Date created, 10/27/2017 - Subject to change. © Belimo Aircontrols (USA), Inc.

B310, **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	0°F to 250°F [-18°C to 120°C]
(Water)	50 poi (245 kDo)
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

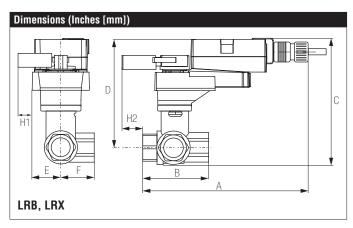


Application

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

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

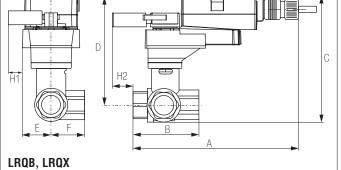


Α	В	C	D	Е	F	H1	H2
8.5"	2.4"	5.19"	4.61"	1.3"	[33]	1.18"	1.1" [28]
[216]	[61]	[132]	[117]			[30]	

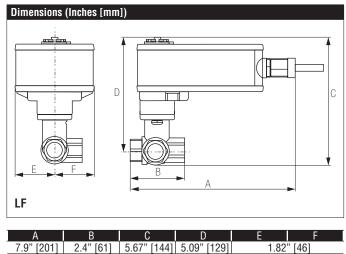
Dimensions (Inches [mm])

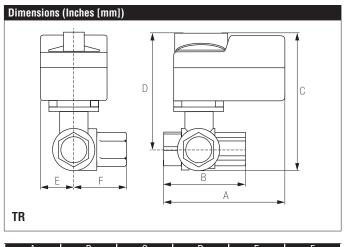
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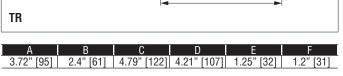


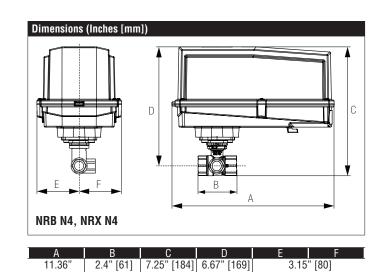


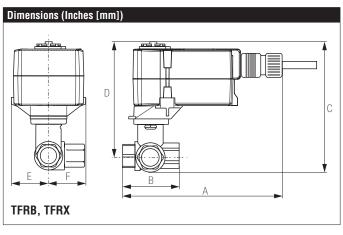
Α	В	С	D	E	F	H1	H2
8.9"	2.4"	5.74"	5.16"	1.58	" [40]	1.18"	1.3" [33]
[226]	[61]	[146]	[131]			[30]	











Α	В	С	D	Е	F
6.59" [167]	2.4" [61]	4.9" [124]	4.32" [110]	1.53	" [38]

[289]





REG. EQUIP.
24 VAC, ±20%, 50/60 Hz, 24 VDC, ±10%
2 W
1 W
4 VA (class 2 power source)
3ft [1m], 18 GA plenum cable with 1/2" conduit connector
electronic throughout 0° to 95° rotation
2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor)
100 k Ω for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA
2 to 10 VDC, 0.5 mA max
Max. 95°, 90°
reversible with built-in switch
reversible with CW/CCW mounting
visual indicator, 0° to 95° (0° is full spring return position)
95 sec
<25 sec
max. 95% RH non-condensing
-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
UL94-5VA
cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
<35 dB (A)
<62 dB (A)
maintenance free
ISO 9001
1.8 lb [0.8 kg]

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





Modulating, Spring Return, 24 VAC for 2 to 10 VDC or 4 to 20 mA Control Signal

Wiring Diagrams



💢 INSTALLATION NOTES



Provide overload protection and disconnect as required.

Only connect common to negative (-) leg of control circuits.



Actuators may be connected in parallel. Power consumption and input impedance must be observed.



Actuators may also be powered by 24 VDC.



A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.



Actuators with plenum cable do not have numbers; use color codes



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.

