

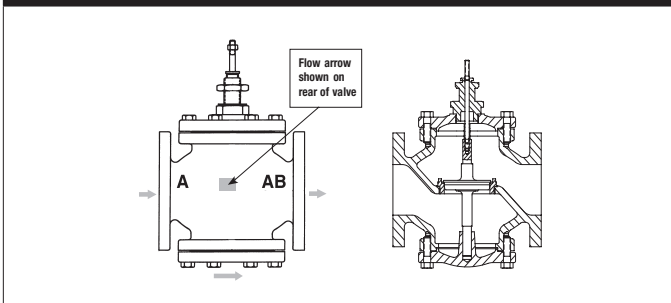
## G680C, 2-Way, Pressure Compensated Flanged Globe Valve



### Technical Data

Service	chilled or hot water, up to 60% glycol, steam
Flow Characteristic	equal percentage
Controllable Flow Range	stem up - open A to AB
Size [mm]	3" [80]
End Fitting	125 lb flanged
Body	cast iron - ASTM A126 Class B (ASME B16.1)
Stem	stainless steel
Stem Packing	NLP EPDM (no lip packing)
Seat	316 stainless steel
Plug	brass
Body Pressure Rating [psi]	ANSI 125
ANSI Class	ANSI 125 (up to 175 psi below 150°F)
Number of Bolt Holes	4
Max Inlet Pressure (Water)	150 psi (1034 kPa) @ 250°F
Max Inlet Pressure (Steam)	35 psi (241 kPa)
Media Temperature Range (Water)	32°F to 338°F [0°C to 138°C]
Media Temperature Range (Steam)	32°F to 280°F [0°C to 138°C]
Maximum Differential Pressure (Steam)	15 psi (103 kPa)
Max Differential Pressure (Water)	25 psi (172 kPa)
Rangeability	91:1
Cv	90
Weight	75 lb [34 kg]
Leakage	ANSI Class III
Servicing	Repack/Rebuild kits available

### Flow Pattern



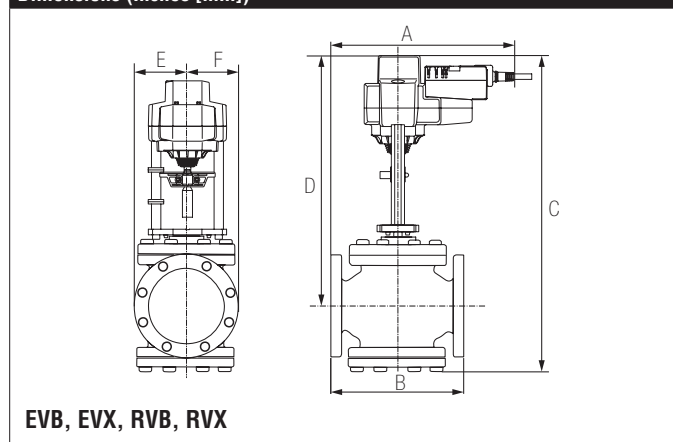
### Application

This valve is typically used in large air handling units on heating or cooling coils. This valve is suitable for use in a hydronic system with variable flow. Bronze or stainless steel trim valves can be used for steam applications, depending on actuator and close-off combination.

### Suitable Actuators

	Non-Spring	Spring	Electronic Fail-Safe
G680C	EVB(X)	AFB(X)	AVKB(X)

### Dimensions (Inches [mm])

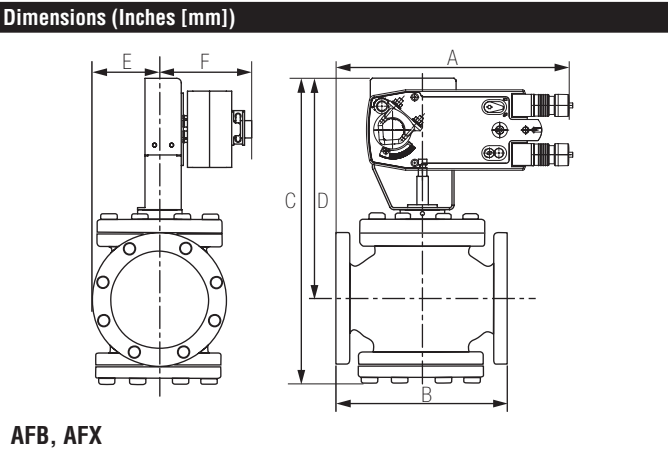


A	B	C	D	E	F
12.2" [310]	10" [254]	24.64" [626]	19.25" [489]	3.94" [100]	

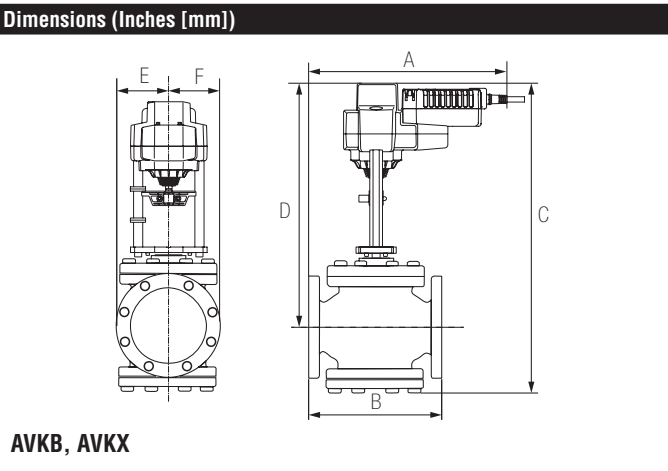
### Piping

The valves 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. The preferred mounting position of the valve is with the valve stem vertical above the valve body, for maximum life. However, the assemblies can be mounted with valve stem vertical above the valve or up to 45 degrees in relation to the horizontal 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.

**G680C, 2-Way, Pressure Compensated Flanged Globe Valve**



A	B	C	D	E	F
12.2" [310]	10" [254]	22.77" [577]	17.85" [453]	3.94" [100]	5.25" [135]



A	B	C	D	E	F
12.2" [310]	10" [254]	24.64" [626]	19.25" [489]	3.94" [100]	

# AFX24-MFT95-X1

Modulating, Spring Return, 24 V, 0 to 135 Ω Input



Technical Data	
Power Supply	24 VAC±20%, 50/60Hz, 24 VDC+20%/-10%
Power Consumption Running	7.5 W
Power Consumption Holding	3 W
Transformer Sizing	10 VA (class 2 power source)
Electrical Connection	18 GA appliance rated cable with 1/2" conduit connector protected NEMA 2 (IP54) 3 ft [1m] 10 ft [3m] and 16 ft [5m]
Overload Protection	electronic throughout 0° to 95° rotation
Operating Range Y	0 to 135 Ω Honeywell Electronic Series 90, 0 to 135 Ω input
Feedback Output U	2 to 10 VDC, 0.5 mA max, VDC variable
Angle of Rotation	95° (adjustable with mechanical end stop, 35° to 95°)
Direction of Rotation (Motor)	reversible with built-in switch
Direction of Rotation (Fail-Safe)	reversible with CW/CCW mounting
Position Indication	visual indicator, 0° to 95° (0° is full spring return position)
Manual Override	5 mm hex crank (3/16" Allen), supplied
Running Time (Motor)	150 sec (default), variable (70 to 220 sec)
Running Time (Fail-Safe)	<20 sec
Override Control	min. position = 0% , mid. Position = 50% , max. position = 100% (Default)
Humidity	max. 95% RH non-condensing
Housing	NEMA 2, IP54, UL enclosure type 2
Housing Material	zinc coated metal and plastic casing
Agency Listings†	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC
Noise Level (Motor)	<40 dB (A)
Noise Level (Fail-Safe)	<62 dB (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Weight	4.6 lb [2.1 kg]

\*Variable when configured with MFT options.

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

### Wiring Diagrams



#### **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.



Meets cULus requirements without the need of an electrical ground connection.



Provide overload protection and disconnect as required.



Actuators may also be powered by 24 VDC.



Actuators and controller must have separate transformers.



Consult controller instruction data for more detailed information.



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.



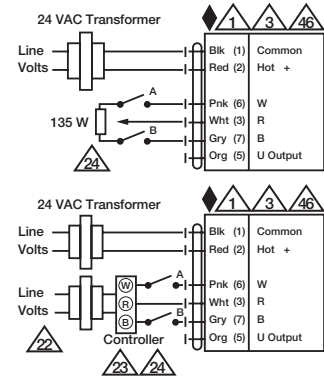
To reverse control rotation, use the reversing switch.



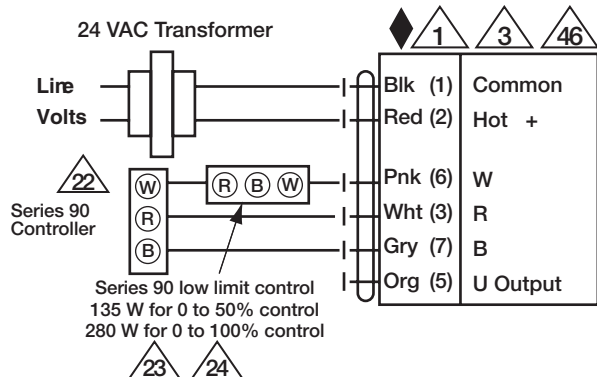
Actuators may be controlled in parallel. Current draw and input impedance must be observed.

Switch A	Switch B	Damper Position
		Damper Open
		Damper Closed

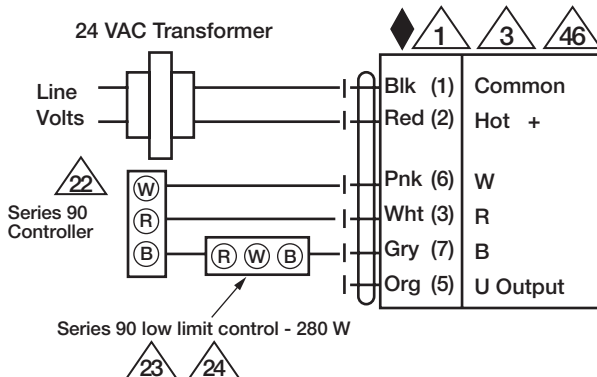
The direction of rotation switch is set so that the fail safe position and the position of the damper is closed with no signal at wire R.



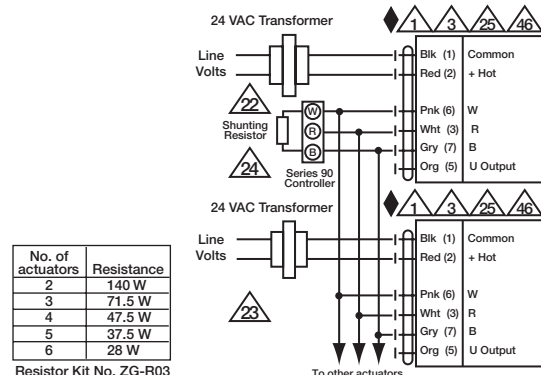
### Typical and Override Control



### Low Limit Control

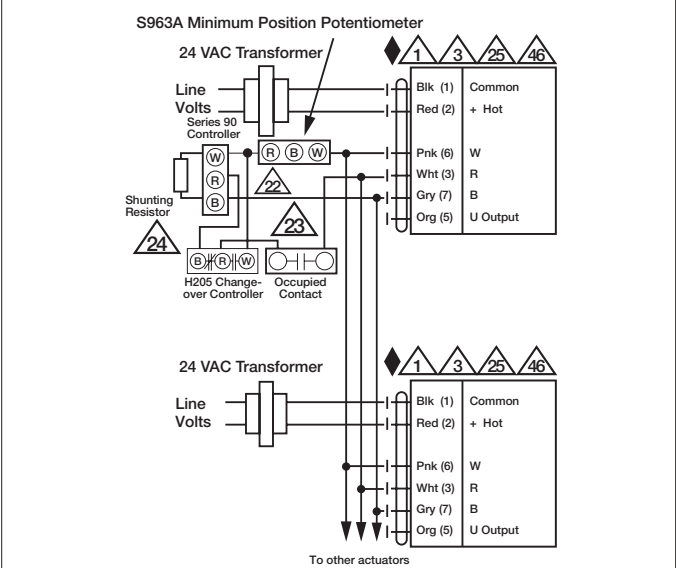


### High Limit Control

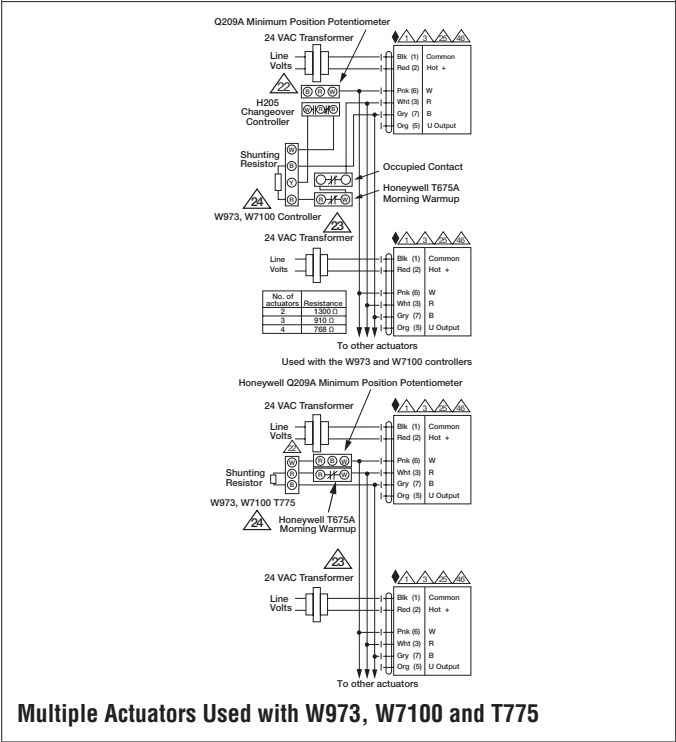


### Multiple Actuators

**AFX24-MFT95-X1**  
Modulating, Spring Return, 24 V, 0 to 135 Ω Input



**Multiple Actuators with Minimum Position Potentiometer**



**Multiple Actuators Used with W973, W7100 and T775**