

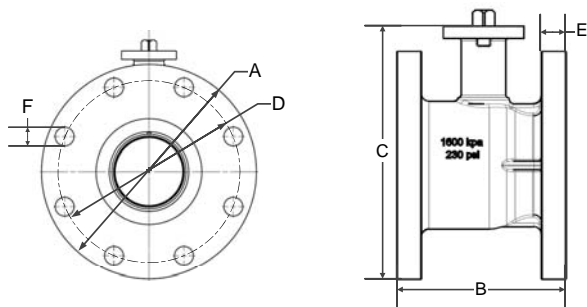


Application

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.

Technical Data	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½", 3", 4", 5", 6"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	cast iron - GG25
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	stainless steel
Packing	2 EPDM O rings, lubricated
Body pressure rating	according to ANSI 125, standard class B
Media temp. range	0°F to 248°F [-18°C to +120°C]
Close off pressure	100 psi
Maximum differential pressure (ΔP)	50 psi
Leakage	0% for A to AB
Cv rating	A-port: see product chart for values

Dimensions



Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6250S	2½" [65]	F05	7.50" [190.5]	5.50" [139.7]	8.10" [205.4]
B6300S	3" [80]		8.00" [203.2]	6.60" [167.6]	8.40" [213.1]
B6400S	4" [100]		9.00" [228.6]	8.30" [210.8]	9.30" [235.9]
B6500S	5" [125]		10.00" [254.0]	10.30" [261.6]	10.50" [266.4]
B6600S	6" [150]		11.00" [279.4]	12.50" [317.5]	11.70" [296.9]

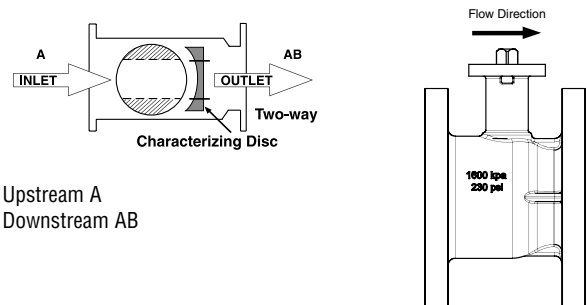
NOTES:

- 1) Flange bolt pattern matches ANSI class 125 flanges (not ANSI/ASME rated)
- 2) Maximum allowable working pressure: 100 PSIG
- 3) It is not recommended to connect raised-face flanges to flat-faced flanges

Valve Nominal Size			Type	Suitable Actuators		
Cv	Inches	DN [mm]	2-way Flange	Non-Spring	Spring	Electronic Fail-Safe
70	2½"	65	B6250S-070	AR Series	AFR Series	
110	2½"	65	B6250S-110			
110	3"	80	B6300S-110			
186	4"	100	B6400S-186			
290	5"	125	B6500S-290	GR		GKR Series
400	6"	150	B6600S-400			

Flow Pattern

2-way B6250 to B6600 Characterized Control Valves™



Upstream A
Downstream AB

Bolt Circle Diameter	Flange Thickness Minimum	Bolt Hole Diameter	Number of Bolt Holes
D	E	F	
5.50" [139.7]	0.75" [19.05]	0.75" [19.05]	4
6.00" [152.4]	0.75" [19.05]	0.75" [19.05]	4
7.50" [190.5]	0.94" [23.88]	0.75" [19.05]	8
8.50" [215.9]	0.94" [23.88]	0.88" [22.35]	8
9.50" [241.3]	1.00" [25.40]	0.88" [22.35]	8



MFT



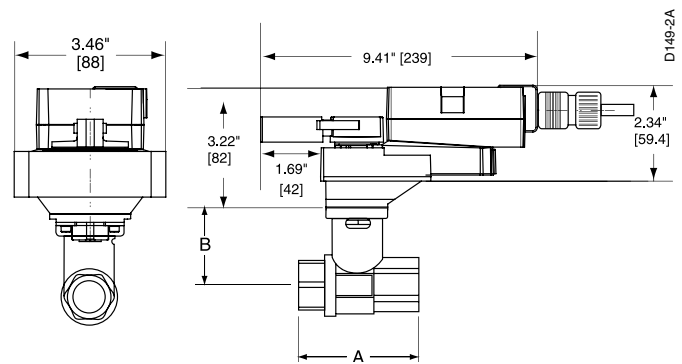
Models

ARX24-MFT
ARX24-MFT-5-14

Technical Data	
Power supply	24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running 4 W holding 1.25 W
Transformer sizing	6 VA (class 2 power source)
Electrical connection	½" conduit connector 18 GA plenum rated cable ARX24-MFT 3 ft. [1m], 10 ft. [3m], 16 ft. [5m]
Overload protection	electronic throughout 0° to 95° rotation
Operating range Y	2 to 10 VDC, 4 to 20 mA (default) variable (VDC, PWM, floating point, on/off)
Feedback output U	2 to 10 VDC, 0.5 mA max VDC variable
Input impedance	100 kΩ (0.1 mA), 500 Ω 1500 Ω (PWM, floating point, on/off)
Angle of rotation	95° electronically variable
Direction of rotation	reversible with protected switch
Position indication	handle
Manual override	external push button
Running time	ARB24-MFT 150 seconds ARX24-MFT variable (90 to 350 seconds)
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 according to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE according to 2004/108/EC and 2006/95/EC for line voltage and/or -S versions
Noise level	<45 dB(A)
Quality standard	ISO 9001

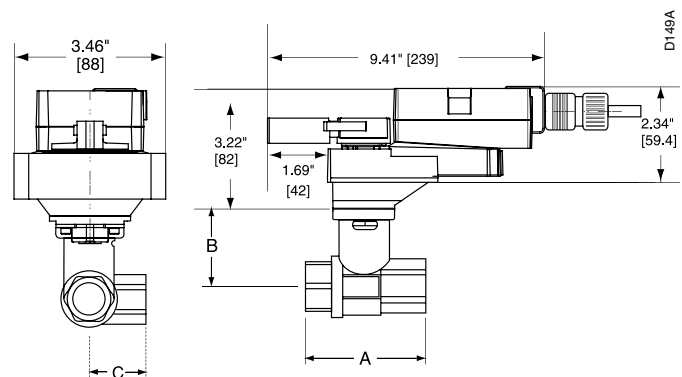
† Rated impulse voltage 4kV, Control pollution degree 3, Type of action 1

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]
B251-B254	2"	50	4.93" [125.2]	2.68" [68.0]
B261-B265	2½"	65	5.55" [140.9]	2.68" [68.0]
B277-B280	3"	80	5.82" [147.9]	2.68" [68.0]

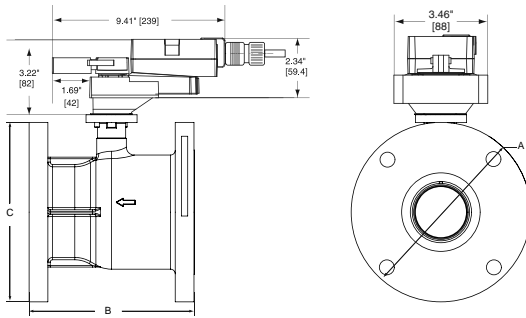
Dimensions with 3-Way Valve



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]

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Dimensions



Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6250	2½" [65]	F05	7.50" [190.5]	5.50" [139.7]	8.10" [205.4]
B6300	3" [80]		8.00" [203.2]	6.60" [167.6]	8.40" [213.1]
B6400	4" [100]		9.00" [228.6]	8.30" [210.8]	9.30" [235.9]

Wiring Diagrams

INSTALLATION NOTES

- 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.
- 4** Position feedback cannot be used with Triac sink controller. The actuator internal common reference is not compatible.
- 6** Control signal may be pulsed from either the Hot (source) or the Common (sink) 24 VAC line.
- 8** Contact closures A & B also can be triacs. A & B should both be closed for triac source and open for triac sink.
- 9** For triac sink the common connection from the actuator must be connected to the hot connection.

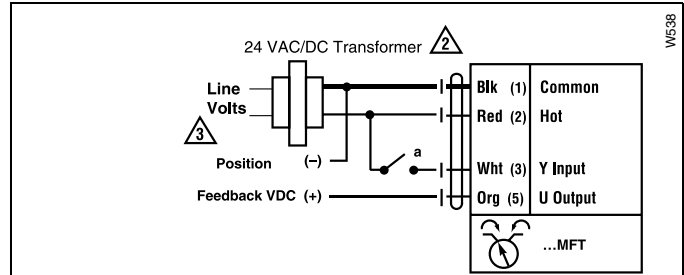
APPLICATION NOTES

- ◆ 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.

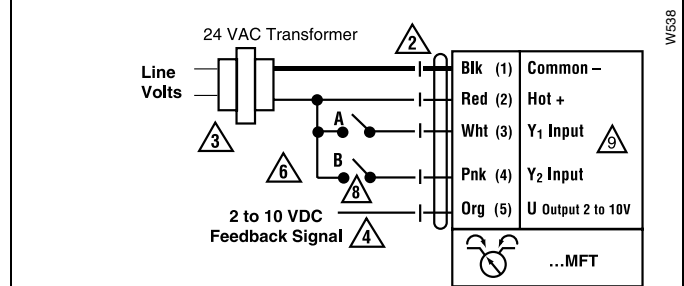
WARNING *Live Electrical Components!*

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.

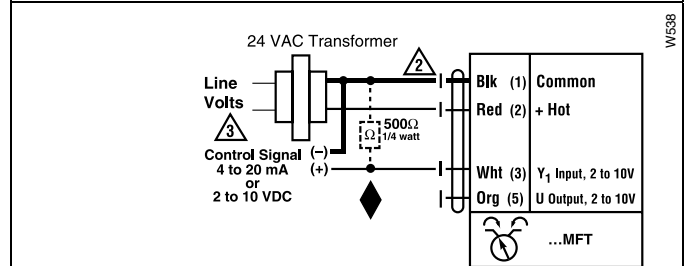
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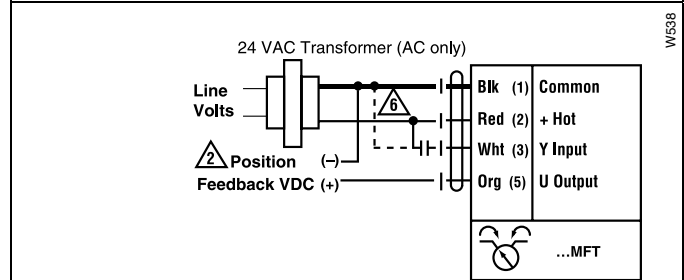
On/Off control



Floating Point



VDC/4-20 mA



PWM