Repeatability under certain conditions

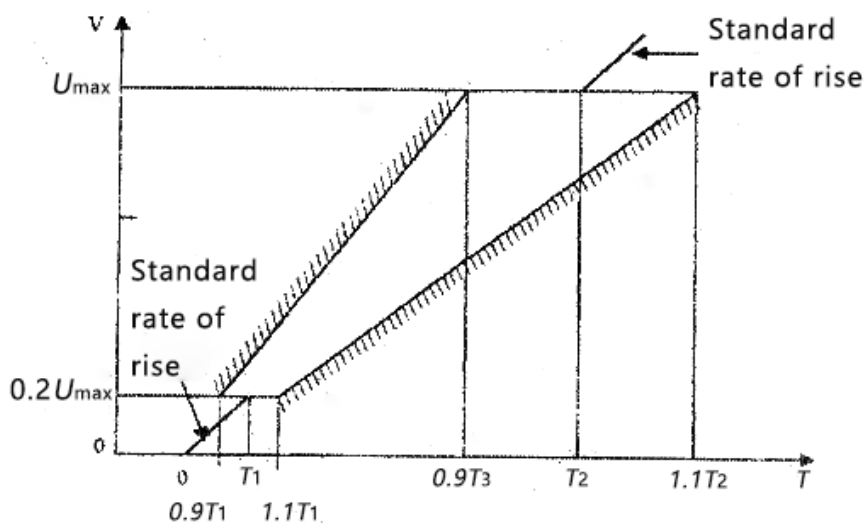
3. Equipment parameters

Test content	Test range	Operating errors	Test conditions
DC breakdown voltage test	60V~1200V	<2%	200V/mS~2000V/mS
Contact resistance test	10m Ω ~500m Ω	<2%	100mA constant current source
Repeatability under certain conditions	BV/CR multiple repeatability tests under specified parameters	/	/

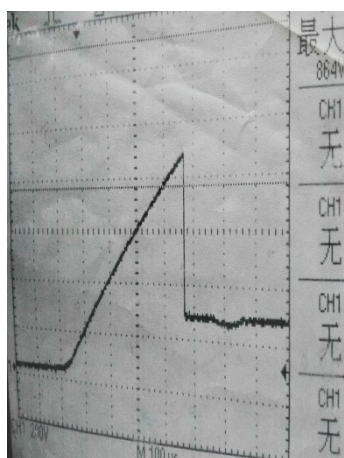
4. Principle of test system



R:current-limiting resistance
 DC breakdown voltage test circuit diagram



Test voltage waveform



Actual waveform

5. Equipment appearance



Front



reverse side

6. Component



Foot switch



Indicator light



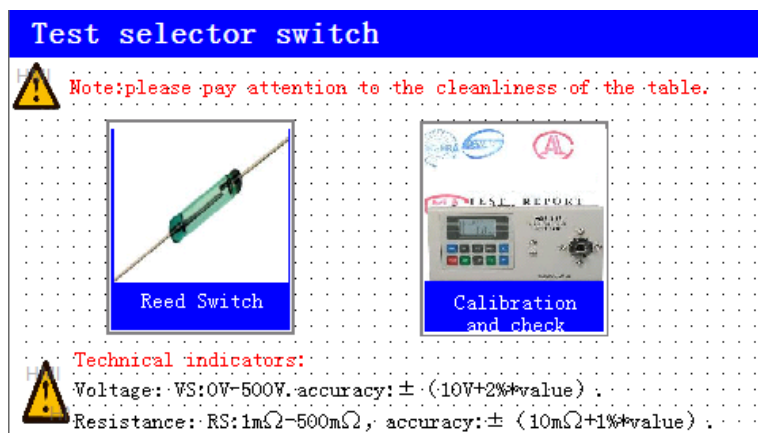
Start button

7. Operation instructions

- Start the interface.

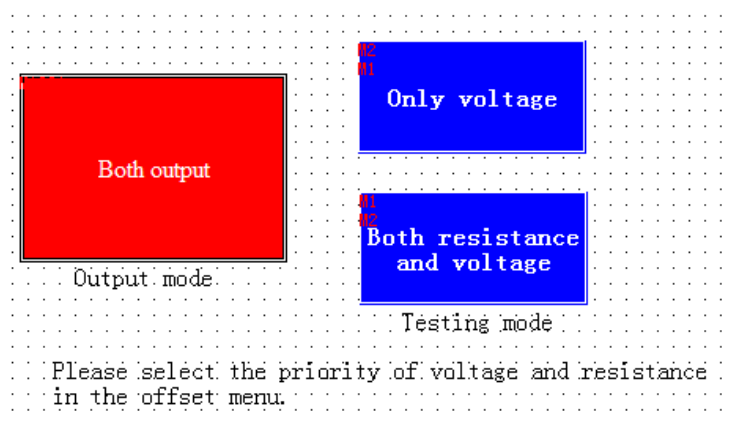


- Menu interface: You can choose from this page to enter the test page and calibration page.

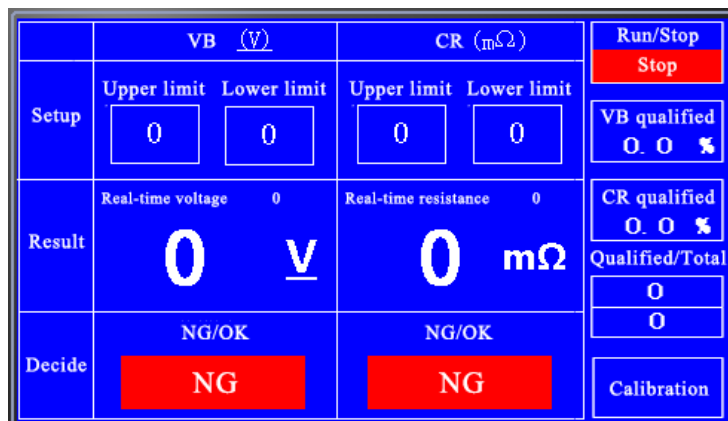


Test selector switch

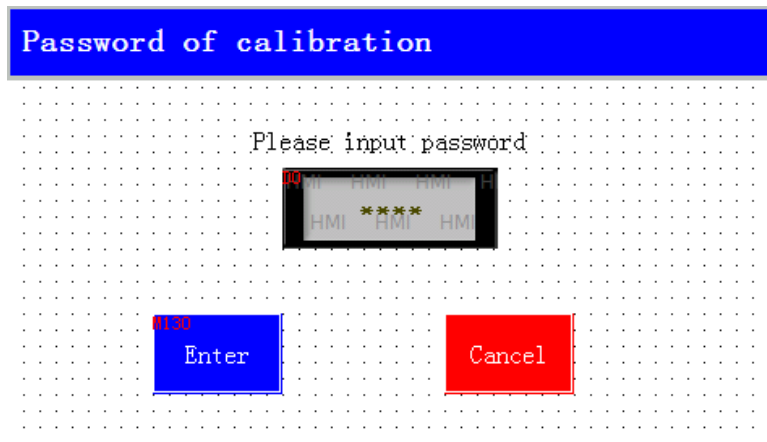
- Test mode selection interface: You can select the appropriate test method as needed here.



- Testing interface: You can set the qualified upper and lower limit of the test product here, and intuitively understand the real-time voltage and resistance during the test process, the final result of the test and the percentage of qualified parameters and other functions. These are displayed on a touch screen.

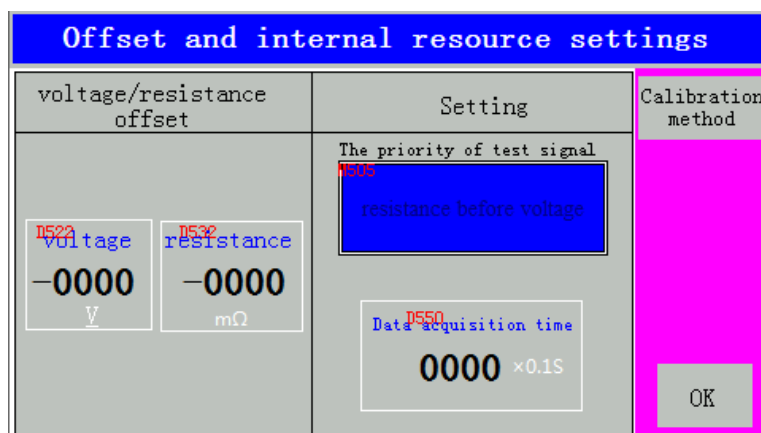


- Password of calibration: Important parameter Settings, are set password lock. Prevent workers on the production line from entering this interface, resulting in parameter changes and affecting quality.



- Offset and internal resource settings: After entering the password, you will enter here, you can calibrate the test parameters and set the breakdown voltage and contact resistance test sequence, USB data storage time (usually set to 10* 0.1s) and so on.

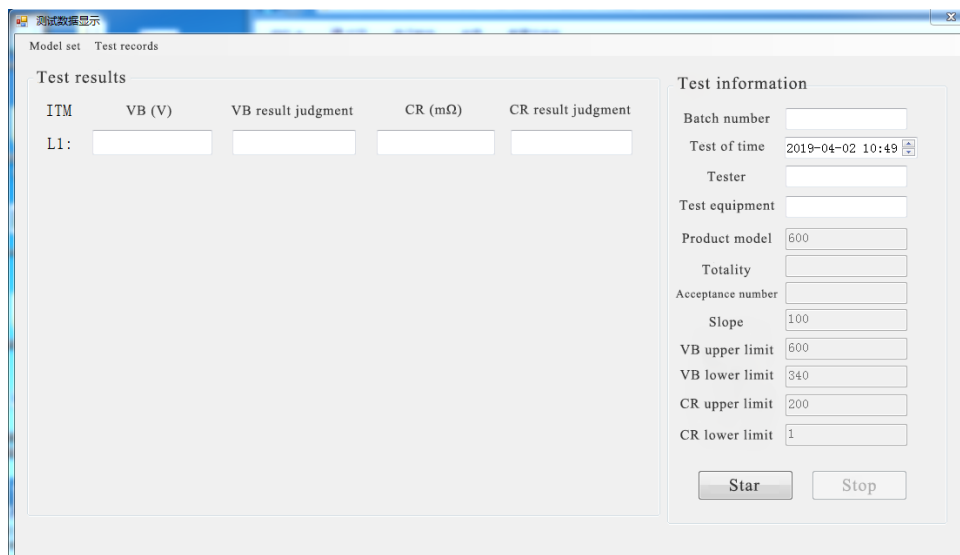
PS: Calibration function should be operated by professionals



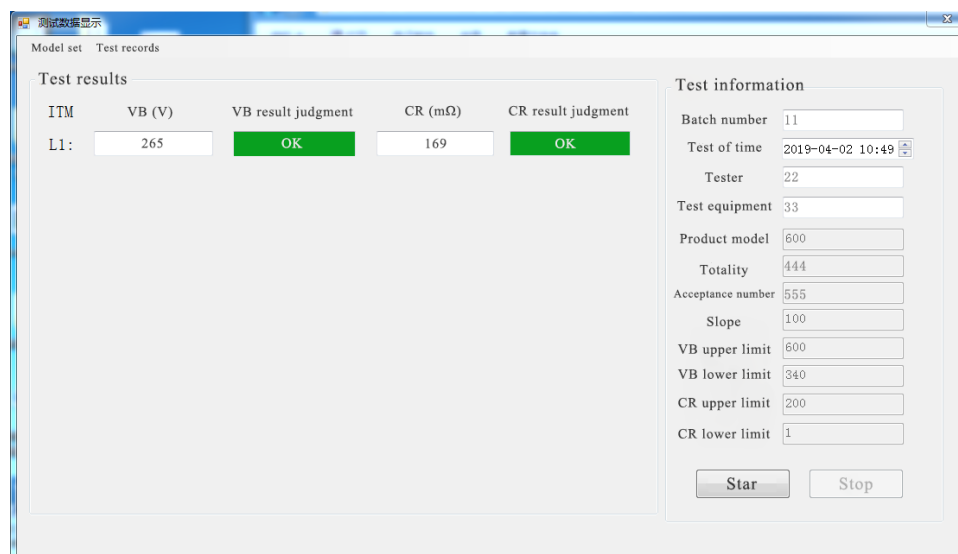
Voltage resistance offset

8. Computer software

This instrument can communicate with computer through RS232 serial port and record test data through software. You can more directly understand the working state through the computer screen here, and more directly set up.



Software interface



Run the demo

9. Equipment technical features

- Breakdown voltage test: the dc breakdown voltage is constructed by using (100V/mS,2000V/mS) slope.
- Use 100mA constant current source to precisely test the contact resistance.
- Using ARM (CPU) and touch screen control, all test items can be controlled by touch screen. Can cooperate with computer software testing (computer software only records test data and does not participate in test actions).



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- Compared with the standard waveform, the error can be controlled within (10V+ measurement *2%).
 - Waveform generators are independent and have independent internal calibration procedures to minimize test errors through adjustment.

10. Summarize

- Basic function: test breakdown voltage(VB) and contact resistance(CR), and feedback OK and NG signals.
- The operator only needs to press the button once to test automatically. Record the quantity of qualified products and unqualified products respectively, and save the test data.
- Breakdown voltage: peak voltage, slope, upper and lower limits can be set flexibly, peak voltage setting range is 300 ~ 2000 v, slope setting range is 100 ~ 300 v/mS, leakage current less than 250 a. Test accuracy (10V+ measurement value *2%)
- Contact resistance: upper and lower limit can be set flexibly. Test of maximum current 100 ma, the test accuracy + / - (10 m Ω + measurements * 2%), continuous experiments can be set in a flexible, set the range of 1 ~ 150 times.
- This equipment can not only test the breakdown voltage, but also can test the contact resistance, and the work efficiency is high, the quality is stable, can help the enterprise greatly reduce the labor cost, has the traditional test instrument incomparable advantages.