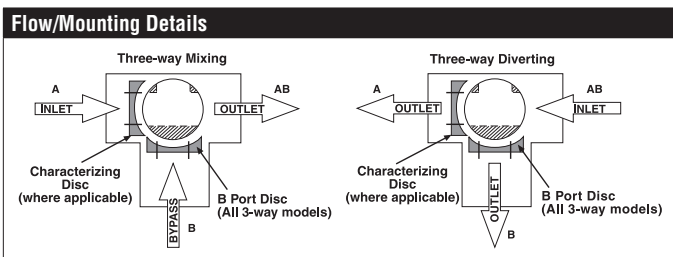


B320B Technical Data Sheet

Chrome Plated Brass Ball and Nickel Plated Brass Stem



| Technical Data | |
|--------------------------------|---|
| Fluid | chilled, hot water, up to 60% glycol |
| Flow characteristic | A-port Equal percentage; B-port modified linear for constant flow |
| Controllable flow range | 75° |
| Valve Size [mm] | 0.75" [20] |
| Pipe connection | NPT female ends |
| Housing | Nickel-plated brass body |
| Ball | chrome plated brass |
| Stem | nickel-plated brass |
| Stem seal | EPDM (lubricated) |
| Seat | PTFE |
| O-ring | EPDM (lubricated) |
| Characterised disc | TEFZEL® |
| Body Pressure Rating | 600 psi |
| Close-off pressure Δ ps | 200 psi |
| Cv | 14 |
| Weight | 1433.25 lb [0.50 kg] |
| Fluid Temp Range (water) | 0...250°F [-18...120°C] |
| Leakage rate | 0% for A – AB, <2.0% for B – AB |
| Maintenance | maintenance-free |



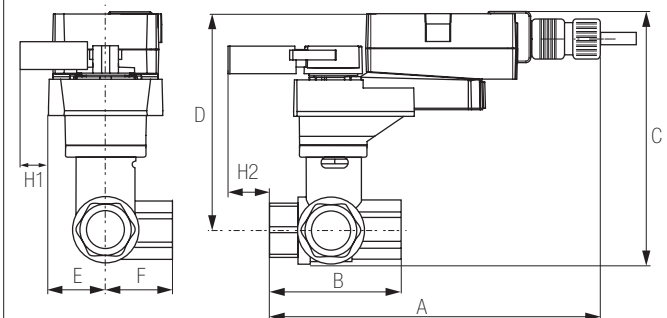
Application

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 a hydronic system with variable or constant flow.

Suitable Actuators

| | Non-Spring | Spring |
|-------|------------|------------|
| B320B | TR, LRB(X) | TFB(X), LF |

Dimensions (Inches [mm])



LRB, LRX

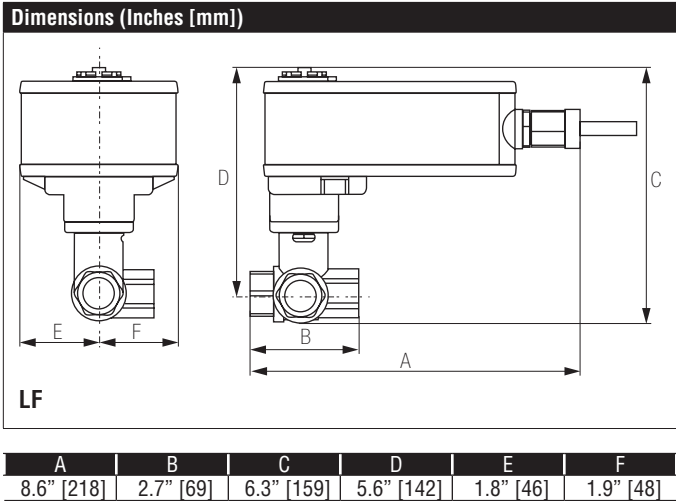
| A | B | C | D | E | F | H1 | H2 |
|-------|------|-------|-------|------|------|------|---------|
| 8.5" | 2.7" | 5.8" | 5.1" | 1.3" | 1.5" | 1.2" | 1" [25] |
| [216] | [69] | [147] | [129] | [33] | [39] | [30] | |

Safety Notes

WARNING: For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see www.p65warnings.ca.gov.



B320B Technical Data Sheet
Chrome Plated Brass Ball and Nickel Plated Brass Stem



Date created, 09/11/2019 - Subject to change. © Belimo Aircontrols (USA), Inc.

LF24-SR-S US, Valve Actuator Technical Data Sheet

Modulating, Spring Return, AC 24 V for DC 2...10 V or 4...20 mA Control Signal



5-year warranty



Technical Data

| | |
|------------------------------------|--|
| Power Supply | 24 VAC, $\pm 20\%$, 50/60 Hz, 24 VDC, $\pm 10\%$ |
| Power consumption in operation | 2.5 W |
| Power consumption in rest position | 1 W |
| Transformer sizing | 5 VA (class 2 power source) |
| Electrical Connection | (2) 18 GA appliance cables with 1/2" conduit connectors, 3 ft [1 m]. |
| Overload Protection | electronic throughout 0...95° rotation |
| Operating Range | DC 2...10 V, 4...20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor) |
| Input Impedance | 100 k Ω for DC 2...10 V (0.1 mA), 500 Ω for 4...20 mA |
| Position Feedback | DC 2...10 V, Max. 0.7 mA |
| Angle of rotation | 90° |
| Direction of rotation motor | reversible with built-in switch |
| Direction of motion fail-safe | reversible with cw/ccw mounting |
| Position indication | Mechanical |
| Running Time (Motor) | 150 s constant, independent of load |
| Running time fail-safe | <25 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C] |
| Ambient humidity | max. 95% r.H., non-condensing |
| Ambient temperature | -22...122°F [-30...50°C] |
| Storage temperature | -40...176°F [-40...80°C] |
| Degree of Protection | IP54, NEMA 2 |
| Agency Listing | cULus acc. To UL 873 and CAN/CSA C22.2 No. 24-93 |
| Noise level, motor | 50 dB(A) |
| Noise level, fail-safe | 62 dB(A) |
| Maintenance | maintenance-free |
| Quality Standard | ISO 9001 |
| Weight | 3.2 lbs (1.45 kg.) |
| Auxiliary switch | 1 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, adjustable 0...95° |










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

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Wiring Diagrams

✂️ INSTALLATION NOTES

-  **A** Actuators with appliance cables are numbered.
-  **1** Provide overload protection and disconnect as required.
-  **3** Actuators may also be powered by 24 VDC.
-  **5** Only connect common to negative (-) leg of control circuits.
-  **7** A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
-  **11** Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
-  **44** One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.
-  **!** Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
-  **ULus** 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.

