

# MD5060x



## INSULATION ANALYZER

- ✓ INSULATION RESISTANCE
- ✓ AUTO-RANGE
- ✓ GUARD TERMINAL
- ✓ ISOLATED RS-232 DATA PORT
- ✓ DIGITAL & BAR-GRAPH READING
- ✓ ALPHANUMERICAL DISPLAY
- ✓ AUTO POWER-OFF
- ✓ IP-54 PROTECTION
- ✓ PROGRAMMABLE TIMER
- ✓ RECHARGEABLE BATTERY
- ✓ AUTOMATED TESTS:
  - ABSORPTION INDEX
  - POLARIZATION INDEX
- ✓ STEP VOLTAGE TEST
- ✓ PROGRAMMABLE PASS-FAIL
- ✓ REAL TIME CLOCK
- ✓ BUILT-IN PRINTER
- ✓ 4000 READINGS MEMORY
- ✓ POWERFUL SOFTWARE
- ✓ CE MARK

The Megabras MD-5060x is a smart, microprocessor-controlled, 5kV insulation tester and analyzer. 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 tester is a portable, battery-powered equipment. Test voltage may be chosen from 500V to 5kV in 100V increments. Due to its measurement principle (actual voltage and current readings) 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 isolated serial output (RS-232) and are printed in the built-in printer as a registration of the performed test. Furthermore, the measured values are stored in a non-volatile internal memory. Up to 4000 measurements may be stored, to be transferred afterward to a computer running the MegaLogg2 program. This advanced software allows a further analysis of the test results, including a graphical representation and automatic report generation. The real time clock and calendar, and the sequential test number, facilitates the identification of each test, and the organization of a predictive maintenance system by trend analysis.

Some other advanced features are useful to run the most sophisticated insulation analysis. Step Voltage Test, configurable Pass-Fail and timed measurements are automatically performed, with a very simple and user-friendly setup. The measurement parameters are stored in the non-volatile memory for an easy configuration.

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-5060x 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.

# MD 5060x - TECHNICAL SPECIFICATIONS

## TEST VOLTAGES

500, 1000, 2500, 5000 V directly, one button selectable.  
500 V to 5 kV in 100 V increments.  
DC, negative.

## MAXIMUM RESISTANCE READING

5 TΩ @ 5kV

## SHORT CIRCUIT CURRENT

1,5 ± 0,5 mA

## TEST VOLTAGES ACCURACY

±3% of nominal test voltages on R ≥ 10GΩ

## MEGOHMMETER BASIC ACCURACY

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

## ADVANCED FEATURES

Automated Polarization Index calculation  
Automated Dielectric Absorption Ratio calculation  
Step Voltage Test  
Programmable Pass-Fail test

## BUILT-IN PRINTER

Prints elapsed time, actual voltage and resistance measured each 15 seconds

## BUILT-IN MEMORY

Stores up to 4000 insulation measurements

## SERIAL DATA OUTPUT

RS-232 @ 4800 bps. With optical isolation. 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.

## TIMER

Programmable timer, from 30 seconds to 30 minutes, for timed tests.

## REAL TIME CLOCK AND CALENDAR

Allows a reliable identification for each test.

## MEGALOGG2 SOFTWARE

Sophisticated but friendly, easy to use, software. Tests are represented in graphic and tabular views. With automatic report generator, including the operator's commentaries.

## 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 - 2,3Ah battery

## BATTERY CHARGER

For 100 - 240 V~ 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.
- RS-232 cable.
- MegaLogg2 software.
- Protective bag.
- Operating instructions.

## CE MARK

Subject to technical change without notice. This catalogue is not a contractual document.



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