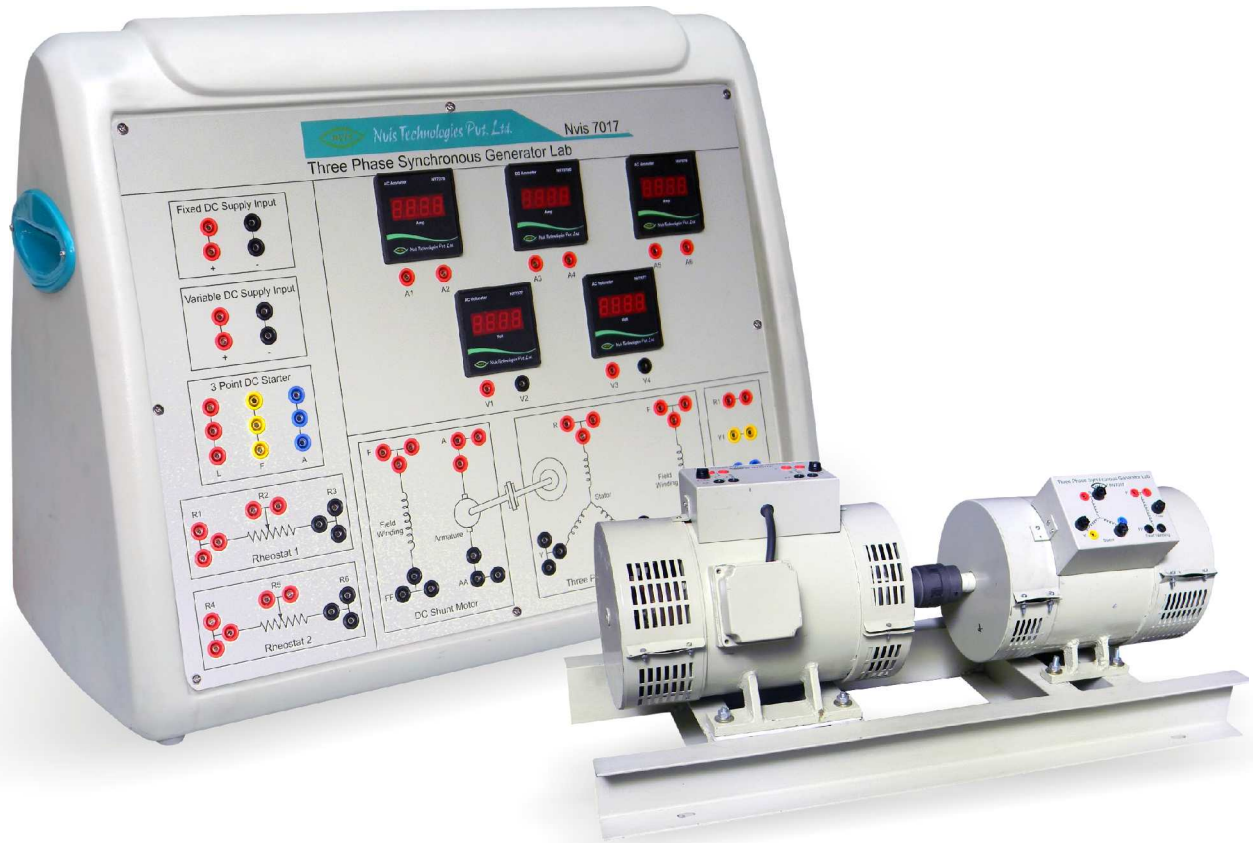




# Three Phase Synchronous Generator Lab

Nvis 7017



**Nvis 7017 Three Phase Synchronous Generator Lab** is an exclusive & important product designed to provide comprehensive learning about fundamental concepts and operating principles of Three Phase Synchronous Generator. Synchronous Generators are the primary source of electrical energy. These are used to convert mechanical power derived from (steam, gas, or hydraulic) turbine to ac electric power. The product provides hands-on experiments like Open Circuit Characteristic of Synchronous Generator and study of the relation between field current and armature voltage.

The product is very easy to use. All protection circuits are in built so there is very less chance of fault or danger to user. The varied scope of learning makes the subject's understanding complete.

## Features

- Electrical loading arrangement
- Flexible shaft coupling arrangement
- Control board consist of high grade FRP material to provide utmost safety to the users
- Provided with Digital Tachometer
- Machine with Class "B" Insulation
- Heavy Duty Base/Channel
- Equipped with supply indication lamps
- Terminals provided to use the optional externally
- Equipped with supply indication lamps
- Designed by considering all the safety standards
- Diagrammatic representation for the ease of connections
- Online Product Tutorial



### Scope of Learning

- To study the Open Circuit Characteristics (OCC) of Three Phase Synchronous Generator
- To study the short circuit characteristics (SCC) of three Phase Synchronous Generator

### Technical Specifications

#### Machines Specification (2 nos.)

Both the Machines are Flexibly Coupled and Mounted on a M.S. channel Base

#### DC Machine (acts as Prime Mover)

Type	: Shunt
Rating	: 2HP
Voltage Rating	: 220V $\pm$ 10%
Speed	: 1500 RPM
Insulation	: Class 'B'

#### Three Phase Synchronous Motor (acts as Generator)

Type	: Salient Pole
Rating	: 3HP
Voltage rating	: 415V $\pm$ 10%
Speed	: 1500 RPM
Insulation	: Class 'B'
Excitation Voltage	: 120V

#### Digital Meters Used

DC Voltmeter	: 300V
DC Ammeter	: 10A, 5A
AC Ammeter	: 10A
AC Voltmeter	: 450V

#### Optional

DC Power Supply "Nvis 725", Rheostat 2.8A, 220 $\Omega$