Huazheng®

HZ-3110
Transformer DC Resistance Tester

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Contents

I. Introduction

The DC resistance is the transformer's semi-finished product, finished product test, installation, commissioning test, and electric part prevention test necessary test project,the transformer coil can effectively find the device welding, connecting parts loose, missing unit, disconnection, and other manufacturing default and other hidden danger occurred after operation.

The DC Resistance transformer to meet fast measurement requirement, we developed HZ-3110 DC Resistance Tester. The instrument is a newpowerful technology, small size, light weight, high output current and other characteristics.

The device is controlled by the microcontroller, with a high degree of automation, automatic discharge functions. It is a test instrument of high precision, simple, direct way to achieve fast transformer measurement.

II. Safety Measure

1. Before using this equipment you must carefully read the manual.

2. The equipment operator should have electric general knowledge.

3. Avoid putting the equipment in the contact of the rain, corrosive gas, dust, high temperature, direct sunlight, and other places.

4. Severe vibration has to be avoiding for gauges.

5. Only an expert must maintain and adjust the equipment .

6. After the test, the user must wait till the discharge alarm stopped before switching off the device, and plugging off the test cables.

7. To measure no-load regulating transformers, the user has to wait till the discharge instructions alarm stops before switching stalls.

8. During testing, do not move the testing clamp and cables.

III. Configuration

1. Whole instrument controlled by high speed SCM, high automatic degree and simple operation.

2. The instrument adopts advanced power supply technology, with multiple current position, test range is wide, suitable for testing DC resistance of large and medium size transformer.

3. Has a complete circuit protection, reliable.

4.Discharge alarm, discharge indicator clear, reduces misuse.

5. Quick response speed, can be directly converted to load tap switch at measuring state, the instrument automatically refresh data.

6.Intelligent power management technology, instrument is always working at minimum power state, effective energy saving, reduce heat.

7.320 x240 matrix of ultra small pixel 65Ktrue color LCD.

8.With calendar clock and power storage, can store 1000 groups data, can be check at any time

9.With RS232 and USB interface, computer communications and U disk storage.

IV. Technical Data

1. Output current：<5mA、40mA、200mA、1A、3A、10A
2. Resolution：0.1μΩ

Range： 0.5mΩ～0.2Ω （10A）

1mΩ-3Ω （3A）

5mΩ-6Ω (1A)

100mΩ-40Ω (200mA)

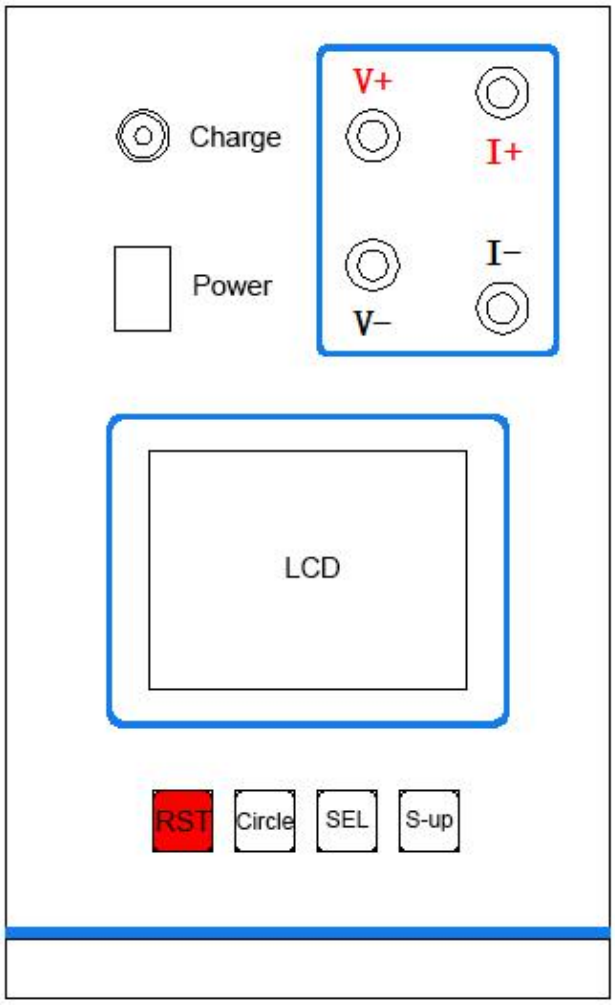
1Ω-200Ω （40mA）

100Ω-20KΩ （<5mA）

3. Accuracy：±(0.2%+2 Readings)
4. Operating temperature：0~40℃
5. Ambient humidity：≤90%RH，(non condensed)
6. size: 425*210*285 mm.
7. Instrument weight :11kg

V. Presentation Of The System

Instrument panel (see the picture):



~220V：Power switch, machine power input, AC socket, safety and switch.

⏚： Earthed terminal，used for whole instrument earthing,for safety protection.

RST： machine restore the initial status，pre-set the current output.

Circle: select menu.

SEL：Setup the current after the tester was reset.

S-up key：press the key after selecting the current; The microcomputer control to realize all testing process.

I+、 I-：Current output terminals ,I+ is the positive current; I- is the negative current.

V+、V-：Voltage input terminals, V+ is the positive voltage;V- is the negative voltage.

RS232: Universal series interface, can controlled by computer;

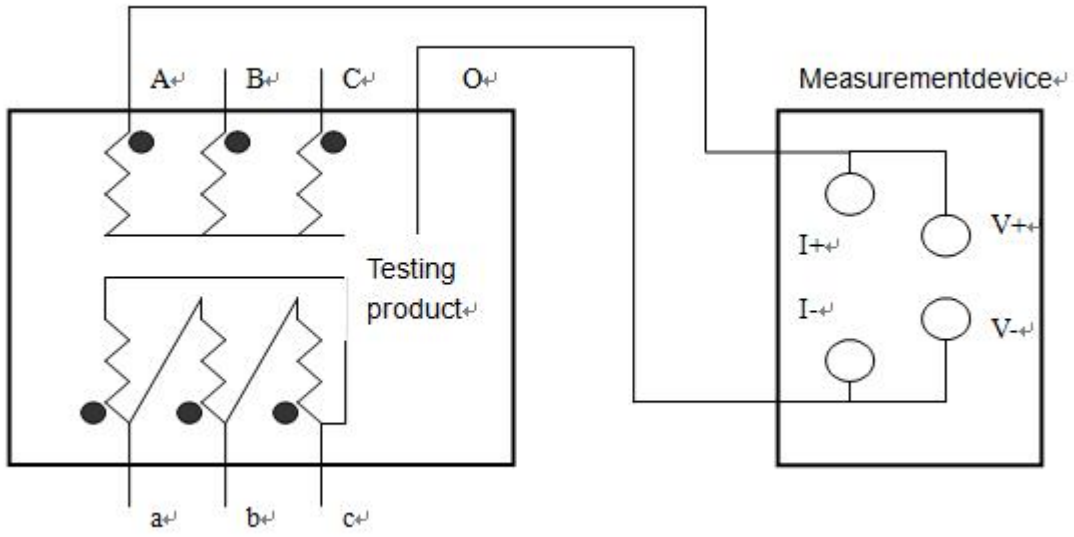
USB: Can output the testing results to USB.

VI. Test and Operating

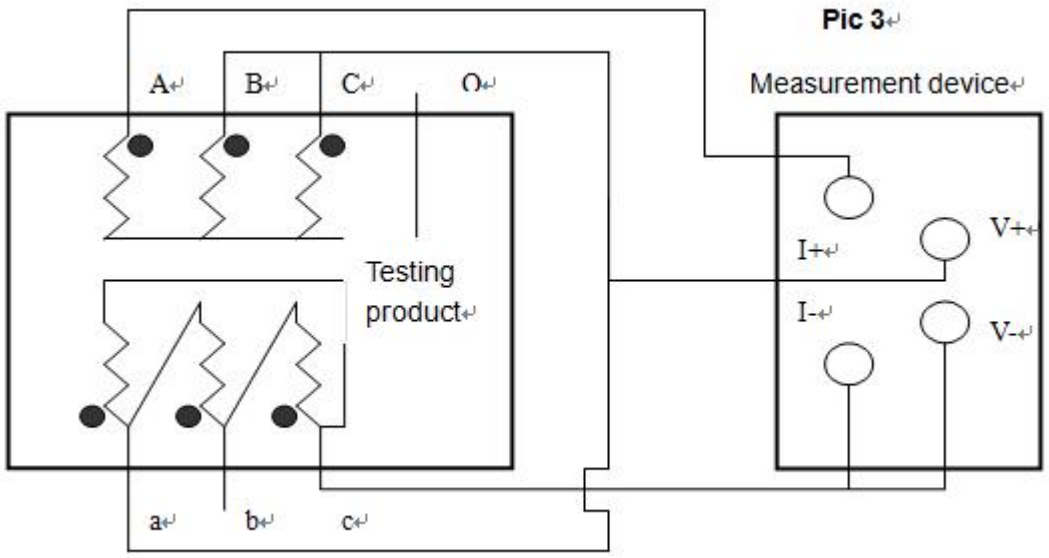
1.Connection： Connect the testing product to the device through test terminal, joint

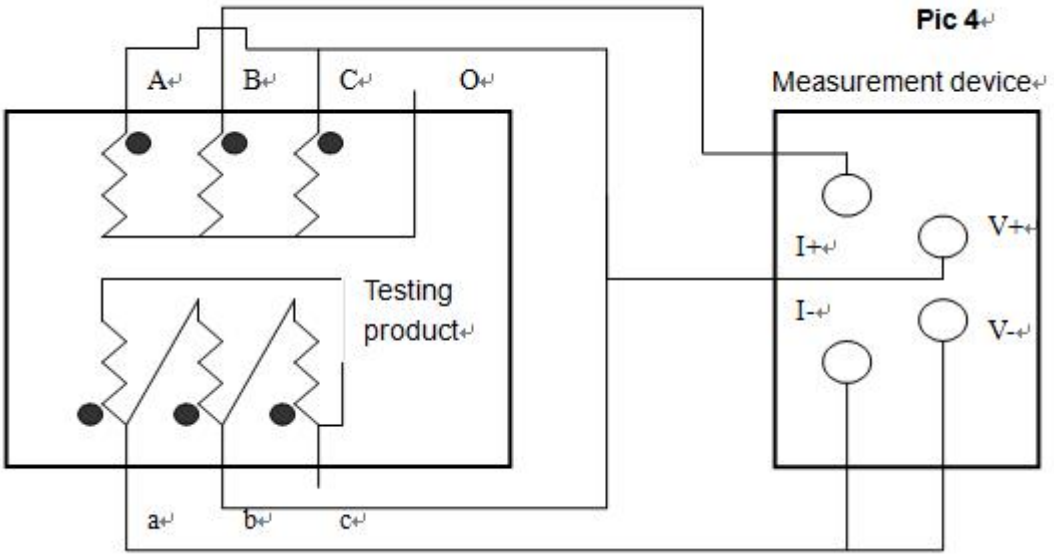
firm;meanwhile insure a well connection of the earthing wire.

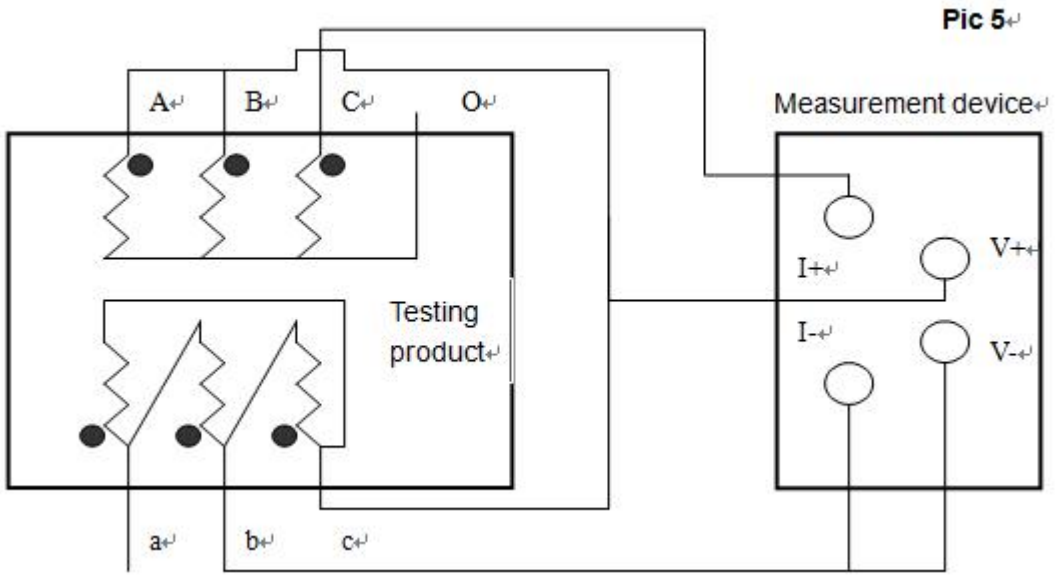
A: Single phase testing method, to see the following drawing.



B. magnetic assisted connections see picture 3 to 5 （suitable $Y_{(N)}$-d-11junction group）







Picture 3, 4, 5 respectively measure low voltage Rac, Rba, Rcb connection

2. Instrument operation instructions:

1) The boot interface displays as shown in figure 1:

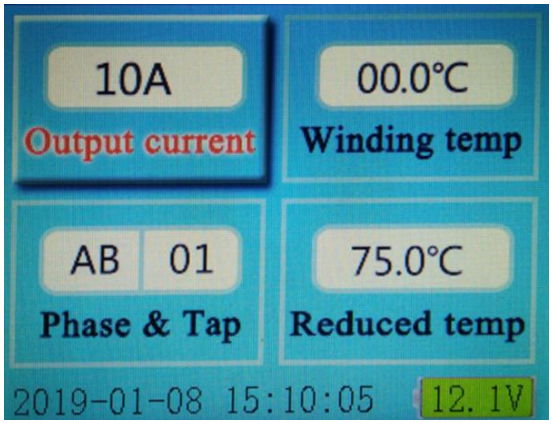


Figure 1

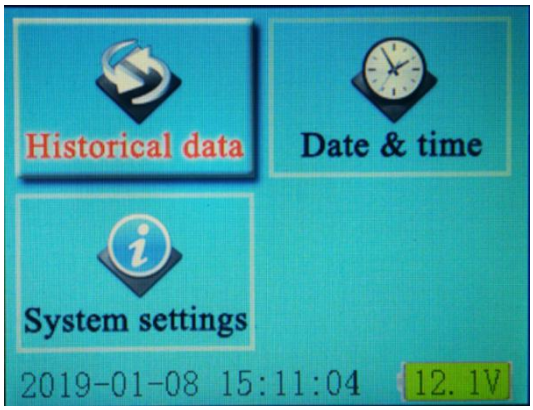


Figure 2

The cursor can be moved between Current selection, Phase splitting, Winding temperature, Conversion temperature, Data query, Clock modification, Host parameters and other options by pressing the cycle key. The selection key can be used to select the options contained in the seven main menus mentioned above.

- When the cursor chooses the current, press the selection key to select the current.
- When the cursor is separated, when the cursor is separated, press the select key, and the phase can be displayed cyclically between AB, BC, CA, AO, BO, CO, ab, bc, ca, ao, Bo and Co. Press the start key to move the cursor to the tap, press the select key number to change between 0-9 (10 bits), press the start key to move the cursor to one bit, press the select key number to change between 0-9.
- When the cursor is in the winding temperature, pressing the start key can make the cursor scroll between three data bits, and the selection key can make the data of each data bit circulate between 0 and 9.
- When the cursor is in the conversion temperature, press the select key, reduced

temperature in the 20 ℃ (copper), 20 ℃ (aluminum), 75 ℃ (copper), 75 ℃ (aluminum), 85 ℃ (copper), 85 ℃ (aluminum), 90 ℃ (copper), 90 ℃ (aluminum), 115 ℃ (copper), 115 ℃ (aluminum), 120 ℃ (copper), 120 ℃ (aluminum), 125 ℃ (copper), 125 ℃ (aluminum), 145 ℃ (copper), 145 ℃ (aluminum), 150 ℃ (copper), 150 ℃ (aluminum) between cyclic display.

- When the current option is any option except winding temperature, press the start button to start measurement.

2) After selecting the current, press the start button to start charging. LCD display "charging". After a few seconds, "Testing" is displayed, indicating that the charging is completed and the test state is entered. After a few seconds, the test results will be displayed, as shown in figure 3:

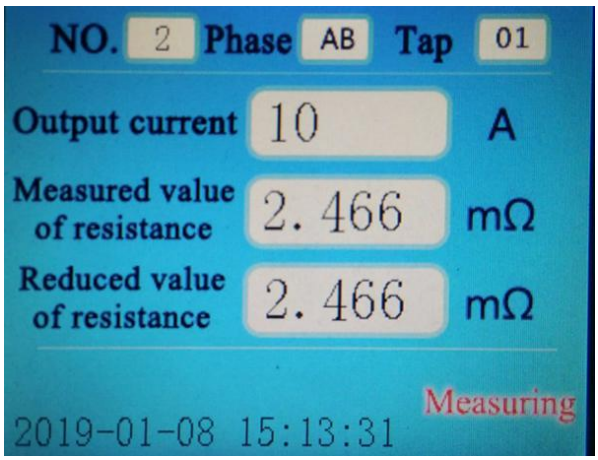


Figure 3

3) Move the cursor to the "data query" menu in the startup interface, and then press the "select" key to enter the data query, as shown in figure 4:

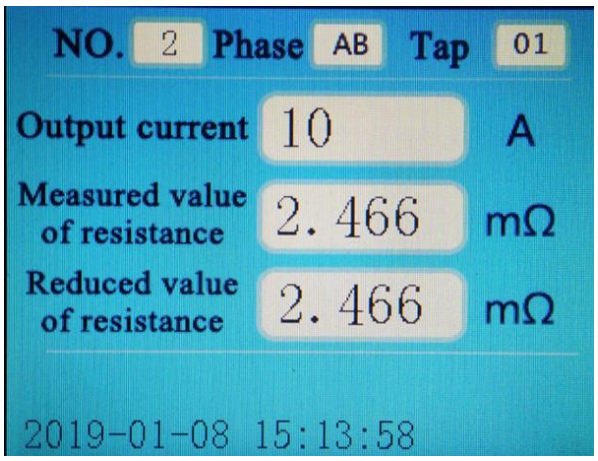


Figure 4

In figure 4, when the cursor is in "Data query", press "select" to scroll up data and "Start" to scroll down data.

4) In figure 2, press the loop key to move the cursor to the clock modification, and press the select key to enter the clock modification interface.

Figure 5

Press the loop key to move the cursor between date data, press the select key to reduce data, and press the start key to increase data.

5) Move the cursor to the host parameters in figure 2, then press the select key to enter the interface as shown in figure 6:

Figure 6

Press the loop key to move the cursor. When the cursor increases the screen brightness, press the select key to increase the screen brightness. When the cursor decreases the screen brightness, press the select key to lower the screen brightness. When the cursor is releasing storage space, press the select key to clear the stored data.

VII. Caution

1. Wait till the discharge alarm stops before reconnecting wires.

2. During the no-load measurement, before resetting the transformer invert load, wait the discharge alarm stops, before switching the tap.

3. Before selecting the current, refer to the technical instruction range, don't exceed or be lower than the use range. When over passing the range, because the current doesn't reach the preset value, the device will stay in "CHARGING" status, press the reset key at this moment, to select the lower current. In case of lower range, it will display "CURRENT VERY LOW"， when the two status appear to confirm the range, and select the suitable current and carry testing.

4. After the test: press "RESET", and winding device will disconnect the power supply, discharge, alarm, Ammeters back to zero, then restore status, and after the discharge alarm, re-connection, proceed the next test or unplug the test cable and end the measurement.

VIII. Guarantee and After Sales Service

The company repairs any problem due to the quality of the equipment for one year from the date you purchase our product.

We provide lifelong maintenance and technology service. If there are abnormalities or faults occur, please timely contact with us, and then we will arrange convenient and fast disposal and field service.

IX. Packing List

No.	Item	Qty
1	Main engine	1
2	Power line	1
3	Red test line	1
4	Black test line	1
5	Test sample（Standard resistance）	1