SUNY Canton College, Electrical Engineering Technology
ELEC 141 Industrial Controls

Industrial Controls, LAB REPORT
Due Date: _____ (as assigned by Instructor)

ALTERNATE TWO MOTOR CONTROL WITH MOTOR – 1 RUN ONLY and MOTOR – 2 RUN ONLY FEATURE.

Requirements:
Use "The Learning Pit" LOGIXPRO PLC SIMULATOR Software and the Dual Compressor Simulator. An example control ladder logic diagram is on pages 47-49 in the loose leaf lab notebook.

Create a plc program that will control the compressor automatically.

- The compressor will not run until a "start" pushbutton is pressed.
- In normal mode (selector setting A) the compressor will run until the desired air pressure is reached. When the air is released and the low pressure is reached the compressor will run again, BUT the opposite motor will to fill the tank. The sequence will continue alternating motors until the "stop" button is pressed or the selector switch changes mode.
- If selector switch is set to position B, the compressor will run with motor one only. Motor two will never run.
- If selector switch is set to position C, the compressor will run with motor two only. Motor one will never run.
- Use indicators to indicate which mode (normal, motor 1 only, or motor 2 only) the system is in.
- Use internal coils to minimize the use of input and output addresses. (each input will drive an internal coil, and each output will be driven by and internal coil address).
- All devices to be labeled appropriately, all rungs with appropriate comments.

Create an input, output, and internal address table.

Create an introduction page to explain the sequence and order of operations for this program. How does the user interface with the panel? What modes of operation and how each mode controls the equipment.

Create a panel layout diagram showing indicators, pushbuttons, and selector switches.

This is a laboratory report. Your work should represent your best effort. A demonstration of the operating program to the instructor is required!

Please ask if there are questions.