

PLC126 LAB 3.2: ALLEN BRADLEY SLC-500 TON

Student Name: _____

Student ID: _____

LAB OUTCOMES:

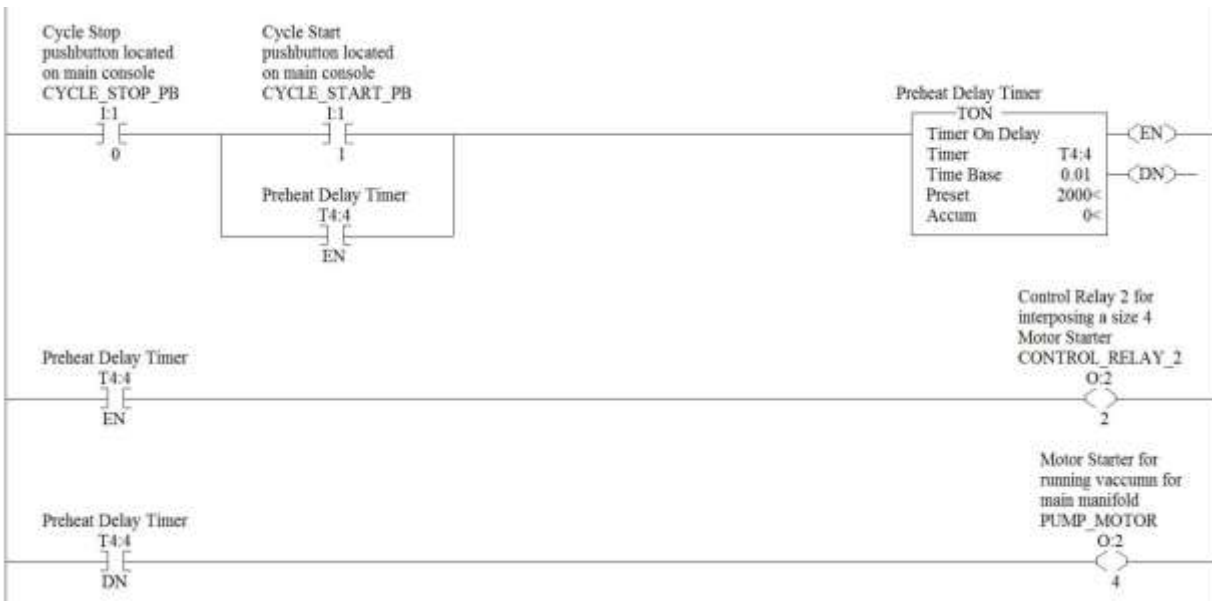
1. Explain the operation of a TON instruction in a hold-in type of program
2. Explain the operation of the status bits controlled by a TON instruction
3. Demonstrate how to change the time delay value of a TON instruction
4. Explain the data range of a SLC-500 timer

LAB PROCESS:

Write the program as shown in part 1 and then save it to the hard drive of the computer. You will then download the program to the SLC-500 processor. Once that it is complete you will go online with the SLC-500 and place the processor in RUN mode.

Part 1

1. Key in the following program and save it to the hard drive. Name the project something you will be able to easily remember.



2. If programmed properly, the CYCLE_STOP_PB should now have highlight. Push the CYCLE_START_PB. Does the timer start to time?
3. How long after you start the timer until output O:2/2 comes on?
4. How long after you start the timer until output O:2/4 comes on?
5. How can you reset the accumulated value of the timer to zero?
6. Does the timer accumulated value have a BCD or an Integer weight?

7. Try entering a value of 40000 into the timer preset value. Will it accept this value?
8. What is the largest preset value that the timer will hold?
9. Put the cursor over the timer. Right click the mouse and click "Data Table". Move the cursor to the preset value and change it to a value of 2500.
10. What location in the SLC-500 memory is the **accumulated value** of the timer stored in?
11. Add a rung of logic that would turn on output O:2/3 when the timer is timing.

Questions

1. When will the accumulated value of a TON instruction be reset to zero?
2. When does the timer "DN" bit come on for a TON instruction?
3. What word locations is the Timer Preset value stored in for timer T4:2?

4. What will the dwell time be for a TON timer if the preset is 3000 and a time base of 0.01?
5. How will the TON accumulated value be affected by turning the timer off, then turning it on again?
6. How would you change the preset of the timer to 4000?
7. What would be the dwell time of the timer if the value of 4000 were put into the timer preset?

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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