



# Single Phase Capacitor Start Induction Motor Training System



\*\* Shown image is just for illustration original may differ

## Introduction

Single Phase Induction Motor Training System is an exclusive and attractive training system for the electrical laboratories. It provides complete learning concepts of Single Phase Capacitor Start Induction Motor. Separate terminals have been provided for main winding, starting winding and capacitor so that student can understand the significance of individual windings along with the role of capacitor in the motor in a simple manner.

It includes phenomenon of excitation, running and reversing of the motor. Students can calculate the equivalent circuit parameters and the power factor of the motor. It demonstrates the relation between speed and torque, known as load characteristic or speed-torque characteristic of the motor. All connections and appearance of panel are designed in a simple manner so that students can make connections by themselves.

## Product Features

- Digital microcontroller based measuring devices with high accuracy and resolution
- Built-in Single phase autotransformer
- Control board Consist of MS Material with power coating / Epoxy paint to avoid any rust
- Screen printed symbols, circuit diagrams, graphics or photos wherever requires.
- Designed using standard BS-10 terminal and patch cords for electrical safety
- Machine winding consist of copper for long term service
- Machine with Class "F" Insulation
- Machine with standard mechanical loading structure
- Machine with standard tabular spring balance with zero adjustment facility
- 1.5 mm x 3mm Heavy Duty Base/Channel with facility to concrete
- Brake-Drum/Pulley with heat suppression facility inside it
- Provided with noncontact Digital speed measuring equipment
- Equipped with supply indicator lamp
- Earthing screw provided at the back side of the control board
- Product supplied with protection fuses, colored patch cords, single phase cords, learning manual having theory operating procedure with connecting diagram, FAQ, Glossary, etc

## Technical Specifications

<b>Mains Supply</b>	: 220VAC $\pm$ 10%, 50Hz
<b>Single Phase Induction Motor</b>	
Type	: Capacitor Start Induction Run
Rating	: 0.5HP to 2HP
Voltage Rating	: 220VAC $\pm$ 10%, 50Hz
Current Rating	: As per standard
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. (Salter make)
Loading Nut & Bolts	: Brass material
Terminals box	: Epoxy paint with terminals and fuses brought out at the top
Machine Base	: MS "C" Channel with suitable interconnection

### Digital Meters used

AC Wattmeter	: 1 No.
AC Voltmeter	: 1 No.
AC Ammeter	: 1 No.

### Single Phase Variac

Primary Voltage	: 220VAC $\pm$ 10%, 50Hz
Secondary Voltage	: 0-220VAC $\pm$ 10%, 50Hz
Current Rating	: 10A

### Digital Tachometer

Range	: 19,999 rpm
Type	: Contact / Non-contact

### Protection Devices

MCB (DP)	: 1No
Glass Fuse	: 1No
Grounding Nut	: Available at the rear side of the panel

## Experiments Can be performed:

Study about single phase capacitor start capacitor run motor with following topics.

- Understanding fundamentals and operational working principles
- Running and reversing phenomenon
- Performance at no-load test and correspondingly calculate equivalent parameters and power factor
- Performance at block-rotor test and correspondingly calculate equivalent parameters and power factor
- Performance at load condition (load test) and correspondingly plot a graph between measured electrical parameters such as, current, voltage, torque (by calculation), speed, etc.

## Supporting Accessories supplied with Product

- Patch Cords of different color scheme
- Single Phase Mains Cord
- Extra Glass Fuses
- Operating Manual (softcopy)
- Digital Tachometer

**\*\*Please feel free to share your queries or requirements by filling your details in ask query section or request a Quote section on the website, we will be happy to cater your requirement.**