BELIMO

Resilient Seat, 304 Stainless Steel Disc

Technical data sheet F680HD

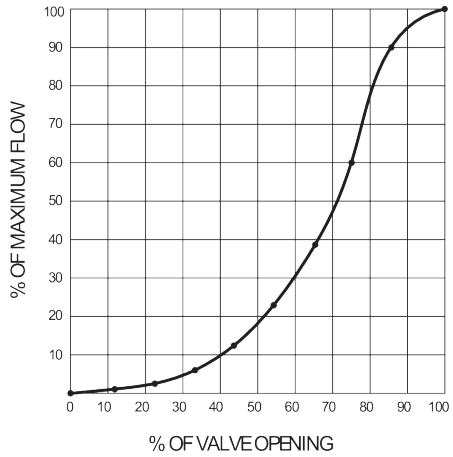
5-year warranty

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 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	302
	ANSI Class	Consistent with 125
	Body pressure rating note	232 psi CWP
	Maximum Velocity	12 FPS
	Lug threads	5/8-11 UNC
Materials	Valve body	Ductile cast iron ASTM A536
	Body finish	epoxy powder coating (blue RAL 5002)
	Stem seal	EPDM (lubricated)
	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	GRB(X)
	Electronic fail-safe	GKRB(X)

Product features

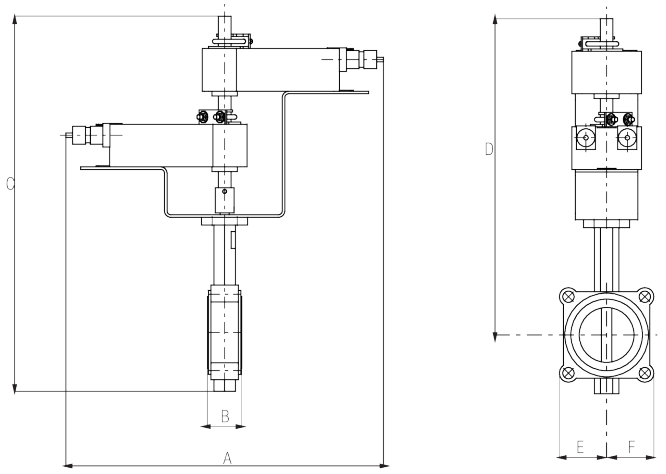
Flow/Mounting details



Dimensions

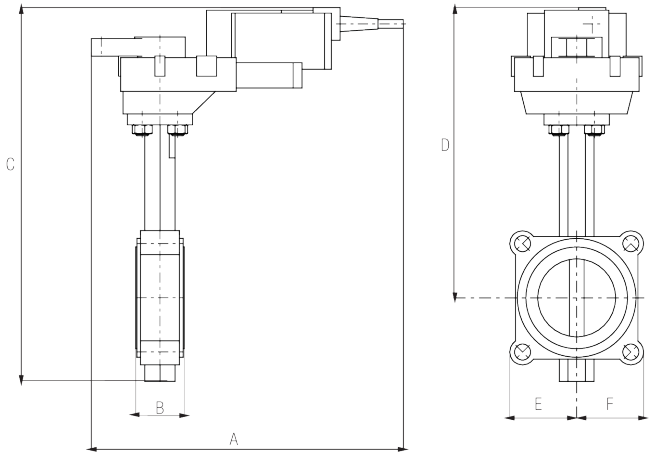
Dimensional drawings

2*AF



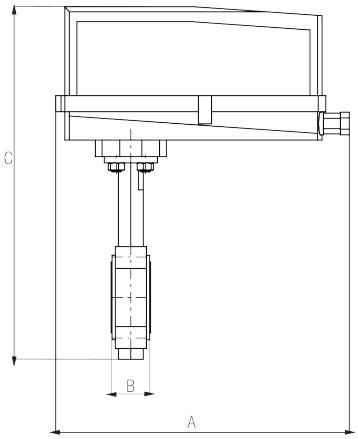
A	B	C	D	E	F	Number of Bolt Holes
17.0" [433]	1.9" [49]	19.7" [501]	16.4" [417]	3.5" [89]	3.5" [89]	4

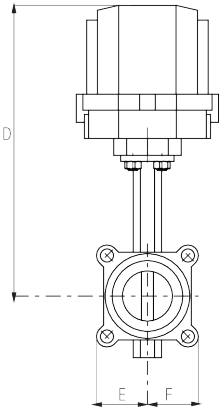
GK



A	B	C	D	E	F	Number of Bolt Holes
11.2" [284]	1.9" [49]	16.5" [419]	13.1" [334]	3.5" [89]	3.5" [89]	4

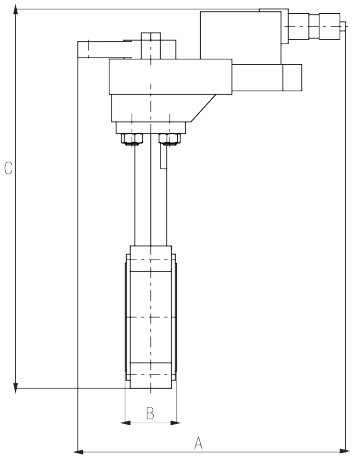
GR/GK..N4

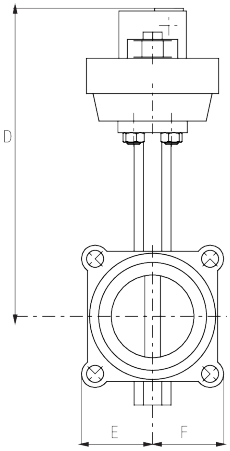




A	B	C	D	E	F	Number of Bolt Holes
14.1" [358]	1.9" [49]	17.8" [451]	14.3" [363]	3.5" [89]	3.5" [89]	4

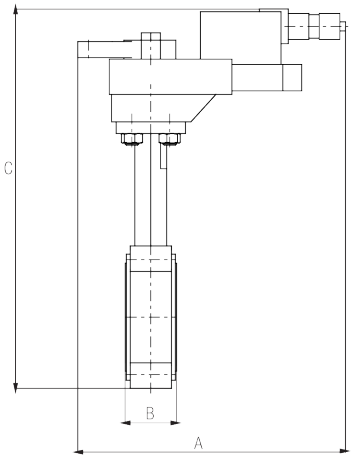
GR

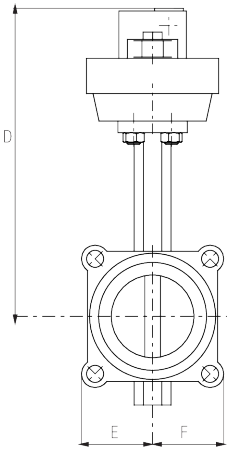




A	B	C	D	E	F	Number of Bolt Holes
10.8" [275]	1.9" [49]	14.3" [362]	11.0" [279]	3.5" [89]	3.5" [89]	4

GM





A	B	C	D	E	F	Number of Bolt Holes
9.4" [239]	1.9" [49]	16.5" [419]	13.1" [334]	3.5" [89]	3.5" [89]	4

BELIMO

Modulating, Non Fail-Safe, 24...240 V, NEMA 4X with BACnet

Technical data sheet PRXUP-MFT-T

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	20 W
	Power consumption in rest position	6 W
	Transformer sizing	20 VA @ AC/DC 24 V (class 2 power source), 23 VA @ AC/DC 120 V, 52 VA @ AC 230 V
	Auxiliary switch	2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 0...90°
	Switching capacity auxiliary switch	3 A resistive (0.5 A inductive) @ AC 250 V
	Electrical Connection	Terminal blocks, (PE) Ground-Screw
	Overload Protection	electronic thoughout 0...90° rotation
Functional data	Communicative control	BACnet MS/TP Modbus RTU MP-Bus
	Operating range Y	2...10 V
	Operating range Y note	4...20 mA
	Input Impedance	100 kΩ for 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for On/Off
	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	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
	Noise level, motor	68 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]

	Storage temperature	-40...176°F [-40...80°C]
	Ambient humidity	max. 95% r.H., non-condensing
	Servicing	maintenance-free
Weight	Weight	13 lb [5.8 kg]
Materials	Housing material	Die cast aluminium and plastic casing

Product features

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.

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

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.

1 Provide overload protection and disconnect as required.

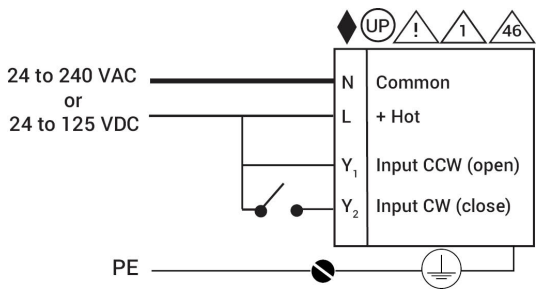
4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.

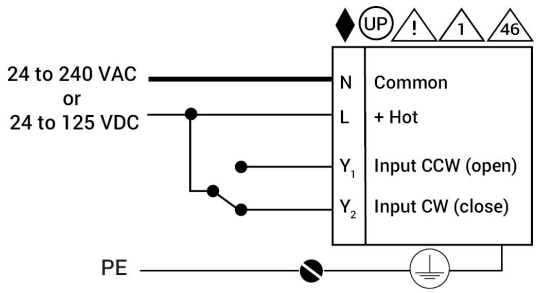
5 Only connect common to negative (-) leg of control circuits.

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

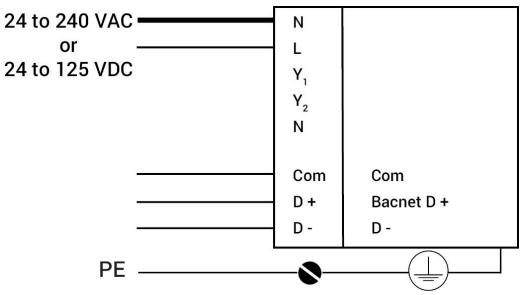
! **Warning! Live Electrical Components!**

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.



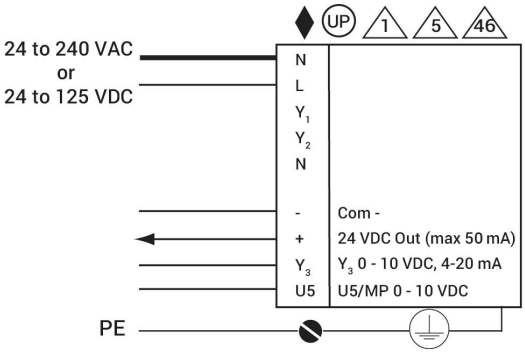


On/Off

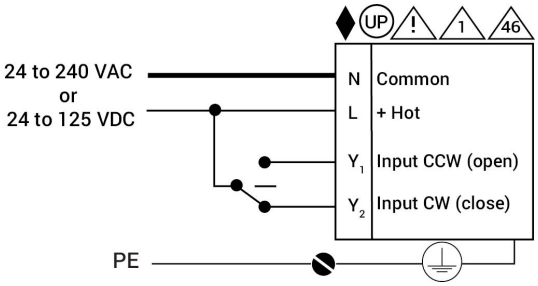


BACnet

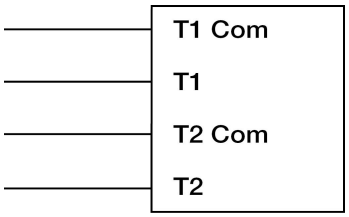
On/Off



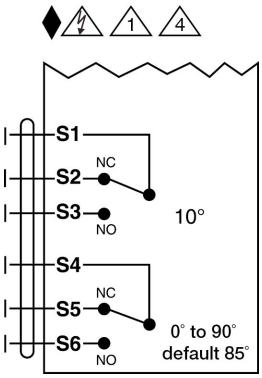
Modulating



Floating Point



Temperature Sensors



Auxiliary Switches