



5-year warranty



**Type overview**

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

**Technical data**

|                           |  |   |
|---------------------------|--|---|
| <b>Functional data</b>    | 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]                                       |
| <b>Materials</b>          | 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   |
| <b>Suitable actuators</b> | Non-Spring   | EVB(X)<br>RVB(X)  |
|                           | Electrical fail-safe   | AVKB(X)   |
|                           | For close-off pressure reference Select Pro or retrofit technical documentation. |   |

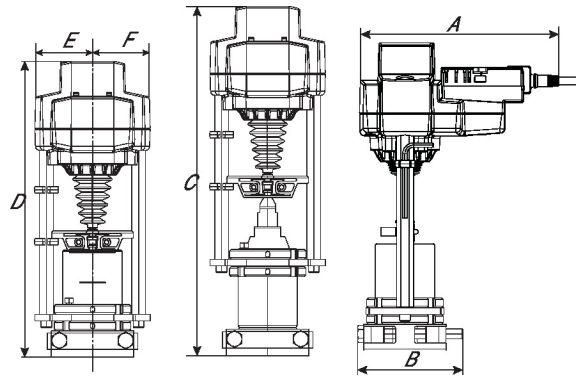
**Product features**

|                              |  |
|------------------------------|--|
| <b>Default/Configuration</b> | 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. |
|------------------------------|--|

**Dimensions**

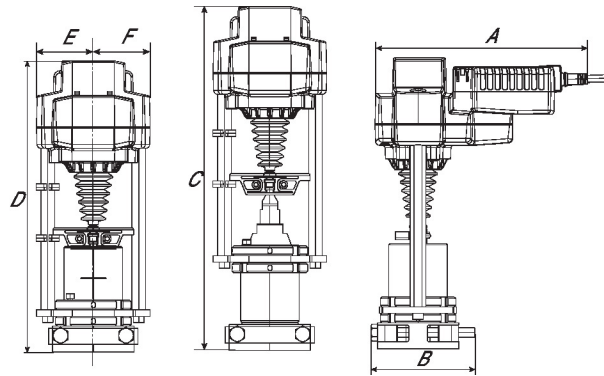
| Type | Weight          |
|------|-----------------|
| FGVL | 9.0 lb [4.1 kg] |

EVB, EVX, RVB, RVX

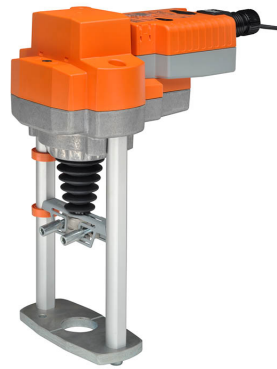


| A          | B          | C           | D           | E         | F         |
|------------|------------|-------------|-------------|-----------|-----------|
| 9.2" [234] | 5.0" [127] | 16.7" [425] | 14.0" [355] | 2.8" [71] | 2.8" [71] |

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] |



5-year warranty



Technical data

|                        |                                    |   |
|------------------------|------------------------------------|---|
| <b>Electrical data</b> | Nominal voltage                    | AC/DC 24 V  |
|                        | Nominal voltage frequency          | 50/60 Hz  |
|                        | Power consumption in operation     | 5 W   |
|                        | Power consumption in rest position | 2 W   |
|                        | Transformer sizing                 | 9.5 VA (class 2 power source)   |
|                        | Electrical Connection              | 18 GA plenum cable, 3 ft [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     |   |
| <b>Functional data</b> | Actuating force motor              | 2000 N [450 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<br>End point 2.5...32 V  |
|                        | Options positioning signal         | 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  |
|                        | Bridging time (PF)                 | 2 s   |
|                        | Pre-charging time                  | 5...20 s  |
|                        | Direction of motion motor          | selectable with switch  |
|                        | Direction of motion fail-safe      | reversible with switch  |
|                        | Manual override                    | 5 mm hex crank (3/16" Allen), supplied  |
|                        | Stroke                             | 1.25" [32 mm]   |
|                        | Running Time (Motor)               | 90 s /  |
|                        | Running time motor variable        | 90...150 s  |
|                        | Running time fail-safe             | <35 s   |
|                        | Noise level, motor                 | 60 dB(A)  |
|                        | Noise level, fail-safe             | 60 dB(A)  |
| Position indication    | Mechanically, with pointer         |   |
| <b>Safety data</b>     | 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  |









|                    |                     |                                       |
|--------------------|---------------------|---------------------------------------|
| <b>Safety data</b> | Ambient temperature | -22...122°F [-30...50°C]              |
|                    | Storage temperature | -40...176°F [-40...80°C]              |
|                    | Ambient humidity    | Max. 95% RH, non-condensing           |
|                    | Servicing           | maintenance-free                      |
| <b>Materials</b>   | 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 |
|                        | Gateway MP to LonWorks  | UK24LON |
| Electrical accessories | Description   | Type    |
|                        | Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US  |
| 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**
 **INSTALLATION NOTES**

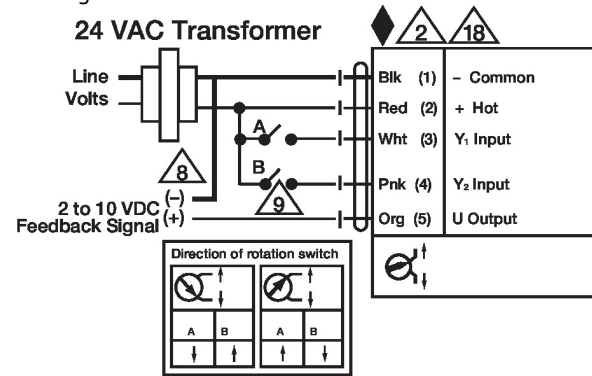
-  Actuators may be connected in parallel. Power consumption and input impedance must be observed.
-  Actuators may also be powered by DC 24 V.
-  A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
-  Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V line.
-  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.
-  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.

**Wiring diagrams**

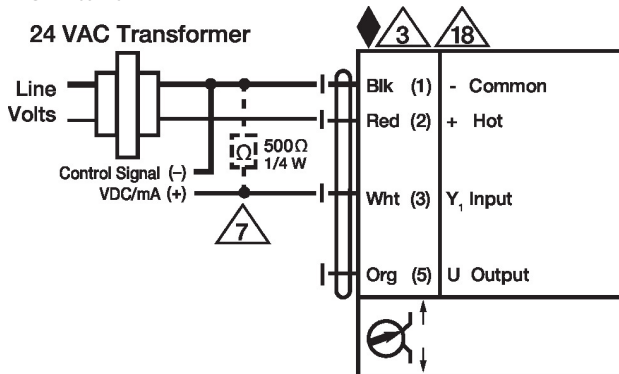
On/Off



Floating Point



VDC / 4 to 20 mA



Override Control Min, Mid, Max Positions

