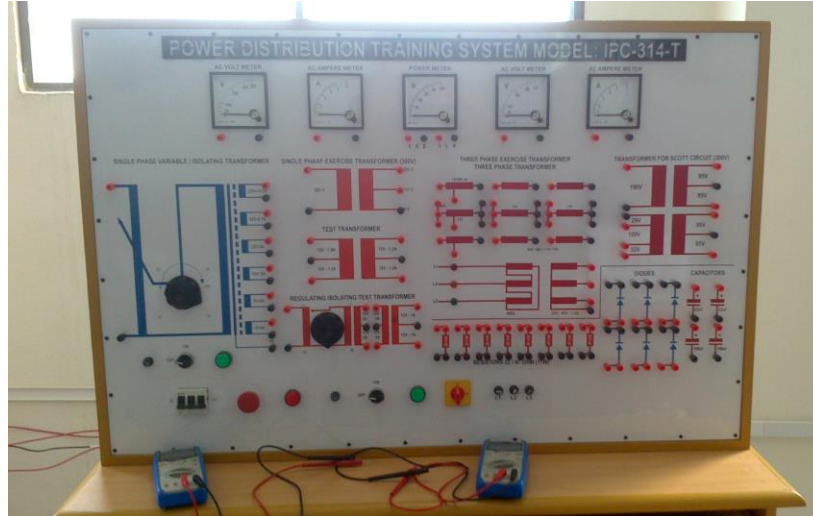


IPC EDUCATIONAL TRAINERS

POWER DISTRIBUTION TRAINER

MODEL: - IPC-314-T



Single Phase Transformer:-

Single phase isolating transformer when off-load, loaded and with a short-circuit. Off-load and on-load voltages. Short circuit voltage, sustained short circuit current. Power, iron and copper losses and efficiency. Switch on-current transients (Rush effect). Measurement on a single phase auto transformer and there differences to an isolating transformer.

Three Phase Transformer & Circuit Groups:-

Construction and notation of three phase transformers. Magnetizing current magnetic asymmetry. Consumed and delivered power and efficiency. Switch-On current transient (Rush effect). Transformation ratio. Phase relationship between input and output of the transformer. Load applied between one line and neutral in following circuit group: Yy0 (Star-Star), Yd5 (Star-Delta), Yz5 (Star-Zigzag), Dy5 (Delta-Star).

SPECIFICATION:

Single Phase Variable / Isolating Transformer:-

Single Phase variable transformer and isolating transformer, with protective winding for producing various exercise voltages. All outputs can be connected in series.

Output: 2 x 0...3V/6A
 2 x 0...12V/3A

Can be connected in Parallel.

 1 x 42V/0.7A
 1 x 230V/0.2A

Note: - we reserve the right to change the shape & design of the trainer without prior notice.

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Single Phase Exercise Transformer:-

Input: 2 x 12V/1.2A
Output 1: 12V/1.5A
Output 2: 12V/1.5A
Input : 230V
Output 1: 230V
Output 2: 230V

Three Phase Transformer:-

Three phase transformer and three phase rectifier. To protect against high body contact voltages, the main supply voltage of 230/400 V is stepped down to 23/40V.

Input: 3 x 400V
Output: 23/40 V, 1.2A

Three Phase Exercise Transformer:-

Three leg exercise transformer for basic exercises. Output for Star, Delta and circuit groups including a Zig-Zag circuit.

Input: 3 x 23/40V (Star or Delta)
Output: 3 x 2 x 11V
Phase Current: 4 A max.

Regulating Isolation Transformer:-

Isolating Transformer, suitable for exercises with off load, loaded and short circuit conditions.

Output Voltage:

Auto transformer: 2 x 0-12V/3A
Exercise transformer: Primary 2 x 12V/1A
Secondary 2 x 12V/1A
Power requirements: 230 V/50Hz

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LIST OF EXPERIMENTS:-

STUDY OF SINGLE PHASE TRANSFORMER & RECTIFIER CIRCUITS:

- Single Phase Transformer OFF Load, Loaded and Short Circuit.
- Single Phase Transformer Losses, Efficiency, and Rush-Effect.
- Single Phase Transformer, Auto Transformer.
- Rectifier Circuit (Half-wave Rectifier) (M1)
- Rectifier Circuit (Full-wave Rectifier) (M2)
- Rectifier Circuit (Bridge Rectifier) (B2)

STUDY OF THREE PHASE CIRCUIT.

- Three Phase Main Supply.
- Star Circuit.
- Delta Circuit.

STUDY OF THREE PHASE TRANSFORMER.

- Three Phase Transformer.

CIRCUITS USING THREE PHASE TRANSFORMER.

- a Circuit groups Yy0 (Star – Star)
- b Circuit groups Yd5 (Star – Delta)
- c Circuit groups Yz5 (Star – Zig-Zag)
- d Circuit groups Dy5 (Delta – Star)

STUDY OF THREE PHASE RECTIFIER CIRCUITS.

- Star Circuit.
- Bridge Circuit.
- Double – Star Circuit.

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