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## MD5KVR



- Microprocessor-controlled
- Insulation resistances up to 5 TΩ
- Auto-range
- Automated tests: Absorption index, Polarization index, Capacitance, Leakage current and AC/DC voltmeter
- IP65 protection
- Switchable filter to remove external noise interference
- Real time clock and calendar
- Built-in printer, internal memory for up to 16,000 measured values
- Software for data management



## Description

The digital insulation tester model **MD5KVR** is 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 preselected test voltages, 500 V - 1 kV - 2,5 kV - 5 kV. Other test voltages, from 50 V to 5 kV, can be selected in 25 V or 500 V steps.

A state-of-the-art microprocessor controls the equipment operation and enables the incorporation of advanced features which make measurements easier: auto-range selection, AC/DC voltmeter, automatic measurement of absorption index, polarization index, leakage current and capacitance, timer enabling programming of test duration, configurable pass-fail test, dielectric discharge, ramp test, step voltage test, built-in printer, real time clock and calendar.

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 16,000 measured values may be stored 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 **MD5KVR** is powered by 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 megohmmeter supplies very reliable and accurate measurements both in laboratory and out in the field.



### Remote Control App

This instrument has Bluetooth® interface and can be controlled remotely via an Android™ smartphone / tablet running the Remote Control App.



• Android™ and Google Play™ Store are trademarks of Google, Inc.  
• Bluetooth® is a registered trademark of the Bluetooth SIG, Inc. worldwide.

(1) Android device not included.

(2) This is an estimation based on data provided by battery manufacturers and cannot be guaranteed. Warranty period for LFP batteries is the same as the warranty period of the equipment itself.



### Rechargeable battery (LiFePO4)

**Expected lifetime:** 2000 charge / discharge cycles<sup>2</sup> (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.

## MD 5KVR

### Technical specifications

#### TEST VOLTAGE

500 V - 1 kV - 2.5 kV - 5k V directly, one button selectable.

50 V to 5 kV in 25 V or 500 V steps. DC, negative.

#### MAXIMUM RESISTANCE READING

5 TΩ @ 5 kV.

250 GΩ @ 250 V.

#### DC VOLTMETER

15 V up to 1,000 Vdc.

Accuracy: ± (5% of reading + 3 digits).

#### AC VOLTMETER

15 V up to 1,000 V r.m.s.

Accuracy: ±(5% of reading + 3 digits).

#### OVERVOLTAGE CATEGORY

CAT. III - 600 V.

#### LEAKAGE CURRENT MEASUREMENT

1 nA up to 3,000 μA.

Accuracy: ±(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.

#### INSULATION TESTER BASIC ACCURACY

± 5% of reading from 1 MΩ to 1 TΩ @ 5 kV.

± 20% of reading from 1 TΩ to 5 TΩ @ 5 kV.

(for lower test voltages, the upper limit will be reduced proportionally).

± 20% of reading ± 5 digits 10 from kΩ to 100 kΩ.

± 10% of reading ± 5 digits 100 from kΩ to 1 MΩ.

#### ADVANCED FEATURES

- Ramp test.
- Dielectric discharge.
- Step voltage test.
- Automated polarization index calculation.
- Automated dielectric absorption ratio calculation.
- Programmable pass-fail test.
- 16,000 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

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 (LiFePO4 12 V - 6,000 mAh).

#### BATTERY CHARGER

12 V - 2 A.

#### OPERATING TEMPERATURE RANGE

-5°C to 50°C.

#### STORAGE TEMPERATURE RANGE

-25°C to 70°C.

#### HUMIDITY RANGE

95% RH (non condensing).

#### EQUIPMENT WEIGHT

Approx. 4.3 kg.

#### DIMENSIONS

345 x 272 x 159 mm.

### Included accessories

- 3 Measuring test leads.
- 1 USB cable.
- 1 AC adapter.
- 1 Protective bag.
- 1 T-Logger software.
- 1 User guide.

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