



## DEL MOTORIZED SOLUTIONS

(866) 44MOTOR - (215) 639.3880

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A manual input is any form of a contact closure (or dry contact). The RP60AUM is capable of receiving a dry contact directly into the screw terminals located on the board (see figure 8.0.1).

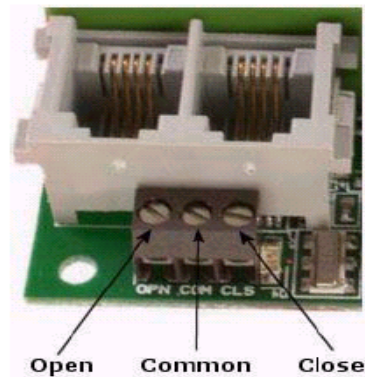


Figure 8.0.1: Manual Inputs

When wiring a manual switch, the middle screw is the "Common" post for the switch lead. As the contact is closed between the "Open" or "Close" posts, the appropriate action is performed.

### **Technical Note:**

The purpose of the "Common" post is simply to provide a common return path. The RP60AUM reacts the circuit is closed to the "Up" and "Down" posts. It is possible to parallel wire a single manual switch to multiple RP60AUM's using one "Common" lead to multiple "Open" and "Close" leads.

## 8.1. Types Of Switches

Any switch that delivers a dry contact can be categorized into one of four categories: SPST Maintained, SPST Momentary, SPDT Maintained, and SPDT Momentary.

### 8.1.1. SPST Maintained

The most common type of switch is a standard light switch. These are referred to as "Single Pole, Single Throw" (SPST) Maintained switches. An SPST switch has a single contact for switching current either on or off (see figures 8.1.1.1 & 8.1.1.2).

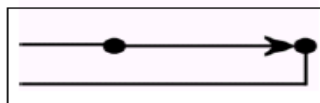


Figure 8.1.1.1: Closed SPST

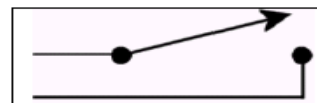


Figure 8.1.1.2: Open SPST

The contact is maintained for the duration of the action (i.e. as long as the lights are on).



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**Programming Sequence:** Stop + O7 + C7 > O# > C7 > O1 > Stop

When using a SPST Maintained switch, the manual inputs are wired to the "Common" and "Open" screws.

### 8.1.2. SPST Momentary

Another common type of switch is the push-button switch. This is similar to a garage door opener or doorbell. These are SPST Momentary switches. When the button or switch is released, the contact is broken.

In most cases, however, even though the contact is broken, we want the action to continue (i.e. just because we let off the button doesn't mean we want the motor to stop). The action in this case becomes sequential, meaning the first press of the button sends the motor down, the next press stops the motor, the next opens it, and so on.

**Programming Sequence:** Stop + O7 + C7 > O# > C7 > O1 > Stop

When using a SPST Momentary switch, the manual inputs are wired to the "Common" and "Close" screws.

### 8.1.3. SPDT Maintained

A third type of switch is "Single Pole, Double Throw" Maintained switch. A common illustration of this switch is a 3-position rocker switch. SPDT switches have the ability to switch current between one of 2 contacts or no current at all (see figures 8.1.3.1, 8.1.3.2, & 8.1.3.3).

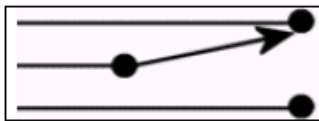


Figure 8.1.3.1: Closed SPDT

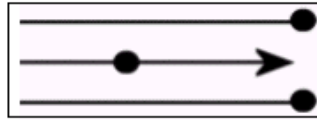


Figure 8.1.3.2: Open SPDT

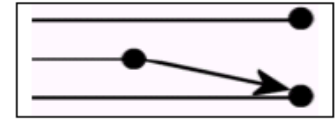


Figure 8.1.3.3: Closed SPDT

In this case, the action is maintained in the direction of the switch as long as the switch remains in its position. The RP60AUM has the ability to stop when there is no voltage being delivered by the switch (i.e. the rocker is in the middle, "off" position).

**Programming Sequence:** Stop + O7 + C7 > O# > C7 > O3 > Stop

### 8.1.4. SPDT Momentary

An SPDT switch is capable of delivering voltage to one of two contacts while the user presses and holds the button. This is a SPDT Momentary switch. An example of this is a rocker switch with a spring, which always returns the switch to the center "off" position.

When one side of the switch is pressed, voltage will be delivered to the appropriate contact. When the other side is pressed, the other contact will be energized.