

MD5060e



SMART MEGOHMMETER

✓ INSULATION RESISTANCE

✓ AUTO-RANGE

✓ GUARD TERMINAL

✓ RS-232 DATA OUTPUT

✓ DIGITAL & BAR-GRAPH
READING

✓ ALPHANUMERICAL
DISPLAY

✓ AUTO SWITCH-OFF

✓ IP-54 PROTECTION

✓ BUILT-IN TIMER

✓ RECHARGEABLE
BATTERY

AUTOMATED TESTS:

✓ ABSORPTION INDEX

✓ POLARIZATION INDEX

◆ STEP VOLTAGE TEST

◆ REAL TIME CLOCK

◆ BUILT-IN PRINTER

◆ 4000 READINGS MEMORY

✓ CE MARK

✓ Standard feature

◆ Extended feature

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MEGABRAS

The Megabras MD-5060e is a smart, microprocessor-controlled, 5kV insulation tester. Besides the conventional measurement of insulation resistances up to $5T\Omega$, its advanced features allow to automatically measure both the Polarization Index and Dielectric Absorption Index, thus significantly simplifying testing of transformers.

This insulation resistance tester is a portable, battery-powered equipment. Test voltage may be chosen from 500V to 5kV in 500V steps. Due to its measurement principle (actual voltage and current readings) it is a "true megohmmeter" and so the accuracy of resistance measurement is not affected by any test voltage error. Nevertheless, the High-Voltage generator is electronically stabilized with a better than 2% accuracy in open-circuit condition and for any normal operation battery voltage.

The built-in chronometer automatically counts the elapsed time since the start of measurement. Measured values are transmitted through the serial output (RS-232) and may be logged using a Lap-Top, PDA, or any data-logger for their later analysis. Optionally, the MD-5060e megohmmeter may be supplied with a built-in printer that prints values as a registration of the performed test.

Operation is very simple and user-friendly: just connect the leads, switch-on the equipment, select the test voltage and press the start button. At that moment, high voltage is applied to the sample and the chronometer starts counting the time that goes by. Then the equipment automatically selects the most suitable scale and shows the measured value in the alphanumerical display. Reading is direct, both in digital and analogue form (bar-graph).

After the first minute, the *Dielectric Absorption Index* will be available and it will be easily accessed by pressing a key. Likewise, 9 minutes later the Polarization Index will also be available after being automatically evaluated by the equipment.

Several extended features are available in the MD-5060x version: Step Voltage Test, built-in memory for up to 4000 measured values, built-in printer, real-time clock and calendar, programmable pass-fail test.

In order to guarantee the operator safety, the cabinet is made of a high-breakdown strength plastic and there are no accessible metallic parts. High security output terminals are placed in the furthest and most protected area of the equipment. A light indicator shows high-voltage presence and is switched-off when the capacities (both internal and external) are discharged up to reaching a safe value.

MD-5060 is powered using a rechargeable battery and has an automatic charger that may be connected to 100 - 240V mains supply.

The cabinet is strong and lightweight, easy to carry, impact-resistant and suitable to be used under severe weather conditions. Thus the megohmmeter supplies very reliable and accurate measurements both in laboratory and out in the field.

TEST VOLTAGES (T.V.)

500, 1000, 2500, 5000 V directly, one button selectable.
500 V to 5 kV in 500 V steps.
DC, negative.

MAXIMUM RESISTANCE READING

5 TΩ

SHORT CIRCUIT CURRENT

1,5 mA ± 0,5

TEST VOLTAGES ACCURACY

±3% of nominal test voltages on $R \geq 10G\Omega$

MEGOHMMETER BASIC ACCURACY

±5% of reading ± 3 digits
(1 MΩ to 500 GΩ at any test voltage)

ADVANCED FEATURES

Automated Polarization Index computing
Automated Dielectric Absorption Ratio computing

BUILT-IN PRINTER

Prints elapsed time, actual voltage and resistance measured each 15 seconds (offered as an optional feature in MD-5060e).

SERIAL DATA OUTPUT

RS-232 @ 4800 bps. Suitable for data collection in an external serial printer, computer or data-logger.

BUILT-IN CHRONOMETER

Shows elapsed time in mm:ss format. Count starts automatically for each measurement.

ENVIRONMENTAL PROTECTION

IP54 with closed lid.

SAFETY CLASS

Meets the requirements of IEC 61010-1/1990, IEC 61010 1/1992 amendment 2

E.M.C

In accordance with IEC 61326-1

ELECTROSTATIC IMMUNITY

In accordance with IEC 1000-4-2

ELECTRO MAGNETIC IRRADIATION IMMUNITY

In accordance with IEC 61000-4-3

POWER SUPPLY

Internal rechargeable 12 V - 2,3 Ah battery

BATTERY CHARGER

For 100 - 240 V AC mains

OPERATING TEMPERATURE RANGE

-5°C to 50°C

STORAGE TEMPERATURE RANGE

-25°C to 65°C

ALTITUDE

Up to 3000m

HUMIDITY RANGE

95% RH (non condensing)

WEIGHT

Approx. 3kg.

DIMENSIONS

274 x 250 x 124 mm

INCLUDED ACCESSORIES

- Measuring test leads, 1,80 m. (2)
- GUARD test lead, 1,80 m.
- Charger power cord.
- Operating instructions

CE MARK

MD 5060x - EXTENDED FEATURES

- Step voltage test
- Pass-fail test
- Memory for 4000 readings
- Real time clock and calendar
- Built-in printer
- Spot test
- Programmable timer



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