

# PLC124 LAB 1.3: SINGLE PHASE MOTORS & TRANSFORMERS

Student Name: \_\_\_\_\_

Student ID: \_\_\_\_\_

## LAB OUTCOMES:

Upon completion of this lab procedure, the student should be able to:

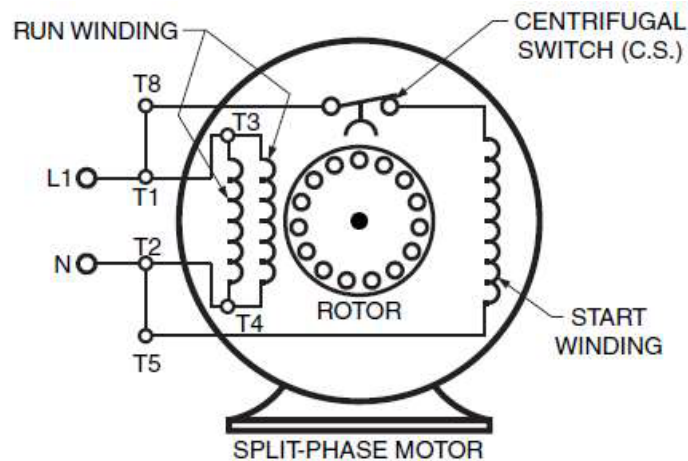
1. Wire a single phase, split-phase motor.
2. Wire a single phase, capacitor-start motor.
3. Wire a step-up and step-down transformer.
4. Test and replace components of an AC motor.
5. Reverse the rotation of an AC motor.
6. Describe how a transformer works
7. Interpret a transformer nameplate.

## LAB PROCESS:

Find a Machines Training Unit and an NSCC demonstration transformer.

**Part 1:**

1. Wire a single phase AC motor



2. Test the insulation on the AC motor with a megger
3. Reverse the rotation of a single phase AC motor.
4. Test the current of the AC motor with a clip on ammeter
5. Load the AC single phase motor and explain the meter readings.

What is the relationship between load and current?

6. Replace the centrifugal switch on an AC split phase motor

**Part 2:**

1. Wire the demonstration transformer with 120 VAC input and 104/208V output.

2. Wire the demonstration transformer with 120 VAC input and 104 V output.
3. Wire the demonstration transformer with 208 VAC input and 120 V output.
4. Interpret the transformer nameplate
5. Explain how a transformer works

*The outcomes of this exercise (listed on page 1) specifies the skills that the Student must demonstrate to the Instructor. Once the Instructor is satisfied with the demonstration of Knowledge & Skills by the individual student, they will sign this document (for the student), then enter a 100% into the Hands-On Lab grade in Sakai.*

I verify that this student has completed all of the requirements of this Hands-On Assessment:

Student Name: \_\_\_\_\_

Faculty Signature: \_\_\_\_\_ Date: \_\_\_\_\_

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