

LAB NO: 10**SERIES AND PARALLEL CONNECTION OF LOADS WITH DISTRIBUTION BOX****Objective:**

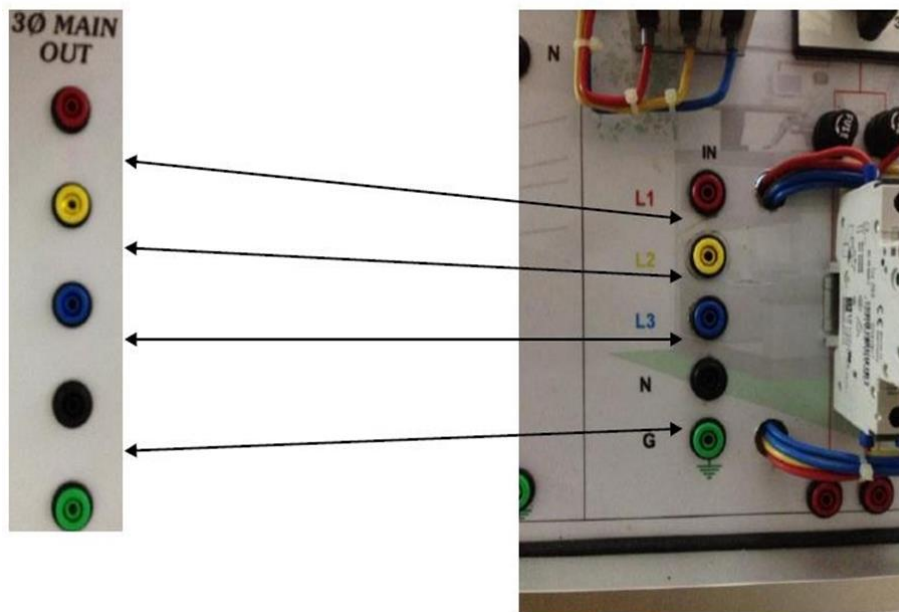
The main objective of this lab is to determine and understand the series parallel circuit connection of load in distribution box.

Theory:

If two circuit elements are in series, the same current must flow through them. If two circuit elements are in parallel, the voltage across each element is the same. At any junction, the current that flows in will equal the current that flows out. For any loop in a circuit, the sum of the voltage changes around the loop is zero. The voltage change across a resistor is negative if the change is in the direction of the current flow (a voltage drop). The voltage change across a resistor is positive if the change is in a direction opposite to the current flow (a voltage rise).

Connection of Distribution Box:

Use three phase main supply to online Distribution box input. Then connect output of Energy Analyzer to Bulb load box.

**Figure 10.1**

Series Connection:

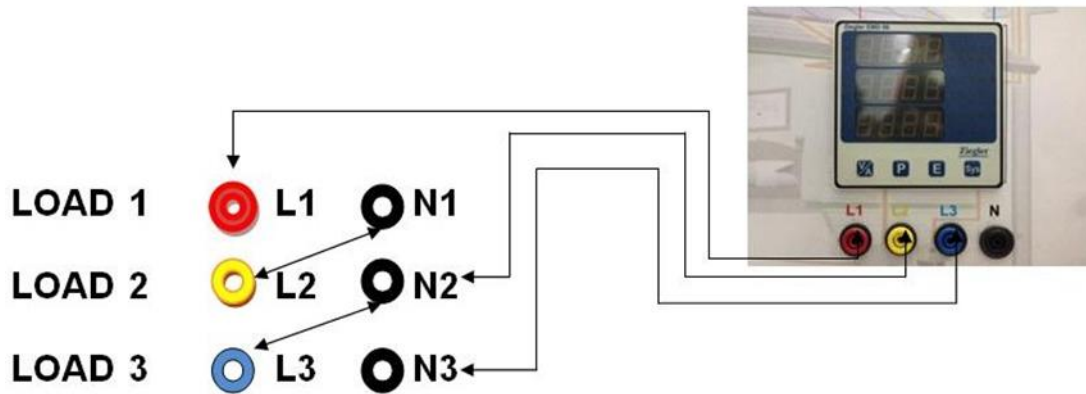


Figure 10.2

Parallel Connection:

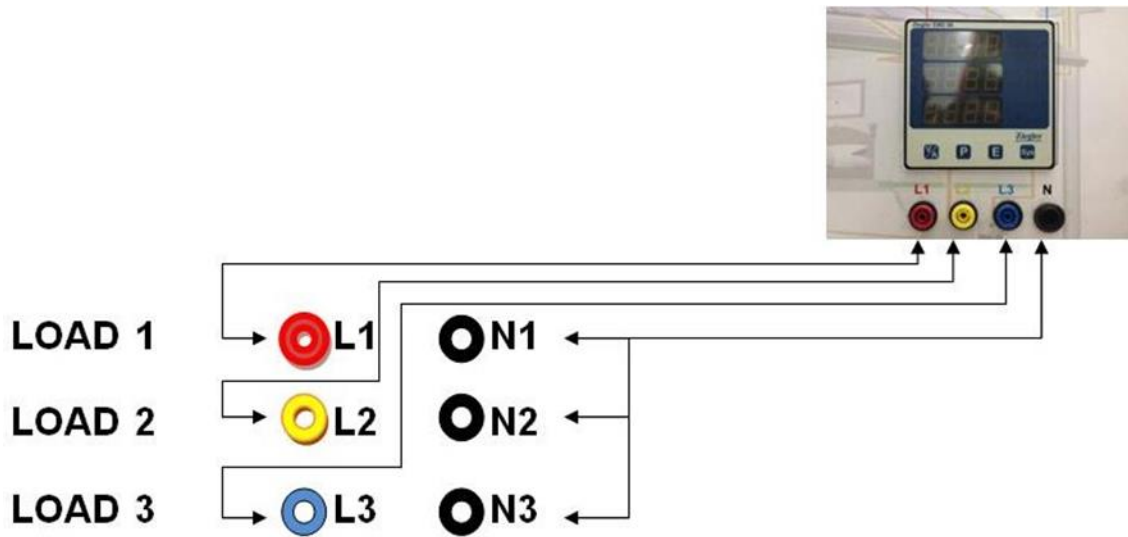


Figure 10.3

POST LAB QUESTIONS:

**Q1: Two bulbs of 40W and 60W are connected in series with an AC power supply of 100V.
Which bulb will glow brighter and why?**

**Q2: Two bulbs of 40W and 60W are connected in parallel with an AC power supply of 100V.
Which bulb will glow brighter and why?**

Teacher Remarks:

Obtained Marks: / 10