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Johnson Controls VA-7202-1001

Johnson Controls VA-720x Series Electric Valve Actuator User Manual

Model: VA-7202-1001

1. PRODUCT OVERVIEW

The Johnson Controls VA-720x Series Electric Actuator, specifically model VA-7202-1001, is designed for precise incremental or proportional control of valves in HVAC applications. This robust, non-spring-return, synchronous, motor-driven electric actuator provides a minimum seating force of 180 lb. (800 N), ensuring reliable operation in a compact and easily installable package. Key features include:

- **Compact Unit:** Delivers 180 lb. force (800 N) output, suitable for a wide range of applications.
- **Magnetic Clutch:** Ensures constant output force for positive valve close-off and protects the motor under stall conditions.
- **Durable Construction:** Designed for extended cycle life.
- **Easy Field Mounting:** Unique yoke design simplifies installation and stroke adjustment when mounting to valves.
- **Selectable Action:** Offers selectable direct and reverse action for simplified setup.



Figure 1: The Johnson Controls VA-7202-1001 Electric Valve Actuator shown in its original product packaging.

2. INSTALLATION AND SETUP

The VA-720x Series actuator is designed for straightforward installation. It can be field-mounted to VBC Series Bronze Cage Trim Valves and either factory or field-mounted to VG7000 Series Bronze Control Valves. The unique yoke design facilitates easy attachment and reduces the time required for stroke adjustment.

2.1. Mounting Considerations

- Ensure the valve is compatible with the VA-720x series actuator.
- Verify adequate space for installation and future maintenance.
- Follow all local electrical codes and safety regulations during installation.

2.2. Electrical Connections

The actuator accepts incremental control from a three-wire 24 VAC control signal or a proportional DC control signal (up to 10 V maximum). Refer to the wiring diagram provided with the product for specific connection details. Ensure power is disconnected before making any electrical connections.



Figure 2: Internal view of the VA-7202-1001 actuator, showing the motor and control circuitry, with the protective blue cover removed.

3. OPERATING INSTRUCTIONS

The VA-720x Series actuator provides precise control over valve positions. Once installed and wired correctly, the actuator responds to the input control signal to modulate the valve's stroke.

3.1. Control Signal Input

- **Incremental Control:** Utilizes a three-wire 24 VAC signal for step-by-step valve positioning.
- **Proportional Control:** Responds to a DC control signal ranging from 0 to 10 VDC, allowing for fine modulation of the valve.

3.2. Direct and Reverse Action

The actuator features selectable direct and reverse action. This setting determines whether an increase in the control signal results in the valve opening or closing. Consult the product's technical documentation for instructions on how to configure this setting to match your system's requirements.

4. MAINTENANCE

The Johnson Controls VA-720x Series Electric Valve Actuator is designed for durable and reliable operation with minimal maintenance requirements. Its robust construction contributes to a longer service life.

4.1. Routine Checks

- Periodically inspect the actuator and its connections for any signs of wear, damage, or loose wiring.
- Ensure the mounting is secure and free from vibration.
- Keep the exterior of the unit clean and free from dust or debris.

For any internal servicing or complex repairs, it is highly recommended to contact a qualified service technician or Johnson Controls support.

5. TROUBLESHOOTING

If the VA-7202-1001 actuator is not functioning as expected, consider the following basic troubleshooting steps:

- **No Movement:**

- Verify that the actuator is receiving the correct power supply (24 VAC).
- Check all electrical connections for proper seating and continuity.
- Ensure the control signal (incremental or proportional) is present and within the specified range.

- **Incorrect Movement/Positioning:**

- Confirm that the direct/reverse action setting is configured correctly for your application.
- Check the integrity of the control signal.
- Inspect the mechanical linkage between the actuator and the valve for any obstructions or damage.

- **Unusual Noise:**

- Ensure the actuator is securely mounted and not vibrating against other components.
- If the noise persists, it may indicate an internal mechanical issue. Discontinue use and contact a qualified technician.

For issues not resolved by these steps, or for complex diagnostics, contact Johnson Controls technical support or a certified service professional.

6. SPECIFICATIONS

The following table outlines the key specifications for the Johnson Controls VA-7202-1001 Electric Valve Actuator:

Specification	Value
Brand	Johnson Controls
Model Number	VA-7202-1001
Description	Electric Valve Actuator, Proportional: 0 to 10 VDC, 0 to 20 mA
Control Signal	Incremental (3-wire 24 VAC) or Proportional (0-10 VDC)
Seating Force	180 lb. (800 N) minimum
Stroke	Up to 3/4 in. (19.05 mm)
Material	Bronze (as per product details)

Specification	Value
Package Dimensions	13.82 x 9.72 x 4.57 inches
Weight	4.5 Pounds
Manufacturer	Johnson Controls Inc
Date First Available	July 5, 2012



Figure 3: Product label from the packaging, confirming model VA-7202-1001 and key specifications.

7. WARRANTY AND SUPPORT

Specific warranty terms and conditions for the Johnson Controls VA-7202-1001 Electric Valve Actuator are typically provided at the point of purchase or can be obtained directly from Johnson Controls or an authorized distributor. It is recommended to retain your proof of purchase for warranty claims.

For technical support, product inquiries, or service, please contact Johnson Controls customer service or visit their official website. Always refer to the official documentation provided with your product for the most accurate and up-to-date information.

