

# Insulation Resistance Tester



## Operation Manual

# DIGITAL MEGOHMMETER

## INSTRUMENT OPERATION MANUAL

### 1. INTRODUCTION

The digital meg-ohmmeter instrument uses lower power consumption, high change rate, inductance energy-DCV converter, change 9V-volt to DC100V/250V/500V/1000V;Also, uses digit-bridge resistance measurement for measuring electric insulation resistance. Features include:

Easy and correct readout.

Wide measurement range

High stability and reliability

LCD display for low power consumption and clear readout

Light-weight and compact construction for easy operation.

Auto power off and asleep mode

It is suitable for elevator, machine equipment, telecommunications system check work.

### 2. FRONT PANEL DESCRIPTION



1. RANGE Switch
2. L: connect test circuit input jack terminal
3. E: connect to GND of test object input jack terminal
4. LCD: display measurement data and "MW"
5. High voltage startup switch: test/stop
6. Data holding key: Hold
7. High voltage indicator light
8. Rating voltage rotating switch
9. Crust of meter
10. ACV Input terminal

11. ACV measurement terminal/shieldin put terminalfor insulation

### 3. SPECIFICATIONS

#### 3-1. GENERAL SPECIFICATIONS

1. Display : 68x44mm large window LCD with max. reading of 1999.
2. Over range indication: only the MSD "1" display.
3. Power: six battery5# which is 1.5V(R6AA SUM-3).
4. Power Consumption: unload consumption is less than 300mW.
5. Operation environment: Temperature 0°C~40°C; humidity 30%RH~85%RH.
6. Dimension: 201 x 92.8 x 53.8mm
7. Weight: 600g( contain battery)

#### 3-2. ELECTRICAL SPECIFICATIONS

Test voltage	100V $\pm$ 10%	250V $\pm$ 10%	500V $\pm$ 10%	1000V $\pm$ 10%
Range	 0.1M $\Omega$ –20M $\Omega$	0.1M $\Omega$ –20M $\Omega$	0.1M $\Omega$ –50M $\Omega$	0.1M $\Omega$ –100M $\Omega$
	 20M $\Omega$ –500M $\Omega$	20M $\Omega$ –500M $\Omega$	50M $\Omega$ –1000M $\Omega$	100M $\Omega$ –2000M $\Omega$
Accuracy	$\pm$ (4% of reading +2d)			
Short current	1.7mA			1.4mA
Median resistance	2M $\Omega$	2M $\Omega$	2M $\Omega$	5M $\Omega$

Jack position	L , E
Scale of AC voltage	1-750V
Definition	$\pm$ (2% of reading+ 5 significantdigits)
Resolution	1V
Frequency response	40-200Hz

Note: Median resistance ensures that two terminal voltage is not less than 90% of test voltage of low terminal limit value of measure resistance.

#### 4. OPERATION

1. To select test voltage (100V, 250V, 500V, 1000V) according to need.
2. To select RANGE switch according to need (see the above form).
3. Connect test object electrode to input jack terminal correspondingly.
4. When measuring cable, connect protection circle to "G" jack.
5. Press down the "PUSH" switch until display value stability and reading, then release "PUSH".
6. Connect input line "E or " to test object GND

terminal, connect L to test circuit terminal; and asks the "L" connect line to hang in the air.

7. If only the figure "1" is displayed, over range is indicated and should read from a higher range. When RANGE key is in "Down" position( i.e. in "▲" position), it means insulation resistance exceed 2000MW.

#### **5.WARNING**

1. When test voltage select key is not pressed down, it is possible to appear high voltage on output voltage jack.
2. When measuring, firstly, check whether test voltage select and test voltage remind on LCD are the same as need voltage.
3. To ensure operation safety, test object must be removed from electrified wire netting and short circuit for fully discharge.
4. To ensure reading is accurate, don't contact test terminal during measuring.
5. Keep instrument from high temperature position, avoid sunlight to affect LCD life.

6. It is necessary to replace battery when a "⚡" symbol appears on the LCD display. If store for a long time, the battery should be taken out.
7. When unload, readings are displayed. This is normal and it doesn't affect measurement.
8. During "MW" measuring, it is possible that environment interference or insulation material cause reading unstable. So user may connect "G" terminal to test object shield terminal to reading.
9. To ensure safety and decrease interference, uses SI rubber material measurement line and don't replace it as one likes.

#### **6. ACCESSORIES**

- |                                |        |
|--------------------------------|--------|
| 1. Measurement cable with clip | 1 pair |
| 2. 9V multi-layer battery      | 1 pc   |
| 3. Introduction manual         | 1 pc   |