VERITAS Engineering

Catalogue

of

Electrical Circuit & Network Total Lab

Electrical Circuit & Network Total Lab

Model: VUET-02
Brand : VERITAS



Picture : Electrical Circuit & Network Total Lab

Feature

1. 1φ Practical Capability
2. 3φ Practical Capability
3. DC Circuit & Theorem Practical Capability
4. AC Series Resonance
5. AC Parallel Resonance
6. Voltage Step Up & Step Down Practical Capability
7. Measuring Instruments Range Extension
8. AC to DC Rectifier Practical Capability
9. Power & Power Factor Measuring Capability
10. 1φ Transformer Practical Capability

Technical Specification

Power Supply:

AC Power source for AC practical:
Input voltage: 1-phase = 220V AC, 50Hz, 3 -phase = 380 ? 400V AC
Output voltage: 1φ = 220V AC, 50Hz ; 3 φ = 380 – 400V AC, 50Hz.

DC Power source for DC practical:

2 Sets DC EMF source arrangements of Cells and Batteries.

Multi-meter use for Measuring facilities:

DCV & ACV; Range mV to 600V - 3 nos.
DCA & ACA ; Range µA to 10 A - 3 nos
Resistance Ω to 40 M Ω - 2 nos
Capacitance nF to 100 µF -2 nos
Frequency 1 Hz to 20 MHz - 2 nos
Temperature -20 to1000 deg C. - 2 nos
Digital Wattmeter up to 6000 watts - 1 no
Power factor 0.01 to 1. - 1 nos

Output Capacity:

Resistive Load: 220V, Capacity 1-ϕ = 1200 W ; 3- ϕ = 1200 W;
Inductive Load : 220V, 50 Hz. Capacity 1- φ = 120VAR-300VAR , 3- φ =350VAR ;
Capacitive Load : 220V, 50 Hz., Capacity 1- φ = 200VAR, 3- φ = 200 VAR ;

Additional Device

1. Variable AC Power Supply (0 – 250V, 2 Amp, 1φ)
2. Fixed DC (24Volt, 2 Amp & 12 Volt, 2 Amp) Power Supply
3. Variable DC (0 – 15 Volt) Power Supply
4. Power Socket (1φ, 220V AC) for External Load Connection – 04 Pcs

Load:

Transformer (220/12 – 12 Volt, 7 Amp) – 2 Pcs,
Resistor (1 – 120 KΩ) (Different Value) – 21 Pcs,
Inductor (220 Volt AC, 40W) – 6 Pcs,
Capacitor (220 Volt AC, 2.5uF/3.5uF) – 6 Pcs,
Calling Bell– 1 Pcs,
Fixed Incandescent Bulb Holder– 6 Pcs,
Ammeter & Voltmeter Equivalent Resistor – 2 Pcs
Variable Resistor 1) 10 KΩ - 1 Pcs 2) 100 KΩ - 1 Pcs
Bridge Rectifier Set (Diode 6A, Capacitor 2200 uf, 35 V & 100uf , 16V and 7805 IC) – 1 Set

Switching Device:

Switch Piano Type (SPST – 4 Pcs, SPST Push Button – 4 Pcs, SPDT – 2 Pcs, Fuse – 2 Pcs.)
Industrial Type (Round)

1. Selector Switch – 2 Pcs
2. Push Switch (NO-NC) – 2 Pcs

Size: 5 Feet x 2 Feet x 2.5 Feet

Accessories:

1. Electrical Circuit & Network Total Lab (UET-02) – 1 Unit
2. **Connecting Cord/Cable : 1 Set**
   Both Side Banana Socket (Male-Male Combination)
   Length: 6 Inch – 20 Pcs,
   Length: 12 Inch – 20 Pcs,
   Length: 30 Inch – 20 Pcs.
3. **Experimental Catalog – 1 Unit**

List of Experiment

1. Identification of Electrical Measuring Instruments
2. Verification of Ohm's Law
3. Verification of Series Ckt
4. Verification of Parallel Ckt
5. Power Measurement of Electrical Load
6. Calling Bell Controlling from 3 point with Indicating Lamp
7. One Bulb Controlling from 2 Point(SPDT)
8. Three Bulb Controlling from 3 Point(Separately)
9. Using Fuse/MCB in Electrical Circuit
10. Prepare a Series Board for Testing
11. Verification of KCL
12. Verification of KVL
13. Verification of Thevenin's Theorem
14. Verification of Super Position's Theorem
15. Determining the R & L of a RL Series Circuit
16. Determining the R & C of a RC Series Circuit
17. Determining the R, L & C of a RLC Series Circuit
18. Determining the Power Factor of a RLC Series Circuit
19. Determining the R, L & C of a RLC Parallel Circuit
20. Determining the Resonance frequency of Series Circuit
21. Determining the Resonance frequency of Parallel Circuit
22. Measure Line & Phase Voltage and Current of Star Connected Load
23. Measure Line & Phase Voltage and Current of Delta Connected Load
24. Measure Power of Balanced Star Connected Load(1 Wattmeter Method)
25. Measure Power of Balanced Delta Connected Load(1 Wattmeter Method)
26. Measure Power & Neutral Current of a Unbalanced Star Connected Load
27. Measure Power of 3-phase Load(By 2 Wattmeter Method)
28. Determination of Turn Ratio of a Transformer
29. Observation the step up & Step Down Working System of Transformer
30. Open Circuit Test of a Transformer
31. Short Circuit Test of a Transformer
32. Determination of Voltage Regulation of a Transformer
33. Extension the Range of Voltmeter
34. Extension the Range of Ammeter
35. measurement of low resistance by Ammeter–Voltmeter method.
36. Perform the measurement of frequency by a frequency meter.
37. Perform the measurement of power factor by a power factor meter.
38. Perform the handling of PT.
39. Measure the single phase power by ammeter, voltmeter and wattmeter.
40. Measure the three phase power by two wattmeter method.
41. Measure the three phase power by one wattmeter method.