

B2...VS Series, 2-way, Ball Valve

Bronze Body, Stainless Steel Ball and Stem



- Live-load packing set
- Stainless steel ball & stem
- Blow-out proof stem design

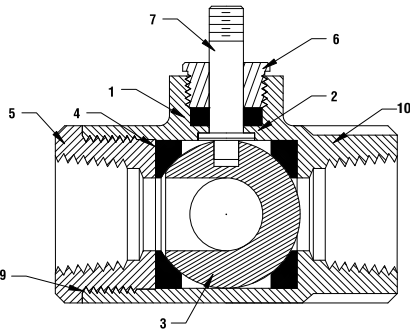
Application

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.

This valve is designed with MFT functionality which facilitates the use of various control input.

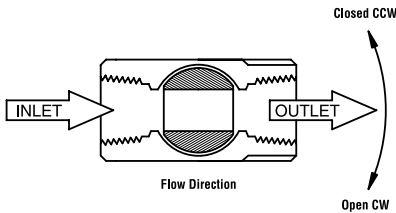
- Up to 35 psi steam
 - ½" - 600 PSIG WOG, Cold Non-Shock.
 - Federal Specification: WW-V-35C, Type II
- Composition: BZ
Style: 3

Technical Data	
Media	chilled or hot water, glycol, 35# steam
Flow characteristic	modified equal percentage
Action	90° rotation valve open CW, valve closed CCW
Sizes	½", ¾", 1", 1¼", 1½", 2"
Type of end fitting	SAE NPT (female connections)
Materials:	
1 Stem packing	reinforced PTFE
2 Stem bearing	reinforced PTFE
3 Ball	316 stainless steel
4 Seat (x2)	reinforced PTFE w/ Durafill
5 Retainer	B16 (¾" - 1") stainless steel B584 (1¼" - 2") stainless steel
6 Gland	B16 brass
7 Stem	316 stainless steel
8 Jam nut	stainless steel
9 Body seal	PTFE (1-1/4" to 2")
10 Body	B584-C84400 bronze

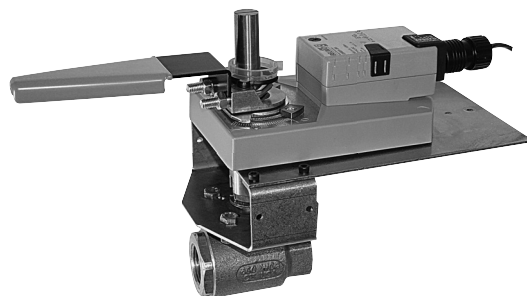


Pressure rating	600 psig WOG
Media temp. range	-22°F to +280°F (-30°C to +138°C)
Close-off pressure	600 psig @ 100°F
Maximum differential pressure (ΔP)	<600 psig

Flow Patterns



Valve Nominal Size			Type	Suitable Actuators	
C _v	Inches	DN [mm]	2-way NPT	Spring Return	Non-Spring Return
1	½	15	B2050VS-01	LF Series	LM Series
2	½	15	B2050VS-02		
4	½	15	B2050VS-04		
15	½	15	B2050VS-15		
30	¾	20	B219VS	NF	NM
51	¾	20	B220VS		
43	1	25	B224VS	AF Series	AM Series
68	1	25	B225VS		
48	1¼	32	B232VS		
84	1½	40	B239VS		GM Series
177	1½	40	B240VS		
108	2	50	B249VS		

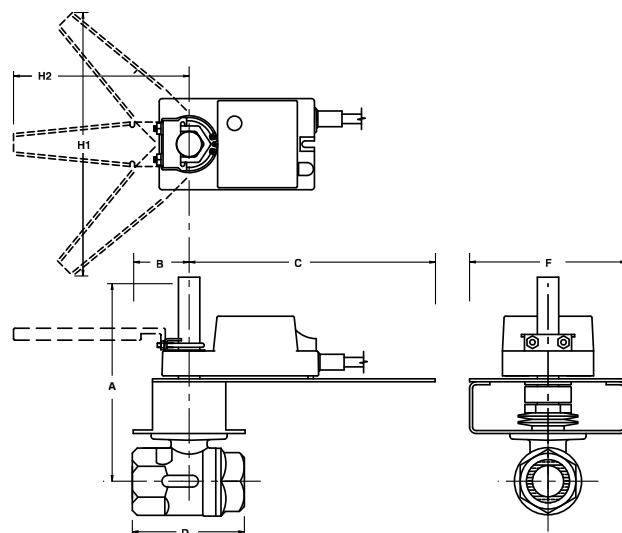


Models

AMB24-3-X1
AMX24-3-X1
ARX24-3

Technical Data	
Control	on/off, floating point
Power supply	24 VAC \pm 20% 50/60 Hz 24 VDC \pm 10%
Power consumption	running 2.5 W holding 0.2 W
Transformer sizing	5.5 VA (class 2 power source)
Electrical connection	1/2" conduit connector AMB24-3-X1 3 ft., 18 GA plenum rated cable
Overload protection	electronic throughout 0° to 95° rotation
Input impedance	600 Ω
Angle of rotation	max 95°, adjustable with mechanical stop
Torque	180 in-lbs [20 Nm]
Direction of rotation	reversible with switch
Position indication	reflective visual indicator (snap-on)
Manual override	external push button
Running time	95 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 type 2/IP54
Housing material	UL94-5VA
Agency listings	cULus acc. to UL 60730-1/-2-14, CAN/CSA C22.2 No. 24 certified, CE acc. to 73/23/EEC
Noise level	<45 db(A)
Servicing	maintenance free
Quality standard	ISO 9001

Dimensions with 2-Way Valve



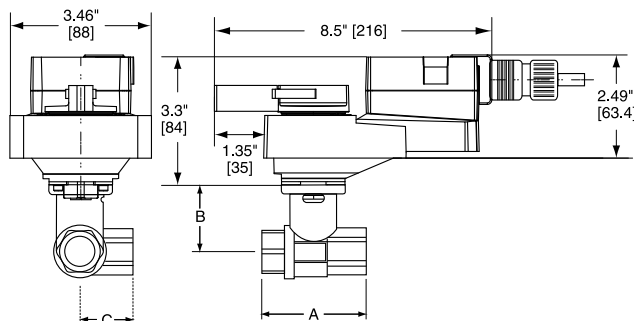
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Valve Nominal Size

Dimensions (Inches)

Valve Body	COP	Inches	DN [mm]	A	B	C	D	F	H1	H2
B225VS	200	1	25	7.00	2.00	8.00	3.62	6.25	9.75	8.50
B232VS	600	1 1/4	32	7.25	2.00	8.00	3.97	6.25	9.75	8.50
B224VSS	1000	1	25	7.00	2.00	8.00	3.37	6.25	9.75	8.50

Dimensions with 3-Way Valve



Valve Nominal Size

Dimensions (mm)

Valve Body	COP	Inches	DN [mm]	A	B	C
B340L	200	1 1/2	40	4.80" [122]	2.44" [62]	2.61" [65]
B350L	200	2	50	5.60" [142]	2.67" [68]	3.11" [79]

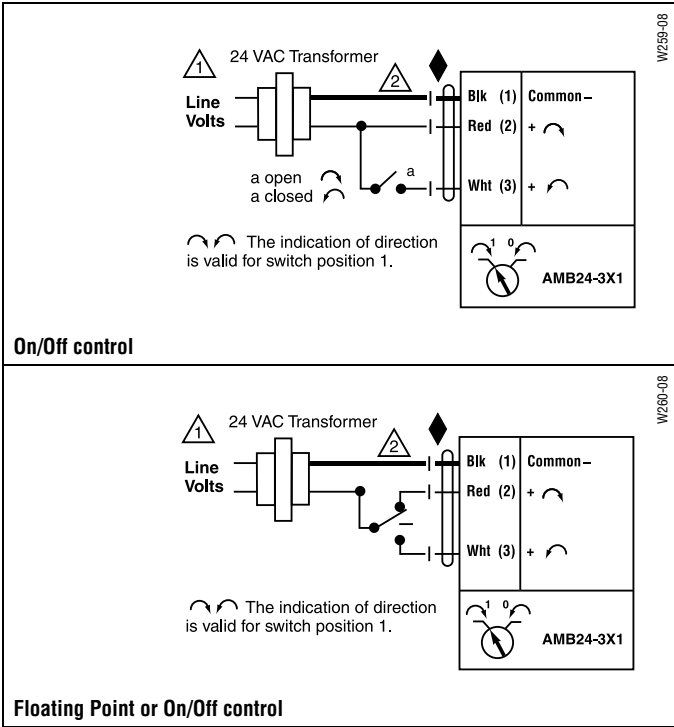
Wiring Diagrams

✂️ **INSTALLATION NOTES**

- 1 Provide overload protection and disconnect as required.
- 2 **CAUTION Equipment damage!**
Actuators may be connected in parallel.
Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 5 Only connect common to neg. (–) leg of control circuits.

📄 **APPLICATION NOTES**

- ◆ 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.



Piping

The valve should be mounted in a weather-protected area in a location that is within the ambient limits of the actuator. Allow sufficient room for valve with actuator and for service. Allow 6" for cover removal and 12" for complete actuator removal. The assembly can be mounted with the actuator vertical or horizontal in relation to the pipe. The actuators should never be mounted underneath the valve, as condensation can build up and result in a failure of the actuators. Do not reverse flow direction.