

## Electric Spring Return Actuators

### Description

VA2202 Series Spring Return Electric Valve Actuators are available in 24 VAC/VDC and 120 VAC ON/OFF control, 24 VAC Floating Control, and 2 to 10 VDC (4 to 20 mA) Proportional Control for use in Heating, Ventilating, and Air Conditioning (HVAC) applications. All models provide 18 lb-in (2 N-m) of output force and feature a NEMA 2 (IP42) housing for indoor use. Versions with a factory-installed Single Pole, Double Throw (SPDT) auxiliary switch are available.

The VA2202 Series actuators are designed for easy mounting in the field to 1/2 and 3/4 in. Johnson Controls® VG1000 Series Ball Valves. The optional available auxiliary switch is adjustable from 5 to 95°.

### Features

- Proportional, Floating, and On/Off control models available
- single screw, direct mounting
- optional auxiliary switch available
- reversible mounting design
- compact design



**VA2202-xxx-2 Series Electric Spring Return Actuator**

### Selection Charts

#### VA2202-xxx-2 Series Electric Spring Return Actuators

| Code Number  | Voltage    | Control                | Auxiliary Switch |
|--------------|------------|------------------------|------------------|
| VA2202-AGA-2 | 24 VAC     | Floating               | No               |
| VA2202-AGB-2 |            |                        | Yes              |
| VA2202-BAA-2 | 120 VAC    | On/Off                 | No               |
| VA2202-BAB-2 |            |                        | Yes              |
| VA2202-BGA-2 | 24 VAC/VDC |                        | No               |
| VA2202-BGB-2 |            |                        | Yes              |
| VA2202-GGA-2 |            | Proportional, 2-10 VDC | No               |
| VA2202-GGB-2 |            |                        | Yes              |

#### Accessories for V2202-xxx-2 Series

| Code Number | Description   |
|-------------|---|
| M2000-500   | Linkage Kit Complete, includes adapter plate, coupler, lock washer, screw and pointer |

### Technical Specifications

| VA2202-xxx-2 Series Actuator (Part 1 of 2) |                              |   |
|--|------------------------------|---|
| Power Requirements                         | VA2202-AGx-2                 | 24 VAC ±20% at 50/60 Hz, 4 VA   |
|  | VA2202-BAx-2                 | 85 to 265 VAC at 50/60 Hz, 5 VA   |
|  | VA2202-BGx-2                 | 24 VAC ±20% at 50/60 Hz, 24 VDC ±10%, 5 VA  |
|  | VA2202-GGx-2                 | 24 VAC ±20% at 50/60 Hz, 24 VDC ±10%, 4 VA  |
| Input Signal                               | VA2202-AGx-2                 | 24 VAC ±20% at 50/60 Hz   |
|  | VA2202-Bxx-2                 | (See Power Requirements.)   |
|  | VA2202-GGx-2                 | 2 to 10 VDC or 4 to 20 mA (with field furnished 500 ohm resistor)   |
| Input Impedance                            | VA2202-AGx                   | 1,000 ohms (0.6 W)  |
|  | VA2202-GGx                   | Voltage: 100,000 ohms, (0.1 mA)<br>Current: 500 ohms (with field furnished 500 ohm 0.25 W minimum resistor) |
| Electrical Connections                     | VA2202-AGA-2<br>VA2202-GGA-2 | Plenum cable, 36 inch, 18 AWG, 1/2 in. conduit connector  |
|  | VA2202-BxA-2                 | Appliance cable, 36 inch, 18 AWG, 1/2 in. conduit connector   |
|  | VA2202-BxB-2<br>VA2202-xGB-2 | Two appliance cables, 36 inch, 18 AWG, 1/2 in. conduit connector  |
| Auxiliary Switch Rating                    | VA2202-xxB-2                 | One SPDT, 3A @ 250 VAC, adjustable 0 to 95°   |
| Mechanical Connection                      |                              | 1/4 to 1/2 in. (10 to 12.7 mm) diameter round shaft<br>1/4 to 5/16 in. (10 mm) square shaft                 |
| Output Torque                              |                              | 18 lb-in (2 N-m) minimum  |
| Rotation Range                             |                              | Adjustable from 37 to 100%, mechanically limited to 95°   |

| VA2202-xxx-2 Series Actuator (Part 2 of 2) |               |  |
|--|---------------|--|
| Nominal Run Time                           | Powered       | 95 seconds maximum   |
|  | Spring Return | 25 seconds maximum at -4 to 122°F (-20 to 50°C),<br>60 seconds maximum at -22°F (-30°C)                                  |
| Cycles                                     |               | 60,000 full stroke cycles; 1,500,000 repositions rated at 16 lb-in (2 N-m)   |
| Enclosure                                  |               | NEMA 2, IP42   |
| Ambient Conditions                         | Operating     | -22 to 122°F (-30 to 50°C);<br>5 to 90% RH, noncondensing  |
|  | Storage       | -40 to 176°F (-40 to 80°C);<br>5 to 95% RH, noncondensing  |
| Valve Fluid Temperature Limits             |               | 0 to 212°F (-18 to 100°C)  |
| Compliance                                 | United States | UL listed acc. to UL 60730-1, UL 60730-2-14 (XAPX)   |
|  | Canada        | cUL listed acc. to CAN/CSA C22.2 No.24 (XAPX7)   |
|  | Europe        | CE Mark, Low Voltage Directive (73/23/EEC), -xAx and -xxB models only<br>CE Mark, EMC Directive (89/336/EEC), all models |
| Shipping Weight                            |               | 1.5 lb (0.7 kg)  |

### Repair Information

If the VA2202-xxx-2 Series Electric Spring Return Actuator fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls® representative.