

SALIENT FEATURES :

- 01 Facilitates easy and safe wiring by students due to use of 4mm sturdy Shrouded banana patch cords & shrouded socket arrangements.
- 02 All machines are mounted on finely painted sturdy base frame with easy machine interchangeability. Use of gear coupling facilitates screwless coupling. interchangeability. Use of gear coupling facilitates screwless coupling.
- 03 With due emphasis on student safety machines operate upto 300W power levels and upto 1500 RPM, without compromising on didactic use. Able to draw all graphs.
- 04 Trunnion mounted DC Integrated machine is used as Dynamometer for loading other machines (Motors / generators both); unlike magnetic powder brake or eddy current brake which can load only coupled Motors and not generators, with facility to measure shaft power using electronic torque / speed Measurement

SINGAL PHASE AC INDUCTION MOTOR TRAINER

NAME OF THE EXPERIMENTS :-

- | | |
|--------------|---|
| Experiment-1 | Study of speed-torque characteristics of single phase induction motor (split phase type). |
| Experiment-2 | Study of efficiency and input power factor of 1phase induction motor (split phase type) for various loading conditions. |
| Experiment-3 | Study of speed-torque characteristics of single phase induction motor (capacitor start type). |
| Experiment-4 | Study of efficiency and input power factor of 1phase induction motor (capacitor start type) for various loading conditions. |
| Experiment-5 | Study of speed-torque characteristics of single phase induction motor (capacitor start-run Type). |
| Experiment-6 | Study of efficiency and input power factor of 1phase induction motor (capacitor start-run type) for various loading conditions. |
| Experiment-7 | Study of "No Load Test" and "Blocked Rotor Test ". on 1 phase Induction Motor. |

Panels Provided

- 01 Aluminum Machine trainer Rack
- 02 Multifunction Meter (Single Phase/Three Phase AC 50Hz)
- 03 1 Phase Motor, Alternator & Sync. Motor
- 04 Extension Board

Motors Provided

- 01 Single Phase AC Integrated Motor with loading arrangement

Accessories Provided

- 01 Hand held digital Tachometer
- 02 Shrouded connecting leads 4mm 50 / 100cm assorted Red & Black

Note: Specifications are subject to change.

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Technical Specification of Panels



MULTIFUNCTION METER (Single Phase/ Three Phase AC 50Hz)

- 1 Bidirectional Multifunction Meter
- 2 3 Phase 4 wire, 440V, Current 5A
- 3 LED display,
- 4 Aux supply 230V, 45-65Hz, 5W
- 5 To measure parameters ie Voltage Current., KVA, Frequency, Power factor, Active Power (W), Reactive Power (vary) etc.
- 6 Shrouded socket 08Nos. etc.

EXTENSION BOARD

- 1 Operating Voltage 230VAC \pm 10% at 50Hz
- 2 ON OFF Switch with indicator
- 3 Eight Nos. five pin 5 Amp Electrical Sockets



1 PH. MOTOR, ALTERNATOR & SYNC. MOTOR

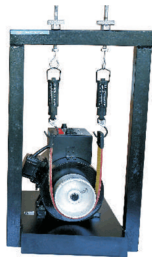
- 1 1 ph. MCBs of 4A/1.6A 1 each.
- 2 2 no. 2P2W selector switches to run as 1ph. Alternator then as synchronous motor.
- 3 2A push button switch to simulate as centrifugal switch.
- 4 1 Lamp load holder with lamp
- 5 Shrouded socket 14Nos.



ALUMINUM FRAME - MODULAR PANELS

Electrical motor trainer rack made up aluminium profile size 40×40mm, foldable and light in weight 10 panel setup can be interchange conveniently to perform experiments. Dimension Length 1100×Height 1000×Depth 350mm.

Technical Specification of Motors



1 PHASE AC INTEGRATED MOTOR WITH LOADING ARRANGEMENT

Voltage : 230 VAC, 50Hz

Capacity -300W/4 Pole m/c, **RPM - 1500 Shrouded Socket - 18**

Rotor Construction : Diecast Squirrel cage motor

Stator construction : Two windings brought out on 4 terminals for main and auxiliary. These will be used to configure different motors Split phase, CSCR, CSIR.

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