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## Honeywell ML6161B2024

# Honeywell ML6161B2024 Direct Coupled Damper Actuator User Manual

Model: ML6161B2024

## PRODUCT OVERVIEW

The Honeywell ML6161B2024 is a Direct Coupled Damper Actuator designed for precise control in HVAC systems. It features a floating SPDT (Single-Pole, Double-Throw) operation with a 35 lb.-in. torque rating. This actuator is non-spring return and operates on 24 Vac  $\pm$ 20% power supply. Its robust design ensures reliable performance for modulating airflow.

## INSTALLATION AND SETUP

### Safety Precautions

- Always disconnect power to the system before installing or servicing the actuator to prevent electrical shock.
- Ensure all wiring complies with local and national electrical codes.
- Handle the actuator with care to avoid damage to internal components.
- Verify the power supply voltage matches the actuator's requirements (24 Vac).

### Mounting

The ML6161B2024 is a direct coupled actuator, designed to mount directly onto a damper shaft. Ensure the damper shaft is clean and free of obstructions. Position the actuator on the damper rod, aligning it correctly with the damper's open and closed positions. Secure the actuator firmly using the integrated mounting hardware, typically involving two set screws to grip the damper shaft.



*Image: Honeywell ML6161B2024 Direct Coupled Damper Actuator. This image shows the front face of the actuator, highlighting the shaft coupling mechanism at the center, the terminal block for electrical connections (CW, COM, CCV) on the right, and the internal motor assembly at the bottom right. The dial around the shaft indicates clockwise (CW) and counter-clockwise (CCW) rotation.*

## Wiring

Connect the actuator to the control system using the terminal block provided. The terminals are typically labeled for easy identification:

- **CW (Clockwise)**: Connect the control signal for clockwise rotation.
- **COM (Common)**: Connect the common wire from the power supply.
- **CCV (Counter-Clockwise)**: Connect the control signal for counter-clockwise rotation.

Ensure all connections are secure and properly insulated. Refer to your specific HVAC system's wiring diagram for detailed connection instructions.

## OPERATION

The ML6161B2024 actuator operates as a floating SPDT device. This means it responds to control signals by moving the damper to a specific position and holding it there without a spring return mechanism. When a signal is applied to the CW terminal, the actuator rotates clockwise. When a signal is applied to the CCV terminal, it rotates counter-clockwise. Removing the signal from both terminals will cause the actuator to hold its last commanded position. This allows for precise modulation of airflow within the HVAC system.

## MAINTENANCE

The Honeywell ML6161B2024 actuator is designed for long-term, reliable operation with minimal maintenance. However, periodic inspection can help ensure optimal performance and longevity:

- **Visual Inspection:** Periodically check the actuator for any signs of physical damage, loose connections, or excessive dust accumulation.
- **Listen for Unusual Noises:** Pay attention to any chirping, grinding, or unusual sounds coming from the actuator. Such noises can indicate wear in the timing motor or magnetic clutches, suggesting a potential need for replacement.
- **Check Damper Movement:** Ensure the damper connected to the actuator moves freely and without obstruction. Sticking dampers can put undue stress on the actuator.
- **Cleanliness:** Keep the area around the actuator clean to prevent debris from interfering with its operation.

No lubrication or internal servicing is typically required for this sealed unit.

## TROUBLESHOOTING

Problem	Possible Cause	Solution
Actuator not moving or responding.	No power supply; incorrect wiring; internal component failure.	Verify 24 Vac power supply; check wiring connections (CW, COM, CCV); if power and wiring are correct, the unit may need replacement.
Actuator makes chirping or grinding noise.	Worn timing motor or magnetic clutch.	This indicates normal wear over time. While the unit may continue to function for a period, replacement is recommended to prevent complete failure.
Actuator jams or moves intermittently.	Obstruction in damper; loose internal washer/gear; incorrect mounting.	Inspect damper for obstructions; ensure actuator is securely mounted and aligned; if problem persists, internal damage may be present, requiring replacement.
Damper does not reach full open/closed position.	Incorrect actuator calibration or damper stop settings.	Adjust the mechanical stops on the damper or re-calibrate the actuator's range of motion if applicable to your system.

## TECHNICAL SPECIFICATIONS

Feature	Specification
Model Number	ML6161B2024
Actuator Type	Direct Coupled Damper Actuator
Operation	Floating SPDT, Non-Spring Return
Torque Rating	35 lb.-in.
Voltage	24 Vac $\pm$ 20%
Product Dimensions	3.39"W x 5.55"H (approx. 4.6 x 4.3 x 6.5 inches; 1.6 Pounds)

Feature	Specification
Material	Copper (internal components), Steel plate and Plenum rated plastic (housing)
Connector Type	Screw Terminals
Manufacturer	Honeywell
UPC	085267168724

## WARRANTY AND SUPPORT

For specific warranty information regarding your Honeywell ML6161B2024 Direct Coupled Damper Actuator, please refer to the documentation provided at the time of purchase or contact Honeywell customer support directly. Warranty terms typically cover defects in materials and workmanship under normal use.

For technical assistance, troubleshooting beyond this manual, or to inquire about replacement parts, please contact Honeywell's official customer support channels. You can usually find contact information on the Honeywell website or through your authorized distributor.

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