

G6100C Technical Data Sheet

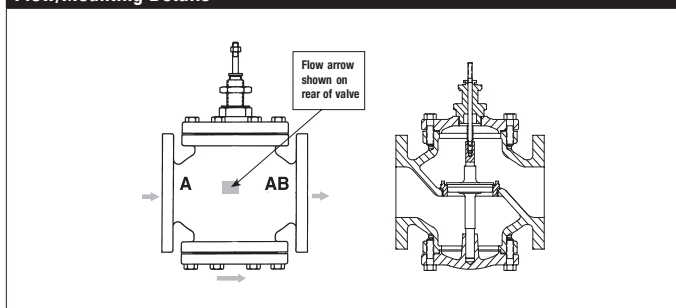


5-year warranty

Technical Data

Fluid	chilled or hot water, up to 60% glycol, steam
Flow characteristic	equal percentage
Controllable flow range	stem up - open A – AB
Valve Size [mm]	4" [100]
Pipe connection	125 lb flanged
Housing	Cast iron - ASTM A126 Class B
Stem	stainless steel
Stem seal	NLP EPDM (no lip packing)
Seat	Stainless steel AISI 316
Valve plug	brass
Body Pressure Rating	ANSI Class 125, up to 175 psi below 150°F
ANSI Class	125
Number of Bolt Holes	8
Maximum Inlet Pressure (Steam)	35 psi [241 kPa]
Max Differential Pressure (Steam)	15 psi [103 kPa]
Rangeability Sv	98:1
Cv	170
Weight	125.69 lb [57 kg]
Fluid Temp Range (water)	32...338°F [0...138°C]
Leakage rate	ANSI Class III
Servicing	repack/rebuild kits available

Flow/Mounting Details



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
G6100C	EVB(X)	(2*AFB(X))	AVKB(X)

Dimensions (Inches [mm])



EVB, EVX, RVB, RVX

A	B	C	D	E	F
13.7" [349]	13.0" [330]	26.6" [676]	19.8" [502]	4.5" [114]	

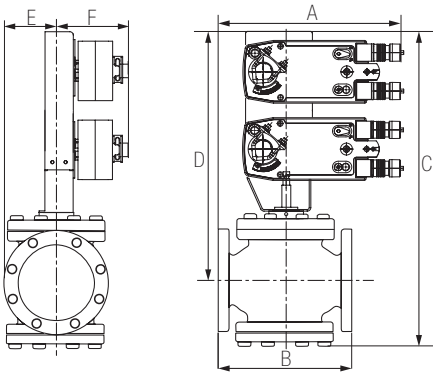
Safety Notes

WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to 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° 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.

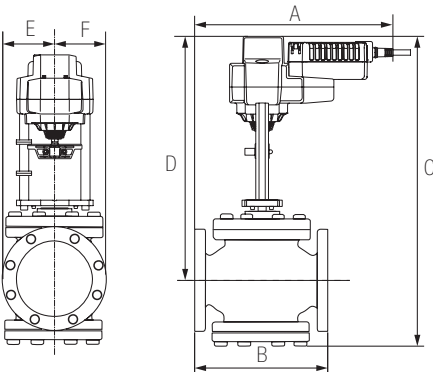
Dimensions (Inches [mm])



2*AFB, 2*AFX

A	B	C	D	E	F
13.7" [349]	13.0" [330]	30.0" [762]	23.2" [590]	4.5" [114]	5.3" [135]

Dimensions (Inches [mm])

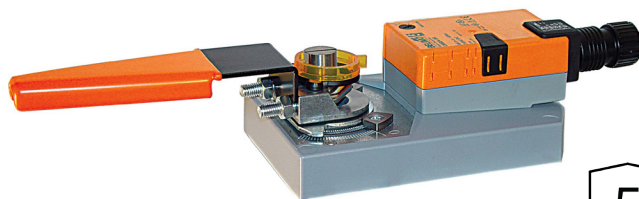


AVKB, AVKX

A	B	C	D	E	F
13.7" [349]	13.0" [330]	26.6" [676]	19.8" [502]	4.5" [114]	

GMX24-MFT-X1 Technical Data Sheet

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



5-year warranty



Technical Data	
Power Supply	24 VAC, $\pm 20\%$, 50/60 Hz, 24 VDC, $\pm 10\%$
Power consumption in operation	4.5 W
Power consumption in rest position	1.5 W
Transformer sizing	7 VA (class 2 power source)
Electrical Connection	18 GA plenum cable, 3 ft [1 m], with 1/2" conduit connector (10 ft [3 m] and 15 ft [5 m] available)
Overload Protection	electronic throughout 0...95° rotation
Operating Range	2...10 V (default), 4...20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor), variable (VDC, on/off, floating point)
Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
Input Impedance	100 k Ω for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM, On/Off and Floating point
Position Feedback	2...10 V, Max. 0.5 mA, VDC variable
Angle of rotation	Max. 95°, adjustable with mechanical stop
Torque motor	360 in-lb [40 Nm]
Direction of motion motor	selectable with switch 0/1
Position indication	Mechanically, 30...65 mm stroke
Manual override	external push button
Running Time (Motor)	default 150 s, variable 90...150 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
Noise level, motor	45 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	4.9 lb [2.2 kg]

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

Date created, 04/03/2020 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams

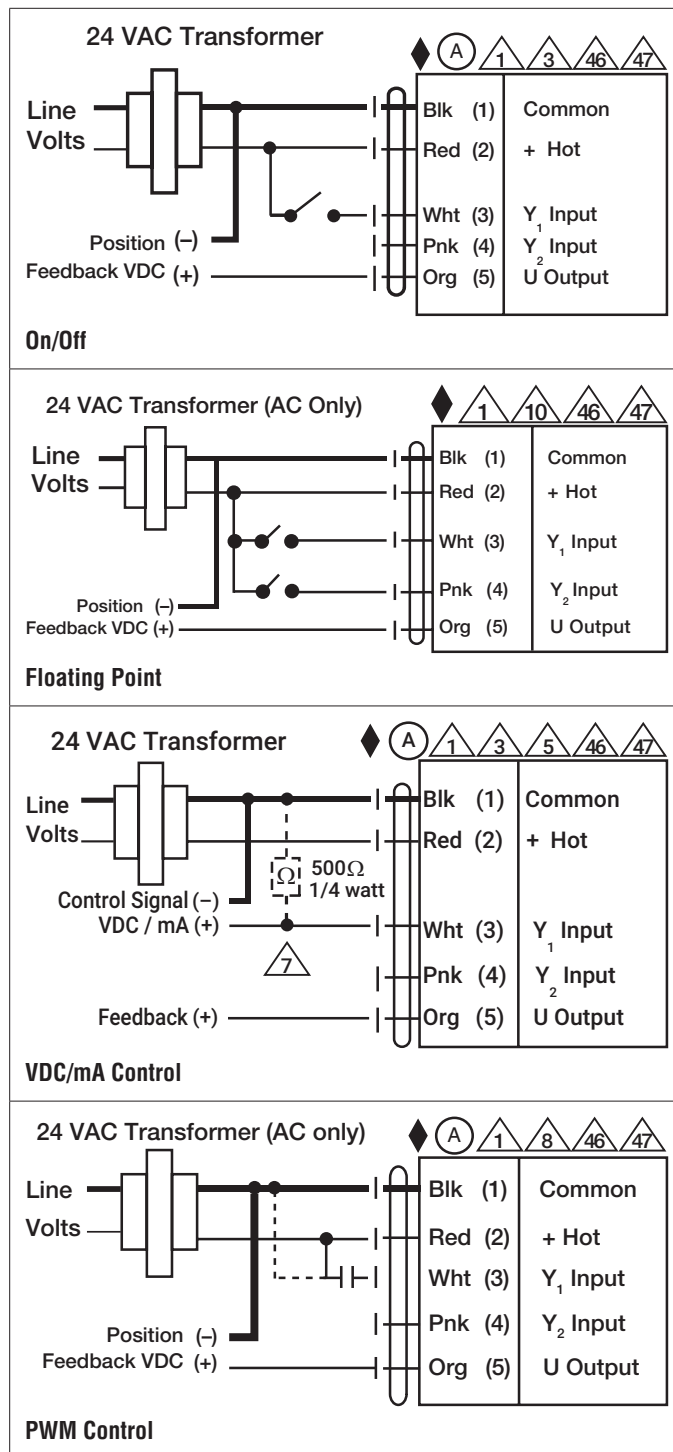
INSTALLATION NOTES

- (A) Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 3 Actuators may also be powered by 24 VDC.
- 5 Only connect common to negative (-) leg of control circuits.
- 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.
- 10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.
- 12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- 47 Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).
- 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.



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

