

Aumoo Aumooo9hgvs3075-13

Aumoo 12V Electric Linear Actuator User Manual

Model: Aumooo9hgvs3075-13

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your Aumoo 12V Electric Linear Actuator. Please read this manual thoroughly before installation and use to ensure proper function and to prevent damage or injury. This linear actuator is designed for applications requiring dynamic linear motion, offering durability and multifunctionality.

2. SAFETY INFORMATION

- **Power Supply:** Ensure the power supply is DC 12V and matches the actuator's requirements. Incorrect voltage can cause damage.
- **Wiring:** Connect wiring correctly according to the polarity. Reversing polarity will reverse the direction of motion.
- **Overload Protection:** The actuator has built-in overload protection. Do not attempt to bypass this feature.
- **Environment:** While rated IP65 for dust and water resistance, avoid submerging the unit or exposing it to extreme conditions beyond its specified operating temperature range (-40 to 65°C).
- **Moving Parts:** Keep hands and clothing clear of moving parts during operation.
- **Installation:** Securely mount the actuator before connecting power.

3. PRODUCT OVERVIEW AND FEATURES

The Aumoo 12V Electric Linear Actuator is a robust device designed for various industrial and automated applications. It features a stainless steel shaft, metal gears, and a high-speed brushed DC motor for reliable performance.

Key Features:

- **Dynamic Linear Motion:** Provides power and durability for applications requiring precise linear movement.
- **Integrated Limit Switch:** Allows for precise control over the start and stop positions of the actuator, preventing over-extension or over-retraction.

- **IP65 Protection:** Designed to withstand dust, water, and harsh environments, protecting internal electronics.
- **DC Brushed Motor:** Equipped with a high-speed DC brushed motor for stable and efficient operation.
- **Wide Application Range:** Suitable for marine hatches, industrial machinery, lawn mowers, feeder testing, and more.



Figure 1: Overview of the Aumoo 12V Electric Linear Actuator.



Figure 2: Close-up view highlighting the IP65 protection and built-in clutch overload protection.

4. SPECIFICATIONS

Parameter	Value
Voltage	DC 12V
Speed	6mm/s
Maximum Thrust	7000N
Installation Size	Stroke + 250mm
Noise Level	<55dB
Working Environment Temperature	-40 to 65°C

Parameter	Value
Protection Class	IP65
Motor Type	DC Brush Motor
Limit Switch	Built-in overload protection
Material	Zinc Alloy, Aluminum Alloy, Stainless Steel
Item Model Number	Aumooo9hgvs3075-13

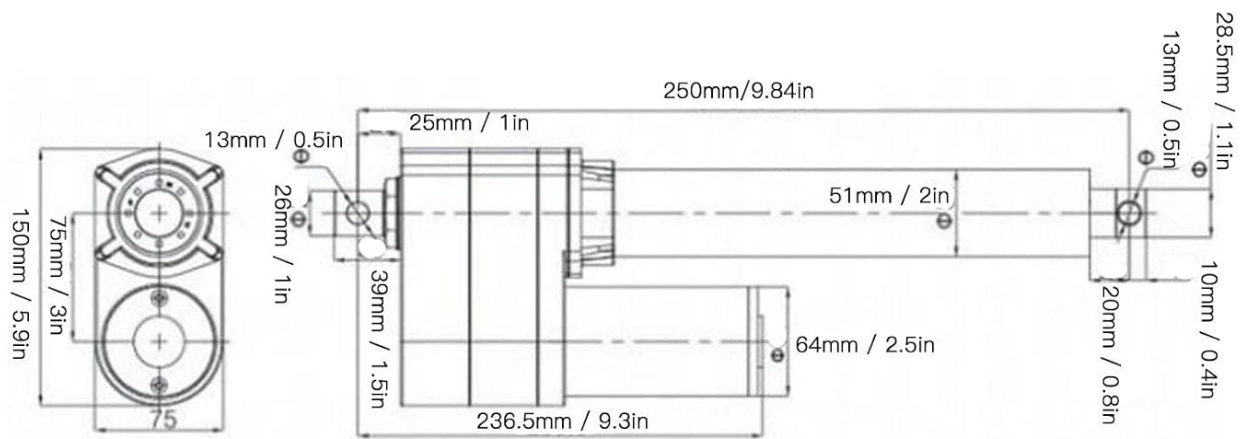


Figure 3: Dimensional drawing of the linear actuator, showing key measurements in millimeters and inches.

5. SETUP AND INSTALLATION

Proper installation is crucial for the safe and effective operation of the linear actuator. Refer to the dimensional drawing for

mounting points.

Installation Steps:

1. **Mounting:** Securely attach the actuator to your application using appropriate fasteners through the mounting holes at both ends. Ensure the mounting surfaces are stable and can support the actuator's thrust force.
2. **Wiring:** Connect the two wires from the actuator to your DC 12V power source.
 - Typically, one wire is positive (+) and the other is negative (-).
 - Reversing the polarity of the power supply will reverse the direction of the actuator's movement (extension/retraction).
 - Ensure connections are secure and insulated to prevent short circuits.
3. **Testing:** Before full operation, perform a test run to verify correct movement and limit switch functionality.



Figure 4: Actuator showing the power connection wires (red and black).

6. OPERATING INSTRUCTIONS

The linear actuator is controlled by applying DC 12V power. Its built-in limit switches automatically stop the actuator at its fully extended and fully retracted positions.

Basic Operation:

- **Extension:** Apply DC 12V power with correct polarity (e.g., red wire to positive, black wire to negative) to extend the actuator rod. The actuator will stop automatically when it reaches its full extension limit.
- **Retraction:** Reverse the polarity of the DC 12V power supply (e.g., red wire to negative, black wire to positive) to retract the actuator rod. The actuator will stop automatically when it reaches its full retraction limit.
- **Stopping Mid-Stroke:** To stop the actuator at any point during its stroke, simply cut the power supply. The actuator will hold its position due to its internal gearing.

The built-in limit switches provide full control over the start and stop positions, ensuring the actuator operates within its mechanical limits and preventing damage from over-travel.

7. MAINTENANCE

The Aumoo linear actuator is designed for low maintenance. Regular checks can prolong its lifespan and ensure optimal performance.

- **Cleaning:** Periodically clean the exterior of the actuator, especially the shaft, to remove dust and debris. Use a damp cloth; avoid harsh chemicals.
- **Inspection:** Regularly inspect the mounting points, wiring, and the actuator rod for any signs of wear, damage, or loose connections.
- **Lubrication:** The internal components are pre-lubricated and generally do not require additional lubrication. If the shaft appears dry or movement becomes stiff, a light application of silicone-based lubricant on the shaft may be considered, but avoid over-lubrication.
- **Environmental Protection:** Ensure the IP65 rating is maintained by checking for any cracks or damage to the housing or cable glands.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
Actuator does not move	No power, incorrect wiring, overloaded, internal fault.	Check power supply (12V DC). Verify wiring connections. Reduce load if exceeding maximum thrust. If problem persists, contact support.
Actuator moves in wrong direction	Reversed polarity.	Reverse the polarity of the power supply connections.
Actuator stops prematurely	Overload protection triggered, obstruction, faulty limit switch.	Check for obstructions. Reduce load. If the issue is consistent and not load-related, contact support.
Unusual noise during operation	Mechanical wear, foreign object, mounting issue.	Inspect for loose mounting or obstructions. If noise persists, contact support.

9. WARRANTY AND SUPPORT

Aumoo products are manufactured to high-quality standards. For specific warranty details, please refer to the documentation provided at the time of purchase or contact your retailer. In case of technical issues or questions not covered in this manual, please contact Aumoo customer support or your authorized dealer.

Manufacturer: Aumoo
Model Number: Aumooo9hgvs3075-13
ASIN: B0BCF7LT58

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Example: How do I reset this device or fix this error?

Details

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