

INS-6005kV 5kV DIGITAL INSULATION TESTER

tinsley
PRECISION INSTRUMENTS

OVERVIEW

The digital insulation tester model INS-6005kV is one of Tinsleys' 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 $5T\Omega$, 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, 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.

INS-6005kV is powered using a rechargeable 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.



KEY FEATURES

- ➔ Micro-processor controlled
- ➔ Insulation resistances up to $5T\Omega$
- ➔ 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
- ➔ High voltage indicator
- ➔ Automatic discharge of potential

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SPECIFICATIONS

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|-----------------------------|--|---------------------------------------|---|
| TEST VOLTAGES | 500V - 1kV - 2.5 kV - 5 kV directly, one button selectable. 500 V to 5 kV in 25 V, 100 V or 500 V steps. DC, negative. | DATA OUTPUT | USB |
| MAXIMUM RESISTANCE READING | 5 TΩ @ 5 kV. | BUILT-IN CHRONOMETER | Shows elapsed time in mm:ss format. Count starts automatically for each measurement. |
| DC VOLTMETER | 10V up to 1,000 Vdc. Accuracy: ±(5% of reading + 3 digits). | MEGALOGG2 SOFTWARE | Friendly, easy to use software. Tests are represented in graphic and tabular views. With automatic report generator, including the operator's commentaries. |
| AC VOLTMETER | 10V up to 1,000 V r.m.s. Accuracy: ±(5% of reading + 3 digits). | ENVIRONMENTAL PROTECTION | IP54 (with closed lid). |
| OVERVOLTAGE CATEGORY | CAT. III - 600V. | SAFETY CLASS | In accordance with IEC 61010-1. |
| LEAKAGE CURRENT MEASUREMENT | 1nA up to 3mA. ±(10% of reading + 3 digits). | E.M.C. | In accordance with IEC 61326-1. |
| CAPACITANCE MEASUREMENT | 50nF up to 10μF @ 500V. 50nF up to 5μF @ 1,000V. 30 nF up to 2μF @ 2,500V. 30 nF up to 1μF @ 5,000V. Accuracy: ±10% of reading ± 3 digits. | ELECTRO MAGNETIC IRRADIATION IMMUNITY | In accordance with IEC 61000-4-3. |
| SHORT CIRCUIT CURRENT | Max. 3 mA. | ELECTROSTATIC IMMUNITY | In accordance with IEC 61000-4-2. |
| TEST VOLTAGES ACCURACY | ± 3% of nominal test voltages on 10GΩ. | POWER SUPPLY | Internal rechargeable battery (LiFePO4 12.8 V - 6000 mAh). |
| EQUIPMENT BASIC ACCURACY | ± 5% of reading 1MΩ to 1TΩ @ 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 10kΩ to 100kΩ. ± 10% of reading 100 kΩ to 1 MΩ. | BATTERY CHARGER | 12 V - 2 A. |
| 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. | OPERATING TEMPERATURE RANGE | -5°C to 50°C. |
| BUILT-IN PRINTER | Prints elapsed time, actual voltage and resistance measured each 15 seconds. | STORAGE TEMPERATURE RANGE | -25°C to 65°C. |
| | | HUMIDITY RANGE | 95% RH (non condensing). |
| | | WEIGHT | Approx. 4.3kg. |
| | | DIMENSIONS | 340 x 295 x 152mm. |
| | | 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. |

All information provided by Tinsley in this datasheet is believed to be accurate. Tinsley reserves the right to discontinue and change specifications and prices at any time without prior notice. For further details, please refer to our website www.tinsley.co.uk