Product Name	GAOTek DC Ground Fault Locator
Product SKU	GAOTek-GFL-135
Product URL	https://gaotek.com/product/gaotek-dc-ground-fault-locator/

Contact us: sales@gaotek.com

Contents

Product Overview

Product General Use

DC resistance measurement is a must-test item in transformer manufacturing for semi-finished products and finished products factory test, installation, hanclover test and preventive test of the power department. It can effectively find manufacturing defects such as material selection, welding, loose connection parts, lack of strands, wire breakage of transformer coils, and hidden dangers after operation.

In order to meet the needs of transformer DC resistance measurement, our company recently developed a tool-based DC Ground Fault Locator. This instrument is an innovative product: small size, hand-held operation, battery powered, and easy to carry. It has the characteristics of small size, light weight, and large output current. The whole machine is controlled by a single-chip microcomputer, which automatically completes functions such as self-inspection, data processing, and display. It also has functions of automatic discharge and discharge sound alarm indication. The instrument with high measurement accuracy, simple operation, which can realize rapid measurement of transformer DC resistance.

Product Safety Considerations

* The instrument can be used indoors and outdoors, but avoid to be used in places such as rain, corrosive gas, dust and high temperature.

*Be sure to read this manual carefully before using this instrument.

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

* This instrument is a high-precision instrument, so violent vibration should be avoided.

* The repair, maintenance and debugging of this instrument should be carried out by professionals.

* After the test, turn off the power supply and remove the test line after the discharge indication is completed.

* When measuring the no-load voltage regulating transformer, be sure to wait until the discharge prompt is completed, and then switch the transformer gear.

* During the test, it is forbidden to disassemble and move the test clamp and the power supply line.

Product Information

Prominent advantage

>The instrument with high output current, is light and powerful, and easy to carry.

> The instrument provides 6 output current options, and the maximum output current is 10A.

Built-in large-capacity lithium battery, easy to operate on site, can work continuously for more than 8 hours

> Wide measurement range (0-50KQ), suitable for inductive samples such as transformers, voltage and current transformers, reactors, generators, motors, etc., and can also be used for measuring switches, copper bars, contactors, relay contacts, metal wires, cable accessories, etc.

> The instrument has the functions of perpetual calendar, 99 groups of data storage, manual temperature conversion and so on, shut down without losing data.

> The menu is simple and friendly the display data is clear and easy to read, and it can be clearly displayed in the sun.

> This instrument has an audible discharge alarm, clear discharge instructions, and reduce mis-operation.

> This machine has the characteristics of high precision,

shockproof, anti-interference, high stability, and easy to carry.

> It has perfect protection circuit, accidental disconnection of test line or power interruption, and built-in perfect discharge circuit and back EMF protection circuit to make it have strong tensile arc ability.

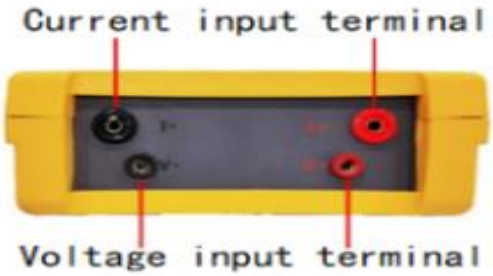
> Graphical interface, intuitive and concise, support Chinese and English switching.

Power supply mode

This instrument is powered by a large-capacity built-in lithium battery;

Appearance

In order to easily take the instrument or expose the side interface during operation, the handheld tester can be tilted, as shown in the figure below.



Technical index

Working power supply	DC： built-in 12.6V/4.8AH lithium battery (special power adapter)
Output current	5mA、100mA、300mA、1A、5A、10A
Measurement Range (Resistance range switching)	
10A	500μΩ～0.1Ω
5A	1mΩ～0.2Ω
1A	50mΩ～6Ω
300mA	100mΩ～20Ω
100mA	500mΩ～60Ω
5mA	30Ω～50kΩ
Accuracy	±(0.2%±3d)
Minimum resolution	0.1μΩ
Display	Large screen color LCD, which can be clearly displayed in the sun
Operating temperature	-10～40℃
Environment humidity	≤80%RH，no condensation.
Storage condition	-20℃~50℃，≤95%RH, no condensation.
Size	280mm×160mm×60mm
Net weight	1.8Kg (Including battery, excluding test line)

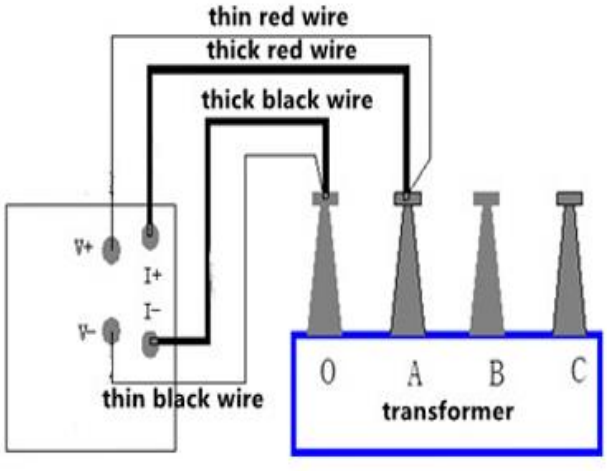
Scope Of Supply

Basic configuration:	Optional:
Handheld host: 1 set Special test line: 1 set Power adapter: 1 pc Standard resistor: 1 pc Instruction manual: 1 pc Certificate and warranty card: 1 set	

Product Test Steps

Wiring

Connect the tested product to the terminal of the instrument using the dedicated test line, and the connection is firm to prevent virtual connection. The wiring of the instrument is shown in the figure below: connect the red test wire rod to I+, the rod to V+, the test clamp to the end of the tested product, connect the black test wire rod to I-, and the rod to V-, the test clamp is clamped to the other end of the tested product.



Parameter settings

1. After connecting all the test wires, press the power switch of the instrument, and the LCD screen displays the "Main Menu" interface, as shown in the figure below.

	DC resistance test for inductive test objects such as transformer, current and voltage transformer, generator and motor.
	View each group of saved data, and export the data.
	Set the date and time of the instrument. Chinese - English interface switching.
	Factory mode requires password operation and is not open to users.

2. . Choose “Start test”, press “OK” to enter measurement interface, as below

★★★★★★ **Keys description** ★★★★★★

Measurement current	Press TAB 移动游标 Move the cursor to select the test current area, set the test current to show a blue background, and press the "up and down" arrow keys to set the 5mA, 100mA, 300mA, 1a, 5A and 10A current gears and ranges.
Compensation temperature	Press TAB 移动游标 Move the cursor to select the compensation temperature area, set the compensation temperature to show a blue background, press the "up and down" arrow keys to set: + 20 ℃, + 75 ℃ and + 120 ℃ successively, and pay attention to the suffix of copper or aluminum.
Ambient	Press TAB 移动游标 Move the cursor to select the

temperature	ambient temperature area, set the ambient temperature to show a blue background, press the "up and down" arrow keys to increase and decrease in turn to set the ambient temperature range: - 99 ℃ to + 199 ℃.
Test number	Press  Move the cursor to select the test number area, edit the test number, present the cursor symbol, press the "left and right" arrow keys to move the cursor, and press the "up and down" arrow keys to set the test number of this test.
Start/step	Press  Mover the cursor to  area, "Start/stop" show a blue background, press "ok", begin to test, the box displays a green edge  indicating "charging...", After the magnetic circuit reaches saturation and the reading is stable, the test can be stopped. Press the "OK" key to stop the test and discharge the test object automatically.

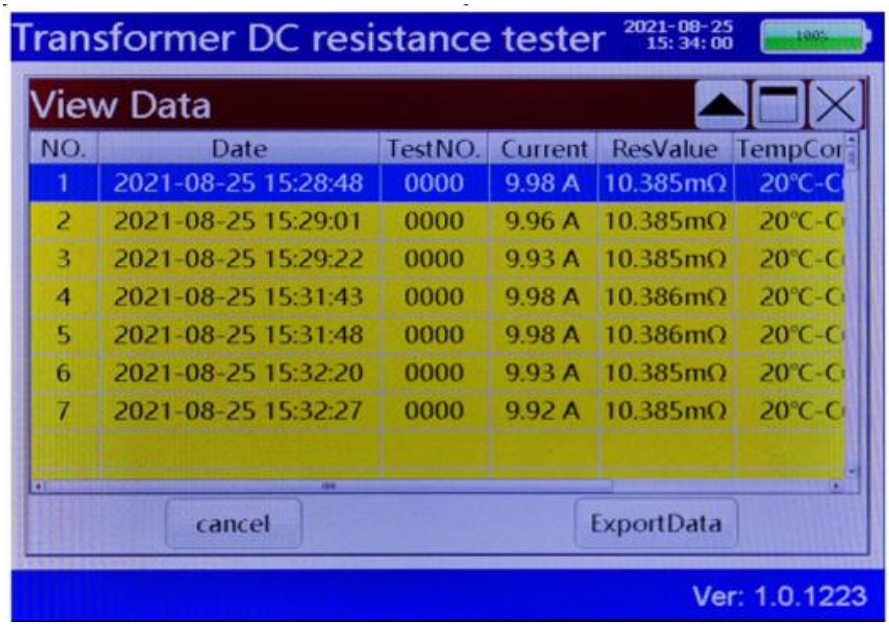
3. During the test, if the test line is detected as a fault with poor contact, the instrument will prompt IX=0 without current output; if the internal temperature is detected to be too high, a warning prompt box will pop up and the measurement will stop.

4. in the "5mA, standby interface, set the current gear button, select 100mA, 300mA, 1A, 5A, 10A", pay attention to the measurement range after the current gear, and confirm the current setting, ambient temperature, copper compensation, etc., during the test are correct, press the TAB key to move the cursor to "Start/Stop" and the instrument enters the test state.
5. When starting the test, the status will display "Charging..." After a few seconds, it will display "Testing..." At this time, it means that the charging is completed and the test state is entered. After the data is stable, the resistance value of the tested product will be displayed.
6. After the test is completed, the instrument automatically pops out the "Test Results" dialog box, move the "Left, Right" arrow keys, select "Exit (do not save data)" and "Save data", the machine automatically saves it.

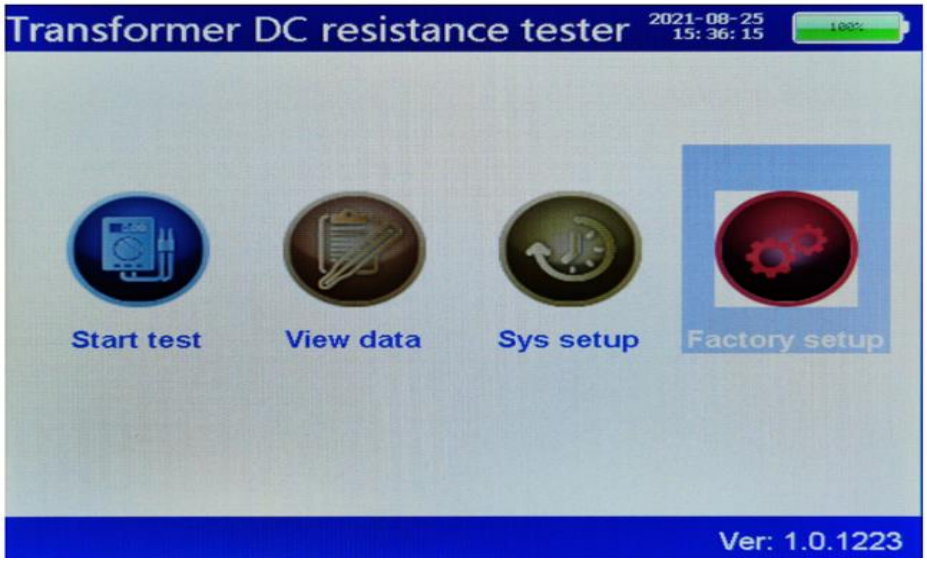
Note: If the current temperature of the sample has been entered during the setting, and "copper supplement" is selected, the instrument will automatically display the resistance value of the sample and the resistance value converted to 75°C, as shown in the figure above.

7. In the main interface, select view data and press "Enter" to enter the data browsing interface.

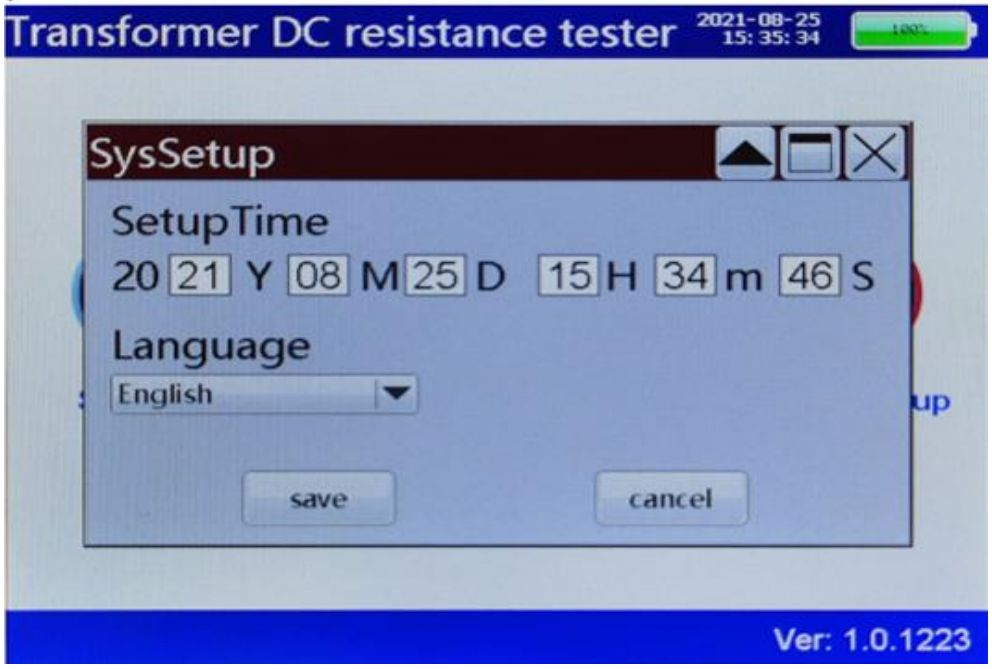
8. In this move the “left right “arrow keys select “Exit” and “ Export Data” insert the U disk, and “U disk scanning ….. appears . The instrument will export and store all data.



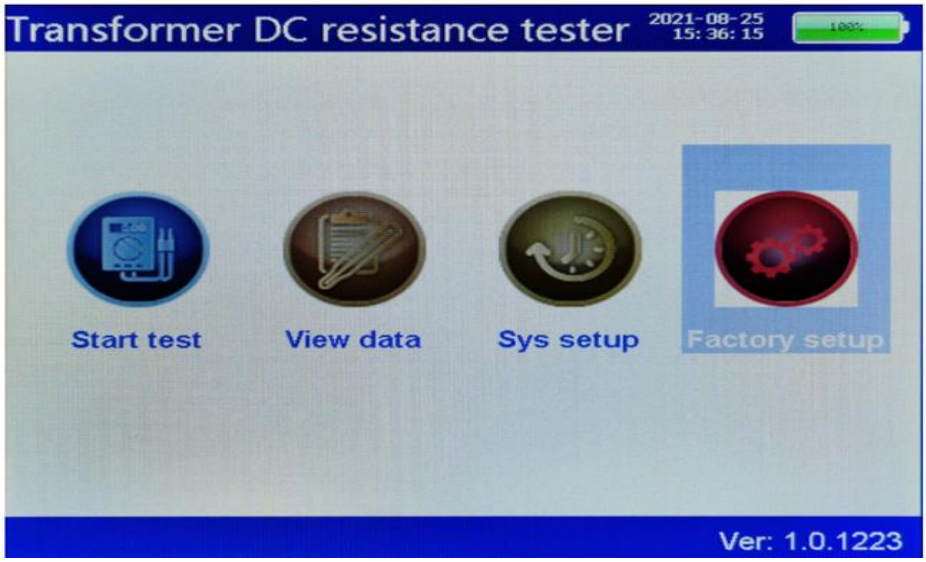
9. In the main interface, select the system settings and press the “Enter” key to enter the system settings interface.



10. In this interface, perform "time setting" and "language setting". Move the cursor by pressing the “left, right" arrow keys, and press the “up, down” arrow keys to modify the setting parameters.



11. In the main interface, select the factory setup and press the “Enter” key to enter the factory setup interface.



12.Factory mode requires password and is not open to users.

Special note: The information in this manual if changed without notice! ! !

1.1 Stop test Press the "OK" key to stop the test, the instrument power supply will be automatically disconnected from the winding, and the discharge will sound an alarm. At this time, the display screen will return to the test interface, and you can enter the test by selecting different current gear keys. After the discharge sound is completed, you can rewire for the next measurement, or remove the test line to end the measurement.

Note: if there is no operation for 15 minutes, the instrument will shut down automatically.

1.2 Instrument charging When the battery power display is insufficient, please turn off the power switch and insert the charger into the charging jack to charge. Charger charging indicator indicator turns red green, indicates it charging. indicates that When the the battery charging is complete. Do not discharge the battery excessively, otherwise it will damage the battery.

Special tips:

1. When the instrument is not used for a long time, it is recommended to charge and maintain it every other month to avoid battery self-discharge consumption and damage to the battery! 2.It is strictly forbidden to charge the instrument with a power adapter not dedicated by the company, otherwise it may cause explosion!!!

Product Precautions

- It must be reset before measuring the reverse tapping of the no-load voltage regulating transformer. After the discharge is over, the alarm sound stops before the tapping point can be switched.
- When measuring the high-voltage side resistance of the on-load __voltage-regulating transformer, start the measurement from the largest resistance range of 1 or 17.
- Be sure to wait for the alarm to stop after the discharge is over, and then remove the lines.
- When selecting current, refer to the range in the technical index column, and do not use it exceed or under range. When the range is exceeded, the current cannot reach the present value, even if the test is forced to continue, the stability of the test result is poor. Under range, the current is too small and the data is unstable for large capacity transformer. When these two states occur, confirm the measuring range and select the appropriate measuring range for testing.
- The test data is unstable or the error is large. In this case, first check the test line to see if there is any virtual connection or looseness. If it still cannot be solved, check whether the sample is corroded.
- The test happens, process first keeps eliminate displaying the “charging...", transformer magnetic if this circuit problem. If the current has not changed for a long time and stays near zero, check whether there is an open circuit.
- If the battery is insufficient during the test, you can connect the charger for emergency test.

When the above problems cannot be solved b, please contact us in time.

After-sale service

The instrument will be repaired and replaced free of charge within 12 months from the date of purchase, and will provide maintenance and technical services for life. If you find any abnormality or failure of the instrument, please contact the company in time to arrange the most convenient treatment scheme for you. The customer guarantees that the warranty be implemented within three years from the date of delivery. If the instrument will is damaged due to negligence, abuse, misuse, restructuring, wrong installation or use, it is not covered by the warranty. Reserve the right to modify the design or structure of the instrument at any time, and do not violate the relevant regulations of the sold instrument.