



Three Phase Induction Motor Training System is an adaptable training system for the Electrical laboratories. The product helps you to get fully acquainted with the basic concepts and functioning of a Three Phase squirrel cage Induction Motor. Training System is composed of three-phase induction motor, circuit control part, instrument detection part and other basic parts. The MS control panel is carved with MS/Aluminum plate, the component identification is printed on the panel with clear screen printing; the component is embedded on the front panel, all wiring is led to the 4mm BS10 safety test terminal, and the laboratory is connected with BS10 banana Terminal too.

### Features

- Digital microcontroller based measuring devices with high accuracy and resolution
- Control board Consist of MS Material with power coating to avoid any rust
- Screen printed symbols, circuit diagrams, graphics or photos wherever requires.
- Equipped with Overcurrent, Leakage Protection, Overvoltage, Under voltage and phase mismatch Protection
- Equipped with DOL and Star Delta Starter for further study

Equipped with Speed Controlling Regulator

- Designed using standard BS-10 terminal and patch cords for electrical safety
- Machine winding consist of copper for long term service and Class "F" Insulation
- Machine with standard mechanical loading structure & standard tabular spring balance with zero adjustment facility
- 1.5 mm x 3mm Heavy Duty Base/Channel with facility to concrete machine
- Brake-Drum/Pulley with heat suppression facility inside it
- Provided with non contact Digital speed measuring equipment
- Equipped with supply indicator lamps
- Earthing screw provided at the back side of the control board
- Product supplied with protection fuses, colored patch cords, single phase\ three phase cords, learning manual having theory operating procedure with connecting diagram, FAQ, Glossary, etc

Note: Specifications are subject to change, Photos shown above are Indicative, Actual Product can Vary.



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### Technical Specifications

- Mains Supply : 415VAC  $\pm 10\%$ , 50Hz
- Three Phase Induction Motor
- Type : Squirrel Cage
- Rating : 1HP
- Voltage Rating : 415V  $\pm 10\%$ , 50Hz
- Current Rating : 1.7A (Approx.)
- Speed : 1440 RPM  $\pm 10\%$
- Insulation : Class 'F'
- Duty : Continuous
- Enclosure : TEFC
- Mounting : Horizontal
- Foot Mounted Shaft Extension : Single Sided
- Loading arrangement : Mechanical
- Brake Drum/Pulley : MS/Aluminum
- Casted with heat suppression facility inside it Spring Balance : 2Nos.
- Loading Nut & Bolts : Yes
- Terminals box : paint with terminals and fuses brought out at the top
- Machine Base : MS "C" Channel
- Speed Controlling Regulator Power Rating : 1.5Kw

### Digital Meters used

- AC Wattmeter : 2 Nos.
- AC Voltmeter : 1 No.
- AC Ammeter : 1 No.
- Digital Tachometer Range : 19,999 rpm
- Type : Contact / Non-contact
- Protection Devices MCB (TPN) : 1No
- Glass Fuse : 1No
- Grounding Nut : Available at the rear side of the panel

### Scope of Learning

1. Direct starting of three phase asynchronous motor
2. Starting of three phase asynchronous motor starter

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3. Self locking (motor stalls when sense overcurrent, undervoltage, overvoltage, phase unbalance, phase failure) starting of three phase asynchronous motor
4. Forward and reverse control of three phase induction motor
5. Experiment on speed regulation of three phase asynchronous motor by voltage regulator
6. Star delta conversion experiment of three phase asynchronous motor
7. Experiment on start stop control of three phase asynchronous motor
8. Electrical parameter measurement.
9. Study of three phase asynchronous motor at no load condition and correspondingly calculate equivalent circuit parameters
10. Study of three phase asynchronous motor at block rotor condition and correspondingly calculate equivalent circuit parameters
11. Study of power factor at no load and short circuit condition
12. Study of Load Characteristic of Three phase squirrel cage induction motor Supporting

#### Accessories supplied with product

- Patch Cords of different color scheme
- Single Phase and Three Phase Mains Cord
- Extra Glass Fuses
- Digital Tachometer
- Learning Material Manual (softcopy)
- 6A, Three Phase Closed Type Autotransformer (Optional)

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