

| | | | |
|---------------------------------|---|---------------------|--------------------|
| Course Name: | Elements of Electrical and Electronics Engineering | Semester: | I/II |
| Date of Performance: | June 22 | Batch No: | E1 |
| Faculty Name: | | Roll No: | 16010321005 |
| Faculty Sign & Date: | | Grade/Marks: | / 25 |

Experiment No: 9

Title: Measurement of Power using Two Wattmeter Method

Aim and Objective of the Experiment:

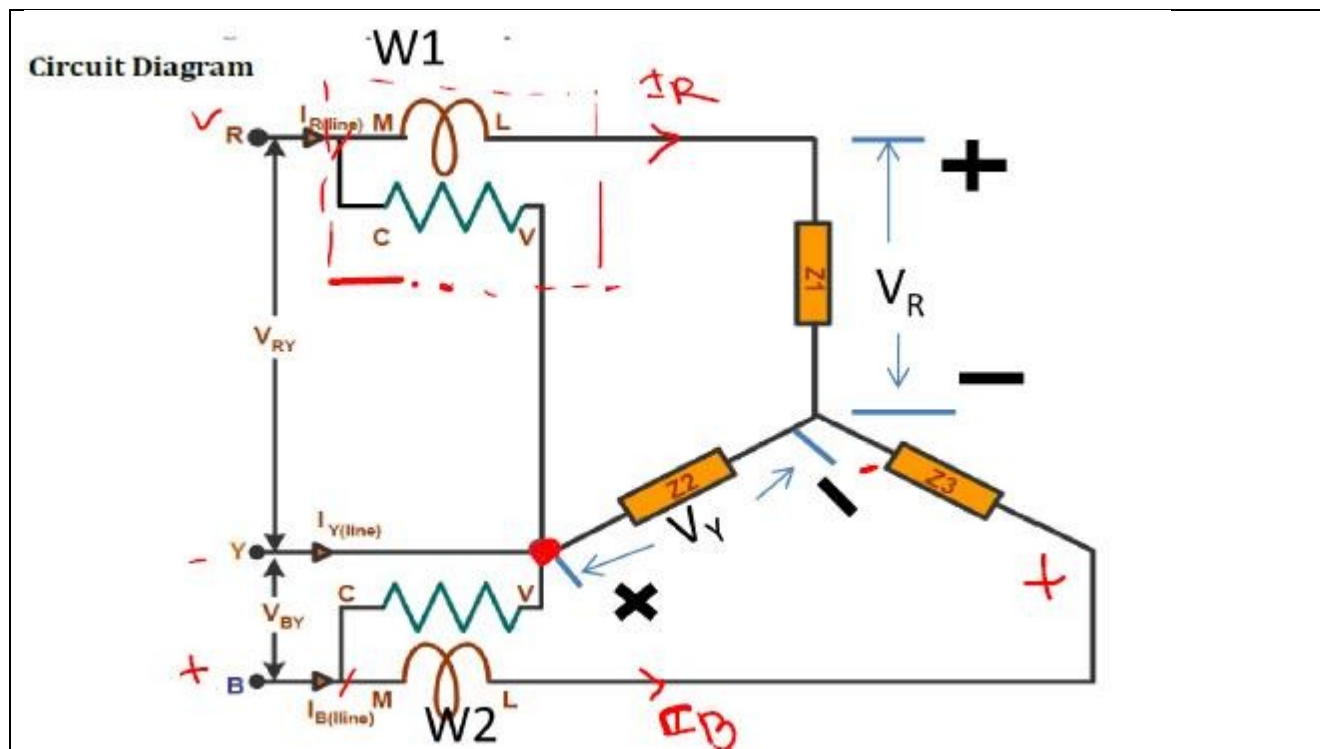
- To measure the power of three phase power using Two Wattmeter Method

COs to be achieved:

CO1: Analyze resistive networks excited by DC sources using various network theorems.

Circuit Diagram/ Block Diagram:

Circuit Diagram



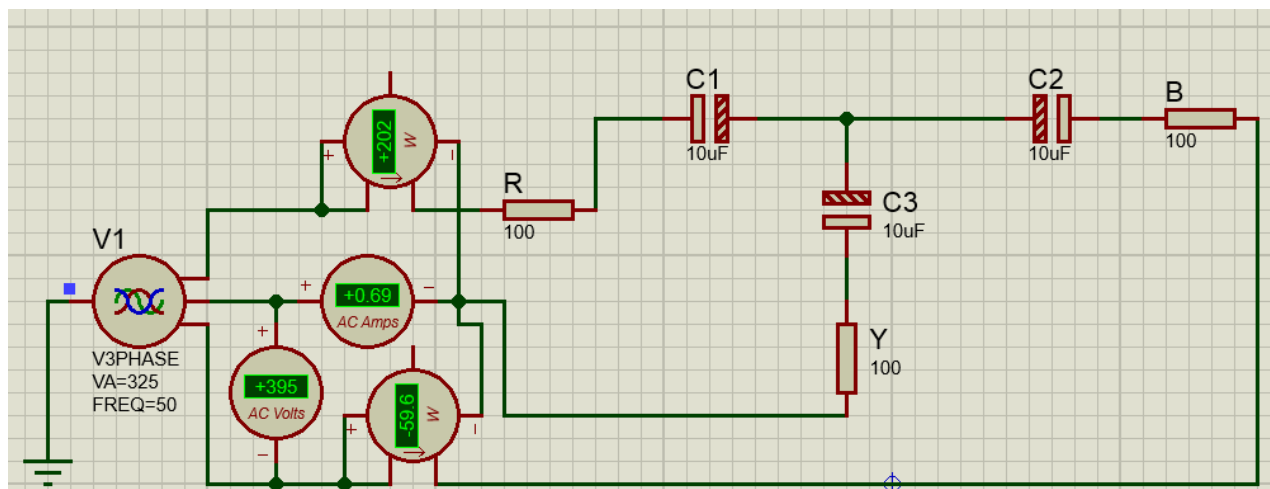
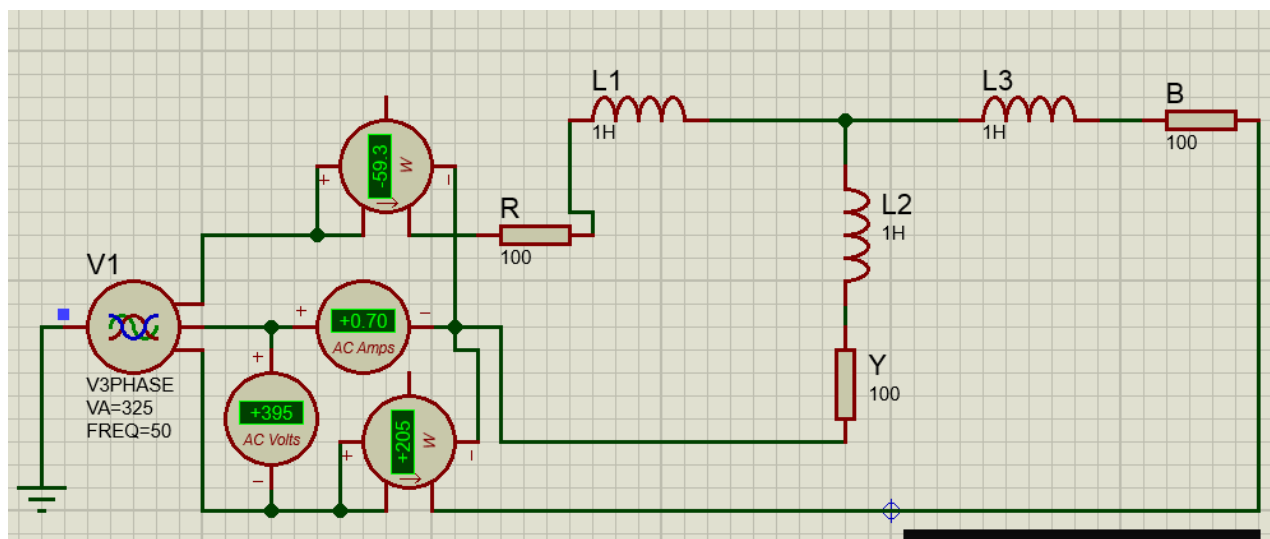
Stepwise-Procedure:

1. Connect the circuit as shown in circuit diagram
2. Increase the load and note down the reading V_L, I_L, W_1 and W_2
3. Practically you will obtain total power $W = W_1 + W_2$
4. Theoretically power is measured by using formula $P = \sqrt{3} V_L I_L \cos \phi$, using $\cos \phi = 1$ (unity) for resistive load.

Observation Table:

| Sr.no | V_L | I_L | W_1 | W_2 | $W = W_1 + W_2$ | $P = \sqrt{3} V_L I_L \cos \phi$ | Load |
|-------|-------|-------|-------|-------|-----------------|----------------------------------|------|
| 1 | 4.20 | 0.922 | 300 | 310 | 610 | 669.9 | 600 |
| 2 | 422 | 1.377 | 450 | 450 | 900 | 1005.1 | 900 |
| 3 | 420 | 2.280 | 750 | 750 | 1500 | 1656.6 | 1500 |

Screenshot of Output:



Conclusion:

Hence, we have successfully completed the experiment.

Signature of faculty in-charge with Date: