Lab #10 PLC & HMI HMI & VFD JD Jones

Name\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Point Value = 100 points

In this lab you will be controlling a VFD on the “A” frame with the HMI and PLC.

1. Establish communication with the HMI and PLC and VFD.
   1. RS Linx for all 3.
   2. Adding the PLC to the HMI program for communication.
   3. Adding the VFD to the PLC program.
2. You need to create a new HMI program and have control of the VFD.
   1. Needed items on the HMI screen
      1. Start button
      2. Stop button
      3. Speed entry button Have the limits set to the VFD speed limits. See below.
      4. Direction button
      5. Readout information of the current VFD speed
3. Wire up and Program the VFD
   1. Wiring of the VFD.
   2. Programming of the VFD for the control of start, stop, speed reference and direction to be from the comm port.
   3. Set the minimum speed to 24.
   4. Set the maximum speed to 92.
   5. Adjust the Accell time to 8 seconds.
   6. Adjust the Decel time to 3 seconds.
4. Showing the instructor it runs.
5. Save and transfer the file to the HMI and run the program.

Points for:

1. Establish communication with the HMI, PLC and VFD. 30 points
2. HMI program and have control of the VFD.
   1. Start, Stop, Direction 10 points
   2. Speed entry, Readout 10 points
3. Wiring of the VFD. 10 points
4. Programming of the VFD for the control of start, stop, speed reference and direction to be from the comm port. 20 points
   1. Set the min and max speed. 10 points
   2. Set the Accel and Decel times 10 points

INSTRUCTOR’S INITIAL\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_