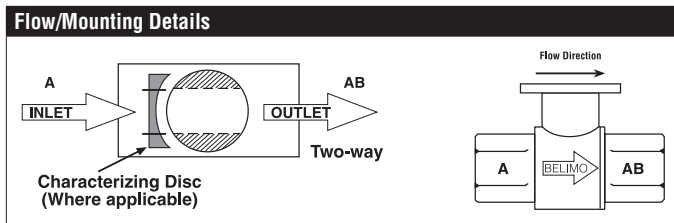


B221B Technical Data Sheet

Chrome Plated Brass Ball and Nickel Plated Brass Stem



Technical Data	
Fluid	chilled, hot water, up to 60% glycol
Flow characteristic	equal percentage
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	No Disc (full flow)
Body Pressure Rating	600 psi
Close-off pressure Δ ps	200 psi
Cv	24
Weight	0.88 lb [0.40 kg]
Fluid Temp Range (water)	0...250°F [-18...120°C]
Leakage rate	0% for A – AB
Maintenance	maintenance-free



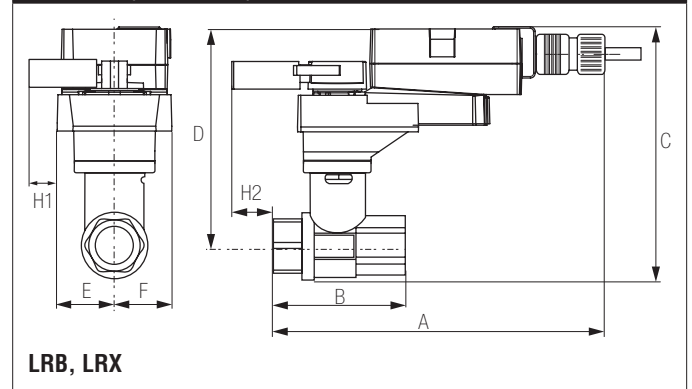
Application

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 flow.

Suitable Actuators

	Non-Spring	Spring
B221B	LRB(X)	LF

Dimensions (Inches [mm])

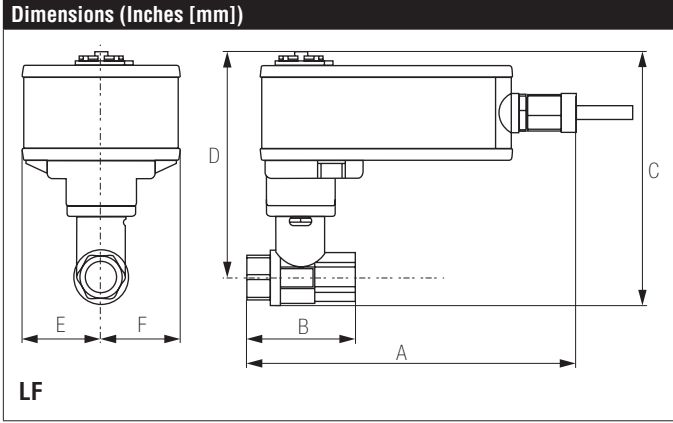


A	B	C	D	E	F	H1	H2
9.4" [239]	2.7" [69]	5.8" [147]	5.1" [129]	1.3" [33]		1.2" [30]	1" [25]

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.

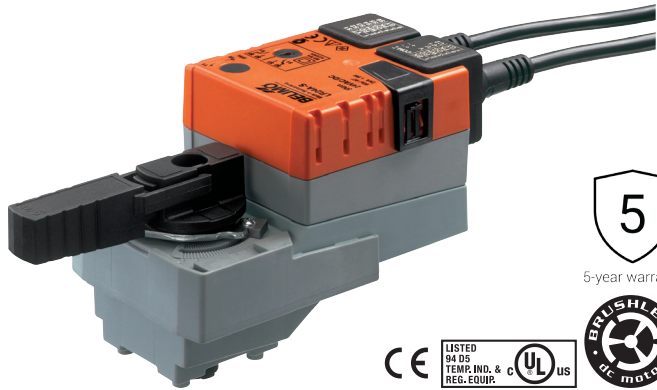
Date created, 09/11/2019 - Subject to change. © Belimo Aircontrols (USA), Inc.



A	B	C	D	E	F
8.6" [218]	2.7" [69]	6.3" [159]	5.6" [142]	1.8" [46]	

LRB24-3-S Technical Data Sheet

On/Off, Floating Point, Non-Spring Return, 24 V



5-year warranty



Technical Data

Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
Power consumption in operation	1.5 W
Power consumption in rest position	0.2 W
Transformer sizing	2.5 VA (class 2 power source)
Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector
Overload Protection	electronic throughout 0...90° rotation
Input Impedance	600 Ω
Angle of rotation	90°
Direction of rotation motor	reversible with built-in switch
Position indication	Mechanically, pluggable
Manual override	external push button
Running Time (Motor)	90 s
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, UL Enclosure Type 2
Agency Listing	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	35 dB(A)
Maintenance	maintenance-free
Quality Standard	ISO 9001
Weight	1.4 lb [0.60 kg]
Auxiliary switch	1 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, adjustable 0...100%

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

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Wiring Diagrams

INSTALLATION NOTES

- Provide overload protection and disconnect as required.
- Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- Actuators may also be powered by 24 VDC.
- Actuators Hot wire must be connected to the control board common. Only connect common to neg. (-) leg of control circuits. Terminal models (-T) have no-feedback.
- Actuators with plenum cable do not have numbers; use color codes instead.
- 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.
- 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.

