Motor Controls Lab #6 AB VFD #2 JD Jones

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Points 100

In this lab you will be wiring up a VFD (Variable Frequency Drive). We will take and build more of the features with each lab. As always, wait for the instructor to approve your wiring prior to powering up. You will be using the **Allen Bradley** on the LabVolt trainers for most of these labs.

Use the website for the drive. Here is a link.

<http://literature.rockwellautomation.com/idc/groups/literature/documents/um/22b-um001_-en-e.pdf>

You will need to reset to factory defaults prior to programming the VFD’s. Here is the process for PowerFlex 40 VFD. I will leave it up to you to figure out the PowerFlex 525.

1) Select parameter P041

2) Set the value to 1

3) After the defaults are complete this parameter will set itself back to 0.

4) F048 on the display means you were successful at resetting the default settings.

You will reset the defaults because previous students might have made changes and the results will be unpredictable.

Tasks to complete:

A) Change the Frequency input to be external from the drive. Use the DC Drive pot for this.

B) Have the max frequency set to 73. Look at “P” parameters.

C) Change the run method to external. Use one push button to start the motor and another to stop it.

D) Turn on a light when the VFD at the set frequency. Not the max frequency. Use the relay contacts.

E) Reverse the direction of the motor with a selector switch.

NOTE: You will **NOT** have a jumper from terminal 1 to 11. The stop button will be in its place.

Points for PowerFlex **40** VFD

A) Change the Frequency input to be external from the drive. 10 pts

B) Have the max frequency set to 73. 5 pts

C) Change the run method to external.

a. Stop button 5 pts

b. Start button 5 pts

c. Reverse selector switch 5 pts.

D) Turn on a light when the VFD at speed. 15 pts

E) Safety glasses and all grounds are connected. 5 pts

Points for PowerFlex **525** VFD

A) Change the Frequency input to be external from the drive. 10 pts

B) Have the max frequency set to 73. 5 pts

C) Change the run method to external.

a. Stop button 5 pts

b. Start button 5 pts

c. Reverse selector switch 5 pts.

D) Turn on a light when the VFD at speed. 15 pts

E) Safety glasses and all grounds are connected. 5 pts

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