

DIGITAL INSULATION RESISTANCE TESTER WITH PI & DAR MEASUREMENT

Model - KM 372



INTRODUCTION:

KM 372 Digital Insulating Resistance Tester + Digital Multi-meter. It has features of complete functions, high accuracy, reliability in operation, and convenience in use. Output test voltage can be switched among 50V/100V/250V/500V/1000V. It can monitor the output high voltage in a real-time way. At any time, the user can observe actual measurement voltage that is output by the meter, effectively avoiding misjudgment caused due to output voltage not conforming to the rated value. The measurement range of the meter can reach up to 20GΩ. The measurement time can be set up according to requirements. After a measurement is completed, the measured result can be kept automatically. Functions of the digital multimeter include AC/DC voltage, resistance, capacitance, frequency, diode, and ON/OFF measurement. The functions of the digital multimeter are completely separated from those of the insulating resistance tester. When use functions of the multimeter, you need not be worried that you would suffer electric shock due to high voltage generated by the insulating resistance tester. The product is applicable to measurement of the insulating resistance of various insulating materials and electric equipments such as transformers, motors, cables, switches, and electric apparatuses. It is also applicable to maintenance, test, and inspection of various electric equipments. It is compact in structure, convenient to carry, and an ideal electrical and electronic testing meter of yours.

SAFETY :

- IEC 61010 CAT IV 600V

GENERAL SPECIFICATIONS :

- **Display mode :** Liquid crystal display; maximum display : 3999 or 5999
- **Sampling rate :** 2 times per second
- The meter can display actual insulation test voltage. LED light is used to indicate high voltage output status.
- **Auto range :** "OL" will be displayed for overload in multi-meter.
- **Operating Temperature :** 0°C ~ 40°C, less than 75%RH
- **Storage Temperature :** -10°C ~ 60°C, less then 80%RH
- **Indication for insufficient battery capacity :** " " is displayed
- **Power supply :** 2 x 14500 - 3.7V Li-ion battery
- **Auto power off :** 15 minutes after it is turned on if no key is pressed or the knob is not turned. Long press HOLD to wake up in sleep mode.
- **Dimension :** Approx. 189 (L) x 89 (W) x 55 (H) mm
- **Weight :** Approx. 380g (including the battery)

Accessories : Test Lead pair, user manual, rechargeable battery & carrying case.



Preliminary Data

ELECTRICAL SPECIFICATIONS KM 372

Accuracy is ± (% reading digits + number of digits) or otherwise specified, at 23°C ± 5°C; <75% R.H.

INSULATION RESISTANCE TESTER :

Rated measurement voltage

Rated Voltage	Measurement Range	Accuracy
50 V	0.05MΩ ~ 1GΩ	± (5% + 5)
100 V	0.1MΩ ~ 2GΩ	± (5% + 5)
250 V	0.25MΩ ~ 5GΩ	0.25M ~ 399.9MΩ: ± (3% + 5)
500 V	0.5MΩ ~ 10GΩ	0.4G ~ 2GΩ: ± (5% + 5)
1000 V	1MΩ ~ 20GΩ	2.001G ~ 20GΩ: ± (10% + 5)

Display Range

Rated Voltage	Range (Auto Range)	Resolution
50 V	4M/40M/400M/1GΩ	0.001MΩ ~ 0.001GΩ
100 V	4M/40M/400M/2GΩ	0.001MΩ ~ 0.001GΩ
250 V	4M/40M/400M/4G/5GΩ	0.001MΩ ~ 0.01GΩ
500 V	4M/40M/400M/4G/10GΩ	0.001MΩ ~ 0.01GΩ
1000 V	4M/40M/400M/4G/20GΩ	0.001MΩ ~ 0.01GΩ

Characteristics of the measurement terminal

Rated Voltage	Drop Resistance	Buzzer Alarm
50 V	0.05MΩ	≤ 0.3MΩ
100 V	0.1MΩ	≤ 0.6MΩ
250 V	0.25MΩ	≤ 1MΩ
500 V	0.5MΩ	≤ 2MΩ
1000 V	1MΩ	≤ 4MΩ

Open Circuit Voltage : 90% ~ 110%
Short Circuit Current : ≥ 1mA

All Specifications are subject to change without prior notice.

ELECTRICAL SPECIFICATIONS KM 372

DC VOLTAGE

Range	Resolution	Accuracy
6 V	0.001 V	$\pm(0.5\% \text{ rdg} + 5 \text{ dgts})$
600 V	0.1 V	

Input impedance: 10M Ω

Maximum input voltage: 600V.

AC VOLTAGE

Range	Resolution	Accuracy
6 V	0.001 V	$\pm(0.8\% \text{ rdg} + 5 \text{ dgts})$
600 V	0.1 V	

Frequency range: 40Hz~1kHz

Input impedance: 10M Ω

Maximum input voltage: 600V.

Display: True-RMS (Sine wave virtual value calibration)

RESISTANCE

Range	Resolution	Accuracy
600 Ω	0.1 Ω	$\pm(0.8\% \text{ rdg} + 5 \text{ dgts})$
600 k Ω	0.1 k Ω	$\pm(0.8\% \text{ rdg} + 5 \text{ dgts})$
6 M Ω	0.001 M Ω	$\pm(1\% \text{ rdg} + 3 \text{ dgts})$
60 M Ω	0.01 M Ω	$\pm(2\% \text{ rdg} + 3 \text{ dgts})$

Overload protection: 250V RMS

CAPACITANCE

Range	Resolution	Accuracy
10 nF	0.001 nF	$\pm(3\% \text{ rdg} + 20 \text{ dgts})$
100 nF	0.01 nF	$\pm(3\% \text{ rdg} + 5 \text{ dgts})$
1 mF	0.1 μ F	$\pm(3\% \text{ rdg} + 5 \text{ dgts})$
10 mF	0.001 mF	$\pm(8\% \text{ rdg} + 10 \text{ dgts})$
100 mF	0.01 mF	$\pm(8\% \text{ rdg} + 10 \text{ dgts})$

Overload protection: 250V RMS

DIODE TEST \rightarrow

Display approximate forward voltage value of the diode.

Test Condition : Forward DC current of Approx. 0.5mA, reverse DC Voltage of Approx. 3.2V.

CONTINUITY TEST \rightarrow

When the ON resistance is less than approx. 50, the buzzer in the meter buzzes.

Test Condition : open circuit voltage of approx. 1V

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