



# SIVANANDA ELECTRONICS

## Digital Surge Comparison Tester

Model :DST-05



### Reliable and Cost Effective

The Digital Surge Comparison tester designed by Sivananda Electronics 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.

## 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 DSO. 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
- 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 DSO display to analyze the faults easily
- 1phase/3phase Test Select Switch

## Related Products

- Surge Tester with DC Hi-Pot test
- Million Megohm Meter Model-LS-3C
- Microhm Meter Model-LS-22DM
- Breakdown Tester Model-HVO-5

## Test Specifications

Model	DST-05
Max Surge Voltage	5000V
Max Pulse Current	330A
Max Pulse Energy	1.0J
Display	DSO
Surge Frequency	50Hz $\pm$ 3%
Operating Voltage	230V $\pm$ 10%
Power Consumption	130W
Weight	40Kg
Physical Dimensions	
Width	550mm
Depth	550mm
Height	550mm

## 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

Over 200 types of test equipments for Power, Wire & Cable, Capacitor, Oil & Petroleum Industries Developed by in house R&D Lab, recognised by Department of Science & Technology Equipments Expored to over 70 Countries

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