**Unit: Manual Motor Controls Job: 23**

**Title: Forward/Reverse/Jog using 3 Pushbuttons for 3 Phase Mtr. CLO# 1,2**

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

**Objectives**

1. Student shall develop a further understanding of reversing a motor.
2. Student shall enhance motor jogging design skills.
3. Upon completion, a student shall have a more complete knowledge base for creating proficient motor control circuits.

**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 forward/reverse/jog motor control circuit using three momentary pushbuttons and a three-position selector switch to select forward/reverse. One pushbutton shall be a traditional “start” and the motor shall rotate in the direction based on the three-position selector switch. Another pushbutton shall be used as a “job” button, much like the “start” but without the sealing action. The remaining pushbutton shall be a “stop” button. The three-position selector switch shall determine if the motor is to rotate “forward” (CCW) or “reverse” (CW). If the motor is running and the selector switch is changed, the motor shall stop running. The operator shall have to press the “start” button to engage the motor in the newly selected direction. The green light shall indicate “forward”, the blue light shall indicate “reverse”, the red light shall indicate “stopped” and the yellow light shall indicate “overload”. Use the space on the opposite side of this page to design your circuit. Once complete, review your design with your 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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