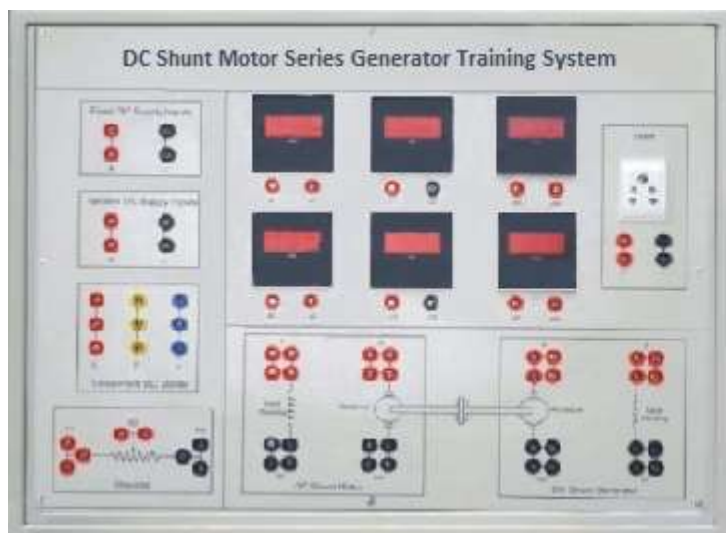


# DC Shunt Motor Series Generator Training System



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

## Introduction

DC Shunt Motor Series Generator Training System is a significant training system for Electrical Machine Laboratories to demonstrate the operational working and characteristic of DC Generators under different loading conditions. DC Series Generator is a type of Generator whose field winding and armature winding are connected in series.

It includes various experiments to be conducted such as operational working behavior of DC Series Generator, Open Circuit Characteristic, and Load Characteristic etc. Diagrammatic representations are provided on the control panel so that students can make connections by their own.

## Product Features

- Machine with standard electrical loading arrangement through flexible lovejoy coupler
- Machine winding consist of copper for long term service
- Machine Conforms to all leading industrial standards with Class "B/F" Insulation
- Heavy Duty Base/Channel with facility to concrete machine using suitable heavy nuts and bolts
- Provided with contact type Digital speed measuring equipment
- Inbuilt DC Drive of suitable rating with overload protection
- Control panel with digital microcontroller based measuring devices with high accuracy and resolution
- Front board consist of MS Material with power coating / epoxy paint to avoid any rust
- Provided with suitable protection such as fuses, MCB, etc wherever requires
- Specially designed BS10 Terminals and patch cords for electrical safety
- Lamp indication for single phase supply
- Earthing screw provided at the back side of the control set-up
- Screen printed diagrammatic representation for the ease of connections.
- Product should be provided with protection fuses, colored patch cords, single phase cords, learning manual having theory operating procedure with connecting diagram, FAQ, Glossary, etc

## Technical Specifications

### Machine Specifications

Both the machines are flexibly coupled and mounted on a "C" Channel base

#### DC Machine (Act as prime mover)

|                 |                              |
|-----------------|------------------------------|
| Type            | : Shunt                      |
| Voltage Rating  | : 220VDC $\pm$ 10%           |
| Speed           | : 1500 rpm $\pm$ 10% at load |
| Insulation      | : Class 'F'                  |
| Winding         | : Copper                     |
| Duty            | : Continuous                 |
| Enclosure       | : SPDP                       |
| Mounting        | : Horizontal foot mounted    |
| Shaft Extension | : Single Sided               |

|                                      |   |
|--------------------------------------|---|
| Loading arrangement                  | : Electrical  |
| <b>DC Machine (Act as generator)</b> |   |
| Type                                 | : Series  |
| Rating                               | : ½ HP to 3HP   |
| Generated Voltage Rating             | : 220V DC± 10% at load  |
| Speed                                | : 1500 rpm ± 10%  |
| Insulation                           | : Class ‘F’   |
| Winding                              | : Copper  |
| Duty                                 | : Continuous  |
| Enclosure                            | : SPDP  |
| Terminals box top                    | : Powder coated/epoxy paint with terminals and fuses brought out at the top |
| Machine Base                         | : MS “C” Channel with suitable interconnection                              |
| <b>Digital Meters used</b>           |   |
| DC Voltmeter                         | : 300V (2nos)   |
| DC Ammeter                           | : 20A (3nos)  |
| <b>DC Power Supply</b>               |   |
| Output Fixed voltage                 | : 200VDC ± 10%  |
| Output Variable voltage              | : 0 - 240VDC ± 10%  |
| Current Rating                       | : Based on Power Rating of Machine  |
| Protection                           | : Overload Protection   |
| <b>Digital Tachometer</b>            |   |
| Range                                | : 19,999 rpm  |
| Type                                 | : Contact / Non-contact   |
| <b>Protection Devices</b>            |   |
| MCB (DP)                             | : 1No   |
| Glass Fuse                           | : 3Nos  |
| Grounding Nut                        | : Available at the rear side of the panel                                   |

#### Experiments Can be performed:

- Study of No Load Characteristics of Self Excited DC Series Generator
- Study of Load Characteristics of Self Excited DC Series Generator

#### Supporting Accessories supplied with Product

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

#### Optional Accessories

- Resistive Load (based on machine rating)

**\*\*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.**