

KMT-01 ELECTRICAL MACHINE TRAINER



KMT-01 Electrical Machine Trainer is a rugged training system for the Electrical laboratories mounted on Aluminum profile rack with sturdy table top 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 an Electrical Machines Trainer.

Specifications

- Trainer control panel is provided in 40X40mm Aluminum profile rack with sturdy table top flat panel.
- It has 16 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.
- 3phase 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 (2 No's)
 - 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
- FWD/REV, STAR/DELTA Switch panel.
 - FWD/REV, 3 pole 3 way switch, 6A/440V
 - Star/Delta switch 3 pole, 3 way, 6A/440V.

- 3 phase Rotor & Sync motor 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)
- 1 Ph Motor, Alternator & Sync Panel
 - 1ph 230V/2A & 230V/4A AC output
 - 1 ph. MCBs of 4A.
 - 0-300V Voltmeter & 0-5A Ammeter (1each).
 - Direction toggle switch
- SCR controlled variable DC panel.(3nos)
 - Full bridge SCR based 0V-200V / 3 Amp cosine firing.
 - Fixed 220V DC Excitation output
 - 0-300V Voltmeter & 0-5A Ammeter
- Instrumentation Power DPM Panel
 - Signal conditioning circuit for speed, torque in kg to give output 0-2.5Vdc.
 - Selector switch for Speed and Torque.
- Synchronization panel.
 - 3 bulbs to check synchronization for generation.
 - facility to connect 2 generator output for synchronization with Synchronization switch
- 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.
- Computer Interface Panel.
 - USB/Serial Modbus for interface
 - Virtual workbench software for windows

Experimental Motors

- 3 Ø Induction Motor with mounting
 - Capacity-300W, 415 V/1.81 A
 - Pole/Terminal- 4 pole/10 terminals
 - Frame-80
 - Speed-1500 RPM
 - Thermistor
- 1 Ø Induction Motor with mounting
 - Capacity-300W, 230 V/2 A
 - Pole/Terminal- 4 pole/10 terminals
 - Frame-90
 - Speed-1500 RPM
 - Thermistor

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

- 1 Ø AC Generator & Synchronous Motor with mounting
 - Capacity-300W, 230 V/2 A
 - Pole/Terminal- 4 pole/4 terminals
 - Frame-90
 - Speed-1500 RPM
 - Thermistor
- 2 Speed 3 Phase Induction Motor with mounting (Motor & generator)
 - Capacity-300W, 415 V/0.7A
 - Pole/Terminal- 4 pole/12 terminals
 - Frame-90
 - Speed-1500/3000 RPM
 - Thermistor
- Universal AC/DC Motor with mounting
 - Capacity-300W, 230 V/2 A
 - Pole/Terminal- 4 pole/4 terminals
 - Frame-90
 - Speed-1500 RPM
 - Thermistor
- 1 Phase Repulsive Induction Motor with mounting
 - Capacity-300W, 230 V/0.7A
 - Pole/Terminal- 4 pole/2 terminals
 - Frame-90
 - Speed-1500/1600 RPM
 - Thermistor
- 3 Ø Salient Pole Alternator
 - Capacity-300W, 415 V/1.5 A
 - Pole/Terminal- 4 pole/10 terminals
 - Frame-112
 - Speed-1500 RPM
 - Phase/Frequency- 3phase/50Hz
 - Exct.230 V DC
 - Thermistor
- DC Motor (DYNAMO TYPE MOTOR) (shunt/series/compound)
 - Capacity-300W, 200 V/2 A
 - Pole/Terminal- 4 pole/6 terminals
 - Speed-1500 RPM
 - Frame-90
 - Torque & Speed Sensor
 - Thermistor

Accessories:

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

Optional Accessories:

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

Experiment List:

- To study the working of DOL starter
- To study the working of 3 phase induction motor with fwd/rev switch
- To study the working of synchronous motor with fwd/rev switch
- To study the working of 2 speed induction motor with fwd/rev switch
- To study the working of universal motor as AC/DC motor
- To study the working of SCR actuator with load
- To study the working of DC shunt /series /separately excited /compound motor
- To study the working of 1phase repulsive motor induction motor
- To study the working of motor coupling using prime mover (dc shunt motor) and generator (3 phase salient pole alternator)
- To study the concept of synchronization and motor coupling using prime mover (dc motor) and generator (3 phase salient pole alternator)

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