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B309, **3-Way**, **Characterized Control Valve** Stainless Steel Ball and Stem

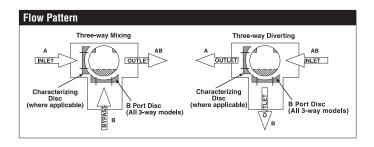








Technical Data	
Service	chilled, hot water, up to 60% glycol
Flow Characteristic	A-port equal percentage, B-port modified
	for constant common port flow
Controllable Flow Range	75°
Size [mm]	0.5" [15]
End Fitting	NPT female ends
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
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	0.8
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

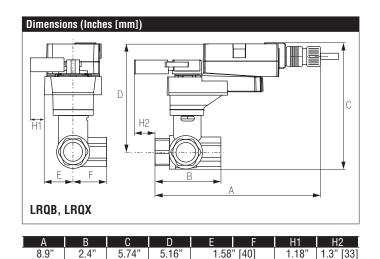
	Non-Spring	Spring
B309	TR, LR, NRB(X)	TFB(X), LF



А	В	C	D	Е	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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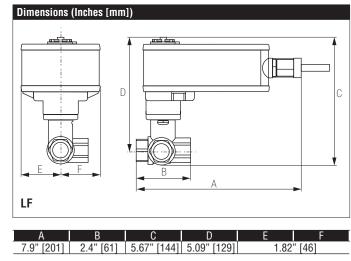
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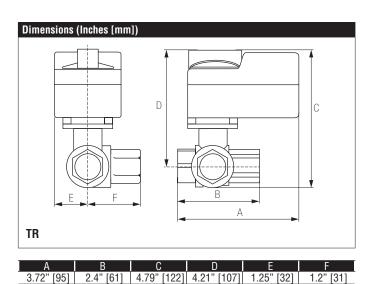
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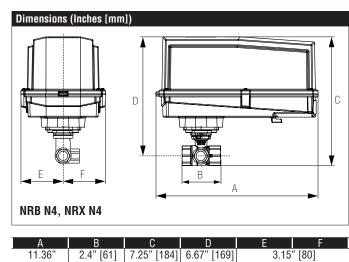
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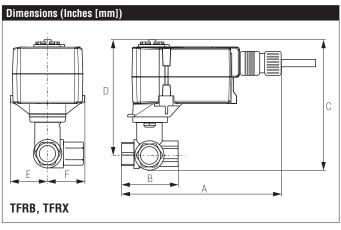
[226]

[61]









TFRB, TFRX	Dimensions (Inches [
	TFRB, TFRX	A

6.59" [167] | 2.4" [61] | 4.9" [124] | 4.32" [110] 1.53" [38] [289]

LRQX24-1 On/Off, Non-Spring Return, 24 V





24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
13 W
1.5 W
23 VA (class 2 power source) (I max
20A@5ms)
18 GA plenum rated cable with 1/2" conduit
connector protected NEMA 2 (IP54) 3ft [1m]
10ft [3m] and 16ft [5m]
electronic thoughout 0° to 90° rotation
actuators are double insulated
on/off
1000 Ω
90°
reversible with built-in switch
integrated into handle
external push button
-22°F to 122°F [-30°C to 50°C]
-40°F to 176°F [-40°C to 80°C]
NEMA 2, IP42, UL Enclosure Type 2
cULus acc. to UL60730-1A/-2-14, CAN/CSA
E60730-1:02, CE acc. to 2004/108/EC
max. 52 dB (A)
maintenance free
ISO 9001







Wiring Diagrams



X 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 with plenum cable do not have numbers; use color codes instead.



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.

