

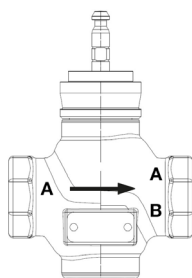
# G250B-N, 2-Way, Globe Valve, Bronze Trim



### Technical Data

|                                       |                                               |
|---------------------------------------|-----------------------------------------------|
| Service                               | chilled or hot water, up to 60% glycol, steam |
| Flow Characteristic                   | modified equal percentage                     |
| Controllable Flow Range               | stem up - open A to AB                        |
| Size [mm]                             | 2" [50]                                       |
| End Fitting                           | NPT female ends                               |
| Body                                  | bronze                                        |
| Stem                                  | stainless steel                               |
| Stem Packing                          | EPDM O-ring                                   |
| Seat                                  | bronze                                        |
| Plug                                  | brass                                         |
| 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)                              |
| Rangeability                          | 100:1                                         |
| Cv                                    | 40                                            |
| Leakage                               | ANSI Class VI                                 |
| Servicing                             | repack kits available                         |

### Flow Pattern



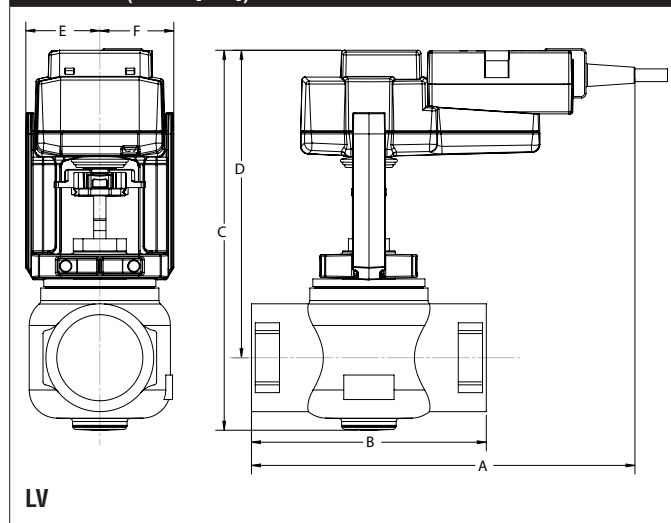
### Application

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 systems 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 |
|---------|------------|--------|----------------------|
| G250B-N | LVB(X)     | NFB(X) | LVKB(X)              |

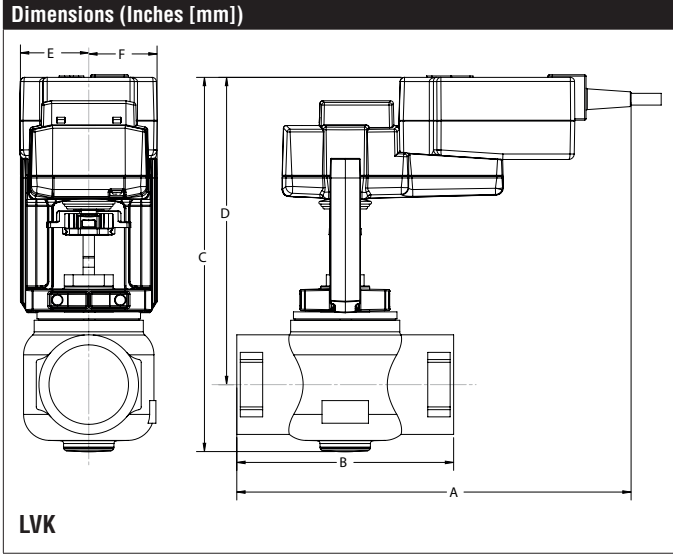
### Dimensions (Inches [mm])



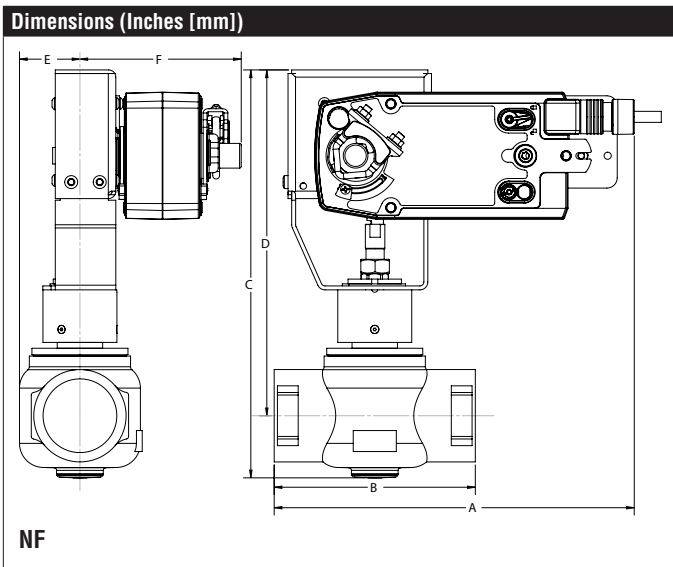
| A         | B           | C           | D           | E          | F |
|-----------|-------------|-------------|-------------|------------|---|
| 10" [254] | 6.12" [156] | 9.92" [252] | 8.01" [203] | 1.93" [49] |   |

### 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 and G3 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.



| A         | B           | C           | D           | E          | F |
|-----------|-------------|-------------|-------------|------------|---|
| 11" [279] | 6.12" [156] | 10.5" [267] | 8.78" [223] | 1.93" [49] |   |



| A            | B           | C              | D           | E          | F           |
|--------------|-------------|----------------|-------------|------------|-------------|
| 10.92" [277] | 6.12" [156] | 12.38" [314.4] | 10.5" [267] | 1.82" [46] | 4.94" [125] |

# NFBUP-X1

On/Off, Spring Return, 24 to 240 VAC



| Technical Data                    |                                                                                            |
|-----------------------------------|--------------------------------------------------------------------------------------------|
| Power Supply                      | 24...240 VAC, -20% / +10%, 50/60 Hz,<br>24...125 VDC, ±10%                                 |
| Power Consumption Running         | 6 W                                                                                        |
| Power Consumption Holding         | 2.5 W                                                                                      |
| Transformer Sizing                | 6 VA @ 24 VAC (class 2 power source), 6.5 VA @ 120 VAC, 9.5 VA @ 240 VAC                   |
| Electrical Connection             | 3ft [1m], 18 GA appliance cable with 1/2" conduit connector                                |
| Overload Protection               | electronic throughout 0° to 95° rotation                                                   |
| Angle of Rotation                 | 95°                                                                                        |
| Torque motor                      | Min. 90 in-lbs [10 Nm]                                                                     |
| Direction of Rotation (Motor)     | reversible with CW/CCW mounting                                                            |
| 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)              | <75 sec                                                                                    |
| Running Time (Fail-Safe)          | <20 sec @ -4°F to 122°F [-20°C to 50°C],<br><60 sec @ -22°F [-30°C]                        |
| Ambient 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, Control Pollution Degree 3

Date created, 11/30/2017 - Subject to change. © Belimo Aircontrols (USA), Inc.

**Wiring Diagrams**

**⚠ 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.

**✂ INSTALLATION NOTES**

- (A)** Actuators with appliance cables are numbered.
- (UP)** Universal Power Supply (UP) models can be supplied with 24 VAC up to 240 VAC, or 24 VDC up to 125 VDC.
- 1** Provide overload protection and disconnect as required.
- ◆** Meets cULus requirements without the need of an electrical ground connection.

