Title: **8 Pin Relay, Wired** Job: 5

Course: Intro to Automation Unit: Manual Motor Control CLO: 2

Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Grade \_\_\_\_\_\_\_\_ Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**Objectives**

1. Student shall identify the components of a standard eight-pin relay.
2. Student shall contrast the difference between “normally-open” contacts and “normally-closed” contacts.
3. Student shall evaluate the behavior of the relays contacts in a live circuit.

**Assessment**

Students shall demonstrate a comprehension of the objectives listed above by scoring a minimum of 75% on this Job. Grading shall be based on instructor evaluation.

**Materials**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Inputs | | | Outputs | | |
| Q | Input Device | Function | Q | Input Device | Function |
| 0 | Mushroom head PB |  | 1 | Green Pilot Light |  |
| 0 | 3P selector switch |  | 1 | Yellow Pilot Light |  |
| 0 | 2P selector switch |  | 1 | Red Pilot Light |  |
| 0 | NC Pushbutton |  | 1 | Blue Pilot Light |  |
| 1 | Dual Pushbutton |  | 1 | Eight-pin relay |  |
|  |  | | 0 | Eleven-pin relay |  |

**Instructions**

Wire the schematic shown on page 2. Ensure to use the proper colored wire and label all wires with the appropriate wire number. Have the instructor review your circuit before energizing the panel. After obtaining approval, energize the circuit and follow the steps in the table below.

**Diagram**

|  |  |  |
| --- | --- | --- |
|  |  |  |

**Schematic**



1. The numbers in the boxes to the left are for what purpose? \_\_\_\_\_\_\_\_\_\_\_\_\_\_
2. The numbers below a device indicate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
3. The number on the horizontal lines indicate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
4. The numbers in the box to the right indicate? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
5. For what purpose are some of the numbers underlined? \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_
6. Without pressing PB2, record the state of the four lights.

Green \_\_\_\_\_\_\_\_\_\_ Yellow \_\_\_\_\_\_\_\_\_\_ Red \_\_\_\_\_\_\_\_\_\_ Blue \_\_\_\_\_\_\_\_\_\_

1. Pressing PB2, record the state of the four lights

Green \_\_\_\_\_\_\_\_\_\_ Yellow \_\_\_\_\_\_\_\_\_\_ Red \_\_\_\_\_\_\_\_\_\_ Blue \_\_\_\_\_\_\_\_\_\_

1. For questions 6 and 7, what does the state of the pilot light indicate? \_\_\_\_\_\_\_\_\_\_\_
2. List three applications that a relay may be of use in a controls application.

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Refer to the Manual Motor Controls Boolean Logic Shop Job #3 and answer the following questions.

1. Rung 1 is an example of what type of logic?   
   (EQUAL, NOT, OR, AND, NOR, NAND)
2. Rung 2 is an example of what type of logic?   
   (EQUAL, NOT, OR, AND, NOR, NAND)
3. Rung 3 is an example of what type of logic?   
   (EQUAL, NOT, OR, AND, NOR, NAND)