

TESCA Order Code - 46505A : A Single and Three Phase Transformer Experimental Trainer specially designed to help of students understanding about the various aspects in transformer design and operating such as magnetic fields and circuits, equipments circuits, phase or diagrams, loss components, load testing and regulation, transformer components etc. A comprehensive experiment manual is provided to guide the students on basic transformer theory and practice and also provides a practical introduction to power supplies and electrical machines.

OBJECT

- 01 Polarity Test of Winding
 - 1.1 Study of polarity test for additive
 - 1.2 Study of polarity test for subtractive
- 02 Study of series and parallel connection of secondary windings
 - 2.1 Study of series connection of secondary windings
 - 2.2 Study of parallel connection of secondary windings
- 03 3/4 Magnetic circuits, incorporating the concept of flux, flux density, field strength, magnetomotive force
- 05 Phasor diagram with transformer on no load
- 06 Equivalent circuit of power transformer
- 07 Transformer efficiency and voltage regulation using open and short circuit test
 - 7.1 Study of open circuit test in a single phase transformer
 - 7.2 Study of short circuit test in a single phase transformer
 - 7.3 Measurement of efficiency and voltage regulation at a given load
- 08 To study the rise in temperature of the winding of the transformer with time
- 10 Measurement of current using current transformer procedure
- 11 Study of three phase power supply configurations, delta and star
 - 11.1 Study of star to star configuration
 - 11.2 Study of delta to delta configuration
 - 11.3 Study of star to delta configuration
 - 11.4 Study of delta to star configuration

FEATURES

- 01 Inbuilt single phase Variac.
- 02 Equipped with supply indication lamp.
- 03 Facility to use Fixed and Variable Load.
- 04 Designed by considering all the safety standards.
- 05 Diagrammatic representation for the ease of connections.
- 06 Exclusive and compact design.



TECHNICAL SPECIFICATIONS

The board consists of the following built-in parts:

- 01 Two Digital AC Voltmeter 0 1000 V.
- 02 Two Digital AC Ammeter 0 2 Amp.
- 03 Digital Watt meter single phase Potential coil 250 Volt Current coil 2Amp. Total Watt 500W.
- 04 Temperature Meter.
- 05 Single Phase Auto Transformer:
 - Primary Voltage : 230V,
 - Secondary voltage : 0-270V
 - Rated current : 2Amp.
- 06 Single Phase Transformer :
 - Rating : 500W
 - Primary Voltage : 0 - 110 V, 0- 110V
 - Secondary Voltage : 0 - 110V/1A, 0 - 12V/3A, 24V/1.5A 42V/1A and 110V/1A
- 07 Three Phase Transformer (Using Three Single Phase Transformer)
 - Secondary voltage : 220V
 - Rated current : 500mA
- 08 Load : Three Bulb holder Provided for single & Three Phase Load.
- 09 Current Transformer Ratio 1: 10
- 10 MCB for short circuit and over current 2Amp
- 11 Power Requirement 380V \pm 10% at 50Hz AC Mains.
- 12 Dimensions (mm) : 600 W x 450D x 600 H
- 13 Weight : 37.5 Kg.

LIST OF ACCESSORIES:

- 01 Shrouded patch cord 4mm length 50 cm Red-10.
- 02 Shrouded patch cord 4mm length 50 cm Black-10.

OTHER APPARATUS REQUIRED:

- 01 Resistive Load - Order code - 46610

Note: Specifications are subject to change.

Tesca Technologies Pvt. Ltd.

IT-2013, Ramchandrapura Industrial Area, Sitapura Extension,
Near Bombay Hospital, Vidhani Circle, Jaipur-302022, Rajasthan, India,
Tel: +91-141-2771791 / 2771792; Email: info@tesca.in, tesca.technologies@gmail.com
Website: www.tesca.in