

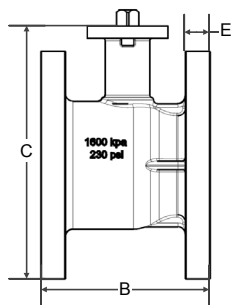
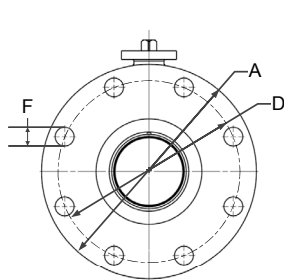


## Application

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
Controllable Flow Range	75°
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
Cv rating	A-port: see product chart for values

## Dimensions



Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6250S	2½" [65]		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]	F05	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]

## 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

## Valve Nominal Size

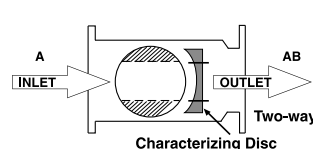
## Type

## Suitable Actuators

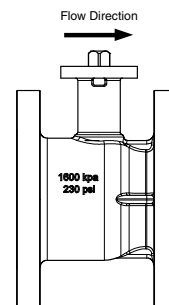
Cv	Inches	DN [mm]	2-way Flange	Non-Spring	Spring	Electronic Fail-Safe
70	2½"	65	B6250S-070			
110	2½"	65	B6250S-110	AR Series	AFR Series	
110	3"	80	B6300S-110			
186	4"	100	B6400S-186	GR Series		GKR Series
290	5"	125	B6500S-290			
400	6"	150	B6600S-400			

## Flow Pattern

## 2-way B6250 to B6600 Characterized Control Valves™



Upstream A  
Downstream AB



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

# GRB120-3, GRX120-3



## Models

GRB120-3

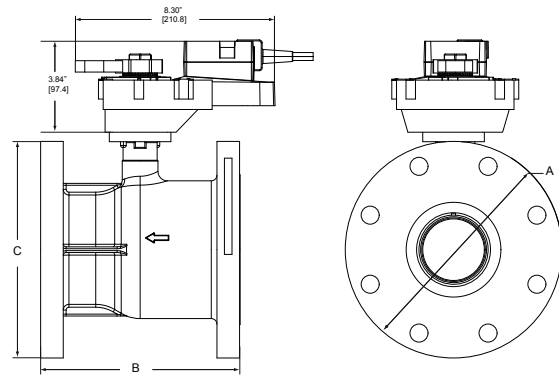
GRX120-3

## Technical Data

Power Supply	100 to 240 VAC, 50/60 Hz (nominal) 85 to 265 VAC, 50/60 Hz (tolerance)
Power consumption	running 4 W holding 2 W
Transformer sizing	7 VA (Class 2 power source)
Electrical connection	18 GA appliance rated cable ½" conduit connector 3 ft. [1m], 10 ft. [3m], 16 ft. [5m]
Overload protection	electronic throughout 0° to 95° rotation
Control	on/off, floating point
Input impedance	600 Ω
Angle of rotation	max. 95°, adjustable with mechanical stop
Direction of rotation	reversible with  switch
Position indication	external push button
Running time	150 seconds, constant independent of load
Humidity	5 to 95% RH non condensing (EN 60730-1)
Ambient temperature	-22°F to 122°F [-30°C to 50°C]
Housing	NEMA 2/IP54, Enclosure Type 2
Housing material	UL94-5VA
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



GR\_LG0CV

Valve Body	Nominal Pipe Size	Top Flange Design	Flange Diameter	Face-to-Face Length	Height
			A	B	C
B6400	4" [100]	F05	9.00" [228.6]	8.30" [210.8]	9.30" [235.9]
B6500	5" [125]		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]

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### Wiring Diagrams

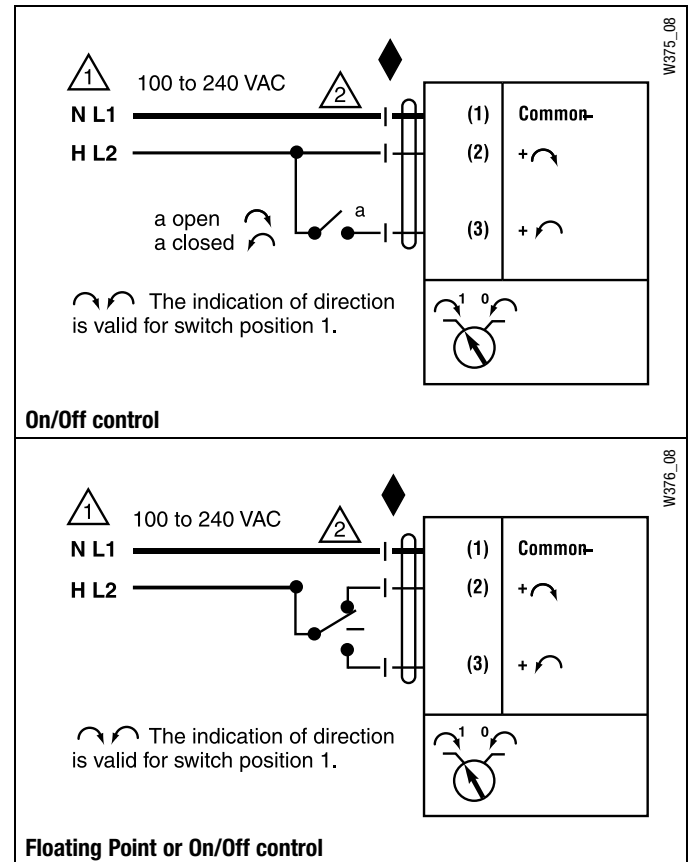
#### ✂️ INSTALLATION NOTES

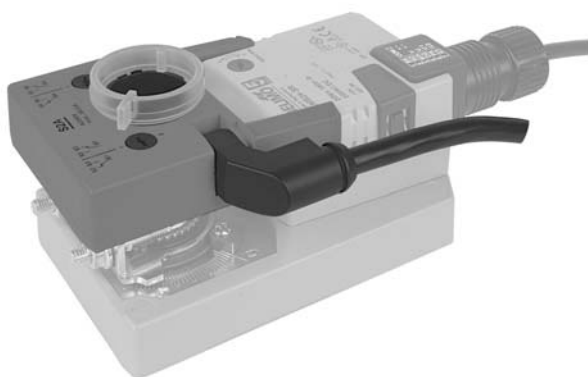
- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel.  
Power consumption and input impedance must be observed.

#### 📄 APPLICATION NOTES

- ◆ 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.





Types		
<b>S1A</b>	one SPDT	3 ft, 18 GA appliance cable
<b>S2A</b>	two SPDT	3 ft, 18 GA appliance cable

Technical Data	S1A	S2A
Number of switches	one SPDT	two SPDT
Weight	4.6 oz [130 g]	6.0 oz [170 g]
Switching capacity	3A (0.5A), 250 VAC	
Switching point	adjustable over full rotation (0° to 95°)	
Pre-setting	with scale possible	
Humidity	5 to 95% RH non-condensing	
Ambient temperature	-22°F to 122°F [-30°C to +50°C]	
Storage temperature	-40°F to 176°F [-40°C to 80°C]	
Housing	NEMA 2 / IP54	
Housing rating	UL94-5VA	
Servicing	maintenance free	
Agency listings	cULus acc. to UL60730-1 CE according to 73/23/EEC	
Quality standard	ISO 9001	

## Application

The S1A and S2A auxiliary switches are used to indicate when a desired position of a damper is reached or to interface additional controls for a specific control sequence.

## Operation

The S1A and S2A auxiliary switches are mounted onto the direct coupled actuator. The switches are modular units that mount directly onto LM, NM, AM, and GM type actuators and are locked into place by guiding grooves on the sides of the actuator.

A driver disk is attached to the actuator clamp and offers direct transmission of the actuator position to the micro switch cams. The switching points can be set over the full scale of 0 to 1 simply by adjusting the slotted discs.

## Mounting Instructions

1. Remove position indicator from actuator.
2. Press down the manual override button and rotate the actuator fully counter clockwise.
3. Turn the driver disk on the switch fully counterclockwise.
4. Slide switch onto the actuator using the actuator guiding grooves on the sides of the actuator.
5. Check for correct mating of the driver disk to the universal clamp.
6. Adjust switch dials as necessary.

## Wiring Diagrams

