B310, 3-Way, Characterized Control Valve Stainless Steel Ball and Stem







WARRANTY

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]	0.5" [15]
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	1.2
Weight	0.7 lb [0.3 kg]
Leakage	0% for A to AB, <2.0% for B to AB
Servicing	maintenance free

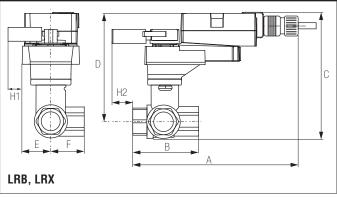


Application

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 Actuators			tors
		Non-Spring	Spring
	B310	TR, LR, NRB(X)	TFB(X), LF

Dimensions (Inches [mm])



A	В	C	D	E	F	H1	H2
8.5"	2.4"	5.19"	4.61"	1.3"	[33]	1.18"	1.1" [28]
[216]	[61]	[132]	[117]			[30]	





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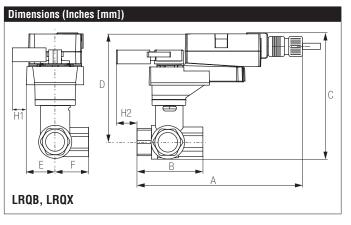
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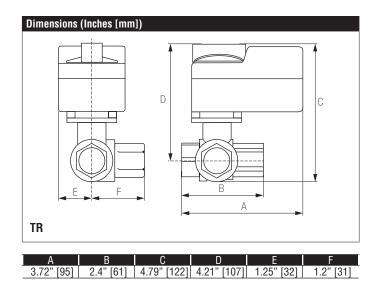
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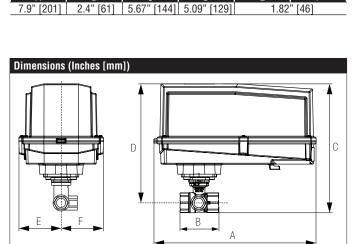
D

В



A	В	С	D	E	F	H1	H2
8.9"	2.4"	5.74"	5.16"	1.58	" [40]	1.18"	1.3" [33]
[226]	[61]	[146]	[131]			[30]	





NRB N4, NRX N4

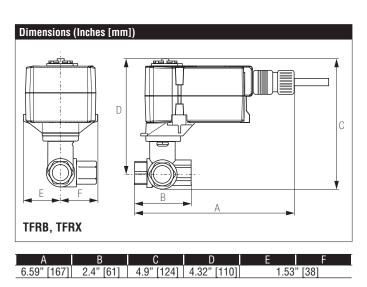
Dimensions (Inches [mm])

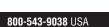
LF

Α

A	В	C	D	E F
11.36"	2.4" [61]	7.25" [184]	6.67" [169]	3.15" [80]
[289]				







LF120-S US, Valve Actuator On/Off, Spring Return, 120 VAC, Auxiliary Switch





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Technical Data				
Power Supply	120 VAC, ±10%, 50/60 Hz			
Power Consumption Running	5.5 W			
Power Consumption Holding	3.5 W			
Transformer Sizing	7.5 VA			
Electrical Connection	(2) 3ft [1m], 18 GA appliance cables with 1/2" conduit connectors			
Overload Protection	electronic throughout 0° to 95° rotation			
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)	4075 sec			
Running Time (Fail-Safe)	<25 sec @ -4°F to 122°F [-20°C to 50°C], <60 sec @ -22°F [-30°C]			
Ambient Temperature Range	-22122 °F [-3050 °C]			
Storage Temperature Range	-40176 °F [-4080 °C]			
Housing	IP54, NEMA 2			
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			
Auxiliary switch	1 x SPDT, 3A resistive (0.5A inductive) @ 250 VAC, adjustable 0° to 95°			
+Rated Impulse Voltage 800V Type of action 1 && Control Pollution Degree 3				

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



Wiring Diagrams

🔀 INSTALLATION NOTES

A Actuators 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.

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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.

