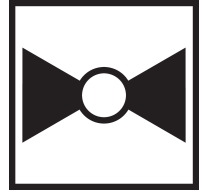




5-year warranty

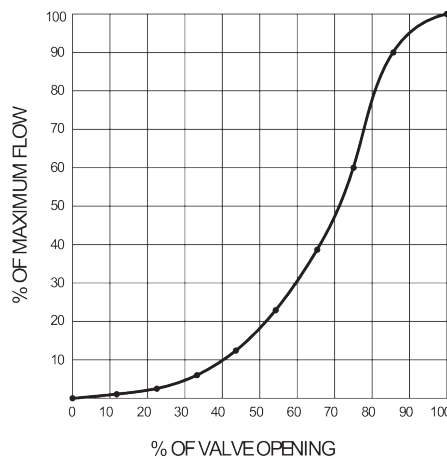


Technical data

Functional data	Valve Size	2" [50]
	Fluid	chilled or hot water, up to 60% glycol
	Fluid Temp Range (water)	-22...250°F [-30...120°C]
	Body Pressure Rating	ANSI Class Consistent with 125, 232 psi CWP
	Close-off pressure Δps	200 psi
	Servicing	maintenance-free
	Rangeability Sv	10:1 (for 30...70° range)
	Flow Pattern	2-way
	Leakage rate	0%
	Controllable flow range	90° rotation
	Cv	115
	ANSI Class	Consistent with 125
	Body pressure rating note	232 psi CWP
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
Materials	Body finish	epoxy powder coating (blue RAL 5002)
	Seat	EPDM
	End fitting	for use with ANSI class 125/150 flanges
	Bearing	RPTFE
	Disc	304 stainless steel
Gear operator materials	Gears - hardened steel	
Suitable actuators	Non-Spring	ARB(X)
		GRB(X)

Product features

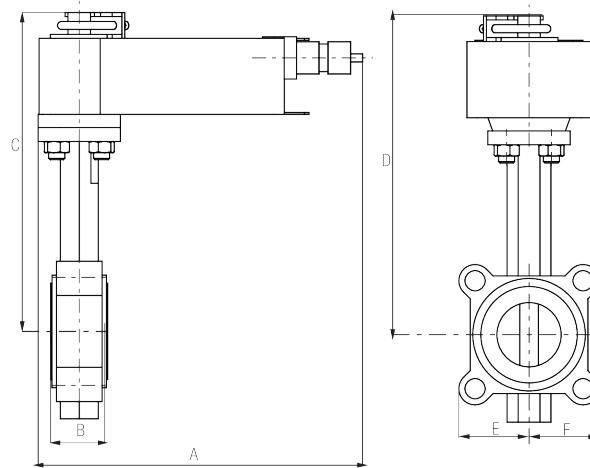
Flow/Mounting details



Dimensions

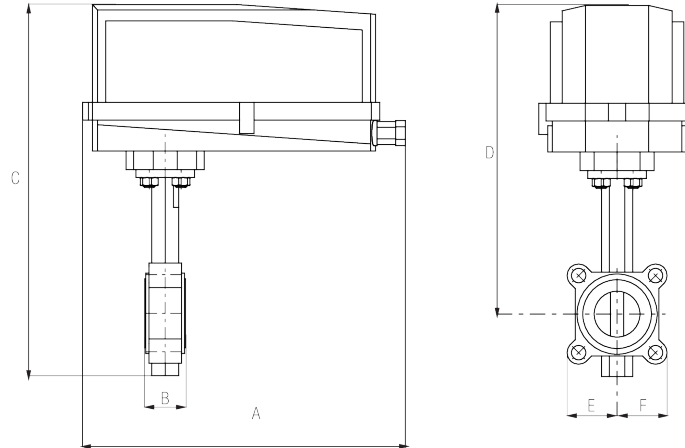
Dimensional drawings

AFR



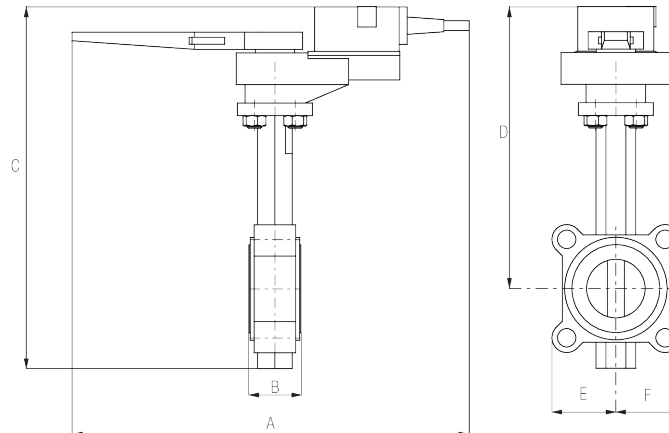
A	B	C	D	E	F
10.5" [267]	1.7" [44]	12.0" [305]	9.2" [234]	2.9" [73]	2.9" [73]

GR/AFR N4(H)



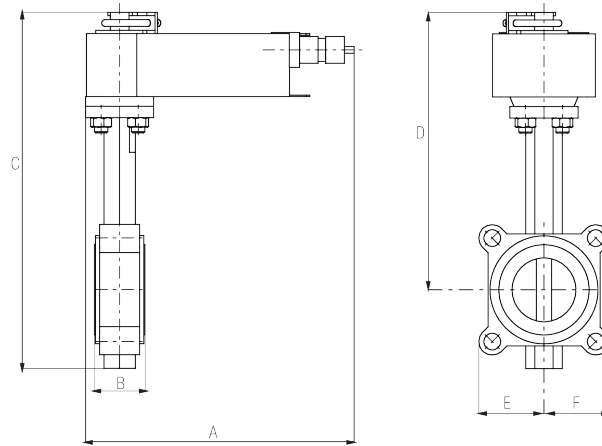
A	B	C	D	E	F
13.8" [350]	1.8" [45]	16.3" [415]	13.5" [342]	2.9" [73]	2.9" [73]

ARB/GRB



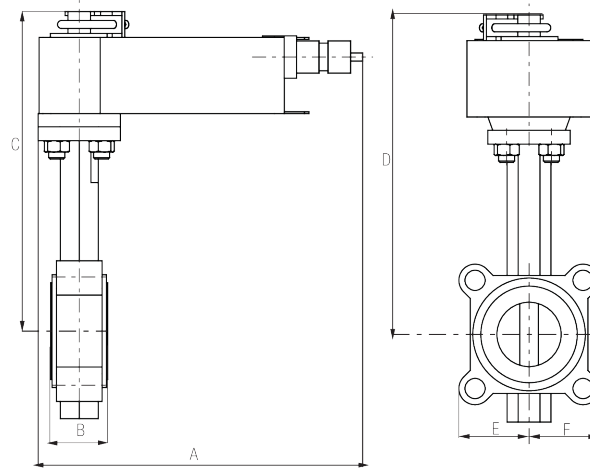
A	B	C	D	E	F
14.6" [370]	1.8" [45]	12.4" [314]	9.7" [246]	2.9" [73]	2.9" [73]

AFB/AFX



A	B	C	D	E	F
10.5" [267]	1.8" [45]	15.1" [384]	12.4" [315]	2.9" [73]	2.9" [73]

AMB/AMX



A	B	C	D	E	F
8.9" [226]	1.8" [45]	15.1" [384]	12.4" [315]	2.9" [73]	2.9" [73]



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	3.5 W
	Power consumption in rest position	1.3 W
	Transformer sizing	6 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...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	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
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	90°
	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, pluggable	
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
	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	2.6 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 configurable and communicative Belimo actuators / VAV controller and HVAC performance devices	ZTH US

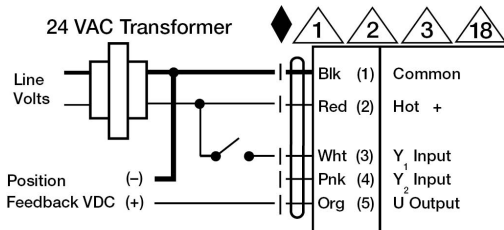
Electrical installation

✂ INSTALLATION NOTES

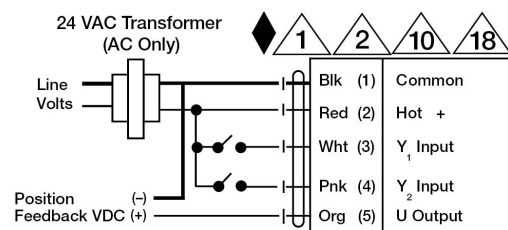
- ▲1 Provide overload protection and disconnect as required.
- ▲2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- ▲3 Actuators may also be powered by 24 VDC.
- ▲5 Only connect common to negative (-) leg of control circuits.
- ▲7 A 500 Ω resistor (ZG-R01) 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).
- ▲18 Actuators with plenum cable do not have numbers; use color codes instead.
- ◆ Meets cULus requirements without the need of an electrical ground connection.

⚠ Warning! Live Electrical Components!

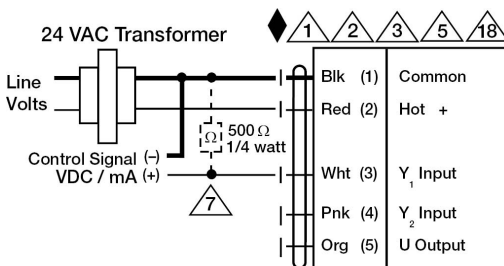
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow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



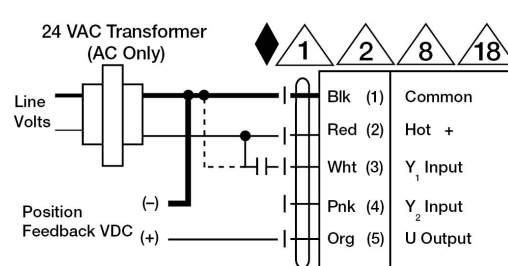
On/Off



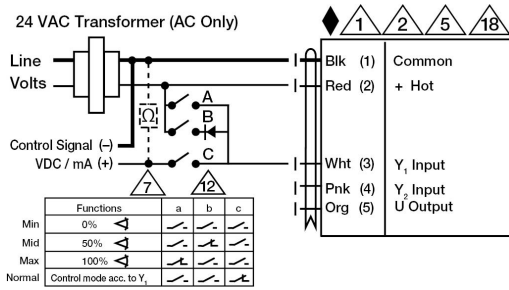
Floating Point



VDC/mA Control



PWM Control



Override Control