KMG-05
ELECTRICAL POWER GENERATION SET UP

KMG-05 Electrical power Generation set up is a rouged training system for the Electrical laboratories mounted on Aluminum profile rack with sturdy table top flat panel. Each panel has ABS molded plastic sturdy enclosure with 4mm shrouded connectors showing circuit diagram & its connection tag numbers for easy understanding and connections. The product helps you to get fully acquainted with the basic concepts and functioning of a Electrical power Generation set up

Specifications

- Trainer control panel is provided in 40X40mm Aluminum profile rack with sturdy table top flat panel.
- It has 12 no's of ABS plastic panel mounted on the aluminum rack with mimic diagram of components
- All input & output are terminated in 4mm shrouded connector and 4mm banana cable is provided for experiments.
- 3 phase DOL starter 4pole MCB, contractor & relay panel
  - 4 pole MCB of 415 V/4A.
  - DOL 9A Contactor with 230V / 50 Hz / 11VA COIL.
  - Bimetallic thermal O/L relay with range 1.4A - 2.3A
  - R-Y-B Input display Indicators.
  - Manual start / stop with local trip contact
- 3 phase multifunction meter panel
  - Bidirectional Multifunction
  - 3 Phase ¾ wire, 415V, CT Input 5A
  - LCD/LED display, Aux supply 230V, 45-65 Hz, 5W
  - V, A, Hz, Pf, KVA, KW, KWH
  - Modbus RTU RS485 connections
- FWD/REV, STAR/DELTA Switch panel
  - FWD/REV, 3 pole 3 way switch, 6A/440V
  - Star/Delta switch 3 pole, 3 way, 6A/440V.
- Instrumentation Power panel
  - Signal conditioning circuit for speed, torque in kg to give output 0-2.5Vdc.
  - Selector switch for Speed and Torque.
- Rotor & Sync panel
  - Rotor resistors of Short, open, DC Ext, 15E, 21E, 30E each.
  - Rotor resistor selector switch, 3 pole, 6 Way 6A/440V.
  - DC Rotor excitation with circuit breaker (3Amp)
- SCR controlled variable DC panel (3Nos)
  - Full bridge SCR based 0V-200V / 3 Amp cosine firing.
  - Fixed 220V DC Excitation/Field failure relay
  - 0-300V Voltmeter & 0-5A Ammeter with polarity protection diode
- 1 Phase AC/DC Resistive Load panel.
  - 750E/600E/300E/212E/162E/ 125E/112E/100E 200W Load.
  - 9 Way Selector switch for selection of load resistors
- 3 Phase Inductive Load panel.
  - 0-0.75-3H Inductive Load.
- 3 Phase Capacitive Load panel.
  - 0-2.5uf capacitive Load.
- Table top trunnion 300W 1 Phase DC Motor Coupled with 3 Phase Salient Pole AC Motor
- 3 Phase Salient Pole Alternator
  - Capacity-300VA/415V/0.75A.
  - Frame-112
  - Speed-1500 RPM
  - Exct. 200 V DC.
- D.C. Motor/GENERTOR (Shunt/Series/Compound)
  - Capacity-0.5HP/200V/0.5A.
  - Frame-90
  - Speed-1500 RPM
  - Exct.200V D.C.

Accessories:

- Set of Shrouded Cables
- Set of Manuals with Experiments.
- Demo CD showing Experiments

Note : Specifications & Photos can be altered without notice in our constant efforts for improvement.

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Optional Accessories:

- Handheld Tacho Meter**...**.1 No
- Working Table (KWT-01)**...**.1 No
- Multimeter **...** 1 No
- Tool Kit**...** 1 No

Experiment List:

- Regulation of 3 phase alternator by :
  - Synchronous impedance method
  - ZPF or POTIER method
  - Actual load test
- Determination of :
  - Direct axis and quadrate axis subtransient reactance Xd" & Xq"
  - Zero sequence reactance XO.
  - Negative sequence reactance X2.
- Comparing experiment faults currents with calculated fault current using ZO, Z1, Z2.
- To study the working of DOL starter
- To study the working of SCR actuator with 1phase resistive load
- To study the working of dc shunt motor with 1phase resistive Load panel
- To study the working of motor coupling using prime mover (DC shunt motor and 3 phase salient pole alternator)

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