Application

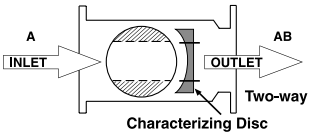
This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box re-heat coils and bypass loops. This valve is suitable for use in a hydronic system with variable or constant flow.

Technical Data	
Service	chilled or hot water, 60% glycol
Flow characteristic	A-port equal percentage
Action	90° rotation
Sizes	2½", 3", 4", 5", 6"
Type of end fitting	pattern to mate with ANSI 125 flange
Materials:	
Body	cast iron - GG25
Ball	stainless steel
Stem	stainless steel
Seats	PTFE
Characterizing disc	stainless steel
Packing	2 EPDM O rings, lubricated
Body pressure rating	according to ANSI 125, standard class B
Media temp. range	0°F to 248°F [-18°C to +120°C]
Close off pressure	100 psi
Maximum differential pressure (ΔP)	50 psi
Leakage	0% for A to AB
C_V rating	A-port: see product chart for values

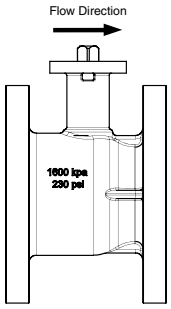
	Valve Nominal Size		Type	Suitable Actuators		
Cv	Inches	DN [mm]	2-way Flange	Non-Spring	Spring	Electronic Fail-Safe
70	2½"	65	B6250S-070	AR Series	AFR Series	
110	2½"	65	B6250S-110			
110	3"	80	B6300S-110			
186	4"	100	B6400S-186			
290	5"	125	B6500S-290	GR		GKR Series
400	6"	150	B6600S-400			

Flow Pattern

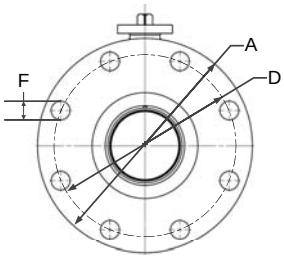
2-way B6250 to B6600 Characterized Control Valves™

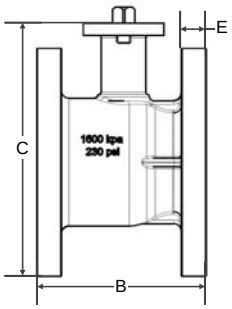


Upstream A
Downstream AB



Dimensions





Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6250S	2½" [65]	F05	7.50" [190.5]	5.50" [139.7]	8.10" [205.4]
B6300S	3" [80]		8.00" [203.2]	6.60" [167.6]	8.40" [213.1]
B6400S	4" [100]		9.00" [228.6]	8.30" [210.8]	9.30" [235.9]
B6500S	5" [125]		10.00" [254.0]	10.30" [261.6]	10.50" [266.4]
B6600S	6" [150]		11.00" [279.4]	12.50" [317.5]	11.70" [296.9]

Bolt Circle Diameter	Flange Thickness Minimum	Bolt Hole Diameter	Number of Bolt Holes
D	E	F	
5.50" [139.7]	0.75" [19.05]	0.75" [19.05]	4
6.00" [152.4]	0.75" [19.05]	0.75" [19.05]	4
7.50" [190.5]	0.94" [23.88]	0.75" [19.05]	8
8.50" [215.9]	0.94" [23.88]	0.88" [22.35]	8
9.50" [241.3]	1.00" [25.40]	0.88" [22.35]	8

NOTES:
1) Flange bolt pattern matches ANSI class 125 flanges (not ANSI/ASME rated)
2) Maximum allowable working pressure: 100 PSIG
3) It is not recommended to connect raised-face flanges to flat-faced flanges

MFT 5 YEAR WARRANTY

CE LISTED 94 D5 TEMP.IND. & REG.EQUIP. c UL us BRUSHLESS DC MOTOR

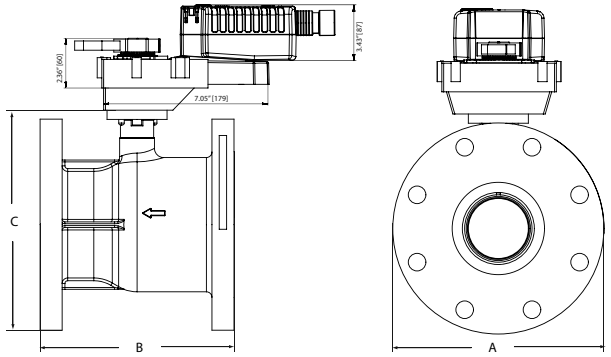
Models

GKRX24-MFT-5-14

Technical Data		
Control		2 to 10 VDC, 4 to 40 mA (default) variable (VDC, PWM, floating point, on/off)
Power supply		24 VAC ± 20% 50/60 Hz 24 VDC ± 10%
Power consumption	running	12 W
	holding	3 W
Transformer sizing		21 VA (Class 2 power source)
Electrical connection		3 ft,18 GA plenum rated cable ½" conduit connector 10 ft. [3m], 16 ft. [5m]
Overload protection		electronic throughout 0° to 95° rotation
Feedback output		2 to 10 VDC, 0.5 mA max, VDC variable
Input impedance		100 kΩ (0.1 mA, 500 Ω) 1500 Ω (PWM, floating point , on/off)
Angle of rotation		max. 95°, adjustable with mechanical stop electronically variable
Direction of rotation		reversible with ↷/↶ switch
Position indication		visual indicator
Running time		95 seconds (default) variable (75 to 300 seconds)
	fail-safe	35 seconds
Manual override		external push button
Ambient temperature		-22°F to 122°F [-30°C to 50°C]
Housing		NEMA 2/IP54, Enclosure Type 2
Housing material		UL94-5V (flammability rating)
Agency listings †		cULus according to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE according to 2004/108/EEC and 2006/95/EC.
Noise level		<45 dB(A)
Quality standard		ISO 9001

† Rated Impulse Voltage 800V, Type of action 1.AA (1.AA.B for -S version), Control Pollution Degree 3.

Dimensions



Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6500	5" [125]	F05	10.00" [254]	10.30" [261.6]	10.50" [266.4]
B6600	6" [150]		11.00" [279.4]	12.50" [317.5]	11.70" [296.9]

Wiring Diagrams

INSTALLATION NOTES

1 Provide overload protection and disconnect as required.

2 ***CAUTION*** *Equipment Damage!*
Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.

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.

8 Contact closures A & B also can be triacs. A & B should both be closed for triac source and open for triac sink.

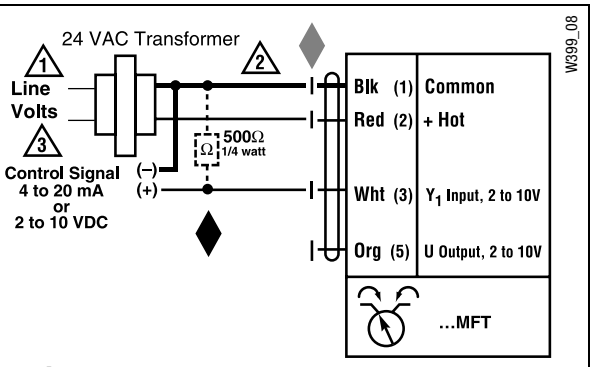
9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller.

APPLICATION NOTES

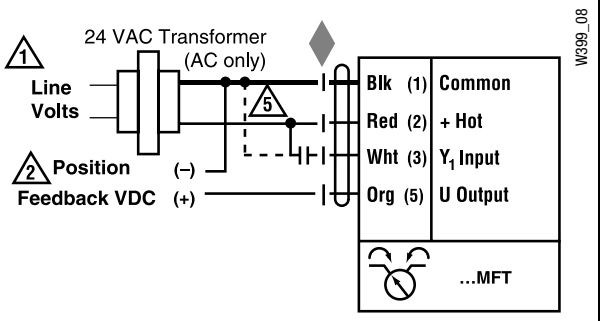
◆ Meets UL requirements without the need of an electrical ground connection.

◆ The ZG-R01 500 Ω resistor may be used.

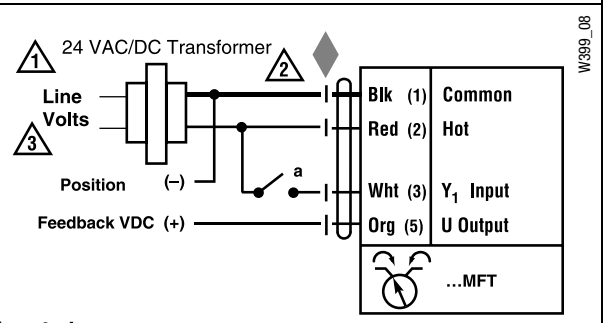
WARNING *Live Electrical Components!*
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components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



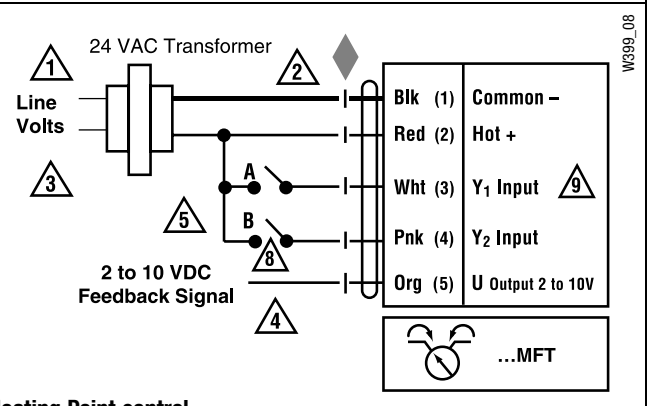
VDC/4-20 mA



PWM



On/Off control



Floating Point control