BELIMO

Stainless Steel Ball and Stem

Technical data sheet B6400S-186-250

5-year warranty

Technical data

Functional data	Valve Size	4" [100]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	0...250°F [-18...120°C]
	Body Pressure Rating	ANSI Class 250, raised-face
	Close-off pressure Δps	310 psi
	Flow characteristic	equal percentage
	Servicing	maintenance-free
	Maximum differential pressure (water)	50 psi [345 kPa]
	Flow Pattern	2-way
	Leakage rate	0% for A – AB
	Controllable flow range	75°
	Cv	186
	ANSI Class	250
	Body pressure rating note	raised-face
	Cv Flow Rating	A-port: as stated in chart B-port: 70% of A – AB Cv
Materials	Valve body	Cast iron - GG 25
	Stem seal	EPDM (lubricated)
	Seat	PTFE
	Pipe connection	250 lb flanged
	O-ring	EPDM (lubricated)
	Ball	stainless steel
Suitable actuators	Non-Spring	GRB(X)
	Electronic fail-safe	GKRB(X)

Safety notes

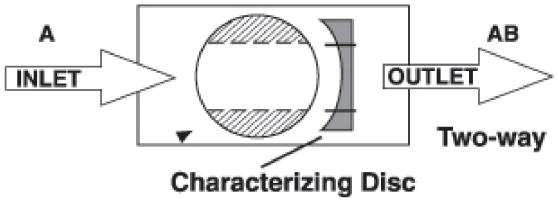
- WARNING: This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov

Product features

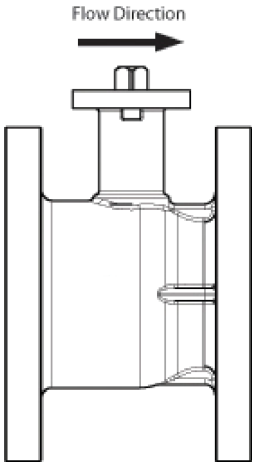
Application

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.

Flow/Mounting details



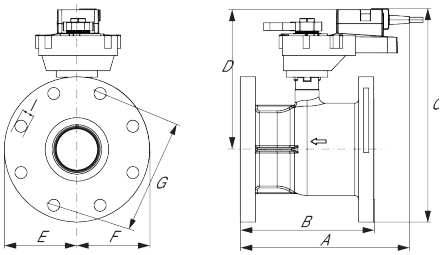
Upstream A
Downstream AB



Dimensions

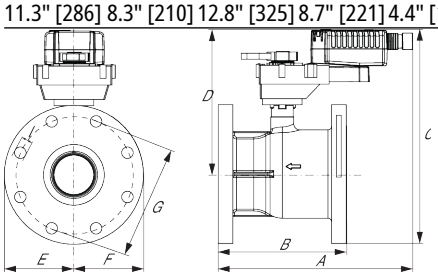
Dimensional drawings

GRB, GRX



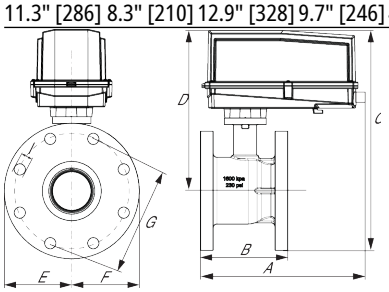
A	B	C	D	E	F	G	I	Number of Bolt Holes
11.3" [286]	8.3" [210]	12.8" [325]	8.7" [221]	4.4" [113]	4.4" [113]	7.9" [200]	0.9" [22]	8

GKRB, GKRX



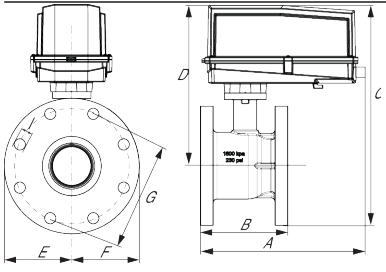
A	B	C	D	E	F	G	I	Number of Bolt Holes
11.3" [286]	8.3" [210]	12.9" [328]	9.7" [246]	4.4" [113]	4.4" [113]	7.9" [200]	0.9" [22]	8

GRX, GKRX



A	B	C	D	E	F	G	I	Number of Bolt Holes
15.0" [381]	8.3" [210]	16.3" [415]	12.6" [321]	4.4" [113]	4.4" [113]	7.9" [200]	0.9" [22]	8

GRX, GKRX

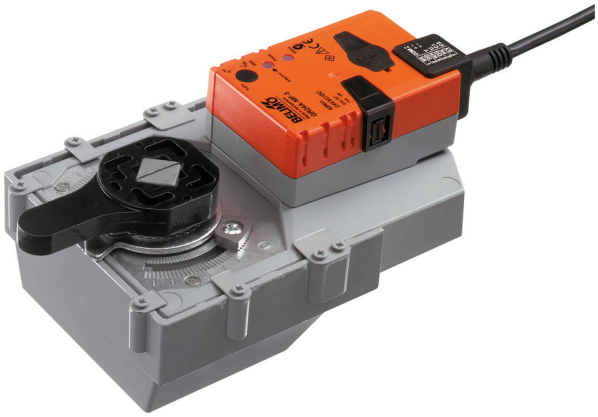


A	B	C	D	E	F	G	I	Number of Bolt Holes
15.0" [381]	8.3" [210]	16.3" [415]	12.6" [321]	4.4" [113]	4.4" [113]	7.9" [200]	0.9" [22]	8

BELIMO

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

Technical data sheet GRX24-MFT



5-year warranty

Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	8 W
	Power consumption in rest position	2.5 W
	Transformer sizing	11 VA (class 2 power source)
	Electrical Connection	18 GA plenum cable with 1/2" conduit connector, degree of protection NEMA 2 / IP54, 3 ft [1 m] 10 ft [3 m] and 16ft [5 m]
	Overload Protection	electronic thoughout 0...90° rotation
Functional data	Operating range Y	2...10 V
	Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Input Impedance	600 Ω
	Operating range Y variable	Start point 0.5...30 V End point 2.5...32 V
	Options positioning signal	variable (VDC, on/off, floating point)
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	90°, adjustable with mechanical stop
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	default 150 s, variable 90...150 s
	Running time motor variable	90...150 s
	Noise level, motor	45 dB(A)
	Position indication	Mechanically, 30...65 mm stroke
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	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; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC
	Quality Standard	ISO 9001
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	max. 95% r.H., non-condensing
	Servicing	maintenance-free
Weight	Weight	2.7 lb [1.2 kg]

Accessories

Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to LonWorks	UK24LON
	Gateway MP to Modbus RTU	UK24MOD

Service tools	Description	Type
	Connection cable 10 ft [3 m], A: RJ11 6/4 ZTH EU, B: 3-pin Weidmüller and supply connection	ZK4-GEN
	Service Tool, with ZIP-USB function, for parametrisable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US

Electrical installation

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...20 mA control signal to 2...10 V.

8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V 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).

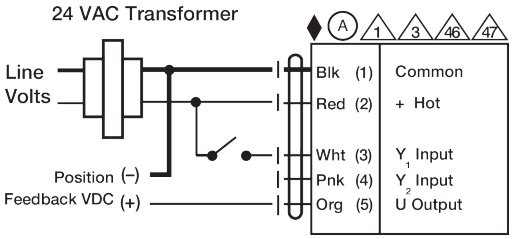
46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.

47 Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).

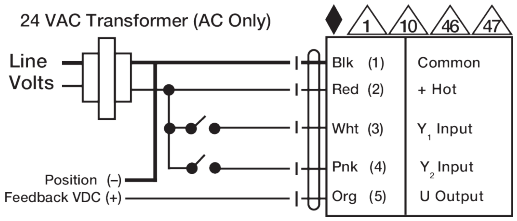
◆ Meets cULus requirements without the need of an electrical ground connection.

Warning! Live Electrical Components!

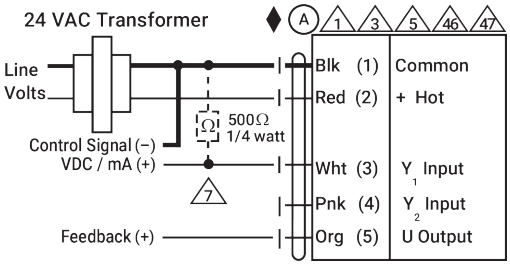
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow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



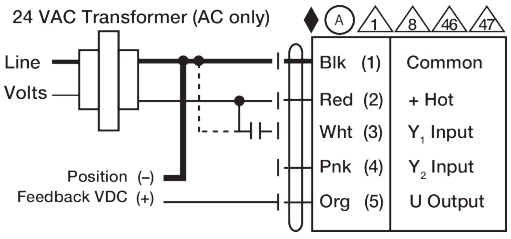
On/Off



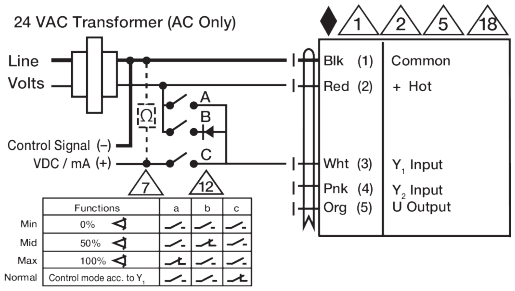
Floating Point



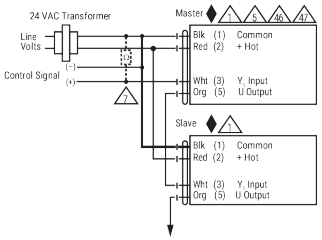
VDC/mA Control



PWM Control



Override Control



Master - Slave