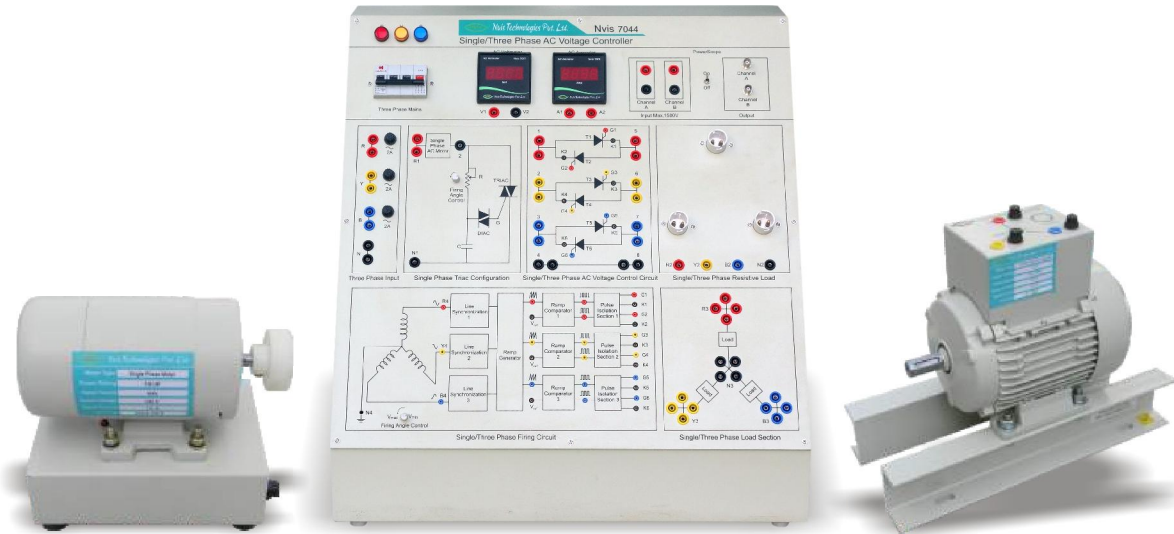




# Single and Three Phase AC Voltage Controller

## Nvis 7044



**Nvis 7044 Single and Three Phase AC Voltage Controller** is a useful Training System for Power Electronics Lab to demonstrate the operational working of Single and Three Phase AC Voltage Controller. It includes the experiment such as speed control of Three Phase AC Motor through anti- parallel SCR configurations with fine control response, speed control of single phase universal motor through TRIAC and anti parallel SCR configuration. It helps students to know how to generate firing pulses for three phase controller using ramp comparator scheme.

Nvis 7044 is equipped with SCR firing control circuit that deals with triggering, modulation and instrumentation deriving the operating characteristics and capabilities of Controllers. It incorporates all the necessary test points in order to explain the gate circuit by analyzing gate waveforms through inbuilt Power Scope.

### Features

- Power Scope for isolation measurement
- Provided with Single and Three Phase Motor
- High quality meters
- Three Phase low voltage Supply for gate circuit
- Three Phase Firing Circuit provided with pulse isolation
- Test terminals provided to analyze the waveforms
- Designed by considering all the safety precautions
- Diagrammatic representation of circuits

### Scope of Learning

#### Study of :

- Three Phase Firing Circuit
- Three Phase AC Voltage Controller at Lamp Load
- Three Phase AC Voltage Controller at Motor Load
- Single Phase AC Motor Control Drive by anti Parallel SCR3
- Single Phase AC Motor Control Drive by DIAC-TRIAC Configuration

### Technical Specifications

**Three Phase Mains Supply** : 415V  $\pm$ 10%, 50Hz

#### Three Phase Machine

Type : Squirrel Cage Induction Motor  
 Rated Power : 1HP  
 Rated Voltage : 415V

#### Single Phase Machine

Type : Universal Motor  
 Rated Power : 1/8HP  
 Rated Voltage : 230V

**Power Scope** : Isolated 1500Vmax

**SCR Rating** : SCR TYN616, 600V/16A

**TRIAC Rating** : BT136, 600V/4A

**DIAC Rating** : DB3

**Firing Angle Control** : 30° to 150°

#### Meters Used

Digital AC Voltmeter : 0-450V

Digital AC Ammeter : 0-5A

**Three Phase MCB** : 10A (TPN)