# Date created, 10/07/2016 - Subject to change. © Belimo Aircontrols (USA), Inc.

# **B249**, **2-Way**, **Characterized Control Valve** Stainless Steel Ball and Stem

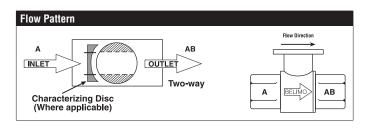






WARRANT

Technical Data	
Service	chilled, hot water, up to 60% glycol
Flow Characteristic	equal percentage
Controllable Flow Range	75°
Size [mm]	2" [50]
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]	400
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	46
Weight	2.9 lb [1.3 kg]
Leakage	0% for A to AB
Servicing	maintenance free

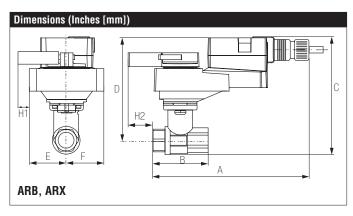


# **Application**

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 flow.

**Suitable Actuators** 

	Non-Spring	Spring	
B249	ARB(X)	AFRB(X)	



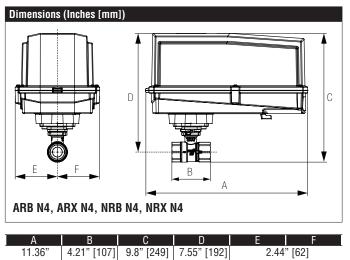
А	В	C	D	E	F	H1	H2
11"	4.21"	6.84"	5.51"	1.73	" [44]	1.18"	0.5" [15]
[279]	[107]	[174]	[140]			[30]	

[289]

ARQB, ARQX

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3.39" [86]



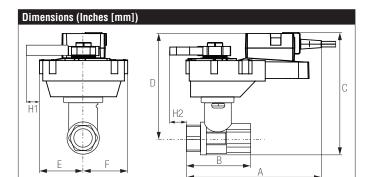
	D C
AFRB N4, AFRX N4	

9.24" [235]

10.29"

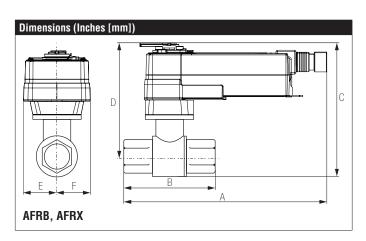
[261]

F	Α	В	
2.44" [62]	12.98"	4.93" [125]	
	[330]		



4.21" [107] | 9.8" [249] | 7.55" [192]

Α	В	С	D	Е	F	H1	H2
11"	4.21"	7.45"	6.11"	2.28	" [58]	0.75"	0.5" [15]
[279]	[107]	[190]	[155]			[20]	



]	Α	В	С	D	Е	F
	10.82"	4.21" [107]	9.47" [241]	8.14" [207]	2.02	" [51]
	[275]					

# ARX120-3 On/Off, Floating Point, Non-Spring Return, 100 to 240 VAC





nominal 100 to 240 VAC, 50/60 Hz, tolerance		
85 to 265 VAC 50/60 Hz		
3 W		
0.6 W		
7 VA (class 2 power source)		
18 GA applicance rated cable with 1/2" conduit		
connector protected NEMA 2 (IP54) 3ft [1m]		
10ft [3m] and 16ft [5m]		
electronic thoughout 0° to 90° rotation		
600 Ω		
90°		
reversible with built-in switch		
integrated into handle		
external push button		
90 sec (default), Optional (90 or 150 sec)		
-22°F to 122°F [-30°C to 50°C]		
-40°F to 176°F [-40°C to 80°C]		
NEMA 2, IP54		
cULus acc. to UL60730-1A/-2-14, CAN/CSA		
E60730-1:02, CE acc. to 2004/108/EC and		
2006/95/EC		
<45 dB (A)		
maintenance free		
ISO 9001		

†Rated Impulse Voltage 4kV, Type of action 1, Control Pollution Degree 3.







### Wiring Diagrams



# X INSTALLATION NOTES



Actuators with appliance cables are numbered.



Provide overload protection and disconnect as required.



Actuators may be connected in parallel. 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.

