Email :
sales@laboratoryinstrumentsmanufacturers.com

Product Name :	**Product Code :**
Modern Electrical Machines System- (Remote control, Internet base control and GSM Control)	LIM-CAT-L0043-00019

Description :

Modern Electrical Machines System- (Remote control, Internet base control and GSM Control)

Technical Specification :

Modern Electrical Machines System- (Remote control, Internet base control and GSM Control)
DC Motor/ Generator with Separate/ Compound /Series Excitation Power: 300 W, Armature voltage: 220 Vdc Separate excitation voltage: 220 Vdc R.p.m.: 3000
3-Phase Asynchronous Cage Motor Power: 500 W, Voltage: 230/400V 50Hz R.p.m.: 2850 - 2 poles Delta-star connection
3-Phase Asynchronous Wound Rotor Motor (01No.) Power: 500 W, Voltage: 230/400V, 50 Hz R.P.M: 2900 (2 poles), Rotor voltage: 400V Delta-star connection
3-Phase Synchronous Motor/ Generator with Asynchronous Starting Power: 350 VA, Voltage: 230/400V, 50 Hz R.p.m.: 3000 (2 poles) Excitation voltage: 220 Vdc Delta-star connection Form of construction: IM B3, Protection: IP 22 This unit include thermal protector
Asynchronous 1-Phase Motor with Starting Capacitor Power: 300 W, Voltage: 230 V, 50 Hz R.p.m.: 2900 (2 poles) Form of construction: IM B3, Protection: IP 44 This unit include thermal protector
Universal AC/DC Motor Power: 260/330 W, Voltage: 230 Vac, 50 Hz / 230 Vdc R.p.m.: 3000, Form of construction: IM B3 Protection: IP 22 This unit include thermal protector
Tabletop Power Supply Unit for Electric Measurements and Machines (01 Set)
Variable Resistive Load 3 separate resistive sectors 21 values of DC or single-phase active power 7 values of three-phase active power Safety terminals and protection by fuses AC power supply: 230/400V DC power supply: 220V active power: 460W

Variable Inductive Load (01 Installation, Testing, Commissioning and Training in PE office No.) 3 separate inductive sectors 21 values of single-phase reactive power 7 values of three-phase reactive power apparent power: 460 VA
Variable Capacitive Load 3 separate capacitive sectors 21 values of single-phase reactive power 7 values of three-phase reactive power Safety terminals and protection by fuses Power supply: 230/400V, 50 Hz apparent power: 460VA
1-Phase Transformer Power: 760 VA Voltage of primary winding: 230V, 50 Hz Voltage of secondary winding 1: 0-53-200-400V Voltage of secondary winding 2: 0-115-230V Protection: IP 22 This unit include thermal protector DC Starting Rheostat Rotor Starting Stator Starting Power: 3 x 500 W, Current: 3 x 3.16 A Resistance value: 3 x 50?, Terminals: 9
Shunt Field Rheostat Generator Power: 500W, Current: 0.31A Resistance value: 5000?, Terminals: 3
Shunt Field Rheostat Motor Power: 500 W, Current: 1.55A Resistance value: 200?, Terminals: 3
Multifunction Measuring Instrument (01 No.): Multifunction Instrument in an isolating table-top box; Connections from front and sides, with electrical international symbols; Power connections is carried out with 4mm safety terminals; Programmable connections with dia. 2mm connectors; Cables (01 Set): Set of 40 Cables with Safety Terminals, diameter 4mm, Different Lengths and Colors
Cable Holder (01 No.): The cable support (both sides) are to be made of plastic grids, so to avoid damaging the cables insulation.
With the same set up as the previous worksheet:
Create a program that runs the DC motor at 50% of its max output power.
Modify the program so that it increases the Dynamometer load from 0% to 100% in 4% steps.
Create routines that measure the torque on the load cell.
Create routines that measure the speed of the motor in Revolutions Per Minute (RPM)
Plot the RPM against torque to a graph. This is a speed-torque curve for the DC motor. Speed torque curves are the most basic way of characterizing electrical machines.
Create additional routines that make plots for speed vs current, and torque vs current.
The system consists of a number of 24V electrical machines, a control unit, software applications for driving the control unit and a set of worksheets.
Gra
The dynamometer and cradle which connects to the control unit using a 25way Dtype lead Balance
The control unit which connects to a PC using a USB lead.
Motor under test - in this case a shunt wound motor
Single-phase AC induction motor
1) A series wound motor 2
Brushless DC motor
DC motor
Three-phase AC induction motor The software is available as a download from the Matrix web site. The Modern Electrical Machines functionality is controlled via a USB COM port connection to the computer. We have provided a library of functions to allow the various aspects of the Electrical Machines system to be investigated and controlled. The various Machines function scripts can be found inside the Primitives folder. The scripts require a global variable to be declared in your project to set the COM port number as shown opposite: The dynamometer rotates in the same direction.