



**Nvis 7015 Single Phase Induction Motor Lab** 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. Students can make connections by themselves.

### Features

- Digitalized microcontroller based measuring devices
- Equipped with supply indication lamps
- Control board consist of high grade FRP material to provide utmost safety to the users
- Machine with class "B" insulation
- Standard tabular spring balance with zero adjustment facility
- Machine with standard mechanical loading structure with rotor locking facility
- High standard BS-10 terminal to avoid electrical shock
- Brake-drum/pulley with heat suppression facility
- Rust free power coated mechanical structure
- Digital tachometer for speed measurement
- Online Product Tutorial (CD)



### Scope of Learning

- Understanding fundamentals and operational working principles of single phase capacitor start induction motor
- Running and reversing phenomenon of single phase capacitor start induction motor
- Performance of single phase capacitor start induction motor at no-load condition (no-load test) and correspondingly measure equivalent parameters
- Analysis of single phase capacitor start induction motor by performing blocked rotor test and correspondingly measure equivalent parameters
- Conduct load test of a single phase capacitor start induction motor and plot a graph between measured electrical parameters such as, current, voltage, torque, speed, etc.

### Technical Specifications

**Mains Supply** : Single Phase, 230V  $\pm$ 10%, 50Hz

#### Single Phase Induction Motor

Type : Capacitor start

Rating : 1HP

Voltage rating : 220V

Speed : 1440 RPM  $\pm$ 5%

Insulation : Class 'B'

**Loading Arrangement** : Mechanical

**Brake drum/Pulley** : Aluminum Casted

#### Digital Meters Used

AC Voltmeter : 450V

AC Ammeter : 10A

Wattmeter : 1500W

**MCB (SP)** : 10A

**Digital Tachometer** : 20,000 RPM

#### Optional

Single Phase Variac 10A