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| Name |  | Station |  | Date | |  | | |
| Filename | Manual MC Hands On 04 *[name]*.vsdx | | Location | | U:\Electrical\*First\_Lastname* | | | |
| Objective | | | | | | | | |
| Design a hand off auto circuit that controls a motor based on a limit switch (for auto mode). This motor control circuit is for a three phase motor. This job is to be done on the patch-panel station. The entire control circuit shall be done in 24VDC. When the operator selects *Hand* from the HOA selector switch, the motor shall be controlled by a standard start/stop pushbutton station. When the operator selects *Auto* from the HOA selector switch, the motor shall be controlled by a limit switch (you may use the yellow pushbutton, but draw a limit switch in your design). When limit switch is actuated, the motor shall run. When limit switch is not actuated, the motor shall stop. When the HOA selector switch is in the Off position, neither control circuit shall operate nor shall the motor run. Illuminate a green light when the motor is running and a red light when the motor is off. | | | | | | | | |
| Job Instructions | | | | | | | | |
| * Draw your design on the graph provided. (No use of PCs at this time) * Obtain approval from your instructor to start wiring.(**Station must be locked out**) * After wiring, you may test circuit on your own **without the motor connected**. * Have your instructor review your wiring to ensure all is correct. * Get instructor approval to wire the motor. (**Station must be locked out**) * After connecting the motor, have you instructor look over your motor wiring. * Have instructor test final system and receive a grade. * Instructor add a “problem” into the circuit. Start Time \_\_\_\_\_\_\_\_\_\_ Finished Time \_\_\_\_\_\_\_\_\_ * Render your hand drawing of your schematic in Visio. * Save Visio file using naming convention and location listed above. | | | | | | | | |
| Grading Rubric | | | | | | | | |
| Classification | | | | | | | Points | Score |
| Hand drawing | | | | | | | 15 |  |
| Schematic Design | | | | | | | 10 |  |
| Proper Use of Lock-Out-Tag-Out | | | | | | | 20 |  |
| Wiring | | | | | | | 20 |  |
| Circuit Operation | | | | | | | 10 |  |
| Troubleshooting | | | | | | | 10 |  |
| Visio Rendering | | | | | | | 10 |  |
| File naming and storage | | | | | | | 5 |  |

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