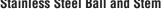
## **B320, 3-Way, Characterized Control Valve** Stainless Steel Ball and Stem







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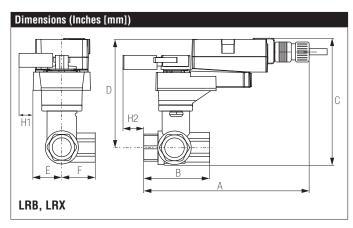
Technical Data	
Service	chilled, hot water, up to 60% glycol
Flow Characteristic	A-port equal percentage, B-port modified
	for constant common port flow
Controllable Flow Range	75°
Size [mm]	0.75" [20]
End Fitting	NPT female ends
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Stem Packing	EPDM (lubricated)
Seat	Teflon® PTFE
Seat O-ring	EPDM (lubricated)
Characterized Disc	TEFZEL®
Body Pressure Rating [psi]	600
Media Temperature Range (Water)	0°F to 250°F [-18°C to 120°C]
Max Differential Pressure (Water)	50 psi (345 kPa)
Close-Off Pressure	200 psi
Cv	14
Weight	0.9 lb [0.4 kg]
Leakage	0% for A to AB, <2.0% for B to AB
Servicing	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.

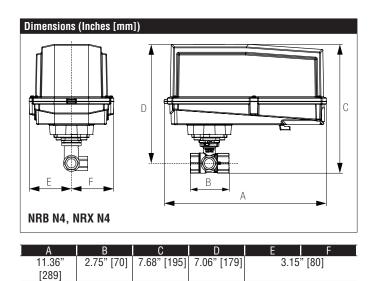
	Suitable Actua	tors
	Non-Spring	Spring
B320	LR, NRB(X)	LF

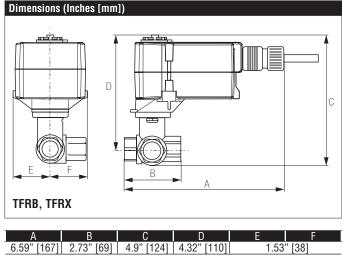


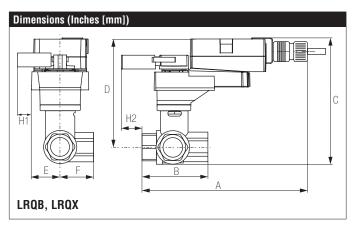
A		В	С	D	E	F	H1	H2
8.5	5" 2	2.73"	5.79"	5.09"	1.3"	1.47"	1.18"	1" [25]
[21	6]	[69]	[147]	[129]	[33]	[37]	[30]	



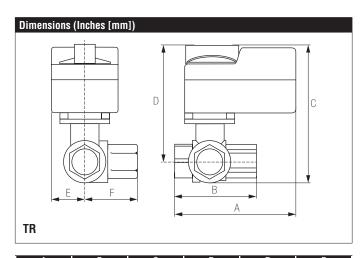
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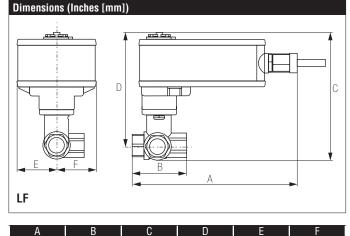




А	В	C	D	E	F	H1	H2
8.9"	2.73"	6.34"	5.64"	1.58	" [40]	1.18"	1.3" [33]
[226]	[69]	[161]	[143]			[30]	



### A B C D E F 3.72" [95] 2.73" [69] 4.79" [122] 4.21" [107] 1.25" [32] 1.2" [31]



 A
 B
 C
 D
 E
 F

 8.58" [218]
 2.73" [69]
 6.27" [159]
 5.57" [141]
 1.82" [46]
 1.89" [48]

# LF120 US, Valve Actuator On/Off, Spring Return Fail-Safe, 120 VAC





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Power Supply120 VAC ± 10%, 50/60 HzPower Consumption Running5.5 WPower Consumption Holding3.5 WTransformer Sizing7.5 VAElectrical Connection3ft [1m], 18 GA appliance cable with 1/2" conduit connectorOverload Protectionelectronic throughout 0° to 95° rotationOperating Range Yon/offAngle of Rotation90°Direction of Rotation (Motor)reversible with built-in switchDirection of Rotation (Motor)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 secRunning Time (Fail-Safe)<25 sec @ -4°F to 122°F [-20°C to 50°C], < 60 sec @ -22°F [-30°C]Ambient Temperature Range-22°F to 122°F [-30°C]
Power Consumption Holding3.5 WTransformer Sizing7.5 VAElectrical Connection3ft [1m], 18 GA appliance cable with 1/2" conduit connectorOverload Protectionelectronic throughout 0° to 95° rotationOperating Range Yon/offAngle of Rotation90°Direction of Rotation (Motor)reversible with built-in switchDirection of Rotation (Fail-Safe)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
Transformer Sizing7.5 VAElectrical Connection3ft [1m], 18 GA appliance cable with 1/2" conduit connectorOverload Protectionelectronic throughout 0° to 95° rotationOperating Range Yon/offAngle of Rotation90°Direction of Rotation (Motor)reversible with built-in switchDirection of Rotation (Fail-Safe)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
Electrical Connection3ft [1m], 18 GA appliance cable with 1/2" conduit connectorOverload Protectionelectronic throughout 0° to 95° rotationOperating Range Yon/offAngle of Rotation90°Direction of Rotation (Motor)reversible with built-in switchDirection of Rotation (Fail-Safe)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
conduit connectorOverload Protectionelectronic throughout 0° to 95° rotationOperating Range Yon/offAngle of Rotation90°Direction of Rotation (Motor)reversible with built-in switchDirection of Rotation (Fail-Safe)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
Operating Range Y       on/off         Angle of Rotation       90°         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)         Running Time (Motor)       <40 to 75 sec
Angle of Rotation       90°         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)         Running Time (Motor)       <40 to 75 sec
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)         Running Time (Motor)       <40 to 75 sec
Direction of Rotation (Fail-Safe)reversible with CW/CCW mountingPosition Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
Position Indicationvisual indicator, 0° to 95° (0° is full spring return position)Running Time (Motor)<40 to 75 sec
Running Time (Motor)       <40 to 75 sec
Running Time (Motor)         <40 to 75 sec
60 sec @ -22°F [-30°C]           Ambient Temperature Range         -22°F to 122°F [-30°C to 50°C]
Storage Temperature Depage 40°E to 176°E [ 40°C to 90°C]
Storage Temperature Range -40°F to 176°F [-40°C to 80°C]
Housing NEMA 2, IP54
Agency Listings† 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)
Servicing maintenance free
Quality Standard ISO 9001

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



#### Wiring Diagrams

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### 🔀 INSTALLATION NOTES

A ctuators with appliance cables are numbered.

Provide overload protection and disconnect as required.

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.

