

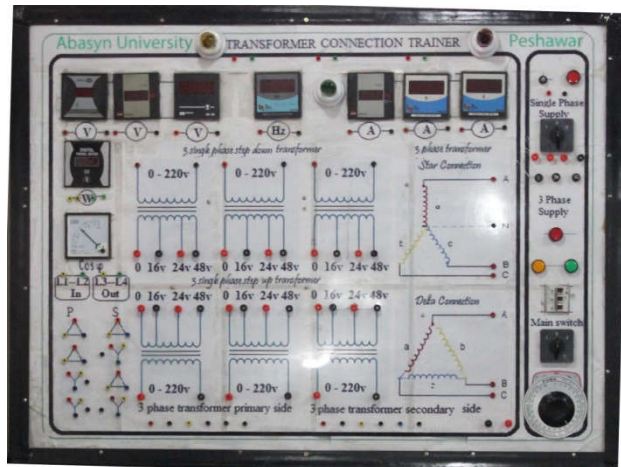
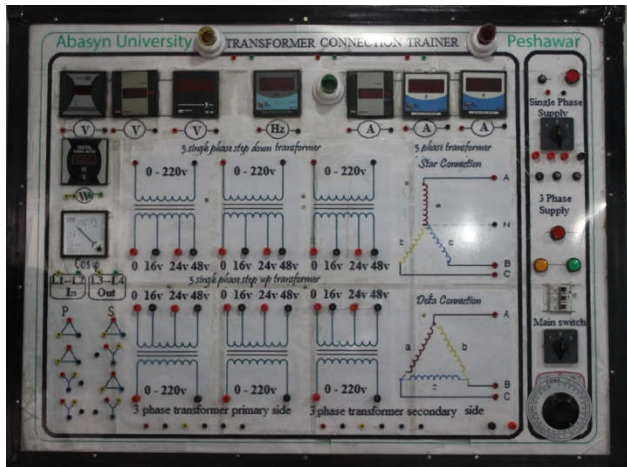
Power Distribution Transformer Trainer

The Distribution Transformer Trainer Model AUP-1 is a portable, hands-on trainer designed to allow students to develop competence in completing single/three-phase transformer connections similar to those performed in the field. The trainer contains two sets of three single-phase transformers to demonstrate three-phase banking configurations, such as wye-wye, delta-delta, closed delta-wye, closed wye-delta, open-wye, open-delta, and others. Each individual transformer winding is thermally protected and designed to accept multiple faults. The Model is built to supply 240 VAC with a center tap on the secondary winding when the primary winding is connected between line and neutral instead of line to line.

List of topics cover:-

- 1- To find the transformation ratio of a transformer by watt meter method.
- 2- To find the transformation ratio of a transformer on load by the ampere meter method.
- 3- Polarity test of transformer.
- 4- To determine the iron loss current, no-load current, power factor on no-load & magnetizing current.
- 5- Study of transformer on no-load & on load conditions.
- 6- To find the current losses of a transformer by short circuit test.
- 7- To find the iron losses of a transformer.
- 8- To find the efficiency of a transformer by direct loading (Resistive).
- 9- To determine the efficiency of a transformer by direct loading (Inductive load)
- 10- To determine the efficiency of a transformer by back to back test.
- 11- To determine the regulation of a transformer with resistive load.
- 12- To determine the regulation of a transformer having inductive load.
- 13- To use three single phase transformer as star to star connected three phase transformer.
- 14- To use three single phase transformer as star to delta connected three phase transformer.
- 15- To use three single phase transformer as delta to delta connected three phase transformer.
- 16- To use three single phase transformer as delta to star connected three phase transformer.
- 17- To use two single phase transformer as V-connected three phase transformer (open delta connection).

SPECIFICATIONS				
Distribution Transformer Trainer		120/208 V – 50 Hz	220/380 V – 50 Hz	240/415 V – 50 Hz
Input	Voltage	120/208 V	220/380 V	240/415 V
	Phases			
	Wires	4 wires plus ground		
	Current rating	5 A		3A
Transformers	Primary Voltage	120V	220V	380V
	Secondary Voltage	16V, 24, 32V, 48V		
	Power Capacity	25 VA		
	Quantity	8		
	Protection	Circuit Breaker		
Load Lamps	Quantity	3		
	Rated Voltage	250		
	Rated Power	25W, 100W, 200W		
Test Leads		2 (probe type)		
Faults	Quantity	8 (switch insert able)		
	Accessibility	Door at the back of the trainer		
Physical Characteristics	Dimensions (H x W x L)	3ft×1ft×4ft		
	Net weight	40Kg		



RENEWABLE ENERGY TRAINER

The Clean Energy Trainer is a hands-on renewable energy kit for introductory understanding of renewable energy technology and micro-grids. Students will get hands-on to build a micro-grid and study many aspects of solar energy conversion, energy storage and renewable energy system design and energy management.

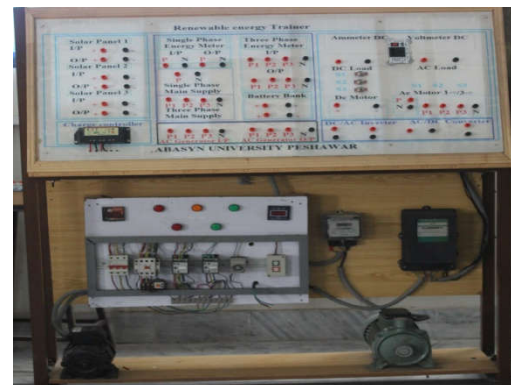
The Clean Energy Trainer is very unique in its approach to learning about renewable energy technology because the focus is on understanding how a systems works and the relationship between the various technology. Students will learn basic of renewable energy and its storage.

The system is dual-purpose, as students can still perform all the individual basic experiments with the solar and energy management. The Clean Energy Trainer is set-up (dimensioned) and operated manually with energy usage (loads).

The Renewable Energy Trainer cover the following topics:

- Solar Training system
- Energy Storage and Conversion
- Introduction to Micro-grids Systems
- The cause and effect of energy inputs and energy usage (loads)
- Introduction to Topics of Energy Management and System Management
- star/delta starter for three phase induction motor
- Single phase induction motor
- Single phase and three phase energy meter
- Battery Charging and Discharging Control

The renewable energy trainer includes: Three phase synchronous generator input/output, solar panel, Batteries, DC to AC inverter, AC to DC converter, charge controller, single phase induction motor, three phase induction motor, single phase energy meter, three phase energy meter and star/delta starter. All required cables, tubes and clamps included, as well as a voltmeter and ammeter. Lamp sold separately and fan should be purchased locally.



STAR/DELTA STARTER TRAINER

The Star Delta Starter Trainer consists of dual isolated circuit diagrams; one is for control circuit diagram & second is for power circuit diagram. In control & power circuit diagram there are different investigation plugs for evaluating and analysis of circuitry.

SPECIFICATION:-

- Safety test sockets.
- Motor protection System
- MCCB circuit breaker
- Digital measuring system
- Contactor, relay and timer
- Over load protection relay
- Three phase main power supply

