



5-year warranty



Type overview

Type	Stroke
FGVL	1.25" [32 mm] AVK, 2" [50 mm] EV/RV

Technical data

Functional data	Fluid	chilled or hot water and steam
	Fluid Temp Range (water)	Please Refer to Manufacturer's Valve Specifications
	Mounting Position	360°
	Applicable valve size	2.5...6" [65...150]
Materials	Hardware	SS and Nickel plated steel
	Housing material	Die cast aluminium and plastic casing
	Stem	316 stainless steel
	Stem adapter	steel/Aluminum
	Frame, plate, base	aluminum, steel (fits competitor bonnets up to 2.3" dia.)
	Collar	aluminum
	Coupling	GF Nylon supplied
Suitable actuators	Non-Spring	EVB(X) RVB(X)
	Electrical fail-safe	AVKB(X)
	For close-off pressure reference Select Pro or retrofit technical documentation.	

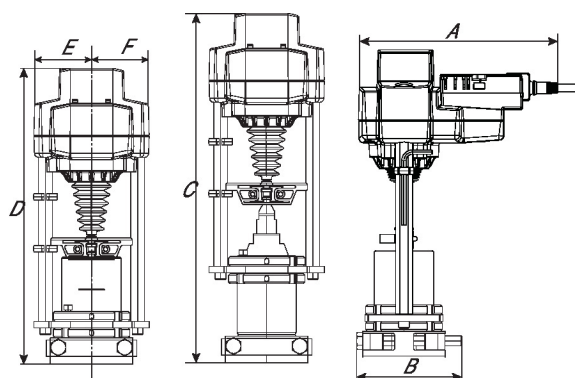
Product features

Default/Configuration	The default set up for a FGVL linkage will be factory installed along with an AVK or EV, RV series actuator. Included in the kit will be all the necessary hardware to facilitate mounting to the valve.
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Dimensions

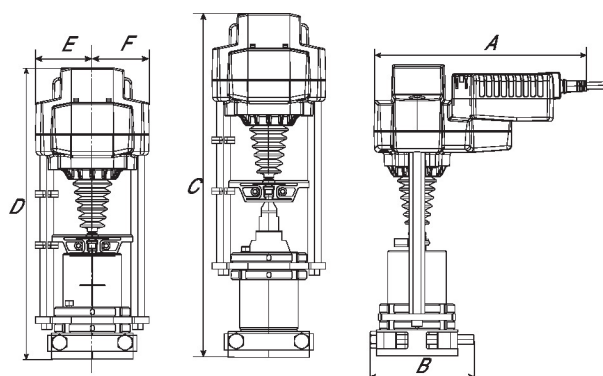
Type	Weight
FGVL	9.0 lb [4.1 kg]

EVB, EVX, RVB, RVX



A	B	C	D	E	F
9.2" [234]	5.0" [127]	16.7" [425]	14.0" [355]	2.8" [71]	2.8" [71]

AVKB, AVKX



A	B	C	D	E	F
10.2" [260]	5.0" [127]	16.7" [425]	14.0" [355]	2.8" [71]	2.8" [71]



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Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	5 W
	Power consumption in rest position	1.5 W
	Transformer sizing	7.5 VA
	Electrical Connection	18 GA plenum cable, 1 m, with 1/2" conduit connector, degree of protection NEMA 2 / IP54
	Overload Protection	electronic throughout full stroke
	Electrical Protection	actuators are double insulated
Functional data	Actuating force motor	2500 N [560 lbf]
	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
	Operating modes optional	variable (VDC, PWM, 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	5 mm hex crank (3/16" Allen), supplied
	Stroke	2" [50 mm]
	Running Time (Motor)	90 s /
	Running time motor variable	90...150 s
	Noise level, motor	60 dB(A)
	Position indication	Mechanically, with pointer
Safety data	Power source UL	Class 2 Supply
	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
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Ambient humidity	Max. 95% RH, non-condensing

Safety data	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
Weight	Weight	5.73 lb [2.6 kg]
Materials	Housing material	Die cast aluminium and plastic casing
Footnotes	† 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 800V. Type of action 1. Control pollution degree 3.	

Accessories

Gateways	Description	Type
	Gateway MP to BACnet MS/TP	UK24BAC
	Gateway MP to Modbus RTU	UK24MOD
Electrical accessories	Gateway MP to LonWorks	UK24LON
	Description	Type
	Belimo PC-Tool, Software for adjustments and diagnostics	MFT-P
Tools	Auxiliary switch 2 x SPDT for NG GV Actuators	S2A-GV
	Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices	ZTH US
	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

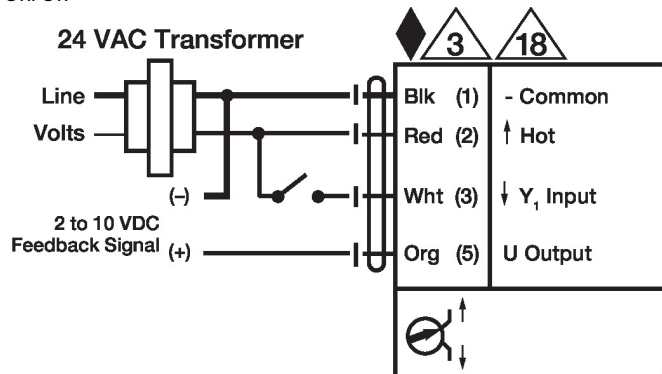
Electrical installation

✂ INSTALLATION NOTES

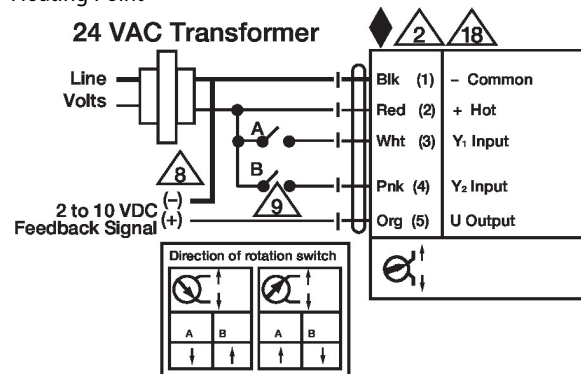
- ⚠ 2 Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- ⚠ 3 Actuators may also be powered by DC 24 V.
- ⚠ 7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- ⚠ 8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.
- ⚠ 9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller. Contact closures A & B also can be triacs. A & B should both be closed for the triac source and open for triac sink.
- ⚠ 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.
- ⚠ 1 **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

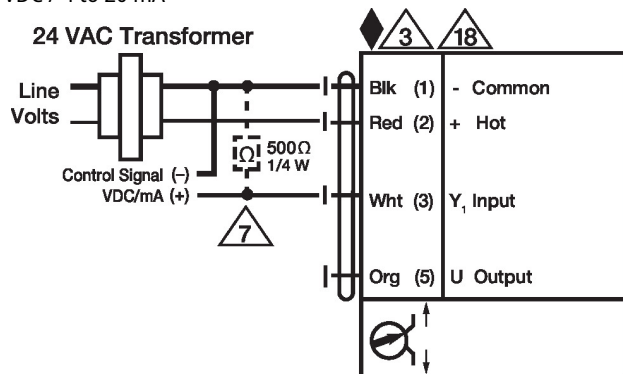
On/Off



Floating Point



VDC / 4 to 20 mA



Override Control Min, Mid, Max Positions

