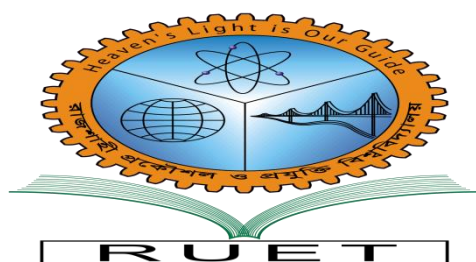


Heaven's Light is Our Guide



Rajshahi University of Engineering & Technology

Department of Electrical & Computer Engineering

Lab report

Course Code : ECE 1202

Course Title : Circuits and Systems -II Sessional .

Date of Experiment : 01-10-2024

Date of Submission :08 -10-2024

Submitted To:	Submitted By:
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Experiment No :4

Experiment Name :Three Phase Sequence test using motor.

Objectives:

- i) To observe the three phase sequence by observing rotation of a motor.

Theory:

In a three-phase system, the order in which the voltages attain their maximum positive value is called Phase Sequence. There are three voltages or EMFs in the three-phase system with the same magnitude, but the frequency is displaced by an angle of 120° electrically.

Phase sequence is the order in which the three phases of a three-phase system reach their peak values. For example, if phase A reaches its peak before phase B, and phase B reaches its peak before phase C, then the phase sequence is ABC. If phase C reaches its peak before phase B, and phase B reaches its peak before phase A, then the phase sequence is CBA. The phase sequence can be either clockwise or counterclockwise, depending on the direction of rotation of the phasor diagram.

Diagram:

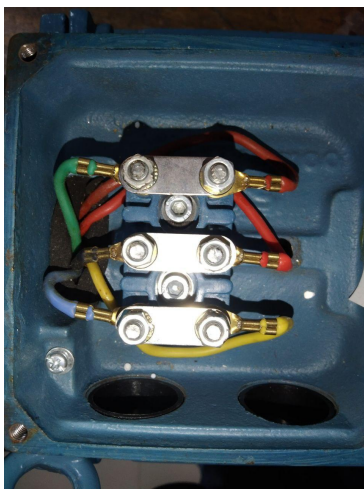


Fig.1: Delta Connection

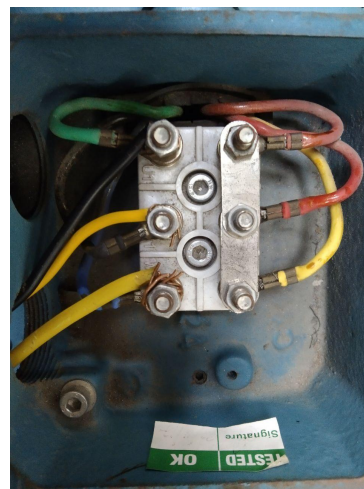


Fig.2: Wye Connection

Required Apparatus:

1. A Motor
2. Connecting Wires
3. Voltage source

Results:

When the motor is rotating in the direction of clock or clockwise, we can say that the phases are in **ABC** sequence .

And when the motor is rotating in the reverse of clock

or anti-clockwise, we can say that the phases are in **ACB** sequence .



Discussions:

At the time of changing two connections between three phases , we could observe the opposite rotation of motor in both Wye and Delta connection . It was easy to decide that the sequence turned ABC to ACB . For the clockwise rotation it was **ABC** sequence and for anti-clockwise rotation it was **ACB** sequence.

Precautions:

- i) Stay away from the motor.
- ii) Safely provided the connection to the voltage source.
- iii) Carefully observe the rotation: