

INS-5005KV

5 kV - DIGITAL INSULATION TESTER

The INS-5005KV measure insulation resistances up to 5 TΩ, automatically measure both the Polarization Index and Dielectric Absorption Index, thus significantly simplifying testing of transformers.

tinsley
PRECISION INSTRUMENTS

OVERVIEW

The INS-5005KV 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. Nevertheless, the High-Voltage generator is electronically stabilized with a better than 2% accuracy in open-circuit condition and for any normal operation battery voltage.

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 4000 measured values may be stored, to be transferred afterward to a computer running the TINSLEY SOFTWARE program. This advanced 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.



KEY FEATURES

- 5 kV Insulation analyzer
- Auto-range
- Guard terminal
- Automated tests:
 - Absorption Index
 - Polarization Index
- Real time clock
- Internal memory for 4,000 measured values
- USB Interface
- Programable pass-fail
- Built-in printer

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TEST VOLTAGES

500 V, 1000 V, 2500 V, 5000 V directly, one button selectable.
500 V to 5 kV in 100 V increments.
DC, negative.

MAXIMUM RESISTANCE READING

5 T Ω @ 5 kV.

SHORT CIRCUIT CURRENT

1.5 \pm 0.5 mA.

TEST VOLTAGES ACCURACY

\pm 3% of nominal test voltages on R \geq 10 G Ω .

EQUIPMENT BASIC ACCURACY

\pm 5% of reading \pm 3 digits.
(1 M Ω to 500 G Ω at any test voltage).

ADVANCED FEATURES

Automated Polarization Index calculation.
Automated Dielectric Absorption Ratio calculation.
Programmable Pass-Fail test.
Programmable Timer.

BUILT-IN PRINTER

Prints elapsed time, actual voltage and resistance measured
each 15 seconds.

BUILT-IN MEMORY

Stores up to 4000 measured values.

INTERFACE

USB.

BUILT-IN CHRONOMETER

Shows elapsed time in mm:ss format. Count starts automatically
for each measurement.

REAL TIME CLOCK AND CALENDAR

Allows a reliable identification for each test.

ENVIRONMENTAL PROTECTION

IP54 with closed lid.

SAFETY CLASS

Meets the requirements of IEC 61010-1.

E.M.C.

In accordance with IEC 61326-1.

ELECTROSTATIC IMMUNITY

In accordance with IEC 61000-4-2.

ELECTROMAGNETIC IRRADIATION IMMUNITY

In accordance with IEC 61000-4-3.

POWER SUPPLY

Internal rechargeable battery (LiFePO4 12 V - 3000 mAh) or
AC Adapter.

BATTERY CHARGER

12 V - 2.0 A (AC Adapter)

OPERATING TEMPERATURE RANGE

-5°C to 50°C.

STORAGE TEMPERATURE RANGE

-25°C to 65°C.

HUMIDITY RANGE

95% RH (non condensing).

WEIGHT

Approx. 2.7 kg.

DIMENSIONS

274 x 250 x 124 mm.

INCLUDED ACCESSORIES

2 Measuring test leads 1.8 meters
1 GUARD test lead 1.8 meters
1 AC Adapter
1 USB cable
1 Tinsley Software
1 User guide
1 Carrying bag

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