



- Live-load packing set
- Stainless steel ball & stem
- Blow-out proof stem design

Application

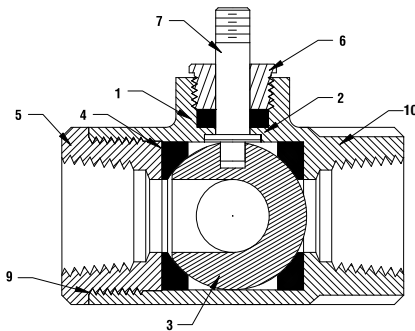
These threaded valves are designed to provide modulating or two position control of hot or chilled water and saturated steam systems under 50 psi.

Typical applications include reheat coils, VAV terminal control, unit ventilators, and air handlers, especially in areas which have minimum profile requirements.

- Up to 50 psi steam
- ½" - 2000 PSIG WOG, Cold Non-Shock.
- Federal Specification: WW-V-35C, Type II,
Composition: SS
Style: 3

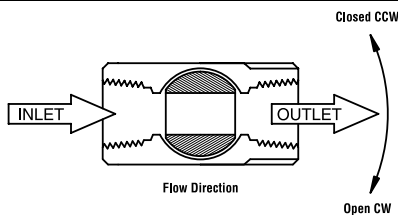
| Technical Data | |
|---------------------|--|
| Media | chilled or hot water, glycol, 50# steam |
| Flow characteristic | modified equal percentage |
| Action | 90° rotation valve open CW, valve closed CCW |
| Sizes | ½", ¾", 1", 1¼", 1½", 2" |
| Type of end fitting | SAE NPT (female connections) |
| Materials: | |
| 1 Stem packing | reinforced PTFE |
| 2 Stem bearing | reinforced PTFE |
| 3 Ball | 316 stainless steel |
| 4 Seat (x2) | reinforced PTFE w/ Durafill |
| 5 Retainer | B16 (¾" - 1") stainless steel B584 (1¼" - 2") stainless steel |
| 6 Gland | A276-316 |
| 7 Stem | 316 stainless steel |
| 8 Jam nut | stainless steel |
| 9 Body seal | PTFE (1¼" to 2") |
| 10 Body | A351-CF8M 316 stainless steel |

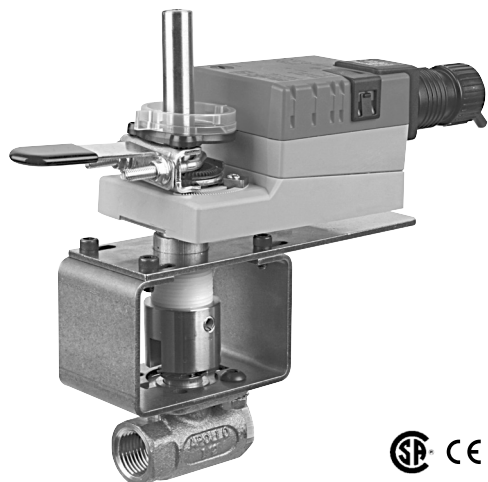
| C _v | Valve Nominal Size | | Type | Suitable Actuators | | |
|----------------|--------------------|---------|-------------|--------------------|-------------------|-----------|
| | Inches | DN [mm] | 2-way NPT | Spring Return | Non-Spring Return | |
| 15 | ½ | 15 | B2050VSS-15 | LF Series | NM Series | SY Series |
| 30 | ¾ | 20 | B219VSS | | | |
| 43 | 1 | 25 | B224VSS | AF Series | GM AM Series | |
| 108 | 2 | 50 | B249VSS | | | |



| | |
|------------------------------------|-----------------------------------|
| Pressure rating | 2000 psig WOG (½" - 1") |
| Media temp. range | -22°F to +298°F (-30°C to +148°C) |
| Close-off pressure | 600 psig @ 100°F |
| Maximum differential pressure (ΔP) | <600 psig |

Flow Patterns



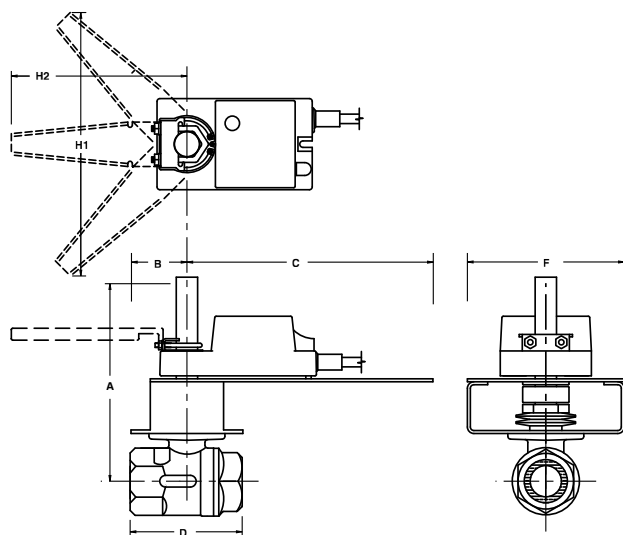


Models

LMB24-3-X1
LMX24-3-X1
LRX24-3

| Technical Data | |
|-----------------------|--|
| Control | on/off, floating point |
| Power supply | 24 VAC ± 20% 50/60 Hz 24 VDC ± 10% |
| Power consumption | running 1.5 W |
| | holding 0.2 W |
| Transformer sizing | 3 VA (class 2 power source) |
| Electrical connection | ½" conduit connector |
| LMB24-3-X1 | 3 ft., 18 GA plenum rated cables |
| Overload protection | electronic throughout 0° to 95° rotation |
| Input impedance | 600 Ω |
| Angle of rotation | 95° |
| Torque | 45 in-lbs [5 Nm] |
| Direction of rotation | reversible with switch |
| Position indication | reflective visual indicator (snap-on) |
| Manual override | external push button |
| Running time | 95 seconds, constant independent of load |
| Humidity | 5 to 95% RH non-condensing (EN 60730-1) |
| Ambient temperature | -22°F to +122°F [-30°C to +50°C] |
| Storage temperature | -40°F to +176°F [-40°C to +80°C] |
| Housing | NEMA type 2/IP54 |
| Housing material | UL94-5VA |
| Agency listings | cULus acc. to UL 60730-1/-2-14, CAN/CSA C22.2 No. 24 certified, CE acc. to 73/23/EEC |
| Noise level | <35 db(A) |
| Servicing | maintenance free |
| Quality standard | ISO 9001 |

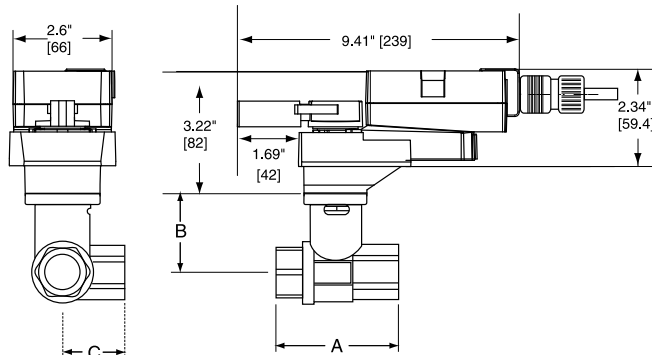
Dimensions with 2-Way Valve



PAGE 7

| Valve Body | COP | Valve Nominal Size | | Dimensions (Inches) | | | | | | | |
|------------|-----|--------------------|---------|---------------------|------|------|------|------|------|------|--|
| | | Inches | DN [mm] | A | B | C | D | F | H1 | H2 | |
| B2050VS-01 | 100 | ½ | 15 | 6.75 | 2.00 | 6.75 | 2.25 | 4.00 | 9.75 | 8.50 | |
| B2050VS-02 | 100 | ½ | 15 | 6.75 | 2.00 | 6.75 | 2.25 | 4.00 | 9.75 | 8.50 | |
| B2050VS-04 | 100 | ½ | 15 | 6.75 | 2.00 | 6.75 | 2.25 | 4.00 | 9.75 | 8.50 | |
| B2050VS-15 | 100 | ½ | 15 | 6.75 | 2.00 | 6.75 | 2.25 | 4.00 | 9.75 | 8.50 | |

Dimensions with 3-Way Valve



| Valve Body | COP | Valve Nominal Size | | Dimensions (mm) | | |
|------------|-----|--------------------|---------|-----------------|------------|------------|
| | | Inches | DN [mm] | A | B | C |
| B315L | 200 | ½ | 15 | 2.63" [67] | 1.73" [44] | 1.42" [36] |
| B320L | 200 | ¾ | 20 | 3.01" [78] | 1.81" [46] | 1.63" [42] |
| B325L | 200 | 1 | 25 | 3.42" [87] | 1.81" [46] | 1.77" [45] |

Wiring Diagrams

INSTALLATION NOTES

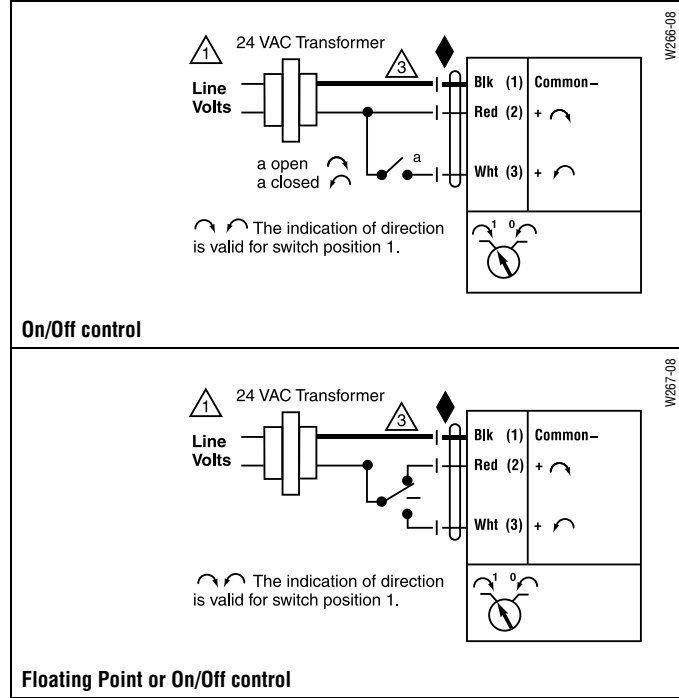
- 1 Provide overload protection and disconnect as required.
- 3 Actuators may also be powered by 24 VDC.

APPLICATION NOTES

- Meets cULus or UL and CSA 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.



Piping

The valve 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. Allow 6" for cover removal and 12" for complete actuator removal. The assembly can be mounted with the actuator 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.