Huazheng®

HZ-5100-I
Handheld Contact Resistance Tester

Huazheng Electric Manufacturing (Baoding) Co., Ltd

Dear user:

Thank you for choosing HZ-5100-I Handheld Contact Resistance Tester.

We hope that this instrument can make your work easier and more enjoyable, so that you can get the feeling of office automation in the test and analysis work.

Before using the instrument, please read this manual, and operate and maintain the instrument according to the manual to prolong its service life. "Just a light press, the test will be completed automatically" is the operating characteristics of this instrument.

If you are satisfied with this instrument, please tell your colleagues; if you are not satisfied with this instrument, please call (0312) 6775656 to tell you to serve you at all times-Baoding Huazheng Electric Manufacturing Co., Ltd., our company will definitely make you satisfied !

Contents

I.Overview

The hand-held Contact Resistance tester is a high-precision, digital switch detection instrument carefully developed by the company according to the IEC standard and the latest electric power executive standard of the People's Republic of China DL/T845.4-2004.The instrument uses high frequency high power constant current switching power supply technology, can measure the micro ohm level contact resistance. Widely used in all kinds of switches and electrical appliances contact resistance, circuit resistance and cable wire, welding line contact resistance measurement, the instrument measurement data is accurate, stable performance, meet the electric power, power supply department on-site high voltage switch maintenance and high voltage switch plant circuit resistance testing requirements. The output current and measuring resistance are output on the seven-inch high brightness touch color LCD at the same time. The measurement results can be output voltage or stored in THE U disk. The power off storage can satisfy the data query at any time.

II.Performance characteristics

1.It has a variety of protection functions such as back EMF impact, interruption of the line during the test process, power failure, and overheating of the power supply, which can reliably protect the impact of the back EMF on the instrument, and synchronously sound an alarm.

2.Intelligent power management technology, the instrument total work in the minimum power state, effective energy saving, reduce heat.

3.The instrument can be freely switched between Chinese and English, with high output voltage and wide measurement range.

4.The test current comes from a high-precision high-current constant-current power supply, without manual adjustment, and the test is fast and accurate.

5.The four-terminal wiring method is adopted, which effectively eliminates the influence of the test lead resistance on the test results.

6.Seven-inch high-brightness touch color LCD, clear display under strong light, full touch screen operation

7.The instrument can be connected to an external printer to print measurement data, which is convenient for paperless office. (optional)

8.The instrument comes with a perpetual calendar clock and power-down storage, which can store 1000 sets of test data for reference at any time.

III.Technical indicators

Test current: 50A, 100A

Measuring scope:0～5mΩ（50A） 0～2mΩ（100A）

Resolution: Min. 0.1μΩ

Accuracy: ± (0.5% ± 2 characters)

Power:1000W

Working mode: continuous measurement

Operating power supply: battery powered

Operating temperature :0 ~ 40℃

Relative humidity: less than or equal to 90% without condensation

Test line length: red standard 5 meters, black standard 3 meters, the length can be customized

Dimensions: 425*335*210 (mm)

Weight: 8 kg

IV.Instrument panel introduction

1. LCD screen: display operation prompts and test data

2. Reset: the test is completed or the instrument is interrupted

3. Start: test or repeat the test

4. Switch: power switch

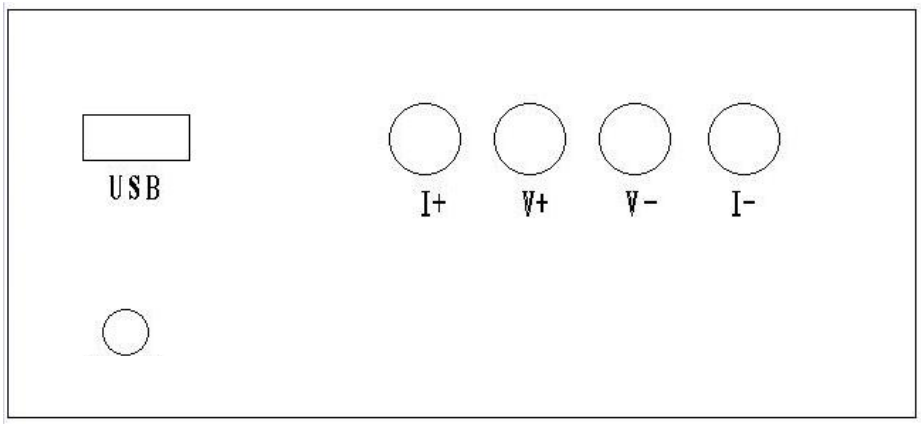
5. I+, I-: are the current output terminals, and provide constant current for the test product through the special test line

6. V+, V-: Input terminals for the voltage signal of the test product

7. USB: U disk interface

8. Charging hole

The following figure is a schematic diagram of the wiring terminal



+I -I: current terminal

+V -V: Potential terminal

Charging socket: the battery can be charged after plugging in the charger

Interface: USB interface

V.menu operation

1. The startup interface is displayed as shown in Figure 1:

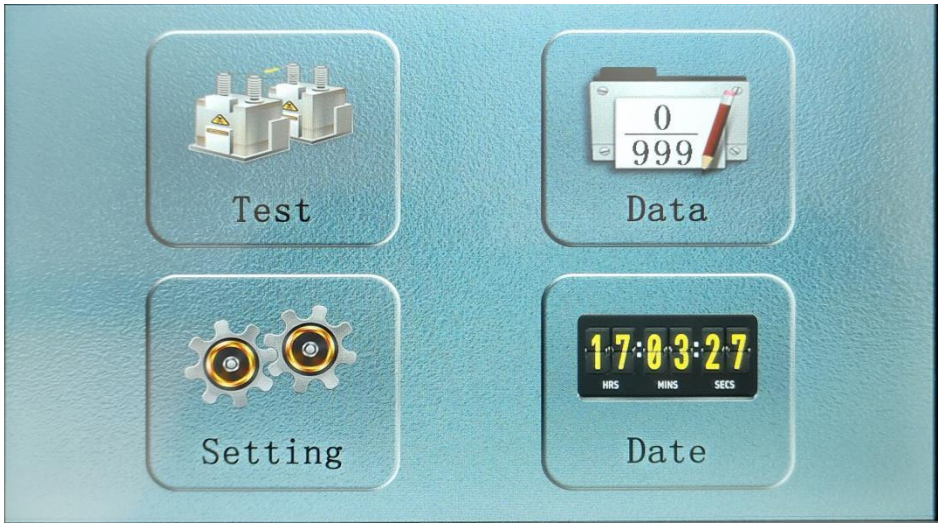


Figure 1

2. Press Data Test to enter the following interface, as shown in Figure 2

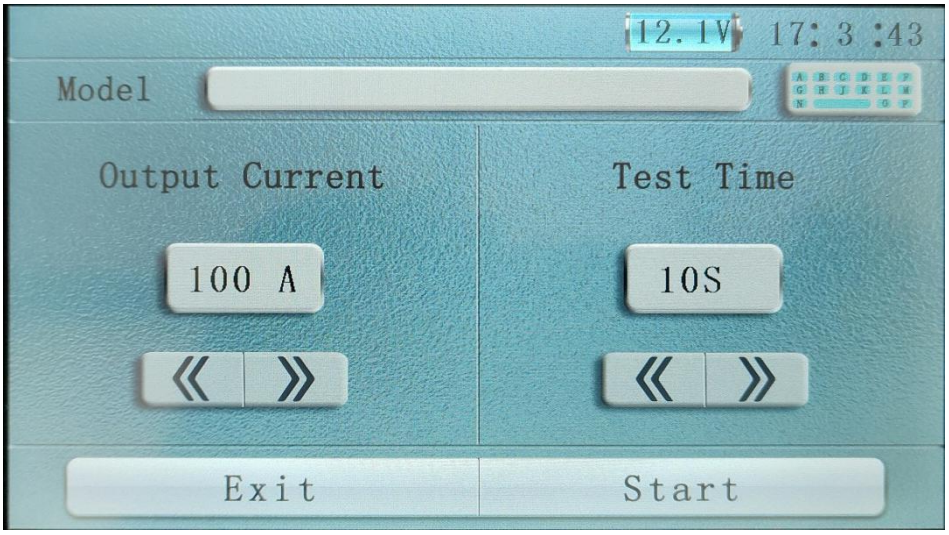


Figure 2

Test product model: Click  to edit the test product name (up to 16 Chinese characters can be input);

Test current: Click  current to cycle between 50A, 100A, and 50A;

Test time: Click  test time: cycle between 10S, 30S, 45S, 60S

3. After selecting the current, click to **start the measurement**, and it will display "charging please wait" to enter the test state. After a few seconds, the test result will be displayed, as shown in Figure 3

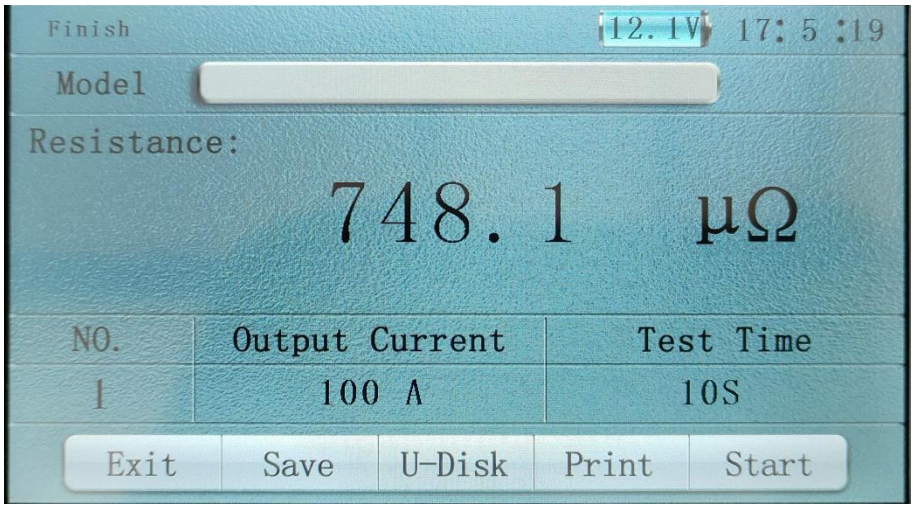


Figure 3

d print; click Return After the test results are displayed, the next step is to store and save the test results locally, or click the U disk to store an

to the home page to return to the main interface; click Continue Test to continue the test.

4. Click **Data Management** in Figure 1 to enter the data query interface, as shown in Figure 4:

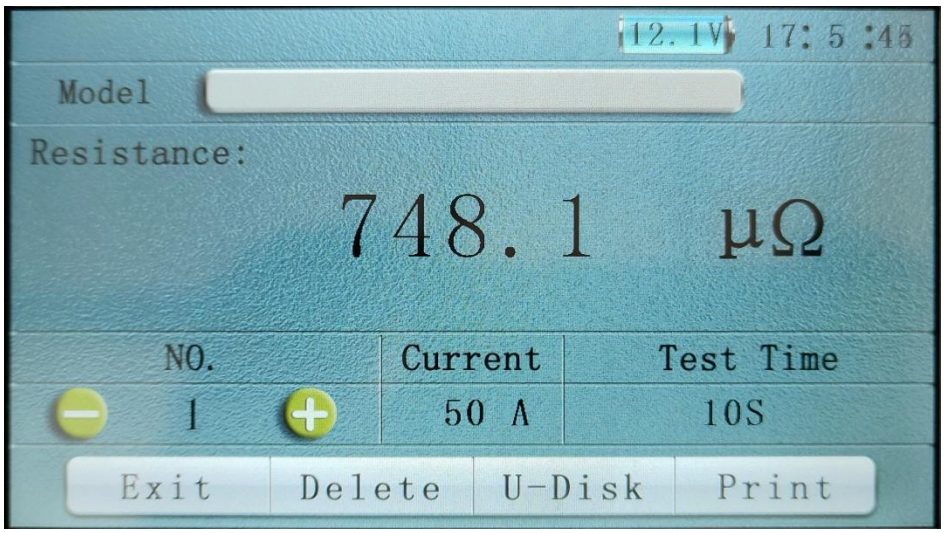


Figure 4

Click  to query the test serial number, click to delete data, to delete the last group of data or all data, click to save the data to the U-disk, click to print to print the data, click to return to the home page to return to the main interface;

5. Click parameter setting in Figure 1 to enter the parameter setting interface, as shown in Figure 5:

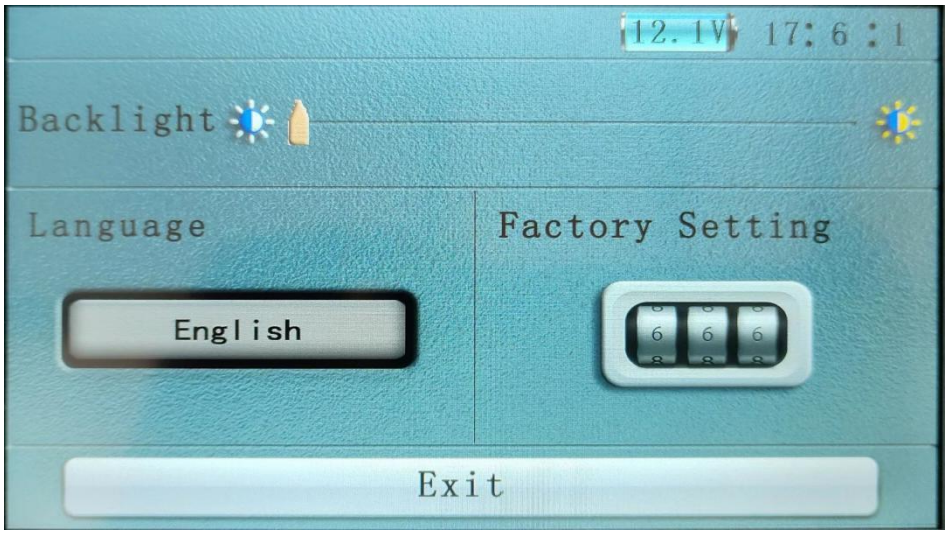


Figure 5

Brightness adjustment: according to the scene environment, move the button to

adjust the screen brightness

Language setting: click the button to switch between Chinese/English interface

Factory setting: Only the manufacturer can set

After setting, click to **return to the home page** to return to the main interface

6. Click on the **clock modification** in Figure 1 to enter the clock modification interface, as shown in Figure 6:

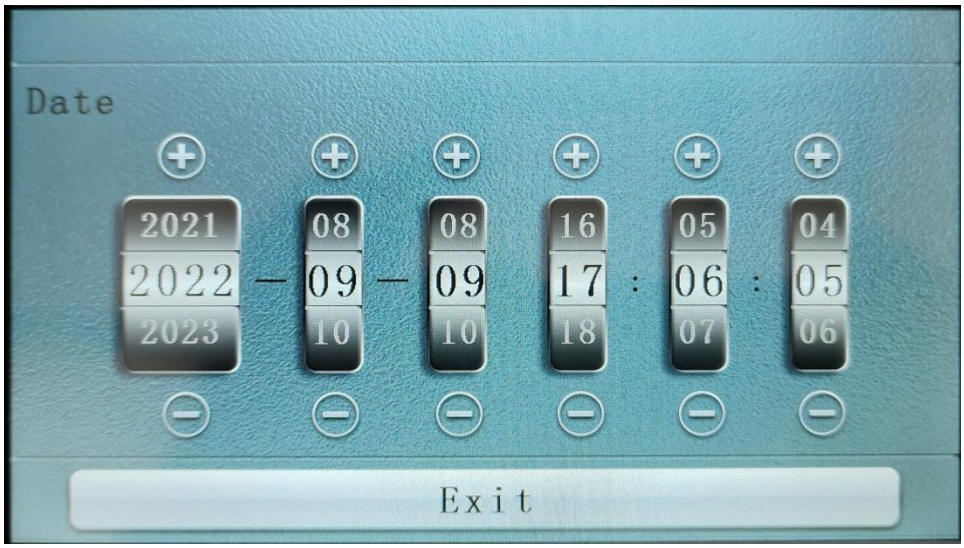
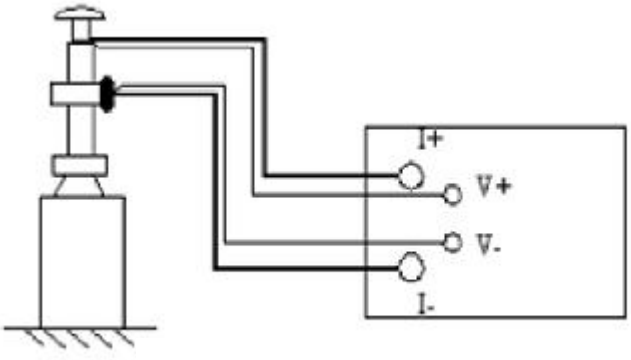


Figure 6

Click to  set date and time

VI.Wiring method



Note: All connecting surfaces of the test clamp should be in reliable contact with the test sample. If oxidation is found on the contact surface, the oxide layer on the contact surface

should be removed first.

1. Wiring method: As shown in Figure 7, connect the special test wire red to red and black to black according to the color. The thick current wire is connected to the corresponding I+ and I- terminals and tightened. In the socket of V-, two clamps clamp both ends of the tested object.

2. Measurement: After completing the wiring as shown in Figure 7, turn on the power switch, select the test time for testing, and the instrument will automatically complete charging, current stabilization and resistance measurement.

VII.safety measures

1. The operator should have common sense in the use of general electrical equipment or instruments.

2. After the test, press the reset button to turn off the power switch. Note: It is strictly forbidden to disassemble and install each test cable with power on.

3. If the instrument is abnormal, first press the reset button to reset the instrument.

4. The maintenance of the instrument must be carried out by professionals, and must not be handled by themselves.

5. This instrument is used for measuring loop resistance and is not allowed to measure inductive loops.

VIII.Packing List

No.	Item	Qty
1	main engine	1
2	test line	1
3	power cable	1
4	Operation Manual	1
5	Qualification	1
6	Packing List	1
7	Test Sample	1