

1. Summary

The Digital Insulation Resistance Tester series have high performance, and safe configuration and improved electrocircuit. It is one new item which has more fully function, higher precision, and easier operation. It's also one quakeproof, dustproof and dampproof tester and can fit work environment of outdoor.

The output testing voltage can be changed between 100V/250V/500V/ 1000V/2500V/5000V for different item no. The resistance can reach 200G Ω , the tester also can measure alternating voltage.

This Tester apply for all kinds of electric equipment and insulation materials such as transformer, electromotor, cable, switch, appliance, etc.


It is a perfect electrical testing meter.

2. Safety Notice

- (1) Read this Operation Manual carefully before use it.
- (2) This meter is designed in accordance with ICE

publication 1010, pollution degree II and

installation category (over voltage category) II.

- (3) Shouldn't use it before close the back lid cause of the danger of electroshock.
- (4) Check the insulation layer of the test pin lead.
- (5) Don't rotate switch when testing.
- (6) When seeing “” on the LCD, means voltage is low. Please replace battery to insure accurately testing.

3. Electric Symbols

- | | |
|---|---|
|  Important hint |  Double insulation |
|  Care for high voltage |  Low battery |
|  AC voltage |  Auto Discharge |

4. Feature

- (1) Low power consumed CMOS double integral A/D transforming IC, auto-checking to zero, auto-displaying polarity, displaying when low or over battery.
- (2) LCD: 3 1/2 digits big screen display, the max show value is 1999.
- (3) Has function of holding data and displaying signal.

- (4) Can use rotating switch when testing voltage.
- (5) Voltage below AC750V can be tested.
- (6) High voltage is on the rails when LED is on.
- (7) Displaying when low battery.
- (8) Drove by Battery not by hand.
- (9) Auto switch the range when resistance measuring.
- (10) With strong load, approx. 1.0mA output short current.
- (11) Perfect circuit protect, preventing damage by voltage shock effectively.
- (12) Size of LCD: 68×44mm (Height of character is 3.2mm).
- (13) Power: six battery 5# which is 1.5V (R6AA SUM-3).
- (14) Size of shape: 201×93×55mm.
- (15) Weight: 600g (contain battery).
- (16) Environment:

Working temperature: 0~40°C, relative humidity < 80%

Storage temperature:

-10~50°C, relative humidity < 85%

Temperature to ensure precision:

23°C ± 5°C, relative humidity < 75%

5. Technique Index

Definition: ± (% of reading + number of least

significant digits) for one year

Environment temperature: 23°C ± 5,

relative humidity < 75%

Insulation tester	1000V	2500V	5000V
Testing Rating Voltage	100V/250V/500V/1000V	250V/500V/1000V/2500V	500V/1000V/2500V/5000V
Output voltage	90-110% Testing Rating Voltage		
Scale	1MΩ~20GΩ	1MΩ~20GΩ	10MΩ~200GΩ
Minimum division	0.01MΩ		
Definition	1MΩ -200MΩ ±(3% of reading+ 5 significant digits)		
	200MΩ -10GΩ ±(5% of reading+ 5 significant digits)		
	10GΩ -200GΩ ±(10% of reading+ 5 significant digits)		
Scale of AC voltage	1-750V		
Definition	±(2% of reading+ 5 significant digits)		
Resolution	1V		
Frequency response	40-200Hz		

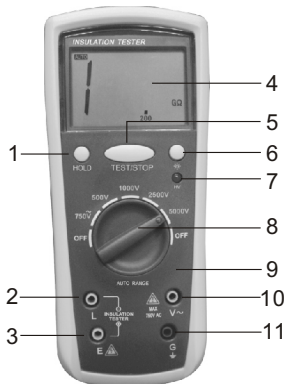
Note: When you measure the resistance is less than 5MΩ in any rating test voltage, the measuring time is not more than 10 sec

Remark: fall down resistance

Rating test voltage	fall down resistance
250V	1MΩ
500V	1MΩ
1000V	2MΩ
2500V	5MΩ
5000V	10MΩ

Explaining: Fall down resistance means lower limit value of resistance which it ensure the voltage of two extremity of measuring is less than 90% of rating test voltage)

6. Operation Sketch Map



- (1) Data holding key: Hold
- (2) LINE input terminal (Insulation)
- (3) EARTH input terminal (Insulation)
- (4) LCD
- (5) High voltage startup switch: TEST/STOP
- (6) Back light switch

- (7) High voltage indicator light
- (8) Rating Voltage rotating switch
- (9) Crust of meter
- (10) ACV Input terminal
- (11) ACV measurement G terminal/Shielded Put terminal For insulation

7. Operating specification

(1) Safety notices

a. There is a possibility of causing an accident of electric shock. After the measurement of insulation resistance is completed, be sure to discharge the high voltage charged in the measuring object.

b. There is a risk of electric shock during the measurement. Be careful not to touch the measuring terminal and measuring object during the measurement.

c. When the circuit is activated, make measurement after disconnecting the power source.


d. Make measurement within the insulation resistance measuring range, and never impress voltage from outside, or the tester will be destroyed.

e. Be sure to confirm the position of rotary switch

and the connection of measuring lead with the tester before starting the measurement.

f. When start the high voltage startup switch, there is a high voltage about 100V-5000V between L and E, must not touch the bare part of meet and object be tested cause of the danger of been shocked.

(2) AC voltage test

a.  Don't test AC 750V or high voltage. It is Dangerous!

b. Connect the measuring Leads

Insert the plug of lead with probe to measuring terminal ACV, and the plug of AC measuring lead to measuring terminal G, respectively.

c. Connect to the measuring object

Using the rotary switch select the (750V) position. Connect the test pin of lead with probe to the other side of measuring object, and the test pin of AC measuring lead to another part of measuring object.

d. Then the digital display voltage is the AC voltage of the metrical object in fact.

(3) Insulation resistance testing

a. Connection of measuring lead

Insert the big plug of lead with probe to measuring terminal L, the plug of lead with clip to measuring terminal E, and the plug of AC measuring lead with a small clip to measuring terminal G, respectively.

b. Testing lead connected

The lead with the big measuring clip is the leads connected with the earth. The lead with the high-voltage's probe is the highest-voltage leads. The lead with connecting in G socket is the shield leads meeting on the surface of the testing resource to preventing the surface leak affecting testing resistance. Using the rotary switch select the (POWER OFF) position, connect the clip of lead to the other side of measuring object, and the AC measuring lead's small clip to the surface of measuring object.

c. Rating Voltage select

Select the Rating Voltage adapt to the insulation resistance you want to test.

Turn the rotating switch to the voltage segment

needed.

D. Testing

Connect the probe to object, press the button (TEST/STOP), HV indicator light, which indicates measuring voltage happen.

After testing begins, the number displayed on LCD is the insulation value of object tested.

e. End

After the measurement completed, push down the switch of the (TEST/STOP) once more. When the red LED off, means the output testing high voltage has been cut. Turn the rotary switch to "OFF" position. If measure the contain nature load, please short the residually electric of the testing resource first before move the testing leads.

8. Maintenance

This is a precise instrument and needs careful maintenance.

a. Don't open the back lid at will. Don't use it if the back lid not fixed.

b. Take the test pin and turn off the power before replace battery. Please open the lid and fit the battery as request.

c. Take out battery and put it in the place dry and airiness if the meter will be leave unused for long-term.

d. Don't change the inner circuit at will or the meter maybe out of use.

If there is any problem, contact with us please.

9. Accessories

a. The measuring lead of the insulation tester: 1 set

b. User's manual: 1 pie

Digital Insulation Resistance Tester



Operation Manual