



MD5075_x

- Insulation resistances up to 5 TΩ
- 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 measured values memory
- USB interface
- Software for data management
- Rechargeable battery

Description

The digital insulation tester model **MD5075x** is one of **TENTECH**'s cutting edge insulation analyzer equipment and it is one of the most complete and sophisticated available in the international market. A 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 5 TΩ, with 4 pre-selected test voltages, 500 V - 1 kV - 2.5 kV - 5 kV. Other test voltages, from 250 V up to 5 kV, may be selected in steps of 25 V, 100 V or 500 V.

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 measured values 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 to be transferred afterward to a computer running the **T-Logger** 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 **MD5075x** 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 insulation tester supplies very reliable and accurate measurements both in laboratory and out in the field.

MD 5075x

Technical specifications

TEST VOLTAGES

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

MAXIMUM RESISTANCE READING

5 TΩ @ 1 kV up to 5 kV.
1 TΩ @ 500 V up to 1 kV.
500 GΩ @ 250 V up to 500 V.

DC VOLTMETER

10 V up to 1000 Vdc. Accuracy: ±(5% of reading + 3 digits).

AC VOLTMETER

10 V up to 1000 Vrms. Accuracy: ±(5% of reading + 3 digits).

OVERVOLTAGE CATEGORY

CAT III - 600 V.

LEAKAGE CURRENT MEASUREMENT

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

CAPACITANCE MEASUREMENT

50 nF up to 10 μF @ 500 V.
50 nF up to 5 μF @ 1,000 V.
30 nF up to 2 μF @ 2,500 V.
30 nF up to 1 μF @ 5,000 V.
Accuracy: ±10% of reading ± 3 digits.

SHORT CIRCUIT CURRENT

Max. 3 mA.

TEST VOLTAGES ACCURACY

± 3% of nominal test voltages on 10 GΩ.

EQUIPMENT BASIC ACCURACY

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

ADVANCED FEATURES

- Automated Polarization Index calculation.
- Automated Dielectric Absorption Ratio calculation.
- Programmable Pass-Fail test.
- Step Voltage Test.
- 4000 measured values 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.

ENVIRONMENTAL PROTECTION

IP65 (with closed lid).

SAFETY CLASS

In accordance with IEC 61010-1.

E.M.C.

In accordance with IEC 61326-1.

ELECTROMAGNETIC IRRADIATION IMMUNITY

In accordance with IEC 61000-4-3.

ELECTROSTATIC IMMUNITY

In accordance with IEC 61000-4-2.

POWER SUPPLY

Internal rechargeable battery (LiFePO4 12 V - 6000 mAh).

BATTERY CHARGER

12 V - 2 A.

OPERATING TEMPERATURE RANGE

23°F to 122°F (-5°C to 50°C).

STORAGE TEMPERATURE RANGE

-13°F to 158°F (-25°C to 70°C).

HUMIDITY RANGE

95% RH (non condensing).

WEIGHT

Approx. 9.48 lb (4.3 kg).

DIMENSIONS

13.39" x 11.62" x 5.98" (340 x 295 x 152 mm).

INCLUDED ACCESSORIES

- 2 Measuring test leads
- 1 GUARD test lead
- 1 AC Adapter
- 1 USB cable
- 1 Protective bag
- 1 User guide
- 1 T-Logger software



Rechargeable battery (LiFePO4)

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.