

MD-5075x

5kV DIGITAL INSULATION TESTER

- ✓ MICROPROCESSOR-CONTROLLED
- ✓ INSULATION RESISTANCES UP TO $5T\Omega$
- ✓ AUTO-RANGE
- ✓ DIGITAL & BAR-GRAPH READING
- ✓ AUTOMATED TESTS:
 - ABSORPTION INDEX
 - POLARIZATION INDEX
 - CAPACITANCE
 - LEAKAGE CURRENT
 - AC/DC VOLTMETER
- ✓ CHRONOMETER UP TO 90 MINUTES
- ✓ SWITCHABLE FILTER TO REMOVE EXTERNAL NOISE INTERFERENCE
- ✓ STEP VOLTAGE TEST
- ✓ REAL TIME CLOCK AND CALENDAR
- ✓ BUILT-IN PRINTER
- ✓ 4000 READINGS MEMORY
- ✓ ISOLATED RS-232 DATA PORT
- ✓ SOFTWARE FOR DATA MANAGEMENT
- ✓ RECHARGEABLE BATTERY



The digital megohmmeter model **MD-5075x** is Megabras' cutting edge insulation analyzer equipment and it is one of the most complete and sophisticated available in the international market. A powerful software allows for further analysis of tests results, including features such as graphical representation and automatic report generation. Its proven technology provides safe, reliable and accurate measurements of insulation resistances up to $5T\Omega$, with 4 pre-selected test voltages, 500V - 1kV - 2.5kV - 5kV. Other test voltages may be selected in steps of 25V, 100V or 500V.

A state-of-the-art microprocessor controls the equipment operation and enables the incorporation of advanced features which make measurements easier: auto-range selection, 4000 readings memory, AC/DC voltmeter, automatic measurement of Absorption Index and Polarization Index, leakage current and capacitance measurement, timer enabling programming of test duration, configurable Pass-Fail test, Step voltage test, built-in printer, real time clock and calendar.

Built-in chronometer, indicating elapsed time, in minutes and seconds, since the test started, up to 90 minutes.

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 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.

MD-5075x 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 5075x - TECHNICAL SPECIFICATIONS

TEST VOLTAGES

500V - 1kV - 2.5kV - 5kV directly, one button selectable.
500V to 5kV in 25V, 100V or 500V steps.
DC, negative.

MAXIMUM RESISTANCE READING

5TΩ @ 5kV

DC VOLTMETER

30V up to 600Vdc
Accuracy: ±(5% of reading + 3 digits)

AC VOLTMETER

30V up to 600V r.m.s.
Accuracy: ±(5% of reading + 3 digits)

OVERVOLTAGE CATEGORY

CAT. III - 600V

LEAKAGE CURRENT MEASUREMENT

1nA up to 1500nA
±(10% of reading + 3 digits)

CAPACITANCE MEASUREMENT

50nF up to 10μF @ 500V
50nF up to 5μF @ 1.000V
30nF up to 2μF @ 2.500V
30nF up to 1μF @ 5.000V

Accuracy: ±10% of reading ± 3 digits

SHORT CIRCUIT CURRENT

Max. 2mA

TEST VOLTAGES ACCURACY

± 3% of nominal test voltages on 10GΩ

MEGOHMMETER BASIC ACCURACY

± 5% of reading 1MΩ to 1TΩ @ 5kV
± 20% of reading 1TΩ to 5TΩ @ 5kV
(for lower test voltages, the upper limit will be reduced proportionally)
± 20% of reading 10kΩ to 100kΩ
± 10% of reading 100kΩ to 1MΩ

ADVANCED FEATURES

- Automated Polarization Index calculation
- Automated Dielectric Absorption Ratio calculation
- Programmable Pass-Fail test
- Step Voltage Test
- 4000 readings memory
- Switchable filter to remove external noise interference

BUILT-IN PRINTER

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

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.

MEGALOGG2 SOFTWARE

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

ENVIRONMENTAL PROTECTION

IP-54 (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

ELECTRO MAGNETIC IRRADIATION IMMUNITY

In accordance with IEC 61000-4-3

ELECTROSTATIC IMMUNITY

In accordance with IEC 1000-4-2

POWER SUPPLY

Internal rechargeable 12V - 3Ah Ni-MH battery

BATTERY LIFE (OPTIONAL)

Approx. 8 hours of test.

BATTERY CHARGER

For 100 - 240V~ mains

OPERATING TEMPERATURE RANGE

-5°C to 50°C

STORAGE TEMPERATURE RANGE

-25°C to 65°C

HUMIDITY RANGE

95% RH (non condensing)

ALTITUDE

Up to 3000m

WEIGHT

Approx. 4,3kg.

DIMENSIONS

340 x 295 x 152mm

INCLUDED ACCESSORIES:

- 2x1.8m Measuring test leads (25kV insulation).
- 1x1.8m GUARD test lead.
- Charger power cord.
- RS-232 cable.
- Protective bag.
- Operating instructions.
- MegaLogg2 software.
- 10 printer paper rolls

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