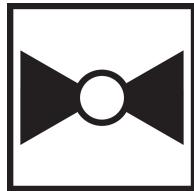




2-year warranty



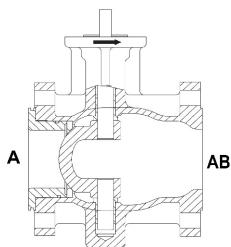
Technical data

Functional data	Valve Size	3" [80]
Fluid		chilled or hot water, up to 60% glycol, steam
Fluid Temp Range (water)		-22...380°F [-30...193°C]
Fluid Temp Range (steam)		-22...365°F [-30...185°C]
Body Pressure Rating		ANSI Class 150
Close-off pressure Δps		250 psi
Flow characteristic		equal percentage
Servicing		repack/rebuild kits available
Rangeability Sv		300:1
Maximum differential pressure (water)		150 psi
Max Differential Pressure (Steam)		100 psi
Close-Off Pressure (Steam)		150 psi
Flow Pattern		2-way
Leakage rate		ANSI Class IV
Controllable flow range		75°
Cv		207
Maximum Inlet Pressure (Steam)		150 psi
Materials	Valve body	WCC grade carbon steel
	Body finish	matt black body finish
	Stem	stainless steel
	Stem seal	PTFE V-ring
	Seat	PTFE
	Pipe connection	125/150 lb flanged, ASME/ANSI b16.1/b16.5
	Ball	stainless steel
Suitable actuators	Non-Spring	SY1 AMB(X) PRB(X)
	Spring	AF
	Electronic fail-safe	GKB(X) PKRB(X)

Product features

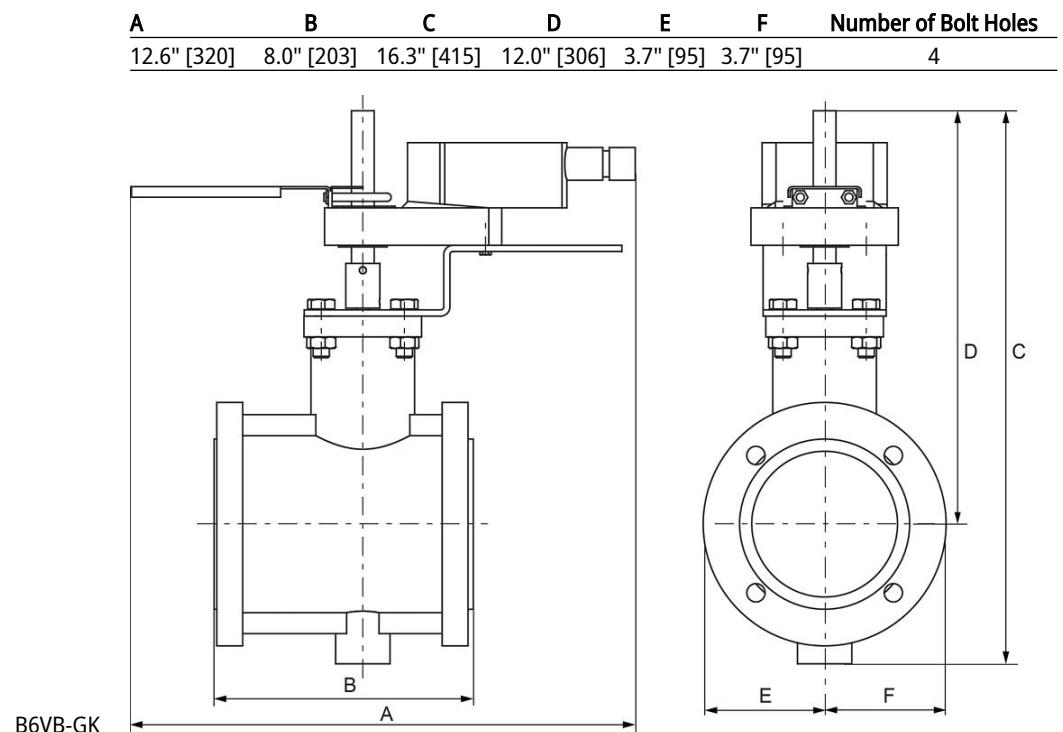
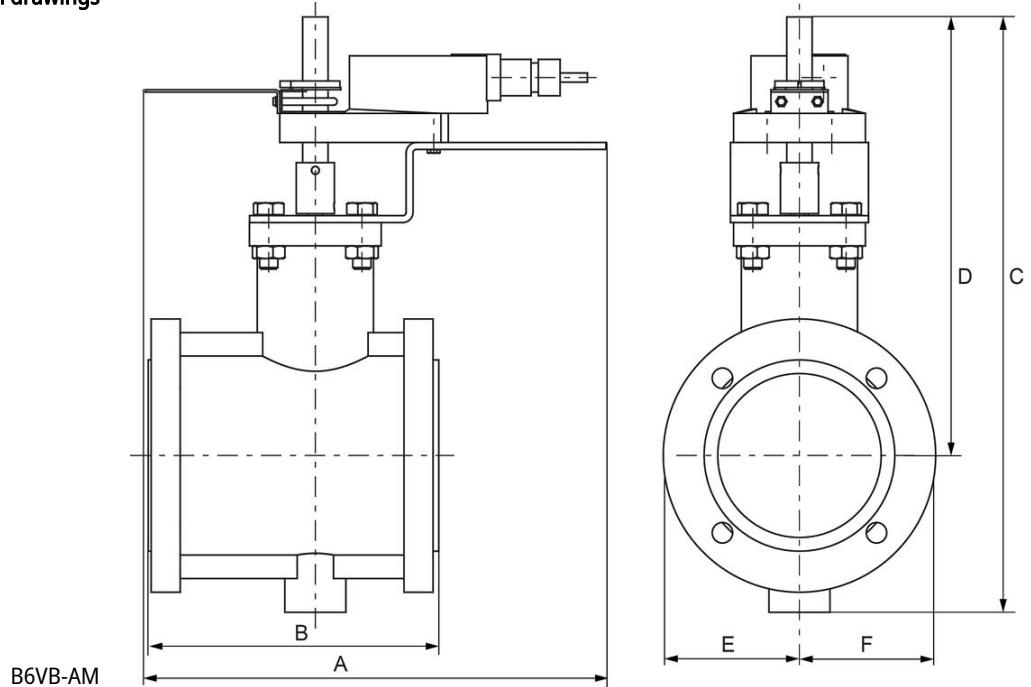
Product features	Fast quarter turn open or closed operation, stainless-steel ball and stem, positive isolation, two-piece body construction
Application	This valve is typically used in air handling units on heating or cooling coils, and fan coil unit heating or cooling coils. Some other common applications include Unit Ventilators, VAV box reheat coils and bypass loops. This valve is suitable for use in a hydronic system with variable flow.

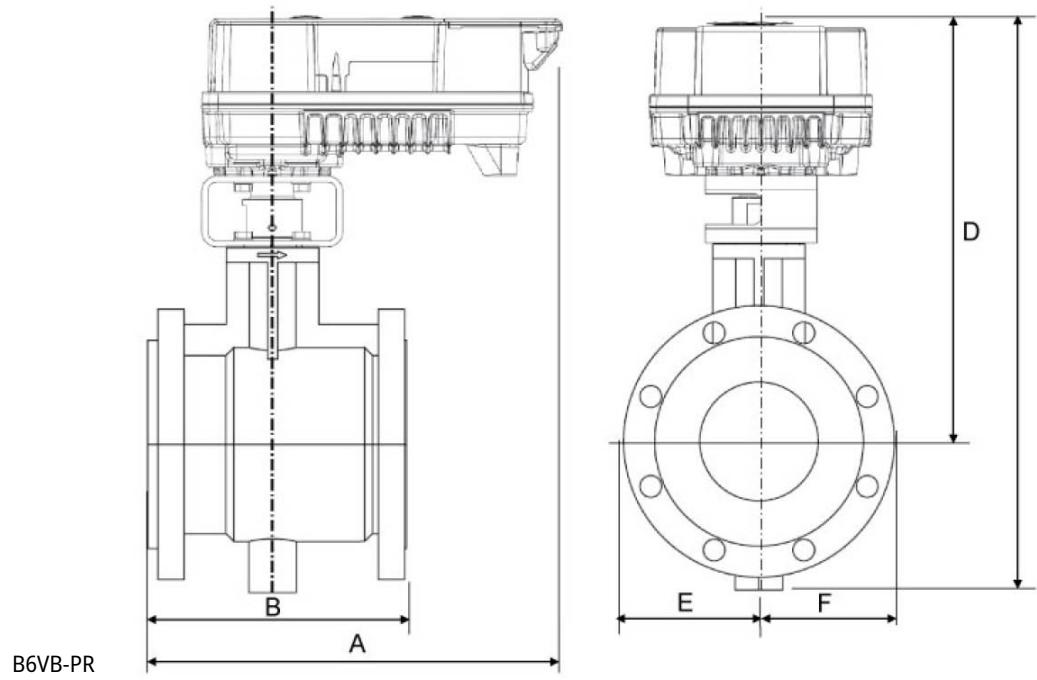
Flow/Mounting details



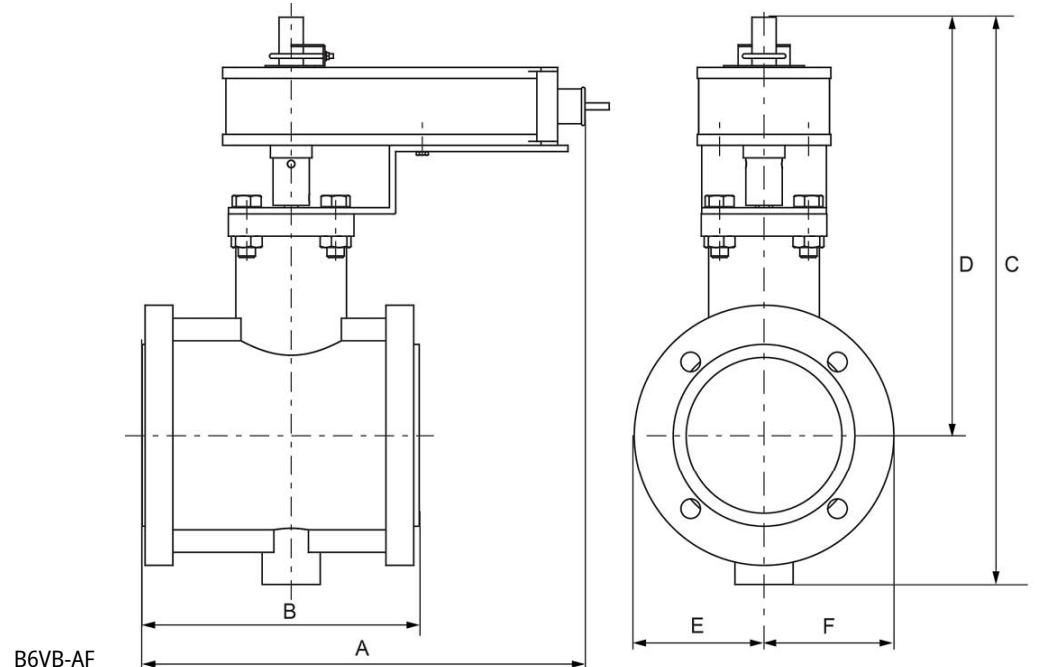
Dimensions

Dimensional drawings





A	B	C	D	E	F	Number of Bolt Holes
11.8" [299]	8.0" [203]	18.9" [480]	14.6" [371]	3.9" [100]	3.9" [100]	4



A	B	C	D	E	F	Number of Bolt Holes
12.7" [323]	8.0" [203]	16.4" [416]	12.0" [306]	3.7" [95]	3.7" [95]	4



5-year warranty

**Technical data**

Electrical data	
Nominal voltage	AC 24...240 V / DC 24...125 V
Nominal voltage frequency	50/60 Hz
Power consumption in operation	52 W
Power consumption in rest position	9 W
Transformer sizing	55 VA @ AC/DC 24 V (class 2 power source), 43 VA @ AC/DC 120 V, 68 VA @ AC 230 V
Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, 1 x 10° / 1 x 0...90° (default setting 85°)
Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
Electrical Connection	Terminal blocks, (PE) Ground-Screw
Overload Protection	electronic throughout 0...90° rotation
Functional data	
Communicative control	BACnet MS/TP Modbus RTU MP-Bus
Options positioning signal	variable (VDC, on/off, floating point)
Position feedback U variable	VDC variable
Setting fail-safe position	0...100%, adjustable with Belimo Assistant App (default setting 0%)
Bridging time	programmable 0...10 s (2 s default) delay before fail-safe activates
Pre-charging time	5...20 s
Direction of motion motor	reversible with app
Direction of motion fail-safe	reversible with app
Manual override	7 mm hex crank, supplied
Angle of rotation	90°
Running Time (Motor)	default 35 s, variable 30...120 s
Running time motor variable	30...120 s
Running time fail-safe	<30 s
Noise level, motor	68 dB(A)
Noise level, fail-safe	62 dB(A)
Position indication	top mounted domed indicator
Passive sensor inputs	2x (Pt1000, Ni1000, NTC10k2)
Safety data	
Degree of protection IEC/EN	IP66/67
Degree of protection NEMA/UL	NEMA 4X
Enclosure	UL Enclosure Type 4X
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU and 2014/35/EU
Quality Standard	ISO 9001
Ambient temperature	-22...122°F [-30...50°C]

Safety data	Ambient humidity	Max. 100% RH
	Servicing	maintenance-free
Weight	Weight	14 lb [6.4 kg]

Product features

Default/Configuration	Default parameters for DC 2...10 V applications of the PKR..-MFT actuator are assigned during manufacturing. If required, different parameters of the actuator can be ordered. These parameters are variable and can be modified by factory pre-set, the handheld ZTH US or using the Belimo App on a smart phone with Near Field Communications (NFC) programming.
Application	PR Series valve actuators are designed with an integrated linkage and visual position indicators. For outdoor applications, the installed valve must be mounted with the actuator at or above horizontal. For indoor applications the actuator can be in any location including directly under the valve.
Operation	The PR series actuator provides 90° of rotation and a visual indicator shows the position of the valve. The PR Series actuator uses a low power consumption brushless DC motor and is electronically protected against overload. A universal power supply is furnished to connect supply voltage in the range of AC 24...240 V and DC 24...125 V. Included is a smart heater with thermostat to eliminate condensation. Two auxiliary switches are provided; one set at 10° open and the other is field adjustable. Running time is field adjustable from 30...120 seconds by using the Near Field Communication (NFC) app and a smart phone. †Use 60°C/75°C copper wire size range 12...28 AWG, stranded or solid. Use flexible metal conduit. Push the listed conduit fitting device over the actuator's cable to butt against the enclosure. Screw in conduit connector. Jacket the actuators input wiring with listed flexible conduit. Properly terminate the conduit in a suitable junction box. Rated impulse Voltage 4000 V. Type of action 1. Control pollution degree 3.
Factory settings	Default parameters for DC 2...10 V applications of the PKR..-MFT actuator are assigned during manufacturing. If required, different parameters of the actuator can be ordered. These parameters are variable and can be modified by factory pre-set, the handheld ZTH US or using the Belimo App on a smart phone with Near Field Communications (NFC) programming.

Accessories

	Gateways	Description	Type
	Gateway MP to BACnet MS/TP		UK24BAC
	Gateway MP to LonWorks		UK24LON
	Gateway MP to Modbus RTU		UK24MOD
	Electrical accessories	Description	Type
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices		ZTH US
	Mechanical accessories	Description	Type
	Hand crank for PR, PKR, PM		ZG-HND PR
	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 programmable and communicative Belimo actuators, VAV controller and HVAC performance devices		ZTH US

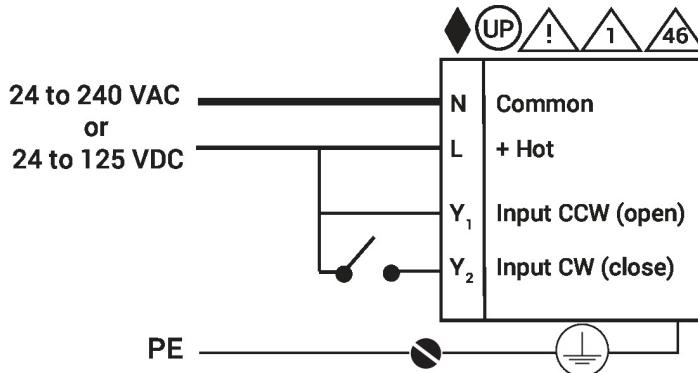
Electrical installation

- ◆ Meets cULus requirements without the need of an electrical ground connection.
- UP Universal Power Supply (UP) models can be supplied with 24 V up to 240 V.
- Disconnect power.
- Provide overload protection and disconnect as required.

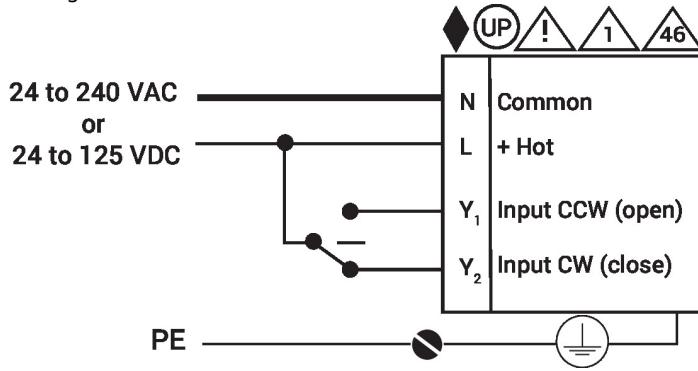
- ⚠ 4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- ⚠ 5 Only connect common to negative (-) leg of control circuits.
- ⚠ 46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.
- ⚠ Warning! Live electrical 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.

Wiring diagrams

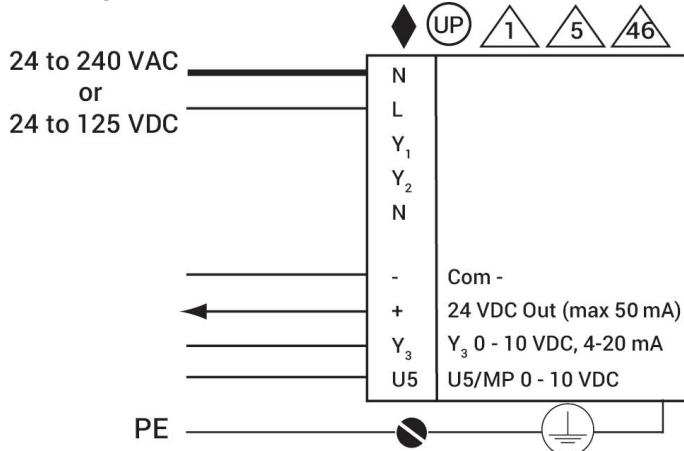
On/Off



Floating Point



Modulating

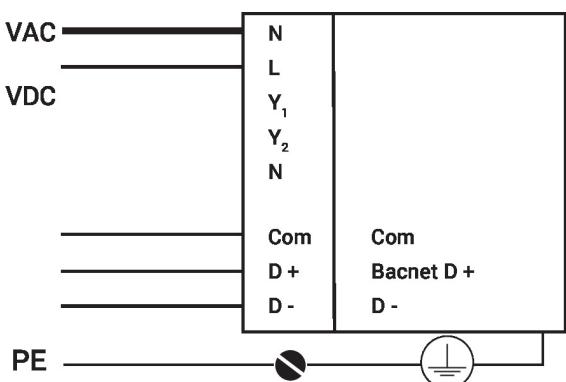


BACnet

24 to 240 VAC

or

24 to 125 VDC



Dimensions

Dimensional drawings

