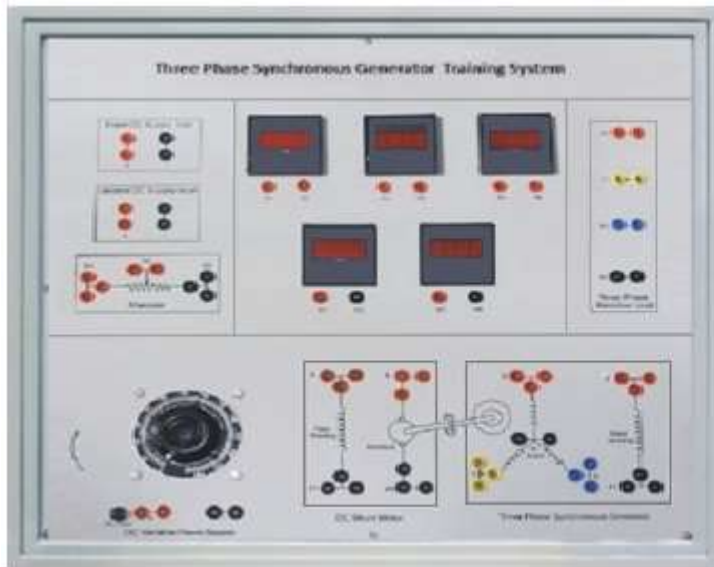


Voltage Regulation of Three Phase Synchronous Generator using MMF Method Training System



** Shown image is just for illustration original may differ

Introduction

Voltage Regulation of Three Phase Synchronous Generator using MMF Method Training System 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 understanding complete.

Product Features

- Built-in DC Regulated Power Supply
- Machine with standard electrical loading arrangement
- Machine winding consist of copper for long term service
- Machine Conforms to all leading industrial standards with Class "F" Insulation
- 2mm x 4mm Heavy Duty Base/Channel with facility to concrete machine
- Standard Lovejoy coupler is used to couple machines
- Provided with non contact Digital speed measuring equipment
- Digital microcontroller based measuring devices with high accuracy and resolution
- Inbuilt DC Excitation Unit for field winding of three phase synchronous generator
- Front board consist of MS Material with power coating / Epoxy paint to avoid any rust
- Specially designed BS10 Terminals and patch cords for electrical safety
- Three Phase Supply indication lamps
- 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

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

DC Machine (act as prime mover)

Type	: Shunt
Power Rating	: 5HP
Voltage Rating	: 220VDC \pm 10%
Speed	: 1500 rpm \pm 10%
Insulation	: Class 'F'
Enclosure	: SPDP
Duty	: Continuous
Mounting	: Horizontal Foot Mounted
Shaft Extension	: Single Sided
Loading arrangement	: Electrical
Terminals box	: Epoxy paint with terminals and fuses brought out at the top
Machine Base	: MS "C" Channel with suitable interconnection

Three Phase Auto-Synchronous AC Machine (Act as generator)

Type	: Salient type with damper winding
Power Rating	: 3HP
Voltage Rating	: 415VAC \pm 10%, 50Hz
Configuration	: Delta Connected
Rated Current	: As per standard
DC Excitation Voltage	: 110VDC \pm 10%
DC Excitation Current	: 2A
Speed	: 1500 rpm \pm 1%
Insulation	: Class 'B/F'
Enclosure	: SPDP

DC Excitation Unit

Voltage rating	: 350VDC \pm 10%
Current rating	: 2A
Topology	: Autotransformer based

DC Power Supply

Fixed DC Voltage	: 220VDC \pm 10%, 2A
Variable DC Voltage	: 0 to 220VDC \pm 10%, 12A

Digital Meters used

AC Voltmeter	: 1 No
AC Ammeter	: 1 No
DC Voltmeter	: 1 No
DC Ammeter	: 2 Nos

Digital Tachometer

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

Protection Devices

MCB (DP)	: 1No
Glass Fuse	: 3Nos
Grounding Nut	: Available at the rear side of the panel

Experiments Can be performed:

- To study open circuit characteristic (OCC) of three phase synchronous generator
- To study short circuit characteristic (SCC) of three phase synchronous generator
- To study short circuit ratio (SCR) of three phase synchronous generator
- To study voltage regulation of three phase synchronous generator using MMF method

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.**