



*INSTRUCTION MANUAL
FOR
BREAKDOWN TESTER
MODEL – 25 KV AC/DC, 10 mA*

CONTENTS.

- 1) GENERAL
- 2) INTRODUCTION
- 3) TECHNICAL SPECIFICATION.
- 4) OPERATING CONTROLS AND INDICATION.
- 5) OPERATING PROCEDURE
- 6) DRAWINGS



GENERAL

Some twenty years ago we committed ourselves to fill up the void in indigenous production – oriented test equipments for our fast growing electronics and electrical industry, which was then dependent on costly imported equipments. Even the simplest of the equipments were being imported with the omnipresent menace of servicing problem.

True to our commitment over the years dedicated and hard-core professionals at Sivananda Electronics have come out with a wide range of test equipments to cater to the needs of the Indian Electronics and Electrical Components Industry. The types of equipment ranges from simple but vital equipments to the most sophisticated equipments using the latest state of the art technology.

Prime design criteria and production orientation, speed, accuracy, ease of operation and suitability for diverse climatic conditions and technical level of manpower leading to an ever-growing list of satisfied customers, shows that we have been successful in fulfilling our commitment.

Our constant endeavor is to update the present equipments and bring out new equipments as per International standards. A constant feedback from our customer is a source of encouragement in our endeavor.

As our equipments are production – oriented, every precaution is taken at each stage to ensure long life and trouble free operation. A well knit team of service engineer's support our after sales programmer.

You have already selected a winner

Read the manual carefully and proceed to use the equipments with confidence.



INTRODUCTION

The instrument Breakdown Tester is designed for Testing Insulation or Breakdown. This is cost effective and reliable for testing Insulation Breakdown of Solid material.

This instrument can be used to test the solid insulation material such as paper, films, plastic, laminates ,Boards, glass, Mica, Ceramic, tapes, capacitors, wires & cable samples and other components.

Salient Features

1. Interlock facility.
2. Automatic Test Cycle.
3. Digital down counter-1 min – 999min.
4. Variable voltage Set
5. Adjustable rate of rise.
6. Variable Trip Set.



3 TECHNICAL SPECIFICATION

3.1 Supply voltage : 230VAC \pm 10%,50Hz, Single phase.

3.2 Output Voltage : Range : 25KV AC and DC
Resolution: 0.1KV
Accuracy: \pm 3%, \pm 2 digit.
Indication: 3 ½ digit Digital Panel Meter.

3.3 Leakage Current :

| <u>Range</u> | <u>Resolution</u> |
|---------------|-------------------|
| 199.9 μ A | 0.1 μ A |
| 1.999 mA | 1 μ A |
| 19.99 mA | 0.01 mA |

(10 mA max)
Accuracy: \pm 3%, \pm 2 digit.
Indication: 3 ½ digit Digital Panel Meter.

3.4 Timer : Range: 1 min to 999 min.
Resolution: 1 min.
Accuracy: \pm 1 min.
Indication: 3 digit display.



4 OPERATING CONTROLS

- 4.1 Mains ON/OFF : Self illumination type Mains ON/OFF switch.
- 4.2 Volts (KV) : Microswitch & Potentiometer provided to set the voltage to be applied to the test specimen.
- 4.3 Current : Microswitch & Potentiometer provided to set the maximum leakage current of the test specimen.
- 4.4 Press Switch HV ON : Self illuminating type to make High voltage ON.
- 4.5 Press Switch HV OFF : Self illuminating type to make High Voltage OFF.
- 4.6 AC / DC Toggle Switch : Toggle Switch used to read the selected Output Voltage on Display
- 4.7 Interlock LED : Visual indication for interlock open, when the Foot switch is not connected or the switch is not Press.
- 4.8 Open Ground LED : Not in use
- 4.9 Motor Speed. : Bandswitch provided to change the speed of the motor i.e. rate of rise 0.1KV, 0.5KV, 1KV, 2KV, 5KV.
- 4.10 Fuse 2Amp : For HV transformer.
- 4.11 Mains Socket : provided to connect AC supply 230V, 1Phase 50Hz.
- 4.12 Digital Timer : Digital down timer to indicate set time in Minutes three digits thumbwheel switch provided to set the HV ON time. Time range is 1 min to 999 min.
- 4.13 HV Terminals : AC HV & DC HV terminals are provided on Back Panel to Test object, with respective Earth Terminal.



5 OPERATING PROCEDURE:

- a. Connect the mains cord of the instrument to 230VAC 50HZ supply.
- b. Switch on the instrument with the help of Mains ON/OFF.
- c. Instrument will be in HT OFF mode.
- d. Connect the object between HV (AC OR DC) and Earth Terminal.
(Always Connect Green Cable(Provided) from Earth Terminal to Earth).
- e. Press the Foot Switch.
(If you do not want to use foot switch, then connect the 3Pin Metal connector by removing of Foot switch connector.)
The HV will not get ON, unless the Interlock is not get OFF.
- f. Set the voltage on DPM (Volts) with the provided microswitch and potentiometer. If the breakdown of the sample is to be checked set 25KV on DPM.
- g. Set the required leakage current on the DPM with the help of Microswitch & Potentiometer provided.
- h. Set the rate of rise i.e. Motor speed with the help of Bandswitch provided on the Front Panel.
- i. Select the withstand time (min) for the voltage with the thumbwheel switch provided for the timer on the front panel.
- j. Press HV ON switch, the voltage start rising and reach the set limit of voltage. If the current exceeds the set limit, The HV gets OFF and the voltage starts decreasing.
- k. If the current not exceeds the set limit, the voltage will reach the set limit and will withstand for the set time, and will automatically get OFF after the completion of timer.
- l. After the test is completed remove the sample after 30 to 50 secs. & take a new sample on which testing is to be done.