**Unit: Manual Motor Controls Job: 20**

**Title: Stop/Start/Jog using Selector Switch for Three Phase Mtr. CLO# 1,2**

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Station \_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Compare motor jogging techniques and how they differ.
2. Demonstrate how a stop/start motor circuit can be converted to a jogging circuit using a two-position selector switch.
3. Develop motor circuit design skills for three-phase motor control.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this shop job. Grading shall be based on the Manual Motor Controls rubric.

**Instructions**

Design a stop/start/jog motor control circuit using two momentary pushbuttons and a two-position selector switch. With the selector switch in “run” mode, whenever the start button is pressed, the motor shall start and stay running. Whenever the stop pushbutton is pressed the motor shall stop. With the selector switch in “jog” mode, whenever the start button is pressed, the motor shall start and run only while the button is being pressed. When the start button is released the motor shall stop. Ensure that the control circuit includes overload protection. Green light indicates that the motor is running. Red light indicates motor has stopped. Blue light indicates that the motor is in “jog” mode. The yellow light indicates on overload condition. Use the space on the opposite side of this page to design your circuit. Once complete, review your design with you instructor. After obtaining approval, you may wire your circuit. Ensure to label all wires with the appropriate wire numbers. Have your instructor review your wiring before energizing your circuit.



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Render the schematic you designed using a CAD type software package on a classroom PC. Once complete, post the schematic to your student network folder using filename MMC Job 20 – *username.ext*