



# PHASE SEQUENCE CHECKER FOR THREE PHASE

## SUPPLY

### ABSTRACT

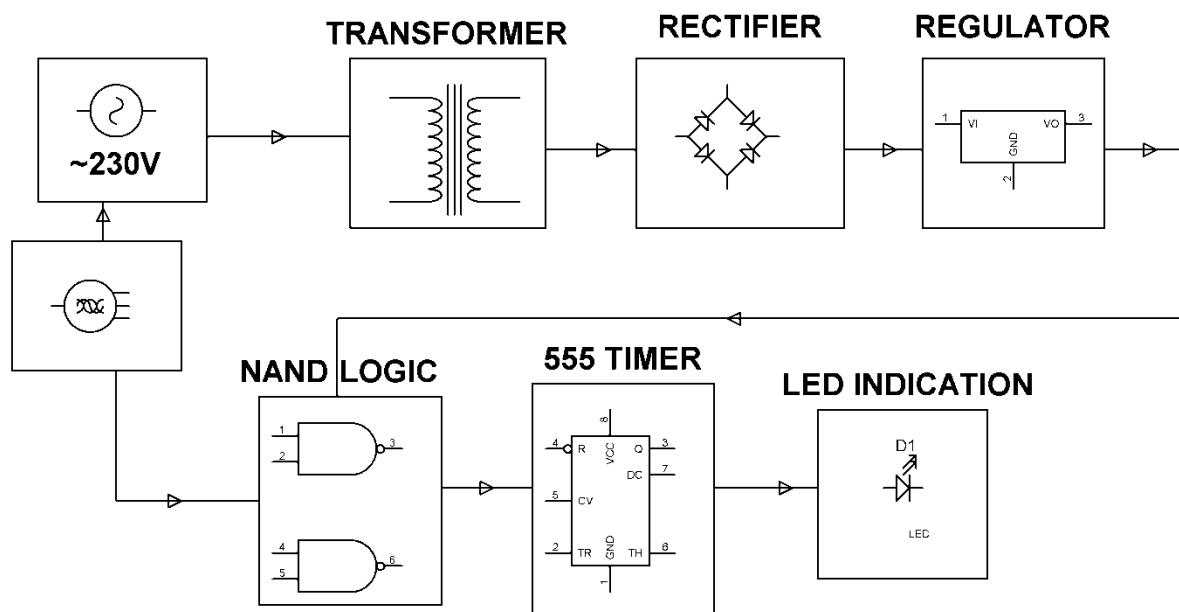
The project is designed to check the sequence of the 3 phase supply. It is very important to know the phase sequence particularly for 3 phase motors. For example, if the 3 phase motor is used for pumping action, any phase reversal accidentally resulting in wrong sequence could force the motor run in the wrong direction. This could result in dry run of the motor to develop permanent fault.

In this project direct 3-phase AC supply 50Hz is fed through voltage drop arrangement duly stabilized by zener diodes to a logic circuit comprising of NAND gates and OR gates to detect the proper sequence of RYB by series of pulses of fixed duration. In the event of changing the sequence from RYB to say YBR, the combination of NAND and OR gates develops an output with a missing pulse during the fixed time duration. This pulse is used in triggering a monostable 555 timer. Thus, while the sequence is not there the triggering to the timer is missed which is indicated



by an LED driven from the output of the 555 timer. DC requirement of the circuit is powered from a step down transformer along with a bridge rectifier and filter capacitor.

### **BLOCK DIAGRAM**



### **HARDWARE REQUIREMENTS:**

- Transformer, Diodes, Voltage Regulator, Capacitors, LED, Resistors, NAND Gate, OR Gate, 555 Timer.