

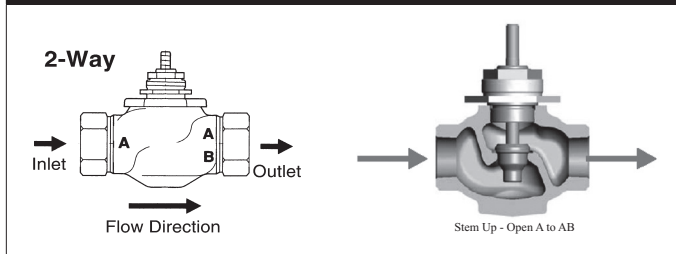
G224, 2-Way, Globe Valve, Bronze Trim



Technical Data

| | |
|---------------------------------------|---|
| Service | chilled or hot water, up to 60% glycol, steam |
| Flow Characteristic | equal percentage |
| Controllable Flow Range | stem up - open A to AB |
| Size [mm] | 1" [25] |
| End Fitting | NPT female ends |
| Body | bronze |
| Stem | stainless steel |
| Stem Packing | spring loaded Teflon® V-ring |
| Seat | bronze |
| Plug | brass |
| Disc | composition (EPDM) |
| Body Pressure Rating [psi] | ANSI 250 |
| ANSI Class | ANSI 250 (up to 400 psi below 150°F) |
| Max Inlet Pressure (Steam) | 35 psi (241 kPa) |
| Media Temperature Range (Water) | 20°F to 280°F [-7°C to 138°C] |
| Media Temperature Range (Steam) | 32°F to 280°F [0°C to 138°C] |
| Maximum Differential Pressure (Steam) | 20 psi (103 kPa) |
| Max Differential Pressure (Water) | 35 psi (241 kPa) |
| Close-Off Pressure | 250 psi |
| Rangeability | 60:1 |
| Cv | 10 |
| Weight | 3.1 lb [1.4 kg] |
| Leakage | ANSI Class IV |
| Servicing | Repack/Rebuild kits available |

Flow Pattern



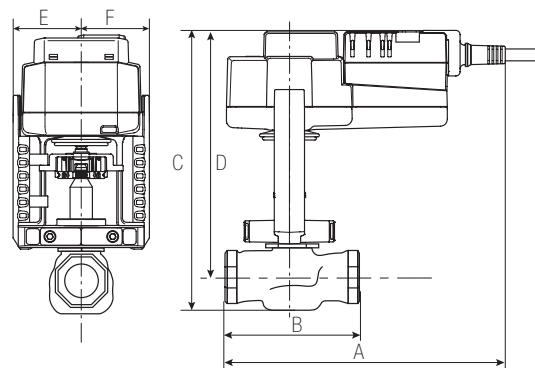
Application

This valve is typically used in Air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in hydronic system with variable flow. Bronze and stainless steel trim valves can be used for steam applications, depending on actuator and close-off combinations.

Suitable Actuators

| | Non-Spring | Spring | Electronic Fail-Safe |
|------|------------|--------|----------------------|
| G224 | SVB(X) | NFB(X) | SVKB(X) |

Dimensions (Inches [mm])



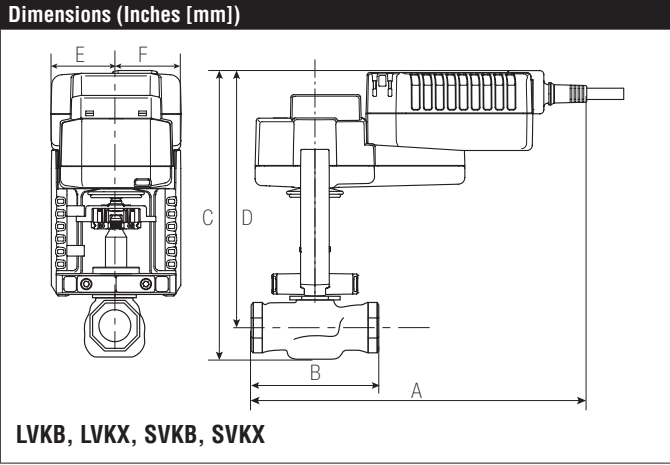
LVB, LVX, SVB, SVX

| A | B | C | D | E | F |
|----------|-------------|------------|----------|------------|---|
| 8" [203] | 4.65" [118] | 9.5" [241] | 8" [203] | 1.95" [49] | |

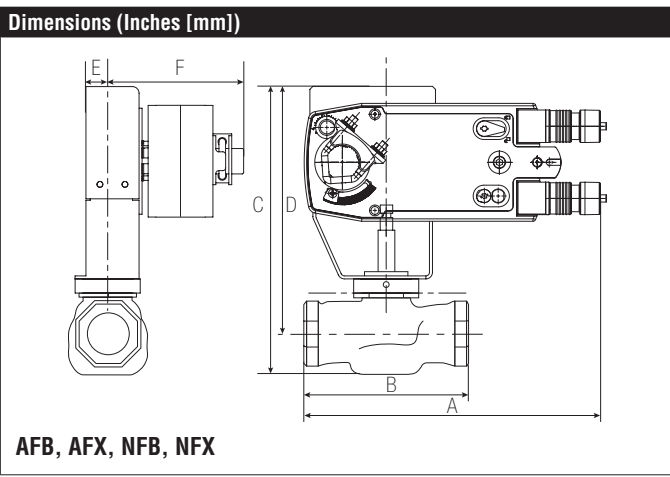
Piping

The valves should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. The G2(S) and G3(D) preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. However, the assemblies can be mounted with the valve stem vertical or horizontal in relation to the pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.

G224, 2-Way, Globe Valve, Bronze Trim



| A | B | C | D | E | F |
|----------|-------------|-------------|------------|------------|---|
| 9" [229] | 4.65" [118] | 10.3" [262] | 8.5" [216] | 1.95" [49] | |



| A | B | C | D | E | F |
|-------------|-------------|-------------|-------------|------------|----------|
| 9.69" [246] | 4.65" [118] | 9.24" [238] | 8.14" [207] | 1.25" [32] | 5" [127] |

NFB24-SR-X1

Modulating, Spring Return, 24 VAC/DC, for 2 to 10 VDC or 4 to 20 mA Control Signal



Technical Data

| | |
|-----------------------------------|--|
| Power Supply | 24 VAC±20%, 50/60Hz, 24 VDC+20%/-10% |
| Power Consumption Running | 3.5 W |
| Power Consumption Holding | 2.5 W |
| Transformer Sizing | 6 VA (class 2 power source) |
| Shaft Diameter | 1/2" to 1.05" round, centers on 1/2" and 3/4" with insert, 1.05" without insert |
| Electrical Connection | 3ft [1m], 18 GA appliance cable with 1/2" conduit connector |
| Overload Protection | electronic throughout 0° to 95° rotation |
| Operating Range Y | 2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor) |
| Feedback Output U | 2 to 10 VDC, 0.5 mA max |
| Angle of Rotation | 95° |
| Torque | 90 in-lbs [10 Nm] minimum |
| Direction of Rotation (Motor) | reversible with built-in switch |
| Direction of Rotation (Fail-Safe) | reversible with CW/CCW mounting |
| Position Indication | visual indicator, 0° to 95° (0° is full spring return position) |
| Manual Override | 5 mm hex crank (3/16" Allen), supplied |
| Running Time (Motor) | 95 sec |
| Running Time (Fail-Safe) | <20 sec @ -4°F to 122°F [-20°C to 50°C], < 60 sec @ -22°F [-30°C] |
| Humidity | max. 95% RH non-condensing |
| Ambient Temperature Range | -22°F to 122°F [-30°C to 50°C] |
| Storage Temperature Range | -40°F to 176°F [-40°C to 80°C] |
| Housing | NEMA 2, IP54, UL enclosure type 2 |
| Housing Material | zinc coated metal and plastic casing |
| Agency Listings† | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC |
| Noise Level (Motor) | <50 dB (A) |
| Noise Level (Fail-Safe) | <62 dB (A) |
| Servicing | maintenance free |
| Quality Standard | ISO 9001 |
| Weight | 4.2 lb [1.9 kg] |

†Rated Impulse Voltage 800V, Type of Action 1.AA.B, Control Pollution Degree 3.

Date created, 02/16/2017 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams
INSTALLATION NOTES

- Actuators with appliance cables are numbered.
- Provide overload protection and disconnect as required.
- Actuators may also be powered by 24 VDC.
- Only connect common to negative (-) leg of control circuits.
- A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- Meets cULus requirements without the need of an electrical ground connection.

WARNING! LIVE ELECTRICAL COMPONENTS!
 During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

