

B6400S-186 Technical Data Sheet

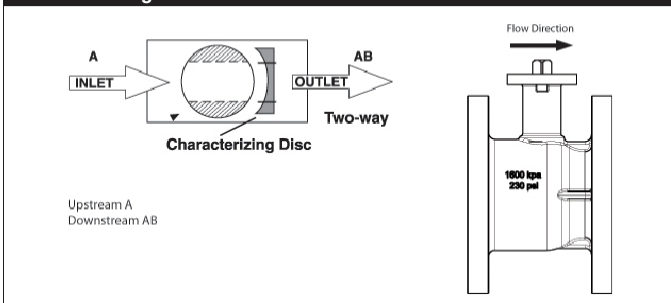
Stainless Steel Ball and Stem



Technical Data

Fluid	chilled or hot water, up to 60% glycol
Flow characteristic	equal percentage
Controllable flow range	75°
Valve Size [mm]	4" [100]
Pipe connection	pattern to mate with ANSI 125 flange
Housing	Cast iron - GG 25
Ball	stainless steel
Stem	stainless steel
Stem seal	EPDM (lubricated)
Seat	PTFE
O-ring	EPDM (lubricated)
Characterized disc	stainless steel
Body Pressure Rating	ANSI Class 125, standard class B
ANSI Class	125
Number of Bolt Holes	8
Close-off pressure Δps	100 psi
Cv	186
Weight	50.71 lb [23 kg]
Fluid Temp Range (water)	0...250°F [-18...120°C]
Leakage rate	0% for A – AB
Servicing	maintenance-free

Flow/Mounting Details



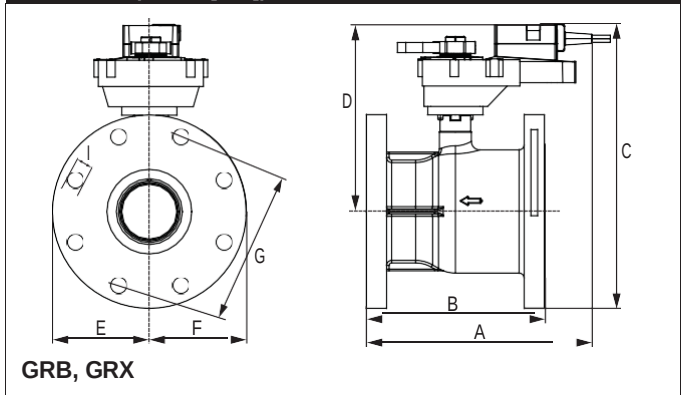
Application

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.

Suitable Actuators

	Non-Spring	Electronic fail-safe
B6400S-186	GRB(X)	GKRB(X)

Dimensions (Inches [mm])

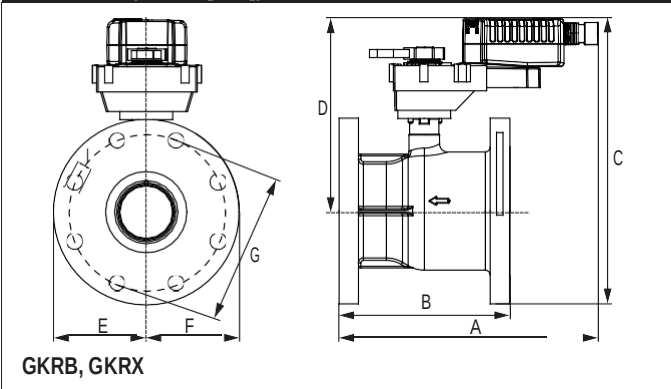


A	B	C	D	E	F	G	H
11.3" [286]	8.3" [210]	12.8" [325]	8.7" [221]	4.5" [114]		7.5" [191]	0.7" [19]

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

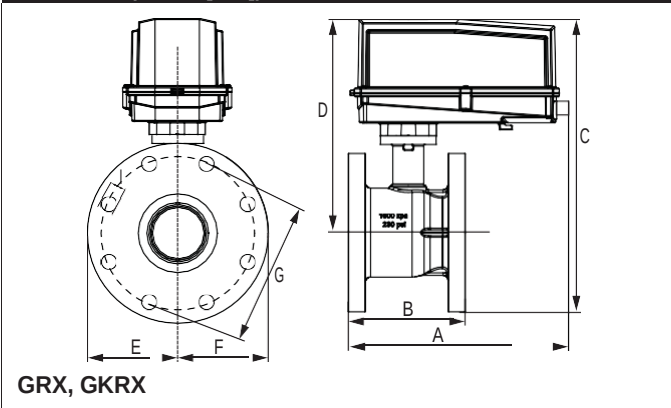
Dimensions (Inches [mm])



GKRB, GKRX

A	B	C	D	E	F	G	I
11.3"	8.3"	12.9"	9.7"	4.5"		7.5"	0.7"
[286]	[210]	[328]	[246]	[114]		[191]	[19]

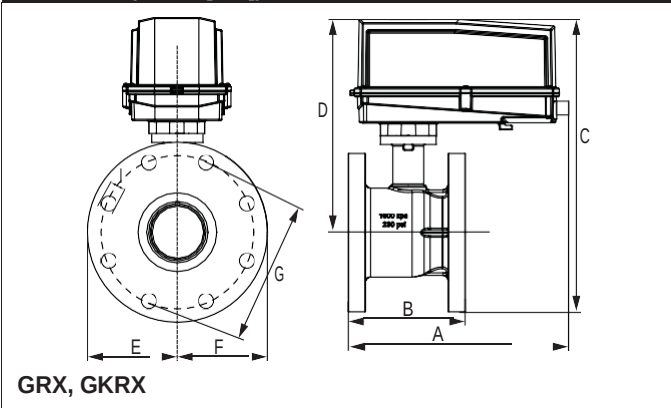
Dimensions (Inches [mm])



GRX, GKRX

A	B	C	D	E	F	G	I
15.0"	8.3"	16.3"	12.6"	4.5"		7.5"	0.7"
[381]	[210]	[415]	[321]	[114]		[191]	[19]

Dimensions (Inches [mm])



GRX, GKRX

A	B	C	D	E	F	G	I
15.0"	8.3"	16.3"	12.6"	4.5"		7.5"	0.7"
[381]	[210]	[415]	[321]	[114]		[191]	[19]

GKRX24-MFT Technical Data Sheet

Modulating, Electronic Fail-Safe, 24 V, Multi-Function Technology®



5-year warranty



LISTED
94-05
TEMP. IND. & C
REG. EQUIP.



Technical Data

Power Supply	24VAC, ±20%, 50/60Hz, 24VDC, -10%/+20%
Power consumption in operation	12 W
Power consumption in rest position	3 W
Transformer sizing	21 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...90° 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 kΩ 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. 90°, adjustable with mechanical stop
Direction of motion motor	selectable with switch 0/1
Direction of motion fail-safe	reversible with switch
Position indication	Mechanically, 30...65 mm stroke
Manual override	external push button
Running Time (Motor)	default 150 s, variable 90...150 s
Running time fail-safe	<35 s
Bridging time	programmable 0...10 s (2 s default) delay before fail-safe activates
Pre-charging time	5...26 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, UL Enclosure Type 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	52 dB(A)
Noise level, fail-safe	61 dB(A)
Servicing	maintenance-free
Quality Standard	ISO 9001
Weight	3.8 lb [1.8 kg]

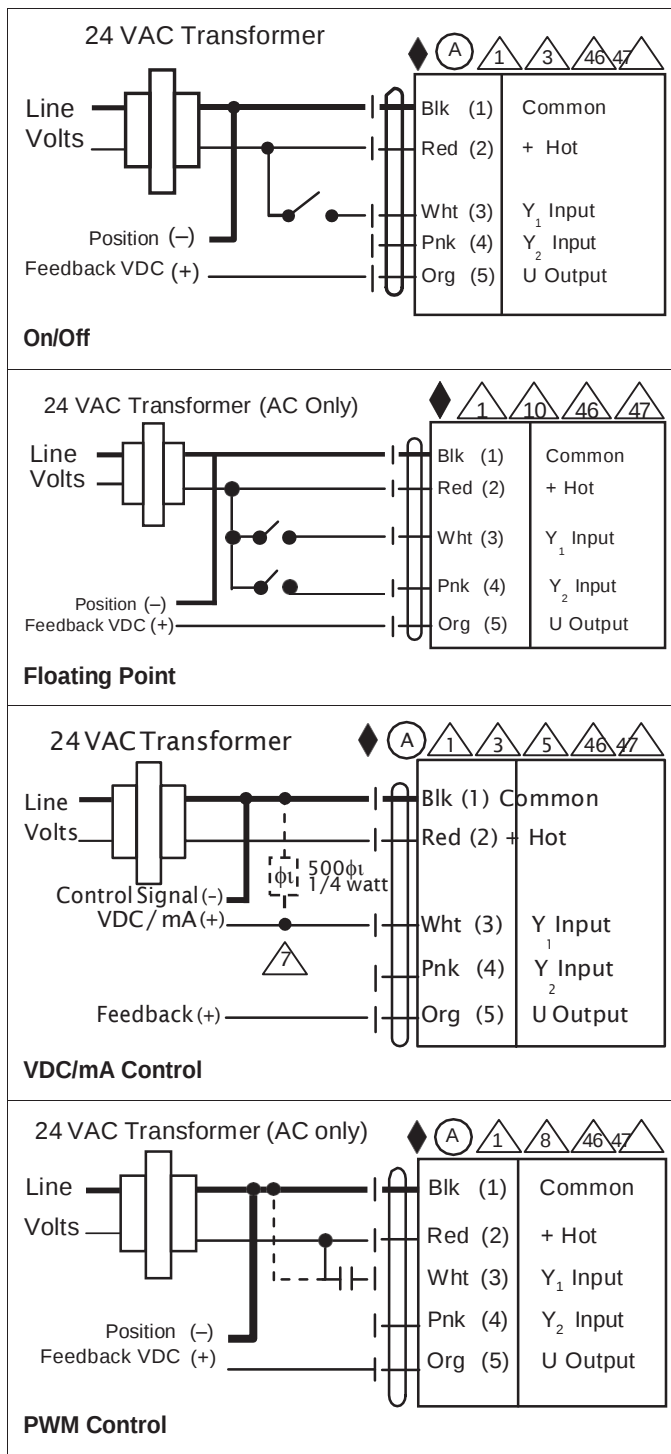
†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

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.



GKRX24-MFT Technical Data Sheet
Modulating, Electronic Fail-Safe, 24 V, Multi-Function Technology®

