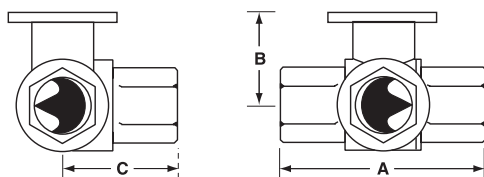




Technical Data	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage B-port modified for constant common port flow
Action	90° rotation
Sizes	½", ¾", 1", 1¼", 1½", 2"
Type of end fitting	NPT female ends
Materials:	
Body	forged brass, nickel plated
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	Tefzel®
Packing	2 EPDM O-rings, lubricated
Body Pressure rating	
600 psi	½" - 1"
400 psi	1¼" - 2"
Media temp. range	0°F to 212°F [-18°C to 100°C]
Close off pressure	
200 psi	½" - 2"
Maximum differential pressure (ΔP)	30 psi for typical applications
Leakage	0% for A to AB <2.0% for B to AB
C <sub>v</sub> rating	A-port: see product chart for values B-port: 70% of A to AB C <sub>v</sub>

Tefzel® is a registered trademark of DuPont

### Dimensions



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B307-B311	½"	15	2.41" [61.1]	1.39" [35.2]	1.20" [30.6]
B312-B315	½"	15	2.38" [60.4]	1.72" [43.7]	1.26" [32.1]
B317-B320	¾"	20	2.73" [69.3]	1.81" [45.9]	1.45" [36.8]
B322-B325	1"	25	3.09" [78.4]	1.81" [45.9]	1.56" [39.8]
B329-B331	1¼"	32	3.96" [100.6]	2.21" [56.2]	2.14" [54.3]
B338-B341	1½"	40	4.39" [111.6]	2.45" [62.2]	2.33" [59.1]
B347-B352	2"	50	4.90" [124.5]	2.68" [68.0]	2.60" [66.0]

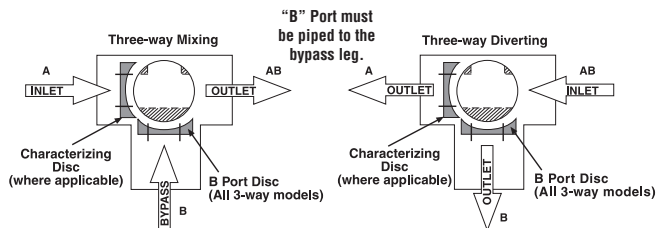
### Application

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.

C <sub>v</sub>	Valve Nominal Size		Type	Suitable Return Actuators			
	Inches	DN [mm]	3-Way NPT	Non-Spring		Spring	
0.3	½"	15	B307	TR Series	LR Series	NR...N4 Series	TF Series
0.46	½"	15	B308				
0.8	½"	15	B309				
1.2	½"	15	B310				
1.9	½"	15	B311				
3	½"	15	B312				
4.7	½"	15	B313				
10	½"	15	B315*				
4.7	¾"	20	B317				
24	¾"	20	B320*				
7.4	1"	25	B322	AR Series	AR...N4 Series	LF Series	
10	1"	25	B323				
30	1"	25	B325*				
10	1¼"	32	B329				
19	1¼"	32	B330				
25	1¼"	32	B331				
19	1½"	40	B338				
29	1½"	40	B339				
37	1½"	40	B340				
46	1½"	40	B341				
29	2"	50	B347	AF Series			
37	2"	50	B348				
46	2"	50	B349				
57	2"	50	B350				
68	2"	50	B351				
83	2"	50	B352				

\*Models without characterizing disc

### Flow Patterns





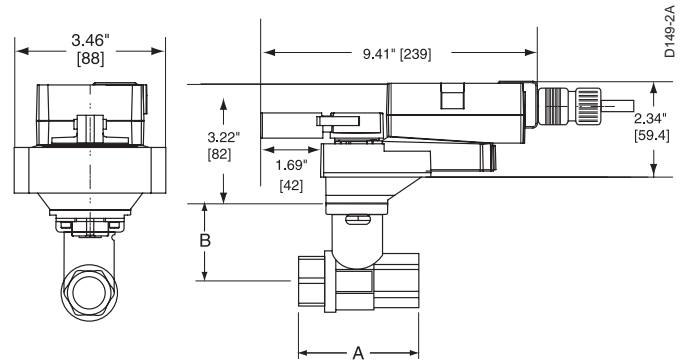
## Models

ARB120-SR  
ARX120-SR Flexible Version

Technical Data	
Control	On/Off, Floating Point
Power supply	100 to 240 VAC, 50/60 Hz (nominal) 85 to 265 VAC, 50/60 Hz (tolerance)
Power consumption	running 3 W holding 0.6 W
Transformer sizing	7 VA (class 2 power source)
Electrical connection	½" conduit connector 18 GA plenum rated cable ARB120-SR 3 ft [1m] ARX120-SR □ 3 ft [1m] □ 10 ft [3m] □ 16 ft [5m]
Overload protection	electronic throughout 0° to 95° rotation
Feedback output U	1 to 10 VDC, max 0.5 mA
Input impedance	600 Ω
Angle of rotation	90°, adjustable with mechanical stop
Direction of rotation	reversible with protected  switch
Position indication	handle
Manual override	external push button
Running time	90 seconds ARB120-SR ARX120-SR □ 300 □ 150 □ 90 seconds, constant independent of load
Humidity	5 to 95% RH non-condensing (EN 60730-1)
Ambient temperature	-22°F to 122°F [-30°C to 50°C]
Storage temperature	-40°F to 176°F [-40°C to 80°C]
Housing	NEMA 2/IP54
Housing material	UL94-5VA
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1, CSA C22.2 No. 24-93, CE acc. to 89/336/EEC (and 2006/95/EC for line voltage and/or -S versions)
Noise level	<45 dB(A)
Servicing	maintenance free
Quality standard	ISO 9001

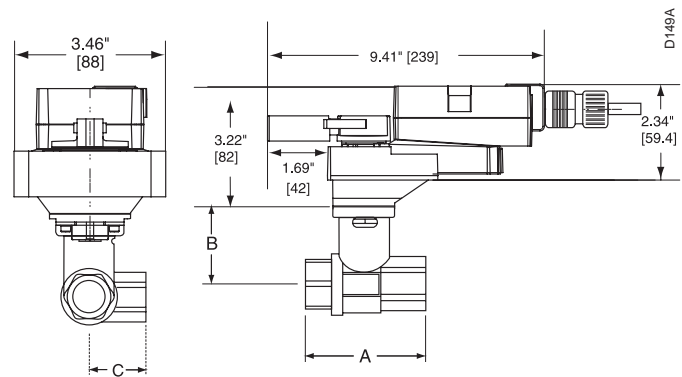
† Rated impulse voltage 4kV, Control pollution degree 3, Type of action 1

## Dimensions with 2-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])	
	Inches	DN [mm]	A	B
B231-B232	1¼"	32	3.72" [94.6]	1.98" [50.4]
B238-B240	1½"	40	3.88" [98.5]	1.98" [50.4]
B248-B250	2"	50	4.21" [107.0]	2.21" [56.2]

## Dimensions with 3-Way Valve



Valve Body	Valve Nominal Size		Dimensions (Inches [mm])		
	Inches	DN [mm]	A	B	C
B329-B331	1¼"	32	3.96" [100.6]	2.21" [56.2]	2.14" [54.3]
B338-B341	1½"	40	4.39" [111.6]	2.45" [62.2]	2.33" [59.1]
B347-B352	2"	50	4.90" [124.5]	2.68" [68.0]	2.60" [66.0]

### Wiring Diagrams

#### ✂️ INSTALLATION NOTES



#### **CAUTION** Equipment damage!

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



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



#### APPLICATION NOTES



The ZG-R01 500 Ω resistor converts the 4 to 20 mA control signal to 2 to 10 VDC, up to 2 actuators may be connected in parallel.



Meets cULus or UL and CSA 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.

