Motor Controls Lab #10 AB VFD #3 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** VFD on the LabVolt trainers

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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. Wire the PLC analog card to determine the frequency.

B) Max frequency of 87.

C) Min frequency of 42.

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

E) Turn on an output from the VFD when it is (choose an option that interests you).

Points for PowerFlex **40** VFD

A) Change the Frequency input to be external from the drive. The PLC is to determine the frequency via the analog card. 15 pts

B) Max frequency of 87. 5 pts

C) Min frequency of 42. 5 pts

D) Change the run method to external.

a. Stop, button 5 pts

b. Start button 5 pts

c. Reverse selector switch 5 pts.

E) Turn on an output from the VFD your choice. 5 pts

F) 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. The PLC is to determine the frequency via the analog card. 15 pts

B) Max frequency of 87. 5 pts

C) Min frequency of 42. 5 pts

D) Change the run method to external.

a. Stop, button 5 pts

b. Start button 5 pts

c. Reverse selector switch 5 pts.

E) Turn on an output from the VFD your choice. 5 pts

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

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