

# 5KV Surge Comparison Tester

## Model 7005K

*The latest Surge Comparison Tester is Lightweight and has many advanced features.*



### Reliable and Cost Effective

The 7005K Surge Comparison tester designed by Jabbals is the most comprehensive tester to check the quality of electrical windings. This instrument is highly reliable, accurate and cost-effective. It is extremely versatile and a valuable tool to easily test the motors in the motor shop or field. As with a new enhanced feature of DSO interface it can easily store the test results that can be printed when required. This Surge tester has been widely appreciated by motor manufacturers worldwide and has immensely improved the quality of the LT motors in the industry.

*The Latest 7000 Series Surge Tester has added a new dimension to the testing of Insulation strength of electric motors.*

## Principle of Surge Comparison Tester

The Surge Comparison tester checks the strength of ground insulation that consists of enameled insulation. It detects the insulation failures such as turn-to-turn shorts, layer-to-layer shorts, coil-to-coil shorts, winding-to-winding shorts, and phase-to-phase shorts. Open circuit and ground detection are other benefits of surge testing.

The Surge tester uses the principle of impedance balance to test the quality of electrical windings. The Surge tester works as a capacitive-discharge system. A capacitor is charged with high voltage and then discharged into the winding, through a solid state assembly. This sequence is repeated thus stressing the insulation of the winding with high voltage pulses.

The resulting voltage decay pattern of two winding is then displayed on the CRT. The waveform pattern will be perfectly superimposed for good windings but in case of a defective winding a double wave pattern will appear on the screen as one wave pattern from the good winding plus the erratic pattern from the faulty winding.

Surge Test Voltage to be applied =  $\sqrt{2} \times (2 \times E + 1000)$   
where E is the operating voltage of the rotating machine

## Benefits

- User friendly front panel controls
- Lightweight, compact, rugged and solid state design
- Highly sensitive fault detection capability - It detects even a single turn short in the coil
- Test leads insulated to 45KV rating
- Leads energized warning indicator
- Bright sharp CRT display to analyze the faults easily
- 1phase/3phase Test Select Switch

## Applications

This tester is widely used for testing newly and rewind motors. It helps in finding and predicting the faults in motors before it actually happens.

This tester is extremely portable that can be easily used in the motor shop and in field to test the following :

- 1 $\phi$  & 3 $\phi$  windings
- LT coils
- AC,DC motors
- Stators
- Transformer coils
- Solenoids & Chokes

## Test Specifications

Model	7005K
Max Surge Voltage	5000V
Max Pulse Current	330A
Max Pulse Energy	1.0J
Display	CRT(100x80mm)
CRT Vertical Sensitivity	
■ 250V/DIV	■ 1000V/DIV
■ 500V/DIV	■ 2000V/DIV
Sweep	Variable
Surge Frequency	50Hz $\pm$ 3%
Operating Voltage	230V $\pm$ 10%
Power Consumption	130W
Weight	40lbs
Physical Dimensions	
Width	380mm
Depth	490mm
Height	210mm

## Optional Features

- Open Input source Ground indicator
- PC Compatible to store, recall and print waveforms

## Related Products

- Surge Tester with DC Hi-Pot test 7005KHP
- Surge Tester with Bar-to-Bar test 7005KAT
- Automatic Surge Tester with Go/No-Go test 7005AN
- Automatic Surge Tester with H.V Flash test 7005ANH

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