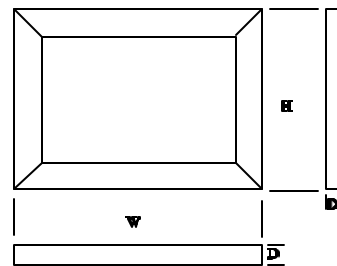
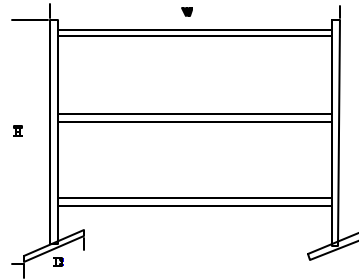


# BASIC ELECTRICITY LAB

Model: BEL-101080

## I. FEATURES

1. THIS DEVICE INCLUDES SOME BASIC EXPERIMENT UNITS AND CAN BE EXPANDED TO THE ADVANCED SYSTEM. MODULAR DESIGN MAKES IT EASY TO USE AND MAINTAIN.
2. EACH EXPERIMENT UNIT CONSISTS OF SEVERAL MODULE BOARDS. ALL INPUT AND OUTPUT SIGNALS, CONTROL FLOWS AND WIRINGS ARE SHOWN ON THE MODULE BOARDS.
3. CIRCUIT DIAGRAMS AND/OR BLOCK DIAGRAMS, ARE SILKSCREENPRINTED ON THE MODULE BOARD.
4. ALL THE TEST POINTS AND CONNECTION TERMINALS ARE BROUGHT OUT ON THE FRONT FOR EASY ACCESS AND MEASUREMENT,
5. CONNECTION TERMINALS ARE STANDARD .16"/4MM DIAMETER JACKS.
6. MAIN PANEL FRAME (STAND) IS MOLDED, SPECIALLY TREATED AND PAINTED FOR LONG-LASTING.



## II. EXPERIMENTS

1. AMPERE'S RULE
2. CORKSCREW RULE
3. LENZ'S LAW
4. FLEMING'S RULES
5. DIGITAL MULTIMETER
6. ANALOG MULTIMETER
7. DC RLC SERIES AND PARALLEL CIRCUITS
8. THEVENIN'S THEOREM
9. MAXIMUM POWER TRANSFER CIRCUITS
10. AMMETER
11. POTENTIOMETER
12. WHEATSTONE BRIDGE
13. SLIDE WIRE BRIDGE
14. SAFE CURRENT AND INSULATION RESISTANCE
15. DUAL TRACE OSCILLATOR
16. FUNCTION GENERATOR
17. FREQUENCY COUNTER
18. DC RLC TRANSIENT STATE CIRCUITS
19. AC RLC SERIES, PARALLEL CIRCUITS
20. HARMONIC OSCILLATION CIRCUITS
21. SINGLE PHASE VOLTMETER AND MULTI-RANGE POWERMETER
22. SINGLE PHASE POWER-FACTOR METER
23. SINGLE PHASE WATT-HOUR METER
24. TEMPERATURE COEFFICIENT OF RESISTANCE
25. JOULE'S LAW
26. RECTIFIER CIRCUIT
27. RECTIFIER FILTER CIRCUIT

## III. SPECIFICATION

### A. MAIN PANEL FRAME

SIZE: 31"/.78m(W) X 34.6"/.88m(H) X 15.7"/.40m(D).

MATERIAL: STEEL FRAME AND ALUMINUM RACK.

### B. MODULE BOARD

1. USING COMBINATION OF SMALL COMPONENT AND MODULE BOARDS FOR EXPERIMENTS.
2. BOARD SIZE: Type-M: 13.4"/.34m (W) X 9.45"/.24m(H) X 1.9"/.048m (D)., PLASTIC EXTRUSION, BLACK COLOR, 3mm THICK.

### C. CONNECTION WIRES

1. EXTRUDED HERMAPHRODITIC BANANA PLUGS, STANDARD 1.6"/4mm DIAMETER.
2. TOTAL 30 WIRES OF LENGTH 7.9"/.2M, 31.5"/.8M AND 59"/1.5M.

### D. COMPONENTS

1. DUAL DC POWER SUPPLY: 0~30V VARIABLE, 1A.
2. DIGITAL MULTIMETER MODULE: 3 1/2, ACV, DCV/A Ohm.
3. SINGLE-PHASE WATT METER MODULE.
4. 1ø WATT-HOUR METER MODULE.
5. MEGGER OHM METER, 500V, 200MΩ.
6. SWITCH MODULE, 6P x 4
7. CAPACITOR MODULE, 10μF, 250V x4
8. VARIABLE POWER RESISTOR MODULE, 50Ω, 100Ω, 100W.

9. VARIABLE POWER RESISTOR MODULE, 50Ω, 1KΩ, 100W.
10. INDUCTOR MODULE, 10mH, 50mH, 100mH, 500mH.
11. SERIES MOTOR, 110V, 90W.
12. LENZ'S LAW EXPERIMENT SET
13. AMPERE'S RULE EXPERIMENT SET
14. CORKSCREW RULE EXPERIMENT SET
15. POLARITY DISPLAY BOARD
16. FLEMING'S RULES EXPERIMENT SET
17. FUNCTION GENERATOR/COUNTER:
18. POTENTIOMETER, 1000mm LONG.
19. 1ø POWER FACTOR METER MODULE
20. CURRENT TRANSFORMER MODULE.
21. POTENTIAL TRANSFORMER MODULE.
22. AUTO TRANSFORMER.
23. WHEATSTONE BRIDGE
24. THERMOMETER
25. LAMP
26. COIL
27. PERMANET MAGNET
28. RELAY MODULE

## **F. EXPERIMENT MANUAL**

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Specification is subject to change without prior notice.