

Name: _____ Lab Section: _____ Date: _____

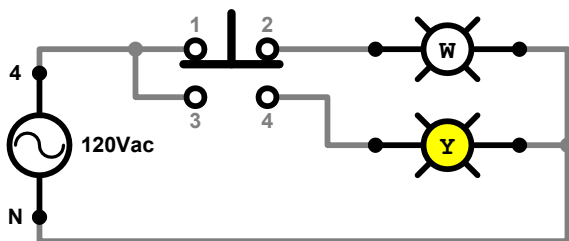
Introduction:

This experiment introduces several of the devices that are commonly utilized within simple motor-control circuits.

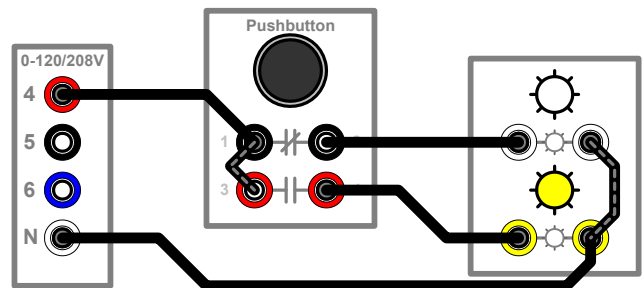
Procedure:

WARNING – Switch OFF the power supply before making modifications to any circuit or if the controller appears to be operating in an uncontrolled/unsafe manner.

1. Construct the following circuit that will be used to determine the order in which the NO and NC contacts within a pushbutton actuate when the button is pressed/released.



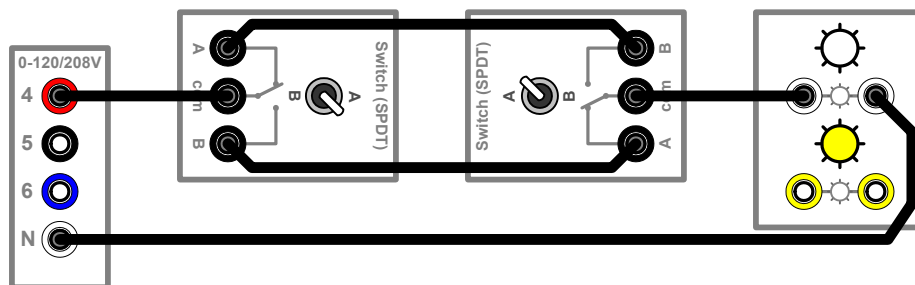
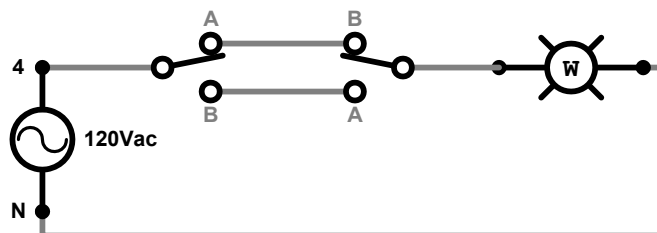
Circuit #1 – Schematic Diagram



Circuit #1 – Wiring Diagram

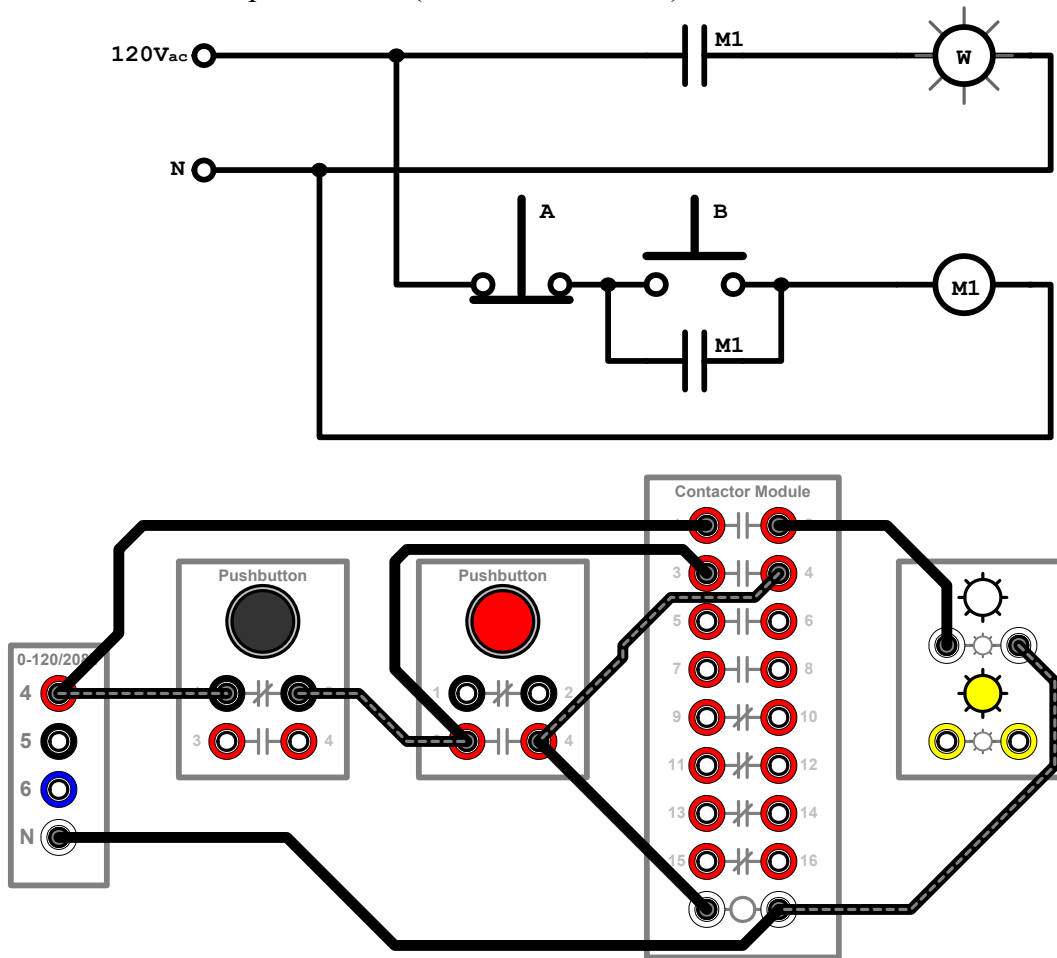
Determine the order in which the pushbutton’s NO and NC contacts when the button is pressed by slowly pressing and then releasing the pushbutton while watching the indicator lamps.

2. Construct the following circuit using 2 SPDT (three-way) switches:



Verify the circuit’s operation.

3. Construct the basic “start-stop” controller shown below. Note that this circuit requires two individual pushbuttons (1 – NC and 1 – NO).



An indicator lamp is being used in place of an actual motor during this experiment such that the illumination of the lamp will simulate the motor’s operation.

Experimentally verify the theoretical operation of the controller, troubleshooting the circuit as necessary to achieve proper operation.

4. Record below the function of each pushbutton with respect to the controller’s operation:

Pushbutton “A” – _____ Pushbutton “B” – _____