

PLC121 LAB 2.3: AC CURRENT

Student Name: _____

Student ID: _____

LAB OUTCOMES:

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

1. Calculate the Peak voltage from an RMS measurement using a DVM
2. Test the voltage on a 120VAC outlet.
3. Identify the hot, neutral and grounding wire connections on a 120VAC outlet
4. Explain the difference between a short circuit and an overload
5. Wire up an overload condition circuit to demonstrate and explain
6. Explain the continuity between a transformer primary and secondary
7. Measure the AC voltage on the primary/secondary of a transformer
8. Wire a basic transformer circuit with 2 resistive loads on the secondary
9. Explain the relationship between current and voltage on a transformers' primary and secondary winding

LAB PROCESS:

Open the AC/DC Training Unit. Setup the unit on its base, or lay flat on the work table.

Make sure all fault switches are in the 0 position.

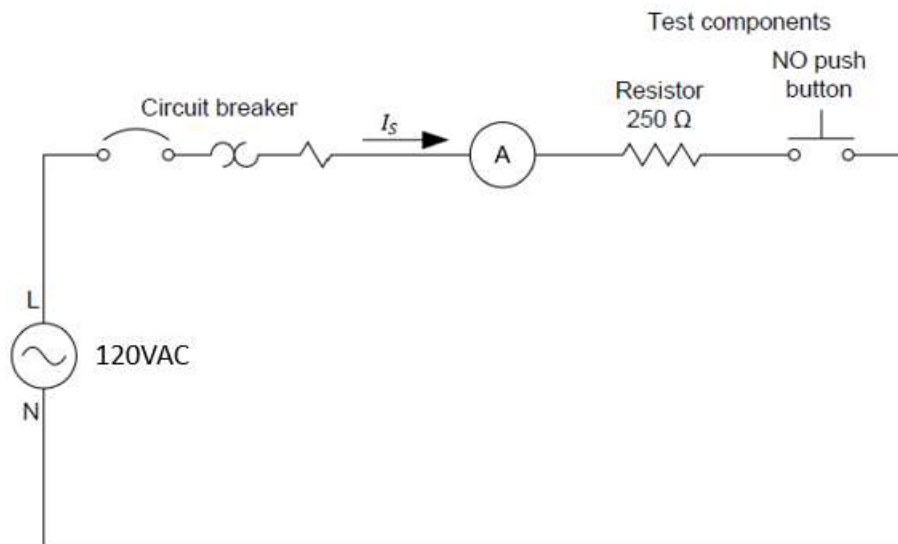
Connect the power cord and turn off the power input switch to make sure the unit is not powered.

Part 1

1. Calculate the Peak voltage from an RMS measurement using a DVM.
2. Test the voltage on a 120V AC outlet.
3. Identify the hot, neutral, and grounding wire connections of a 120V AC outlet.

Part 2

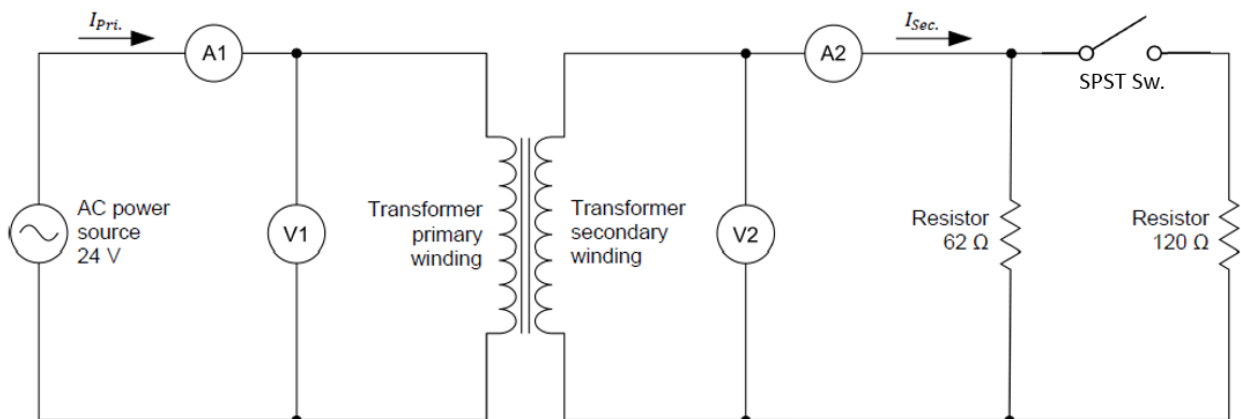
Wire the following circuit on the AC/DC training system:



1. Demonstrate and explain the overload.

Part 3

Wire the following circuit on the AC/DC training system:

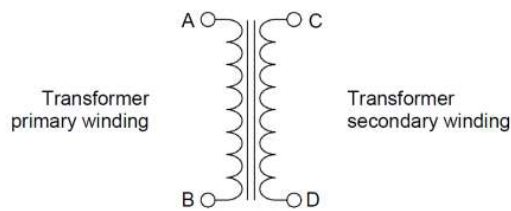


1. Measure the AC voltage on the primary / secondary of a transformer.

2. Explain the relationship between current and voltage on transformers primary and secondary winding.

Questions

1. Explain the difference between a short circuit and an overload.
2. Explain the continuity between a transformer primary and secondary.



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: _____

DOL DISCLAIMER:

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