

## EXPERIMENTS ON SINGLE PHASE TRANSFORMER (OPEN, SHORT, EFFICIENCY & RATIO)

**OMEGA TYPE ES-333** 



**OMEGA TYPE ES-333** Experimental setup has been designed Specifically to study the performance of transformer and determine open circuit test, short circuit test, efficiency and voltage regulation of 1f Transformer. The setup consist of voltmeters, ammeters, wattmeters, load resistors variac and transformer.

The setup is complete in all respect and requires no other apparatus. Practical experience on this setup carries a great educative value for Science and Engineering students.

## **OBJECT**

- 01 To perform open circuit test of 16 Transformer.
- 02 To perform short circuit test of 16 Transformer.
- 03 To determine efficiency and regulation of 1φ Transformer.
- 04 Verification of transformation ratio of 1φ Transformer.

## **FEATURE**

The board consists of the following built-in parts:

- 01 Moving Iron AC portable Voltmeter / : Housed in bakelite case with knife edge pointer & anti parallax mirror scale of 140mm Ammeter/Wattmeter length, spring controlled movement, having accuracy class 1.0.
- 1.1 Two moving iron AC Voltmeter 0 300 V.
- 1.2. One moving iron AC Voltmeter 0 25 V.
- 1.3 Two moving iron AC Ammeter 0 10 Amp.
- 1.4 One moving iron AC Ammeter 0 1.0 Amp.

- 1.5 Two Wattmeter single phase, dynamometer type, Multi range, current coil 5/10Amp.
  Potential coil 75/150/300 Volt.
- 1.6 Wattmeter single phase, dynamometer type current coil 0.5 Amp. Potential coil 300 Volt.
- 02 Variac Variable voltage transformer table/floor mounting with enclosure input 230V, output 0–270V at 8 Amp.
- 03 Transformer for study Input 230V Output 150V at 5Amp.
- 04 Fixed Resistance in three steps: Use two heating rods of 50-70 ohm, 750 Watt each, based on cement asbestos sheet of size 6 x 12 inch, output are on terminal with connecting series & parallel connections by switches, to obtain different resistance 100-140 ohm, 50-70 ohm, 25-35 ohm approx.
- 05 Weight: 44 Kg. (Approx.)
- 06 The unit is operative on 230VAC ±10% at 50Hz.
- 07 Set of connecting wires.
- 08 Strongly supported by detailed Operating Instructions, giving details of Object, Theory, Design procedures, Report Suggestions and Book References.

We are committed to the continuous development of our products, and therefore reserve the right to amend specifications without prior notice.

## **OMEGA ELECTRONICS**