



**GREWIN INDUSTRIAL GROUP CO.,LTD.**

**TEL/WhatsApp: +86 18622096679**

**Mail: admin@coilwindingmachinechina.com**

**Web:www.coilwindingmachinechina.com**



## Features

- Test voltage range: 1-1000V(GW-5040A)  
1-500V(GW-5040B)
  - Insulation resistance test range: 100KΩ-10TΩ
  - Insulation resistance, leakage current dual display
  - 24-bits, 4.3-inch and 4-wire touch LCD screen
  - LCD resolution: 480\*272
  - Zero clearing function
  - Contact detection function for capacitive components
  - Fast test: 30ms
  - Programmable sequence test mode
  - 6 ranges, manual or auto range mode
  - 4-bin comparison function: 3 bins for PASS, 1 bin for FAIL
  - 20 setup files can be stored in the internal memory, support U-disk
  - Measurement data can be stored on U-disk
  - Automatically upgrade firmware by a disk
  - Selectable Chinese and English operation interfaces
  - Handler interface realizes on-line operation
  - Achieve remote control by RS232C and USB Device interface
  - Footswitch trigger function



**GW-5040A/GW-5040B**

## Brief Introduction

■ With touch, color LCD screen and unique insulation resistance/leakage current dual test function, GW-5040A/GW-5040B insulation resistance meter is an intelligent measurement instrument that is used for rapid measurements on insulating properties of electronic parts and components (especially the capacitance), dielectric material, equipments, wires, cables, etc. GW-5040A/GW-5040B is provided with sorting output and external single pulse signal input interface, making it easy for pipeline operation. The quipped communication interface can achieve the off-site operations of all functions of the instrument through microcomputer. The instrument has a powerful anti-jamming capability, which makes the measurement more reliable.

## Specifications

Model	GW-5040A	GW-5040B
Resistance test		
Test range	100kΩ-10TΩ	
Test accuracy	I>10nA :±2% I≤10nA :±5%	
Current test		
Test range	Range 1: 100uA - 1mA, internal input impedance 10kΩ	
	Range 2: 10uA - 100uA, internal input impedance 10kΩ	
	Range 3: 1uA - 10uA, internal input impedance 10kΩ	
	Range 4: 100nA - 1uA, internal input impedance 10kΩ	
	Range 5: 10nA - 100nA, internal input impedance 1MΩ	
	Range 6: 1nA - 10nA, internal input impedance 1MΩ	
Test accuracy	2%±3pA	
Test voltage		
Range	1V-1000V	1V-500V
Accuracy	Voltage≥10V: 1%±1V Voltage<10V: 10%±0.1V	
Current limit	10mA	
ON/OFF	Manually turn on or off it on front panel, or controlled by built-in timer, or by remote control	
Charge time	0-999s programmable	
Measurement delay	0-999s programmable	
Measurement speed	Fast: single measurement time≤30ms Slow: single measurement time≤60ms	
Comparator function	4 bins: 3 bins for PASS, 1 bin for FAIL	
Range mode	Auto, Hold	
Memory	Internal memory and external USB disk	
Standard interface	RS232C,USB HOST,USB DEVICE,HANDLER	

## General Specifications

Operating Temperature And Humidity	0°C - 40°C, ≤90%RH	
Power Requirements	Voltage	90-121 V AC (60Hz) or 198-242V AC (50Hz)
	Frequency	47.5Hz - 52.5Hz
Power Consumption	< 50 VA	
Dimensions (W×H×D)	235mm×104mm×360mm	
Weight	Approx.3.6kg	



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**GW-5042**

## Features

- 320×240 dot-matrix LCD
- Powerful charging function
- High speed measurement:100meas/sec
- High measurement accuracy:±2% (< 1TΩ )
- Contact detection function for capacitive components
- Measurement range:GW-5042 : 10kΩ to 50TΩ  
GW-5042A: 10kΩ to 100TΩ
- Ultra-low leakage current test: minimum current is 10pA, accuracy: 2% ±2pA
- Measurement voltage:GW-5042: 10V – 500V, dual-output  
GW-5042A:10V–1000V, single-output
- Dual outputs (precharge voltage output and test voltage output) can be set.
- The precharge voltage output can be set to follow the test voltage output and can be finely adjusted on test voltage. Also the precharge voltage can be set to work in independent mode.
- When the test current is less than 10nA, the internal input impedance can be selected between 10kΩ and 1MΩ to ensure rapid and accurate test.
- GW-5042 charge current:2mA , 25mA, 200mAselectable  
GW-5042A charge current:2mA , 25mA, 100mAselectable
- 7 current ranges, manual or auto range mode
- 4-bin comparison function
- Programmable sequence test mode
- R-T and I-T Curve test and display mode
- Auto store setup parameters
- Screen hardcopy to be saved as BMP file to a U disk
- Automatically upgrade firmware by a U disk
- Selectable Chinese and English operation interfaces
- Achieve automatic test system by Handler interface
- Achieve remote control by RS232C and USB Device interface
- Support scanning interface for mass tests

## Brief Introduction

■ GW-5042/GW-5042A High Precision IR Tester is an intelligent measurement instrument that is used for rapid measurements on IR properties of electronic parts and components, dielectric materials, equipments, cables, etc. Large LCD and user friendly menu provide you easier operation.

This instrument is especially designed for capacitor IR test GW-5042/GW-5042A can achieve rapid measurements through following methods:

1. Selectable internal input impedance: If the current is greater than 10nA, only 10kΩ input impedance can be used; if the current is below 10nA, you can choose 10kΩ or 1MΩ impedance to test.
2. With the built-in dual voltage output, GW-5042 can charge large capacitors. By dual voltage output, GW-5042 is able to output a precharge voltage up to 500V, 200mA. In voltage follow mode, precharge voltage follow with the test voltage output and can be finely adjusted. Above features ensure the perfect charge of capacitive materials.
3. GW-5042A can output a voltage of 1000V, 100mA to fully charge the capacitive material.

In addition, user can program the sequence measurement steps (up to 18 steps) on GW-5042/GW-5042A. For instance, charge, wait, test, and discharge steps can be programmed. Each step can last up to 100s. GW-5042/GW-5042A has a unique contact detection function. For capacitive material such as capacitors and cables, contact detection function can detect the contact of components under test. Moreover, this detection function will not increase any test time.

GW-5042 equips with interfaces of RS232, USB DEVICE, SCANNING and Handler. Handler interface provide convenience for automatic test system; SCANNING interface is useful for mass measurement of components. User can use a scanner to speed measurement of components.

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## Specifications

Model	GW-5042	GW-5042A
Resistance test		
Range	10 kΩ to 50TΩ	10 kΩ to 100TΩ
Accuracy	Test current > 100pA: 2% Test current ≤ 100 pA: 2% ± Vtest/2pA	
Current test		
range	Range 1 :100uA – 1mA ; Internal Input impedance 10 kΩ	
	Range 2 :10uA – 100uA ; Internal Input impedance 10 kΩ	
	Range 3 :1uA – 10uA ; Internal Input impedance 10 kΩ	
	Range 4 :100nA – 1uA ; Internal Input impedance 10 kΩ	
	Range 5 :10nA – 100nA ; Internal Input impedance 10 kΩ	
	Range 6 :1nA – 10nA ; Internal Input impedance 10 kΩ or 1MΩ (selectable)	
	Range 7 :10pA – 1nA ; Internal Input impedance 10 kΩ or 1MΩ (selectable)	
Accuracy	2% ± 2pA	
Measurement voltage		
Range	10 to 500V, 1V resolution	10 to 1000V,1V resolution
Accuracy	2% of readout, or ± 1V	
Source resistance	200Ω	
Current limit	2,25,or 200mA	2, 25 , or 100mA
Voltage Output	Manually turn on or off on front panel, or controlled by built-in timer, or by remote control.	
Timing	Programmable charge time: 0 to 1000s	
Measurement delay	0 to 1000s programmable	
Discharge resistance	2kΩ	
Discharge time	t = 0.03 x Cx (in μF), when Vtest falls to 1% of the test level.	

Measurement speed	
Trig mode	Single measurement: < 100ms(exclude charge time) Average up to 100 measurements:<100 + (N-1) x 100 ms (exclude charge)
Continuous mode	Direct readout: 100ms – 10000ms depending on average number
Comparator	4 bins:(3 bins for PASS,1 bin for FAIL)
Range mode	Auto, Hold
Average times	1 to100
Memory	20 sets of setup values can be stored.
Standard interface	GPIB, (optional); RS232C; HANDLER interface output; USBDEVICE( USBTMC and USB CDC support); USBHOST; SCANNING

## General Specifications

Operating temperature and humidity	10°C - 40°C, ≤90%RH
Power supply	90 to 130 V AC(60Hz) or 198 to 260V AC(50HZ)
Power consumption	GW-5042 : 250W GW-5042A: 150W
Dimensions (W×H×D)	430mm×400mm×130mm
Weight	GW-5042 : 14kg GW-5042A: 10kg

## Ordering Information

GW-5042 High Precision IR Tester

## Instrument Accessories

GW-5002B 2-terminal test clip leads

## Options

GW-5001 IR test fixture

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