



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

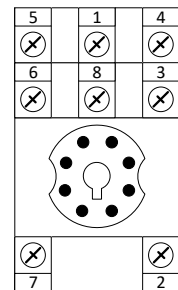
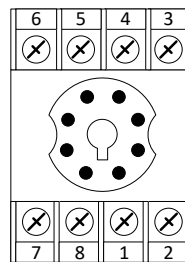
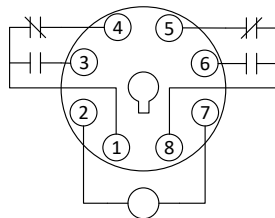
Inputs		
Device	Description	Symbol
Dual Action Pushbutton	Test Relay	TEST
Outputs		
Device	Description	Symbol
Green Pilot Light	State of Contact	CR1_13
Yellow Pilot Light	State of Contact	CR1_14
Red Pilot Light	State of Contact	CR1_86
Blue Pilot Light	State of Contact	CR1_85
Eight-Pin 24VDC Relay	Control Relay	CR1

Instructions

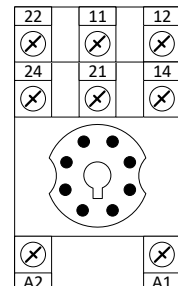
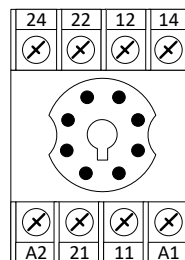
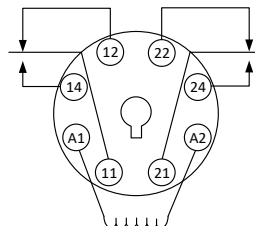
Wire the schematic shown on page 2. Ensure to use the proper colored wire and label all wires with the appropriate wire number. Have the instructor review your circuit before energizing the panel. After obtaining approval, energize the circuit and follow the steps in the table below.

Diagram

NEMA
National
Electrical
Manufacturers
Association

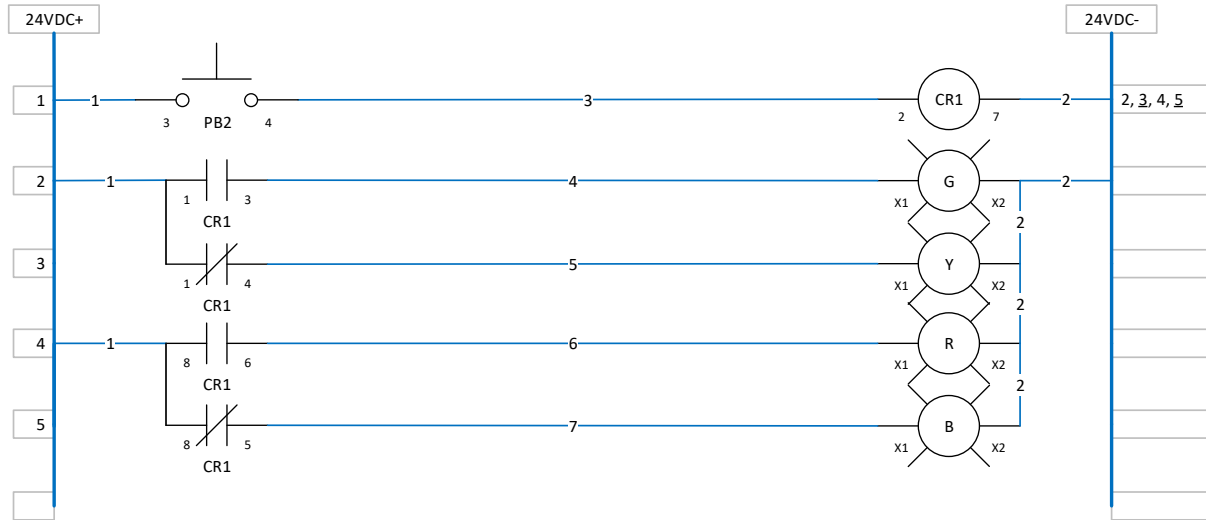


IEC
International
Electrotechnical
Commision



There are two “standards” for how the internal workings of a relay are depicted; NEMA and IEC. We shall be using NEMA throughout this course but it is important to be aware of both.

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 _____
7. Pressing PB2, record the state of the four lights
 Green _____ Yellow _____ Red _____ Blue _____
8. For questions 6 and 7, what does the state of the pilot light indicate? _____
9. List two ways to physically tell whether the relay is energized just by looking at it.

10. 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.

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