

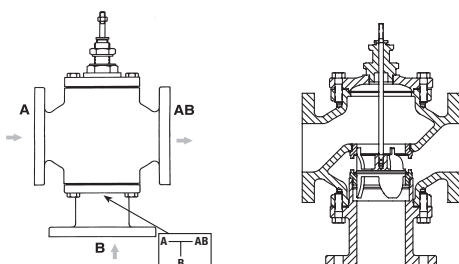
G780, 3-Way, Mixing Flanged Globe Valve



Technical Data

Media	chilled, hot water, up to 60% glycol
Flow characteristic	linear
Controllable flow range	stem up - open B – AB
Valve Size [mm]	3" [80]
Pipe connection	125 lb flanged
Housing	cast iron - ASTM A126 Class B (ASME B16.1)
Stem	stainless steel
Stem seal	NLP EPDM (no lip packing)
Seat	316 stainless steel
Closing element	bronze
Body Pressure Rating	ANSI Class 125, up to 175 psi below 150°F
ANSI Class	125
Number of Bolt Holes	4
Maximum Inlet Pressure (Water)	150 psi [1034 kPa] @ 250°F [121°C]
Rangeability Sv	50:1
Cv	85
Weight	81.59 lb [37 kg]
Media Temp Range (water)	32...350°F [0...176°C]
Leakage rate	ANSI Class III
Maintenance	repack/rebuild kits available

Flow Pattern



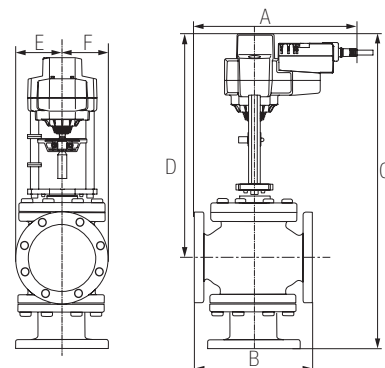
Application

This valve is typically used in large Air Handling Units (AHU) on heating or cooling coils. This valve is suitable for use in a hydronic system with variable flow.

Suitable Actuators

	Non-Spring	Spring	Electronic fail-safe
G780	EVb(X), RVb(X)	AF, 2*AFb(X)	AVKB(X), 2*GKB(X)

Dimensions (Inches [mm])



EVb, EVX, RVb, RVX

A	B	C	D	E	F
12.2" [310]	10" [254]	27.01" [686]	19" [483]	3.94" [100]	

Safety Notes

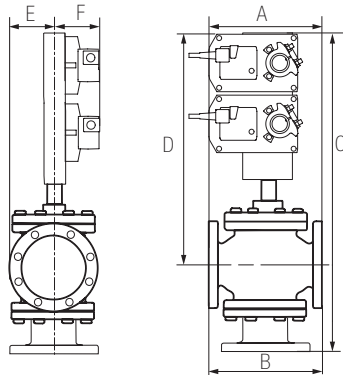
⚠ WARNING: For Belimo Products sold in California, these Products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see www.p65warnings.ca.gov.

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.

G780, 3-Way, Mixing Flanged Globe Valve

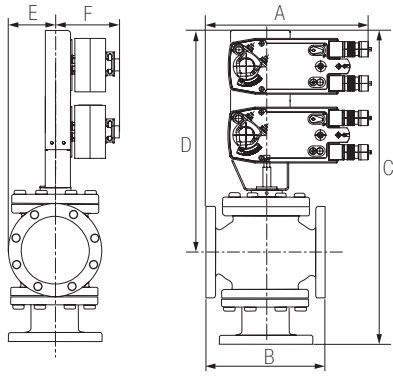
Dimensions (Inches [mm])



2*GMB, 2*GMX, 2*GKB, 2*GKX

A	B	C	D	E	F
12.2" [310]	10" [254]	30.53" [775]	22.5" [572]	3.74" [95]	5.25" [135]

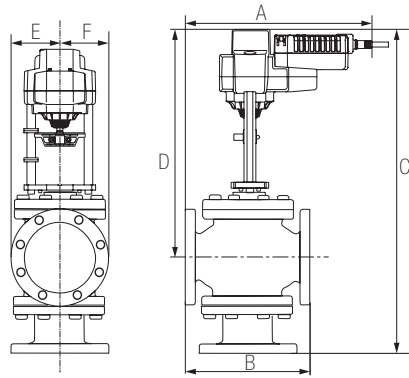
Dimensions (Inches [mm])



2*AFB, 2*AFX

A	B	C	D	E	F
12.2" [310]	10" [254]	30.53" [775]	22.5" [572]	3.74" [95]	5.25" [135]

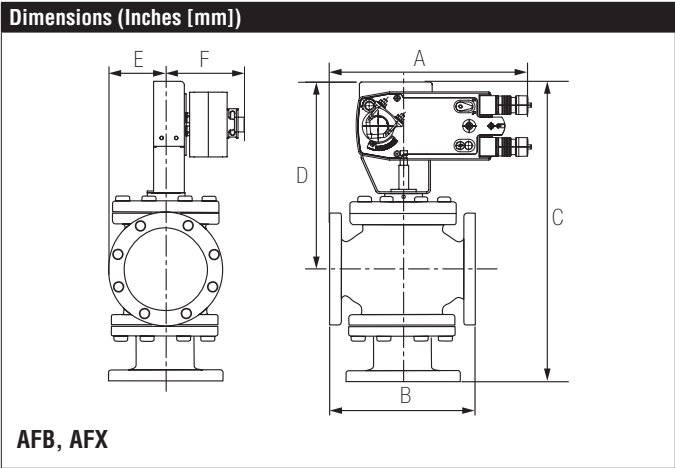
Dimensions (Inches [mm])



AVKB, AVKX

A	B	C	D	E	F
13" [332]	10" [254]	27.01" [686]	19" [483]	3.94" [100]	

G780, 3-Way, Mixing Flanged Globe Valve



A	B	C	D	E	F
12.2" [310]	10" [254]	25.6" [650]	17.52" [445]	3.74" [95]	5.25" [135]

RVB24-MFT

Modulating, Non-Spring Return, Linear, 24 V, Multi-Function Technology®



Technical Data	
Power Supply	24 VAC \pm 20%, 50/60 Hz, 24 VDC \pm 10%
Power Consumption Running	6 W
Power Consumption Holding	1.5 W
Transformer Sizing	11 VA (class 2 power source)
Electrical Connection	3 ft, 18 GA plenum rated cable with 1/2" conduit connector protected NEMA 2 (IP54)
Overload Protection	electronic throughout full stroke
Electrical Protection	actuators are double insulated
Operating Range Y	2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor), variable (VDC, floating point, on/off)
Input Impedance	100 k Ω for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for On/Off
Feedback Output U	2 to 10 VDC
Stroke	2" [50 mm]
Linear Force	1011 lbf [4500 N force]
Direction of Rotation (Motor)	reversible with switch
Position Indication	stroke indicator on bracket
Manual Override	5 mm hex crank (3/16" Allen), supplied
Running Time (Motor)	90 sec, constant independent of load
Humidity	5 to 95% RH non-condensing
Ambient Temperature Range	-22°F to 122°F [-30°C to 50°C]
Storage Temperature Range	-40°F to 176°F [-40°C to 80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing Material	Aluminum die cast and plastic casing
Agency Listings†	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise Level (Motor)	<65 dB (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Weight	9 lb [4.1 kg]

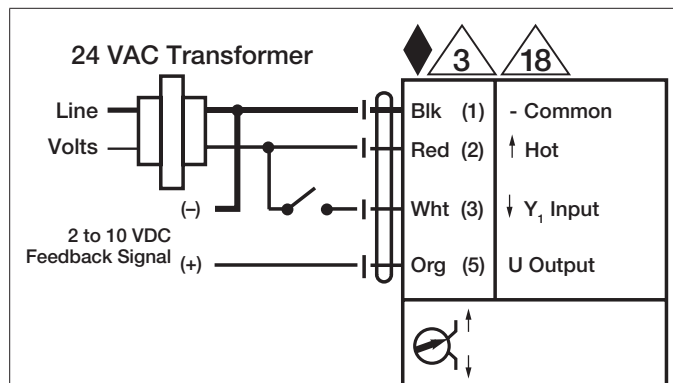
† Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 800V. Type of action 1. Control pollution degree 3.

Wiring Diagrams

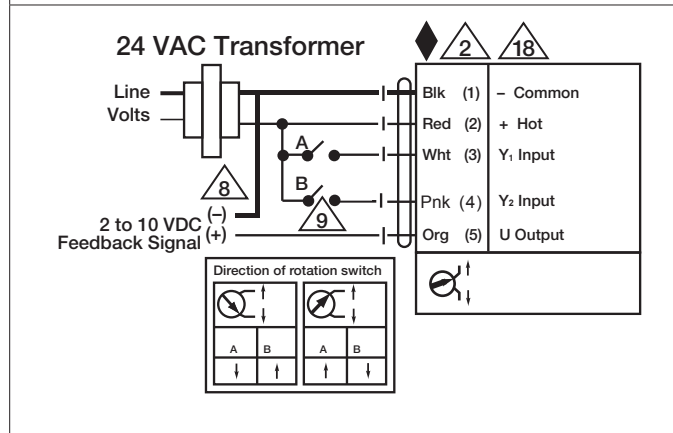
INSTALLATION NOTES

- 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 7 A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- 8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.
- 9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- 18 Actuators with plenum cable do not have numbers; use color codes instead.
- Meets cULus requirements without the need of an electrical ground connection.

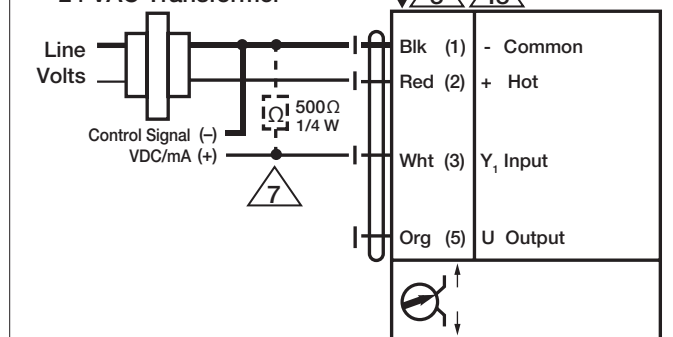
WARNING! LIVE ELECTRICAL COMPONENTS!
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.



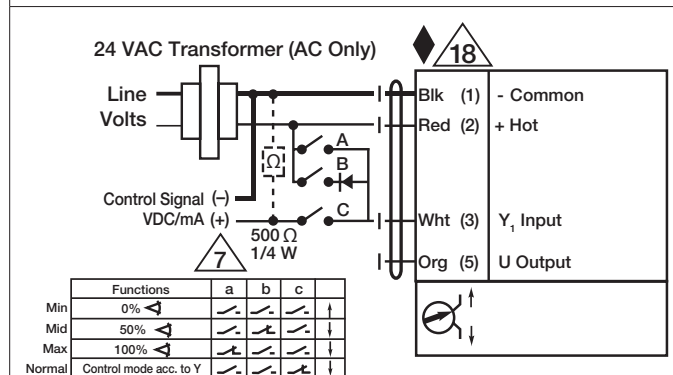
On/Off



VDC / 4 to 20 mA



VDC / 4 to 20 mA



Override Control Min, Mid, Max Positions