PA-39
User Manual

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Specifications

**Control Ability**
2 Actuators with Potentiometers In Sync/Sequence/Individual Control

**Input Voltage**
12-24VDC

**Output Voltage**
12-24VDC

**Current**
30A (15A Per Channel)

**Kit Includes**
1 Control Box, 1 Hand Remote, 1 Wire Harness, Mounting Hardware

**Special Feature**
Remote comes with 3 presets

**Remote Functions**
Up, Down, Pause (Momentary)

**Size (L x H x W)**
4.9" x 1.3" x 3.7"

**Weight**
0.8 lbs

**Warranty**
18 Months

Dimensions

![Dimensions Diagram]

- **Dimensions**
  - Length: 4.9"
  - Width: 1.3" (W)
  - Height: 3.1"

- **Remote Control Dimensions**
  - Length: 3.7"
  - Width: 1.3"
  - Height: 0.2"
Included Components

OVERVIEW

The dual linear actuator controller is a programmable, 3 preset controller that allows individual or sequence linear actuator function.
Basic Wiring Setup

Power Pin

Actuator Potentiometer Pin

Preset #1 Input Switch

Preset #2 Input Switch

Preset #3 Input Switch

Battery

Ground
Dip Switch Positions

Position 1: Actuator 1

Position 2: Both Actuators

To program both actuators, they must both be retracted. First, set the switch to position 1 and retract the first actuator. Then set the switch to position 3 and retract the second actuator.

Presets can be saved at any point desired along the stroke. They do not have to be set in order.

Position 3: Actuator 2

Moving the Actuators

Individual or sequence linear actuator function.
Press buttons 1 and 2 together to make the actuator retract.

PROGRAMMING PRESETS

There are three presets available on this model. Use the following instructions for programming.

1. Extend the actuator(s) to the point you’d like to have the first preset.

2. Press and hold button 1 for 5 seconds. The LED will flash to indicate the preset has been saved.

Repeat this process for preset 2 and 3, using the respective buttons. For setting presets on actuator 2, slide the dip switch to position 2.
Step 1: DIP Switch Positioning
Ensure 4-Bit DIP Switch Configuration:

Set Switch 3 in ON position (0100 = SW 4, SW 3, SW 2, SW 1). All other switches must be in OFF position.

Step 2: Actuator 1 Position Programming (Must be followed in order)

Actuator 1 Start Position:
1. Slide the 3-way position horizontal slider switch to the utmost LEFT (position 1) to set programming mode to ACTUATOR 1 MODE
2. Hold down buttons 2&3 at the same time to EXTEND the actuator. Hold own buttons 1&2 at the same time to RETRACT the actuator.
3. When the starting position of actuator 1 is selected HOLD DOWN BUTTON 1 for five (5) seconds until red light above the button flashes. Once the button flashes, actuator 1 starting position is saved.

Actuator 1 End Position:
1. Ensure the 3-way position in the utmost LEFT position
2. Hold down buttons 2&3 at the same time to EXTEND the actuator. Hold own buttons 1&2 at the same time to RETRACT the actuator.
3. When the ending position of actuator 1 is selected HOLD DOWN BUTTON 3 for five (5) seconds until red light above the button flashes. Once the button flashes, actuator 1 ending position is saved.

Step 3: Actuator 2 Position Programming (Must be followed in order)

Actuator 2 Start Position:
1. Slide the 3-way position horizontal slider switch to the utmost RIGHT (position 3) to set programming mode to ACTUATOR 2 MODE
2. Hold down buttons 2&3 at the same time to EXTEND the actuator. Hold own buttons 1&2 at the same time to RETRACT the actuator.
3. When the starting position of actuator 1 is selected HOLD DOWN BUTTON 1 for five (5) seconds until red light above the button flashes. Once the button flashes, actuator 2 starting position is saved.

Actuator 2 End Position:
1. Ensure the 3-way position in the utmost LEFT position
2. Hold down buttons 2&3 at the same time to EXTEND the actuator. Hold own buttons 1&2 at the same time to RETRACT the actuator.
3. When the ending position of actuator 1 is selected HOLD DOWN BUTTON 3 for five (5) seconds until red light above the button flashes. Once the button flashes, actuator 2 ending position is saved.
Dual Actuator Sequence Programming

**Step 4: Sequence Operation Mode**

After completing steps 1 through 3, set the 3-way position horizontal slider switch to the CENTER (position 2).

Your sequential programming is complete and may now be operated.

**Operation Sequence and Information:**

Button 1: Sets actuators 1 and 2 to START position. Regardless of the individual actuator position, the actuators will return to their programmed START position.

Sequence in the following order:
1. Actuator 2 moves to START position
2. Actuator 1 moves to START position

Button 3: Sets actuators 1 and 2 to END position. Regardless of the individual actuator position, the actuators will position to their programmed END position.

Sequence in the following order:
1. Actuator 1 moves to END position
2. Actuator 2 moves to END position

Button 2: Controls the reversal of the sequence of actuator extension. For example, if actuator 1 extends before actuator 2, pressing button 2 will result in actuator 2 extending before actuator 1.
# Dip Switch Function

<table>
<thead>
<tr>
<th>Position</th>
<th>Function</th>
<th>Action</th>
<th>For</th>
</tr>
</thead>
<tbody>
<tr>
<td>#1</td>
<td>ON</td>
<td>Operates only when ignition is present.</td>
<td>Operates only when the yellow ignition wire receives +12VDC.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>Operates only when ignition is not present</td>
<td>Operates only when the yellow ignition wire is not receiving +12VDC.</td>
</tr>
<tr>
<td>#2</td>
<td>ON</td>
<td>Auto return to preset 1 with loss of ignition.</td>
<td>When +12 VDC is removed from yellow ignition wire, the actuator will travel to preset 1.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Auto return to preset 2 with ignition.</td>
<td>When the yellow ignition wire receives +12VDC, the actuator will travel to preset 2.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>No function of actuators.</td>
<td>When power to the system is turned off, the actuators will not move.</td>
</tr>
<tr>
<td>#3</td>
<td>ON</td>
<td>This position is used for the dual actuator preset for 2 stage sequences.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>2 stage feature off.</td>
<td></td>
</tr>
<tr>
<td>#4</td>
<td>ON</td>
<td>Retreat safety ON. This feature allows the system to detect if an object is preventing the actuator from completing its motion.</td>
<td>The controller performs a speed check after reading the actuator position value. The actuator will retract a small amount and do another speed check. The response will either be ‘error’ or ‘normal’. When an error is present, the actuators will stop motion and extend to the max preset.</td>
</tr>
<tr>
<td></td>
<td>OFF</td>
<td>Retract safety OFF.</td>
<td></td>
</tr>
</tbody>
</table>
Mounting

This section outlines the mounting procedure for the display remote. There are a variety of options available. Use this guide to decide which is best for your operation.

Double-Sided Tape

We have included double-sided tape which can be used to mount the display to any surface.

Mounting Bolts

The mounting bolts that have been provided are a stable and secure mounting option. Use the double sided tape or the support bracket for marking and drilling holes.
Reversible Rear Display Panel

The rear display is designed so that the harness can exit either the top or the bottom of the display remote.

Use the following instructions to reverse the display:

1. Gently separate the two halves of the display. Use a fingernail or other tool to snap the halves apart. They are not attached with screws.

2. Reverse the display.

3. Snap the front and rear halves back into place.