

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 table with 2 columns: Component and Description. Rows include Media, Flow characteristic, Action, Sizes, Type of end fitting, Materials (1-10), and various internal parts like Stem packing, Stem bearing, Ball, Seat, Retainer, Gland, Stem, Jam nut, Body seal, and Body.

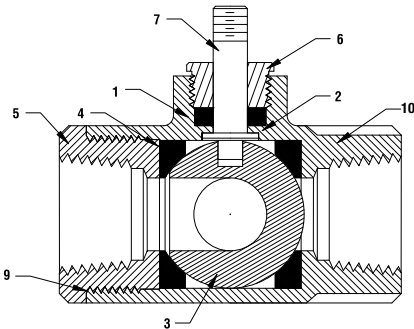


Table with 2 columns: Parameter and Value. Rows include Pressure rating, Media temp. range, Close-off pressure, and Maximum differential pressure.

Flow Patterns

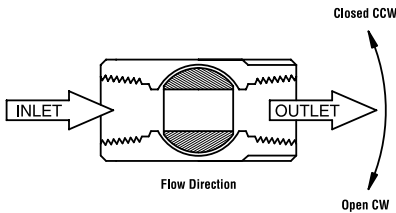
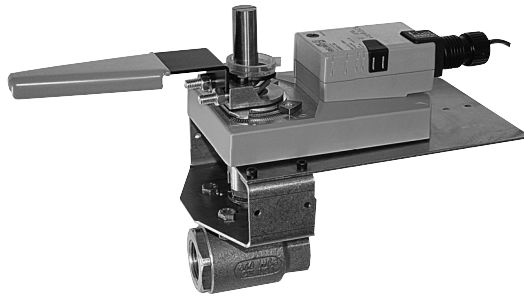


Table with 6 columns: Valve Nominal Size, Type, Suitable Actuators, and Cv. It lists various valve sizes and their corresponding actuator options.

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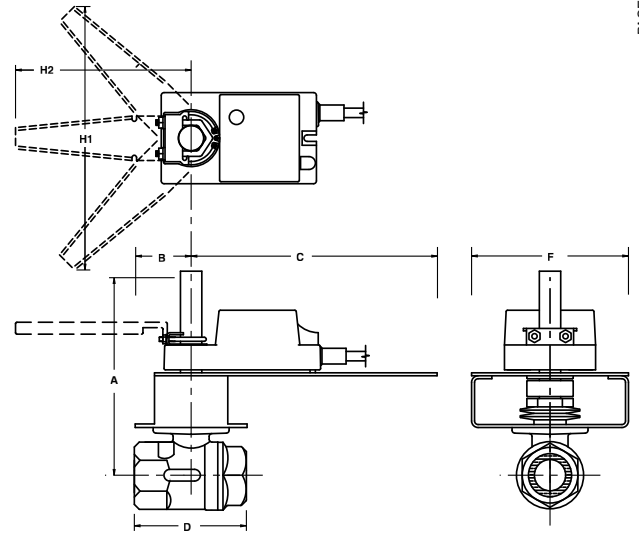


Models

AMX24-MFT-X1
AMX24-MFT95-X1
ARX24-MFT

Technical Data	
Power supply	24 VAC $\pm$ 20% 50/60 Hz 24 VDC $\pm$ 10%
Power consumption	4 W (1.25 W)
Transformer sizing	6 VA (class 2 power source)
Electrical connection	3 ft. [1m], 10 ft. [3m], 16 ft. [5m] 18 GA plenum rated cable ½" conduit connector
Overload protection	electronic throughout 0° to 95° rotation
Input impedance	100 k Ω for 2 to 10 VDC (0.1 mA) 500 Ω for 4 to 20 mA 750 Ω for PWM 1500 Ω for on/off and floating point
Feedback	2 to 10 VDC, 0.5 mA max VDC variable
Angle of rotation	max 95°, adjust. with mechanical stop electronically variable
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	150 seconds (default) 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 type 2/IP54
Housing material	UL94-5VA
Agency listings	cULus acc. to UL 60730-1/-2-14, CAN/CSA E60730-1, CSA C22.2 No. 24-93, CE acc. to 89/336/EEC
Noise level	<45 db(A)
Servicing	maintenance free
Quality standard	ISO 9001

Dimensions with 2-Way Valve



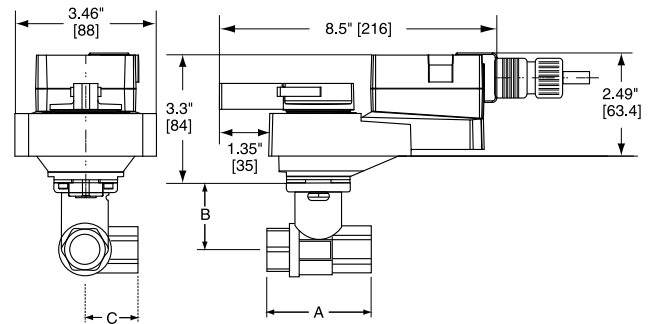
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Valve Nominal Size

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	1¼	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	1½	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

- 1

Provide overload protection and disconnect as required.
- 3

Actuators may also be powered by 24 VDC.
- 4

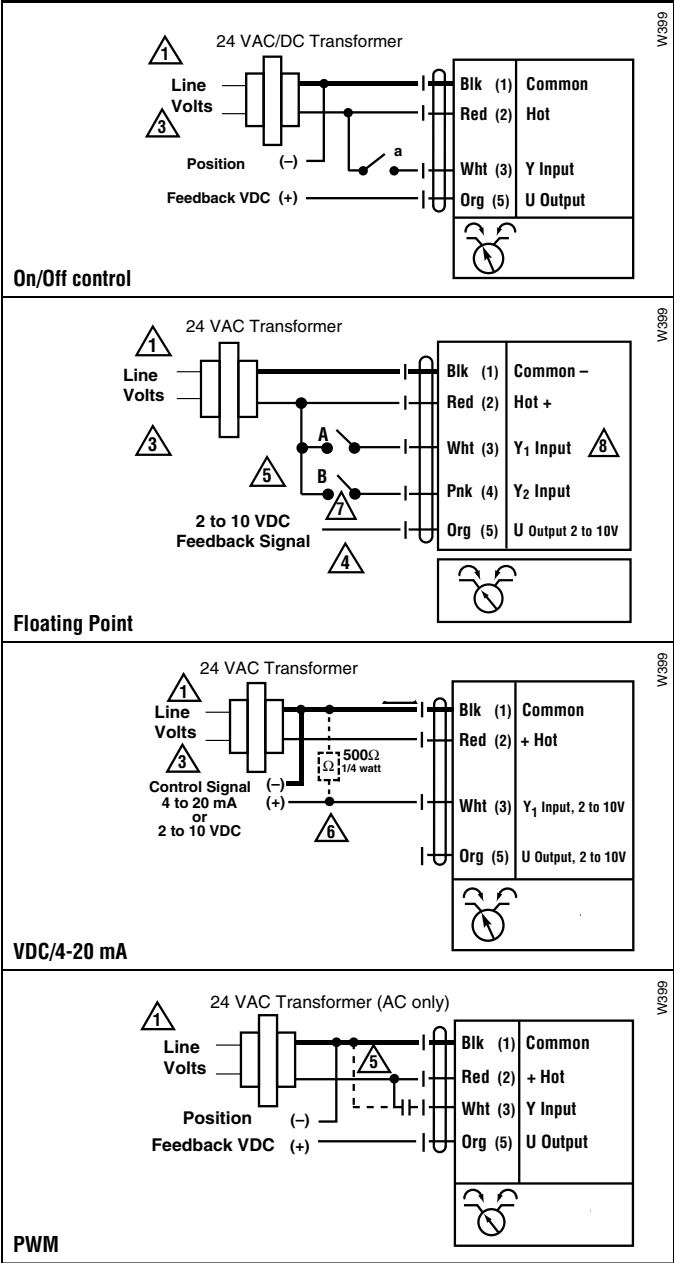
Position feedback cannot be used with Triac sink controller. The actuator internal common reference is not compatible.
- 5

Control signal may be pulsed from either the Hot (source) or the Common (sink) 24 VAC line.
- 6

ZG-R01 may be used.
- 7

Contact closures A & B also can be triacs.
- 8

A & B should both be closed for triac source and open for triac sink. For triac sink the common connection from the actuator must be connected to the hot connection of the controller.





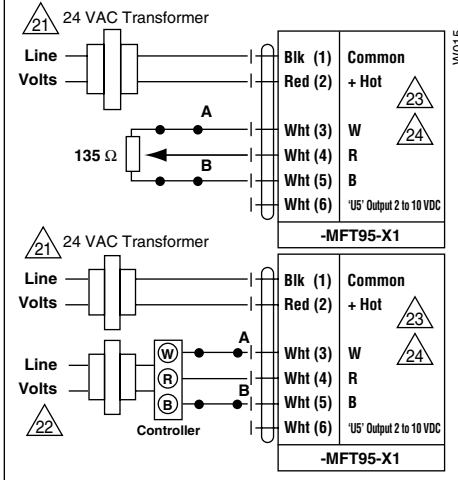
INSTALLATION NOTES

- 21 Provide overload protection and disconnect as required.
- 22 Actuators and controller must have separate transformers.
- 23 Consult controller instruction data for more detailed information.
- 24 Resistor value depends on the type of controller and the number of actuators. No resistor is used for one actuator. Honeywell® resistor kits may also be used.
- 25 To reverse control rotation, use the reversing switch.

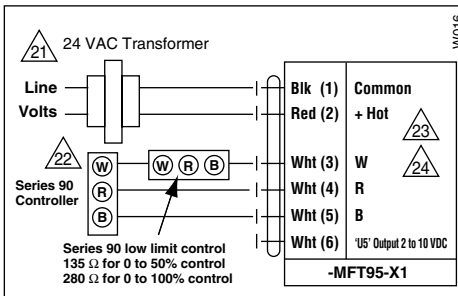
Override

Switch A	Switch B	Damper Position
		Damper Open
		Damper Closed

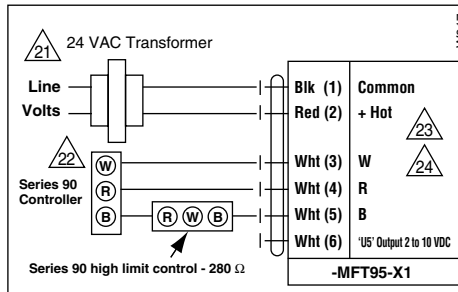
The direction of rotation switch is set so that the fail safe position and the position of the damper is closed with no signal at wire R.



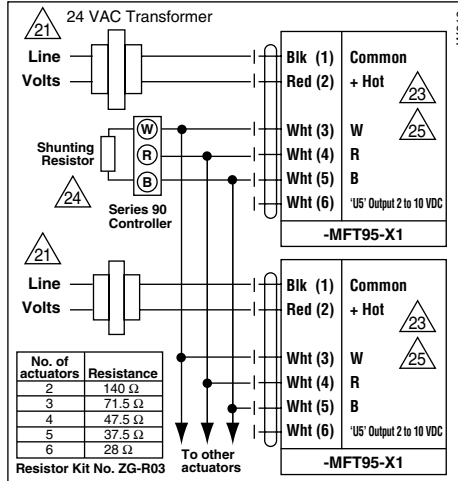
Low Limit Control



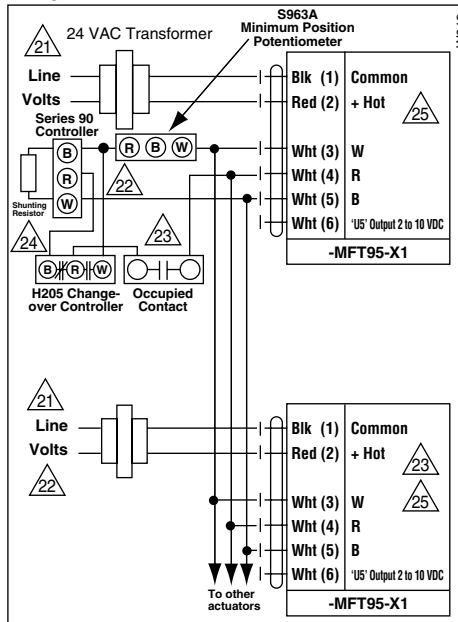
High Limit Control



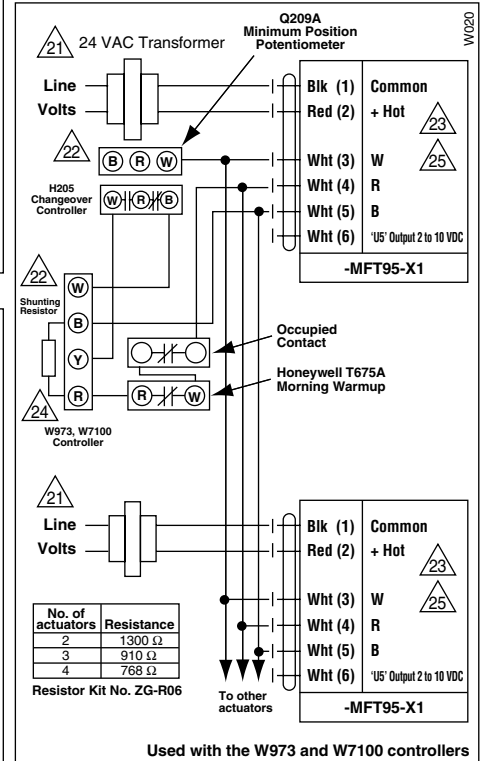
Wiring Multiple Actuators to a Series 90 Controller



Wiring Multiple Actuators to a Series 90 Controller using a Minimum Position Potentiometer



Typical wiring diagrams for multiple actuators used with the W973, W7100 and T775 controllers



Used with the W973 and W7100 controllers

