



5-year warranty

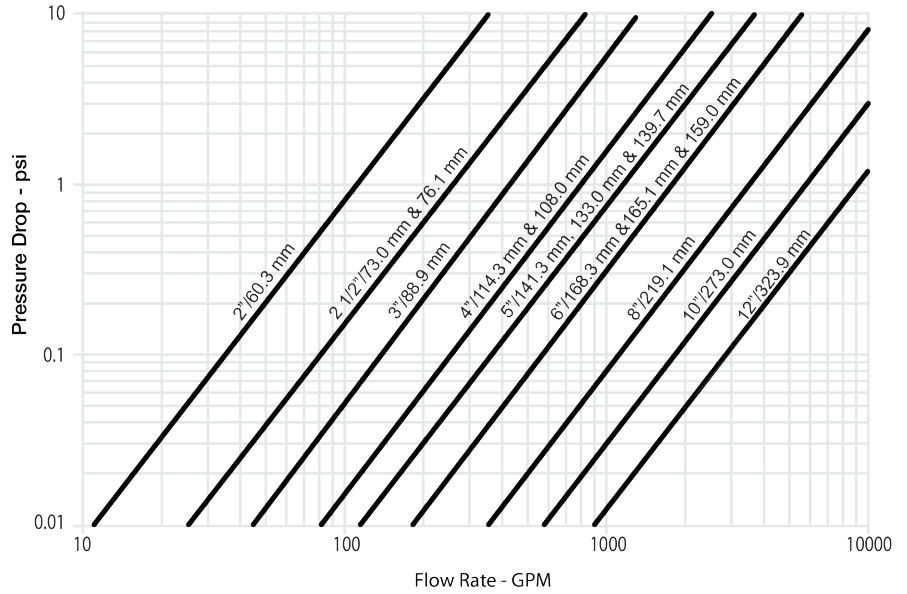


Technical data

Functional data	Valve Size	3" [80]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	-22...250°F [-30...120°C]
	Body Pressure Rating	ANSI Class Grooved AWWA, 300 psi
	Close-off pressure Δps	200 psi
	Servicing	maintenance-free
	Rangeability Sv	100:1
	Flow Pattern	3-way Mixing/Diverting
	Leakage rate	0%
	Controllable flow range	90° rotation
	Cv	440
	ANSI Class	Grooved AWWA
	Body pressure rating note	300 psi
	Maximum Velocity	20 FPS
Materials	Body finish	black alkyd enamel
	Seat	EPDM
	End fitting	grooved ANSI/AWWA (c606)
	Disc	electroless nickel coated ductile iron
Suitable actuators	Non-Spring	(2*GMB(X)) PRB(X)
	Electronic fail-safe	(2*GKB(X)) PKRB(X)

Product features

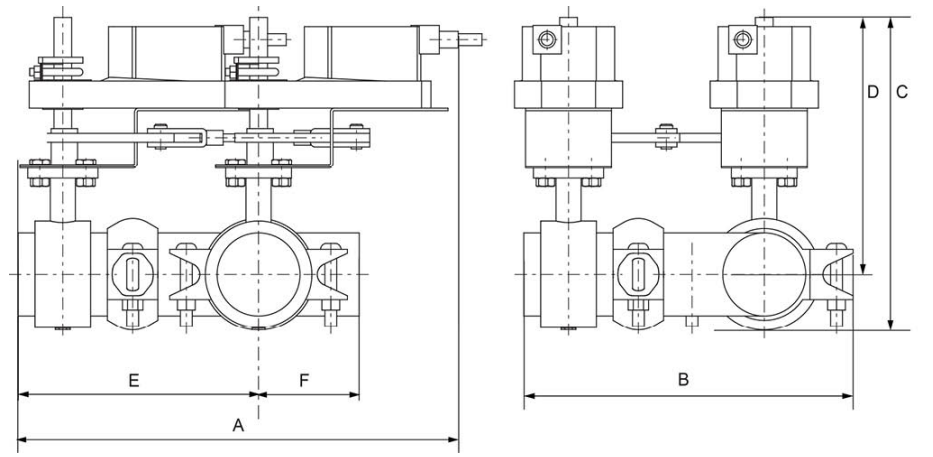
Flow/Mounting details



Dimensions

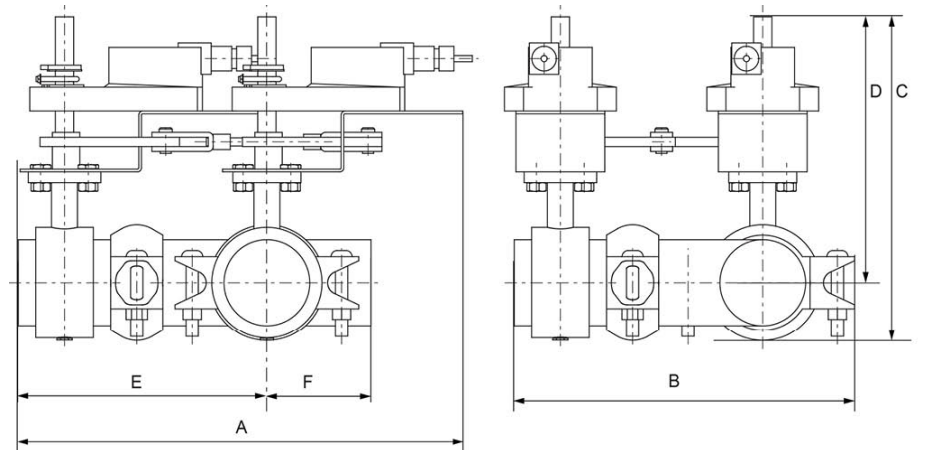
Dimensional drawings

2GK



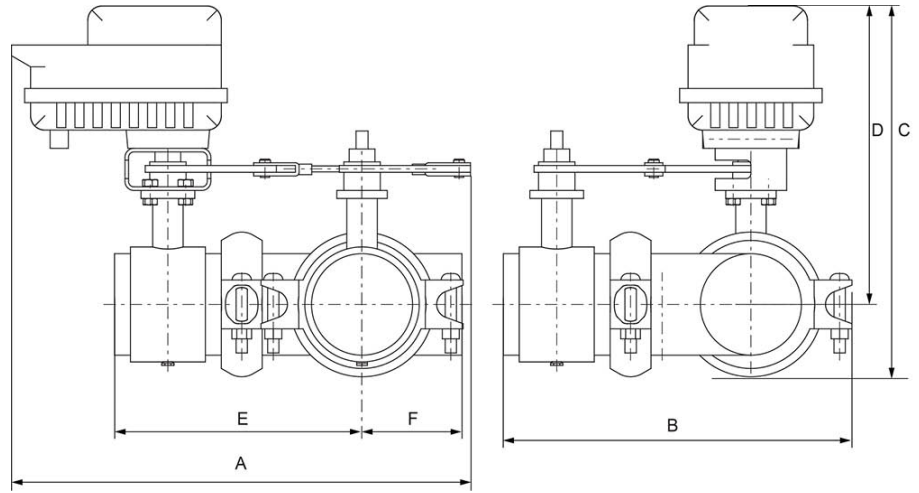
A	B	C	D	E	F
19.6" [499]	13.9" [353]	13.2" [335]	10.8" [274]	10.2" [260]	4.3" [110]

2GM



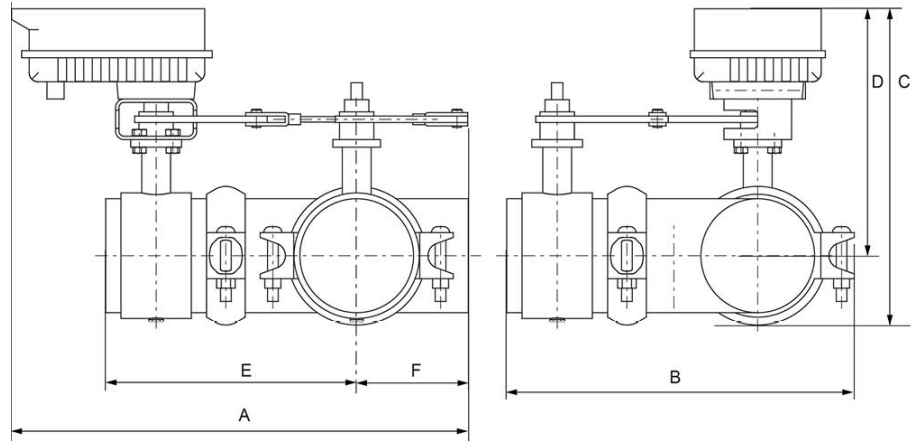
A	B	C	D	E	F
17.8" [451]	13.9" [353]	13.2" [335]	10.9" [276]	10.2" [260]	4.3" [110]

PK



A	B	C	D	E	F
16.2" [412]	13.9" [353]	17.0" [433]	14.7" [374]	10.2" [260]	4.3" [110]

PRB(X)



A	B	C	D	E	F
16.2" [412]	13.9" [353]	14.5" [368]	12.1" [307]	10.2" [260]	4.3" [110]



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	12 W
	Power consumption in rest position	3 W
	Transformer sizing	40 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 throughout 0...95° 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	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM, On/Off and Floating point
	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	2...10 V, Max. 0.5 mA, VDC variable
	Position feedback U note	Max. 0.5 mA
	Position feedback U variable	VDC variable
	Bridging time	programmable 0...10 s (2 s default) delay before fail-safe activates
	Pre-charging time	5...20 s
	Direction of motion motor	selectable with switch 0/1
	Direction of motion fail-safe	reversible with switch
	Manual override	external push button
	Angle of rotation	Max. 95°, max. 95°, adjustable with mechanical stop
	Angle of rotation note	max. 95°, adjustable with mechanical stop
	Running Time (Motor)	default 150 s, variable 95...150 s
	Running time motor variable	95...150 s
	Running time fail-safe	<35 s
	Noise level, motor	52 dB(A)
Noise level, fail-safe	61 dB(A)	
Position indication	Mechanically, 30...65 mm stroke	
Safety data	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	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
	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	9.03 lb [4.1 kg]
Materials	Housing material	UL94-5VA

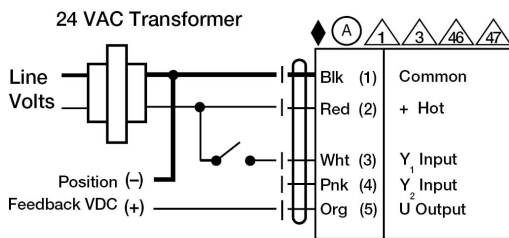
Accessories

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 configurable and communicative Belimo actuators / VAV controller and HVAC performance devices	ZTH US

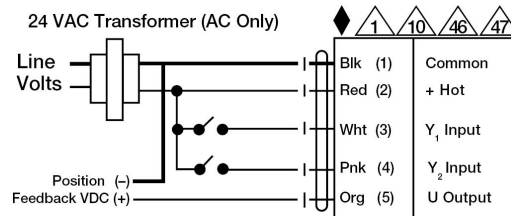
Electrical installation

INSTALLATION NOTES

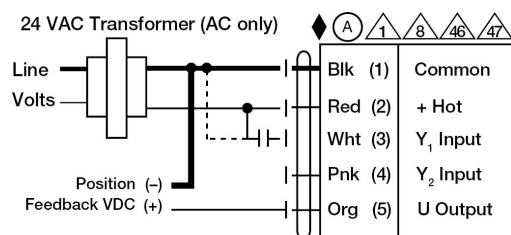
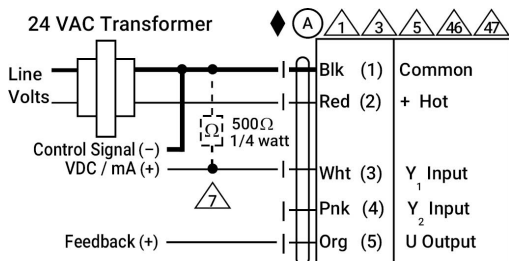
- (A) Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 3 Actuators may also be powered by 24 VDC.
- 5 Only connect common to negative (-) leg of control circuits.
- 7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 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.



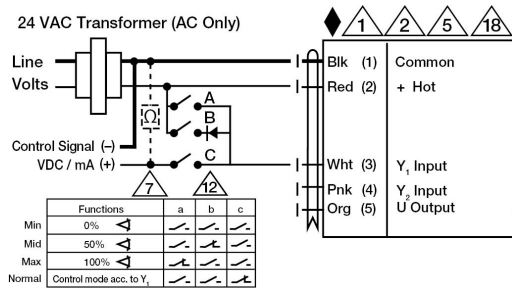
On/Off



Floating Point

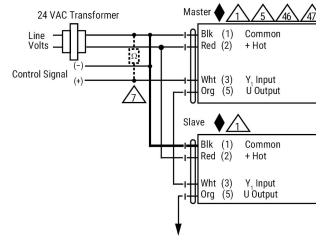


VDC/mA Control



Override Control

PWM Control



Master - Slave