

# MD 10KV<sub>x</sub>

## 10kV DIGITAL INSULATION TESTER

- ✓ MICROPROCESSOR-CONTROLLED
- ✓ INSULATION RESISTANCES UP TO 10TΩ
- ✓ AUTO-RANGE
- ✓ DIGITAL & BARGRAPH 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
- ✓ USB INTERFACE
- ✓ SOFTWARE FOR DATA MANAGEMENT
- ✓ RECHARGEABLE BATTERY



The digital insulation tester model MD-10KV<sub>x</sub> 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 10TΩ, with 4 pre-selected test voltages, 500V - 1kV - 5kV - 10kV. 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, 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 USB interface 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.

The MD-10KV<sub>x</sub> 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.

# MD10KVx - TECHNICAL SPECIFICATIONS

## TEST VOLTAGES

500V - 1kV - 5kV - 10kV directly, one button selectable.  
500V to 10kV in 25V, 100V or 500V steps.  
DC, negative.

## MAXIMUM RESISTANCE READING

10 TΩ @ 5 kV up to 10 kV.  
5 TΩ @ 1 kV up to 4,99 kV.  
1 TΩ @ 525 V up to 999 V.  
500 GΩ @ 500 V.

## DC VOLTMETER

15V up to 600Vdc.  
Accuracy:  $\pm(5\%$  of reading + 3 digits).

## AC VOLTMETER

15V up to 600V r.m.s.  
Accuracy:  $\pm(5\%$  of reading + 3 digits).

## OVERVOLTAGE CATEGORY

CAT. III - 600V.

## LEAKAGE CURRENT MEASUREMENT

1nA up to 1500μA  $\pm(10\%$  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.  
30nF up to 680nF @ 10,000V.

Accuracy:  $\pm 10\%$  of reading  $\pm 3$  digits.

## SHORT CIRCUIT CURRENT

Max. 2mA.

## TEST VOLTAGES ACCURACY

$\pm 3\%$  of nominal test voltages on 10GΩ.

## MEGOhmmeter BASIC ACCURACY

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

## DATA OUTPUT

USB

## 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

IP54 (with closed lid).

## SAFETY CLASS

In accordance with IEC 61010-1.

## 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 61000-4-2.

## POWER SUPPLY

Internal rechargeable battery 12 V - 6Ah.

## BATTERYCHARGER

AC adapter 12 - 2A.  
(Input 90 - 260V~ 45-65Hz).

## OPERATING TEMPERATURE RANGE

-5°C to 50°C.

## STORAGE TEMPERATURE RANGE

-25° to 70°C.

## HUMIDITYRANGE

95% RH (non condensing).

## EQUIPMENT WEIGHT

Approx. 6.3kg.

## DIMENSIONS

406 x 330 x 174mm.

## INCLUDED ACCESSORIES

- 2 Measuring test leads
- 1 GUARD test lead
- 1 AC adapter
- 1 USB cable
- 1 Protective bag
- 1 User guide
- 1 MegaLogg2 software

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



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