

Digital insulation tester

MD5060x



Illustrative image

Features

- Insulation resistances up to 5 TΩ
- Automated tests: absorption index, polarization index
- Programmable pass-fail
- Real time clock
- Auto-range
- Guard terminal
- Digital & bar-graph reading
- Alphanumerical display
- Programmable timer
- Auto power-off
- Built-in printer
- USB interface
- Internal memory for 4,000 measured values
- Software for data management
- Powered by rechargeable LFP battery
- IP65 protection

LFP Rechargeable battery

Expected lifetime

2000 charge / discharge cycles (average).

Low self-discharge

When the equipment is not in use, battery charge decreases with time at a much lower rate than other battery technologies.

Safety

In contrast to other lithium battery technologies commonly used, LFP batteries are thermally and chemically stable, significantly improving battery safety.

Description

The MEGABRAS **MD5060x** is a smart, 5 kV insulation tester and analyzer. Besides the conventional measurement of insulation resistances up to 5 TΩ, 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, rechargeable battery-powered equipment. Test voltage may be chosen from 500 V to 5 kV in 100 V increments. Due to its measurement principle (actual voltage and current readings) the accuracy of resistance measurement is not affected by any test voltage error.

The built-in chronometer automatically counts the elapsed time since the start of measurement. 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 4,000 measured values may be stored, to be transferred afterward to a computer running the MegaLogg 3 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.

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. 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. 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.

MD5060x is powered using a rechargeable LFP battery. The cabinet is strong and lightweight, easy to carry, impact-resistant and suitable to be used under severe weather conditions. Thus the instrument supplies very reliable and accurate measurements both in laboratory and out in the field.

Technical specifications

ELECTRICAL	
MD5060x	
Test voltage	500 V, 1000 V, 2500 V, 5000 V directly, one button selectable. 500 V to 5 kV in 100 V or 500 V increments. DC, negative.
Test voltage accuracy	± 3 % of nominal test voltages on 10 GΩ
Maximum resistance reading	5 TΩ @ 5 kV
Equipment basic accuracy	± 5 % of reading from 1 MΩ up to 1 TΩ ± 20 % of reading from 1 TΩ up to 5 TΩ
Short circuit current	1.5 ± 0.5 mA
FEATURES	
Measuring modes	Manual, Timed, "Pass / Fail", Step Voltage Test, Polarization Index and Dielectric Absorption Index
Filter function	Minimizes interference in resistance measurements
Built-in chronometer	Shows elapsed time in mm:ss format. Count starts automatically for each measurement
Display	Alphanumeric LCD display, 4 lines / 20 characters (Big Number)
Built-in printer	Prints elapsed time, actual voltage and resistance measured each 15 seconds.
Built-in memory	Capacity to store up to 4,000 measured values
Communication	USB
STANDARDS	
Overvoltage protection	CAT III - 600 V
Safety class	IEC 61010-1
EMC	IEC 61326-1
Electrostatic immunity	IEC 61000-4-2
Electromagnetic irradiation immunity	IEC 61000-4-3

SOFTWARE	
Desktop (PC/Notebook)	Megalogg 3 software: to transfer the data stored in the equipment's memory, analyze it and generate test reports
ENVIRONMENTAL	
IP rating	IP65 (with closed lid)
Operating temperature	-10 °C to 50 °C
Storage temperature	-25 °C to 70 °C
Humidity range	95 % RH (non condensing)
POWER SUPPLY	
Rechargeable battery	LFP, 12 V - 3000 mAh
Battery charger	AC Adapter (12 V - 2 A)
MECHANICAL (OF THE INSTRUMENT)	
Weight	Approx. 3.6 kg
Dimensions	274 x 250 x 124 mm

Included accessories

- 2x Measuring test lead
- GUARD test lead
- AC adapter
- USB cable
- User manual
- MegaLogg 3 software (download)
- Carrying bag

Global Presence

MEGABRAS equipment are used in more than 40 countries around the world



Test & Measurement equipment

- Digital transformer ratiometer
- Earth ground testers
- Hipots
- Insulating glove tester
- Insulation testers
- Kilovoltmeters
- Micro-ohmmeters
- Power quality analyzers
- Vibration meter



MEGABRAS IND. ELETRÔNICA LTDA.

Rua Gibraltar, 172 - Santo Amaro
CEP 04755-070 - São Paulo - SP
Brazil

For more information

Phone : +55 (11) 3254-8111 / 5641-8111
Fax : +55 (11) 5641-9755
E-mail : megabras@megabras.com
Site : www.megabras.com