



## AC DC MOTOR GENERATOR SET MODEL: - IPC-2100 – MG

### POWER SUPPLIES: -

#### AC SECTION.

1. Three phase main power supply siemens rated Value current rating (18A-24A) with protection.
  - Indication light.
  - Emergency OFF Push Switch.
  - Power requirement 380V/50 Hz.
2. Three phase main power supply siemens rated current rating (2.4A-4A) with protection.
  - Indication light.
  - Power requirement 380V/50 Hz.
  - Fixed in front panel.
3. Single phase AC Supply unit 230V,6A,50Hz, with fuse protection.
  - ON/OFF Switch.
  - Indication Light.
  - Output with safety socket (4mm)
4. Single Phase variable supply unit 230V,6A,50Hz with fuse protection.
  - ON/OFF Switch.
  - Indication Light.
  - Output with safety socket (4mm)
5. Three phase separate output supply with ON/OFF switch Supply terminals with 4mm banana socket L1, L2, L3, N,E.
6. Three Phase separate output supply for three phase motor run with star delta connection.
  - ON/OFF Switch.
  - 380V, 50Hz.

## **DC SECTION:**

1. DC Power supply 230V, 6A, fixed ON/OFF Switch with fuse Protection.
2. DC Variable power supply 0-230V, 6A ON/OFF Switch with Fuse protection. 2 x 0-----230VDC.  
For Motor/Generator field excitation and armature Supply for Motor.
3. DC Variable drive rated 220V, 7A, ON/OFF Switch, Fuse Protection external, internal 6A, with indication light.

## **METERS FOR MEASUREMENTS.**

- AC VOLT METER. (4Nos.)  
Range 0-----500V accuracy class 1.5,  
connection available 4mm safety socket panel mount (96x96).
- AC AMPERE METER. (4Nos.)  
Range 0-----10A accuracy class 1.5,  
connection available 4mm safety socket panel mount (96x96).
- DC VOLT METER.  
Range 0-----500V accuracy class 1.5,  
connection available 4mm safety socket panel mount (96x96).
- DC AMPERE METER.  
Range 0-----10A accuracy class 1.5,  
connection available 4mm safety socket panel mount (96x96).
- POWER METER.  
Range 0-----2Kw accuracy class 1.5,  
connection available 4mm safety socket panel mount  
(96x96) Three phase.
- POWER FACTOR METER.  
Power factor 0-----1-----0  
Phase angle -90° (cap)-----0-----+90° (ind)  
Accuracy class 1.5
- FREQUENCY METER.  
Range 47Hz----55Hz  
Panel mount (96x96).
- DIGITAL RPM METER.  
Range 0-----9999. Size (48x96) with sensor panel mounted.
- Connection Leads.  
4mm safety connection lead one set.

## **OPTIONAL Motor:-**

- DC Machine
- 3 phase Induction Motor
- Synchronous Motor

**DC DRIVE Thyristor Drive System:** - An electronic drive that shows how to use thyristor circuits to drive D.C. machines.

**AC DRIVE Variable Frequency Inverter:** - Three phase variable frequency output from single-phase fixed frequency supply.

## **OPTIONAL:-**

**Loading modules:** - Variable loads of resistance, capacitance and inductance.

**Break Control Unit:-**

### **LIST EXPERIMENTS:-**

- Study of DC Separately Excited Shunt Generator.
- Load Characteristics of the DC Shunt Generator.
- Magnetic Characteristics of the Separately Excited DC Generator.
- Component of Voltage Drop in DC Shunt Generator.
- Load Characteristics of the DC Series Generator.
- The DC Compound Generator.
- DC Shunt Motor.
- To Study the torque VS Speed characteristics and calculate the efficiency of DC Shunt Wound Motor.
- Performance test of Shunt Motor using Swinburne Test.
- Load Characteristics of the DC Series Motor.
- Speed Control of the DC Motor.

### **LIST OF EXPERIMENTS:-**

#### **Study of Three Phase Synchronous Generator.**

- The Resistance Test.
- Open Circuit Test.
- Short Circuit Test.
- Voltage Regulation.
- Load Test.
- Per-Phase Impedance.
- Load Test of a Three Phase Induction Motor.