



5-year warranty


Technical data

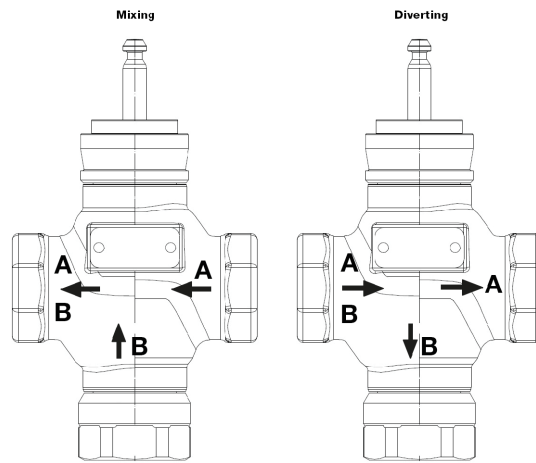
| | | |
|---------------------------|---------------------------|---|
| Functional data | Valve Size | 1.25" [32] |
| | Fluid | chilled or hot water, up to 60% glycol |
| | Fluid Temp Range (water) | 20...280°F [-7...138°C] |
| | Body Pressure Rating | ANSI Class 250, up to 400 psi below 150°F |
| | Flow characteristic | modified equal percentage, linear B – AB |
| | Servicing | repack kits available |
| | Rangeability Sv | A-port 100:1, B-port 50:1 |
| | Flow Pattern | 3-way Mixing/Diverting |
| | Leakage rate | ANSI Class VI |
| | Controllable flow range | stem up - open B – AB |
| | Cv | 20 |
| | ANSI Class | 250 |
| | Body pressure rating note | up to 400 psi below 150°F |
| Materials | Valve body | Bronze |
| | Valve plug | brass |
| | Stem seal | EPDM O-ring |
| | Seat | Bronze |
| | Pipe connection | NPT female ends |
| Suitable actuators | Non-Spring | SVB(X) |
| | Electronic fail-safe | SVKB(X) |

Safety notes


- **WARNING:** This product can expose you to lead which is known to the State of California to cause cancer and reproductive harm. For more information go to www.p65warnings.ca.gov
- The valve has been designed for use in stationary heating, ventilation and air-conditioning systems and must not be used outside the specified field of application, especially in aircraft or in any other airborne means of transport.
- Only authorised specialists may carry out installation. All applicable legal or institutional installation regulations must be complied during installation.
- The valve does not contain any parts that can be replaced or repaired by the user.
- When determining the flow rate characteristic of controlled devices, the recognised directives must be observed.

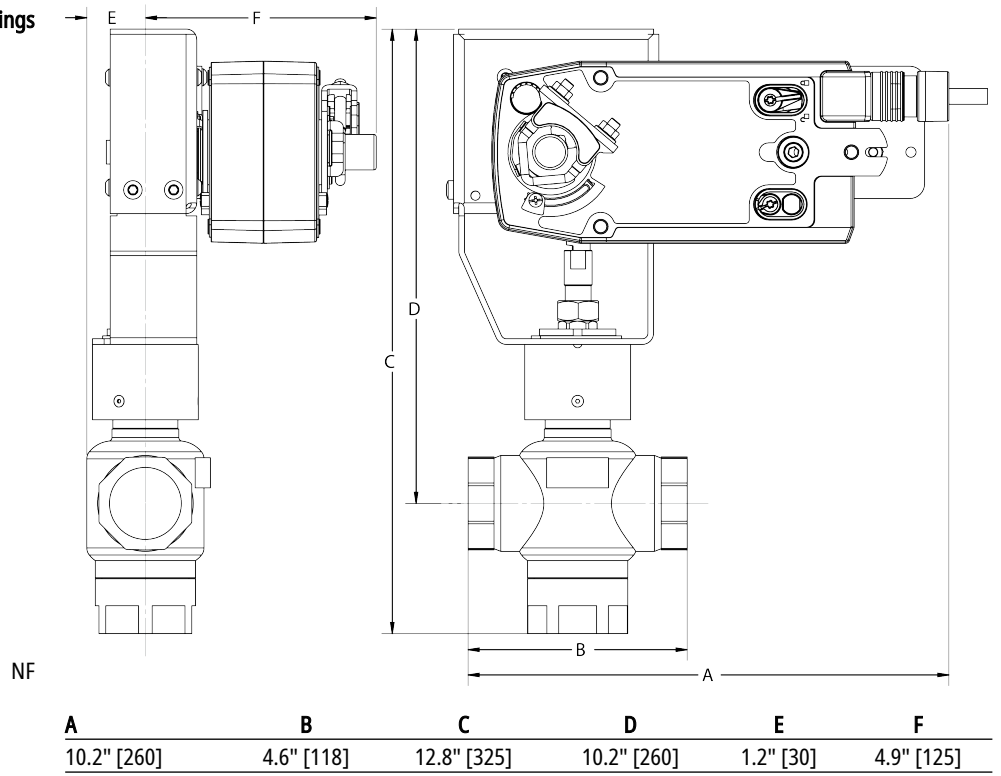
Product features

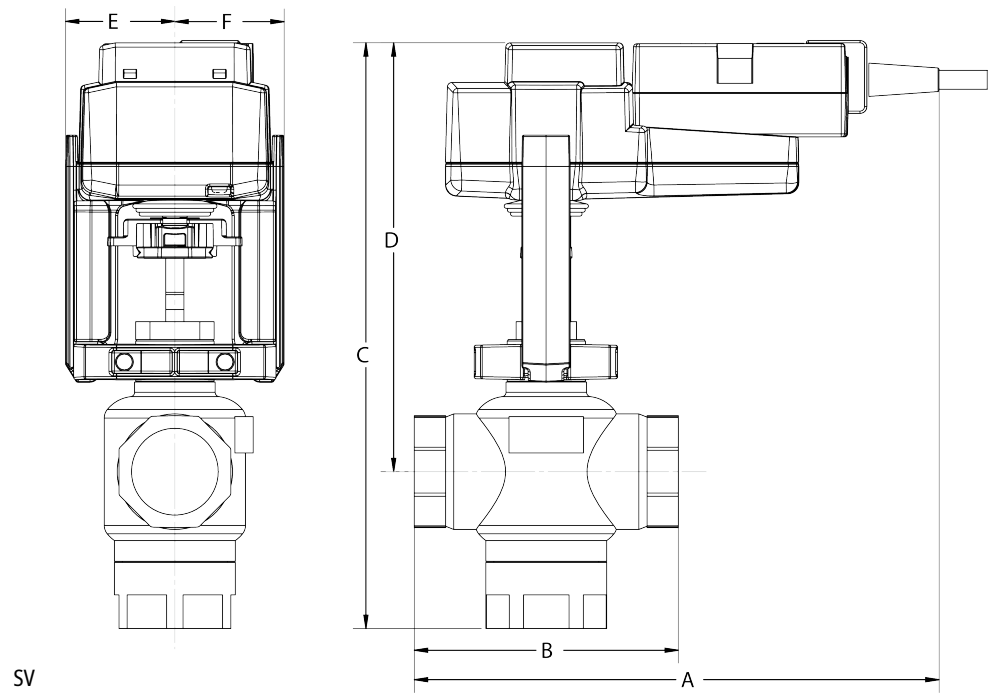
Flow/Mounting details



Dimensions

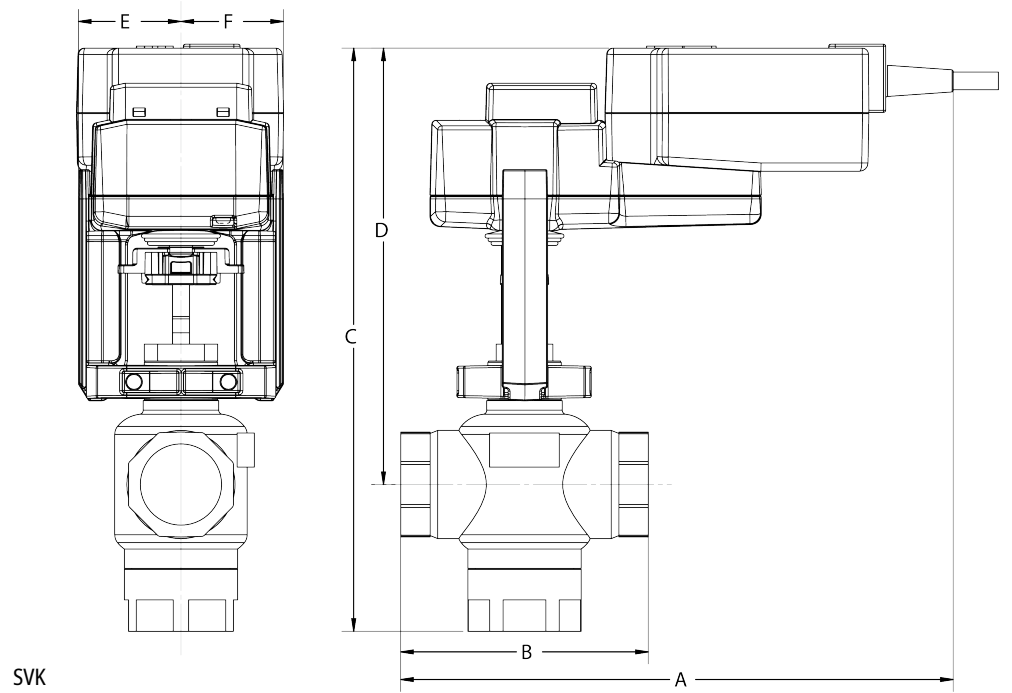
Dimensional drawings





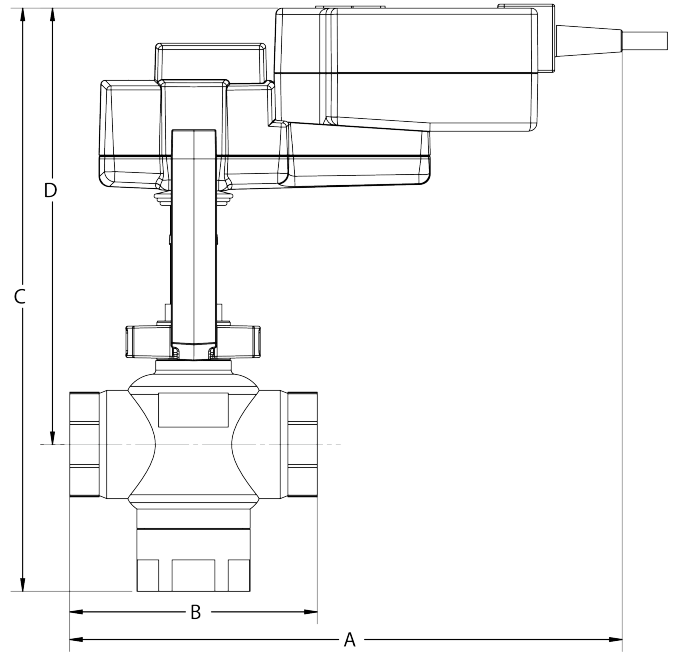
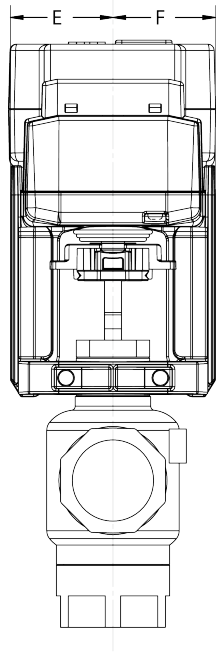
SV

| A | B | C | D | E | F |
|------------|------------|-------------|------------|-----------|-----------|
| 9.2" [234] | 4.6" [118] | 10.3" [262] | 8.5" [216] | 1.9" [48] | 1.9" [48] |



SVK

| A | B | C | D | E | F |
|-------------|------------|-------------|------------|-----------|-----------|
| 10.0" [254] | 4.6" [118] | 11.1" [281] | 8.2" [208] | 1.9" [48] | 1.9" [48] |



SVK

| A | B | C | D | E | F |
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| 10.0" [254] | 4.6" [118] | 11.1" [281] | 8.2" [208] | 1.9" [48] | 1.9" [48] |



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Technical data

| | | |
|------------------------|-------------------------------------|---|
| Electrical data | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Power consumption in operation | 6.5 W |
| | Power consumption in rest position | 3 W |
| | Transformer sizing | 9 VA (class 2 power source) |
| | Auxiliary switch | 2 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, one set at 10°, one adjustable 10...90° |
| | Switching capacity auxiliary switch | 3 A resistive (0.5 A inductive) @ AC 250 V |
| | Electrical Connection | (2) 18 GA appliance cables with 1/2" conduit connectors, 3 ft [1 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) |
| | Operating range Y variable | Start point 0.5...30 V 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 |
| | Direction of motion motor | selectable with switch 0/1 |
| | Direction of motion fail-safe | reversible with cw/ccw mounting |
| | Manual override | 5 mm hex crank (3/16" Allen), supplied |
| | Angle of rotation | 95°, |
| | Running Time (Motor) | default 150 s, variable 40...150 s |
| | Running time motor variable | 40...150 s |
| | Running time fail-safe | <20 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C] |
| | Override control | MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100% |
| | Noise level, motor | 50 dB(A) |
| Noise level, fail-safe | 62 dB(A) | |
| Position indication | Mechanical | |
| Safety data | Degree of protection IEC/EN | IP54 |
| | Degree of protection NEMA/UL | NEMA 2 UL Enclosure Type 2 |
| | Agency Listing | UL 873 listed, CSA C22.2 No. 24 certified |
| | 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

4.4 lb [2.0 kg]

Safety notes

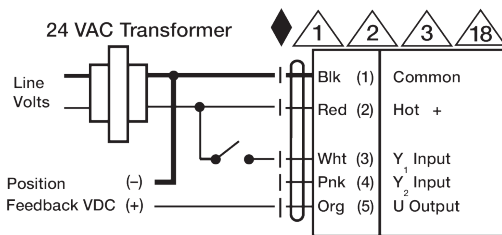


- PVC W/Shld for GV w/UGLK (AM)
- Classic GM to GMB(X) retrofit bracket.
- PVC W/Shld for GV w/UGLK (LF)
- ZS-300 Mounting Bracket Set
- 120 to 24 VAC, 40 VA transformer.
- Cable for ZTH US to actuators w/o diagnostics socket.
- PC Tool computer programming interface, serial port.

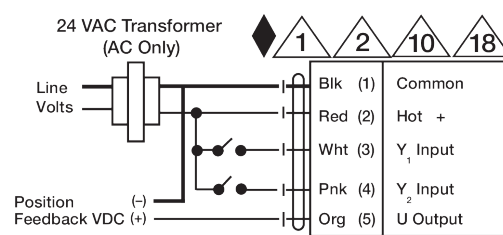
Electrical installation

✂ INSTALLATION NOTES

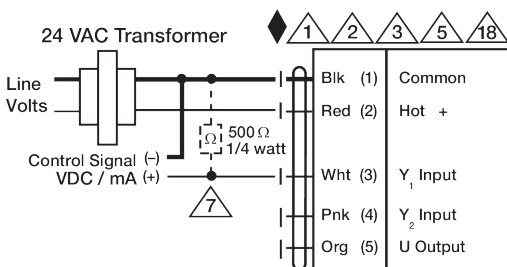
- Ⓐ Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 3 Actuators may also be powered by 24 VDC.
- 4 Two built-in auxiliary switches (2x SPDT), for end position indication, interlock control, fan startup, etc.
- 5 Only connect common to negative (-) leg of control circuits.
- 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.
- 11 Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- 12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- ⚡ Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.
- ◆ 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.



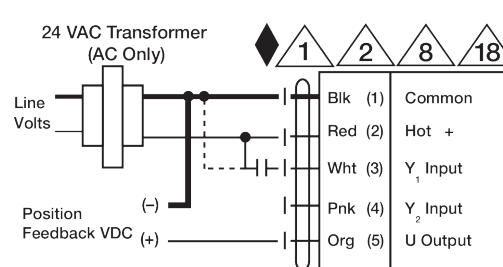
On/Off



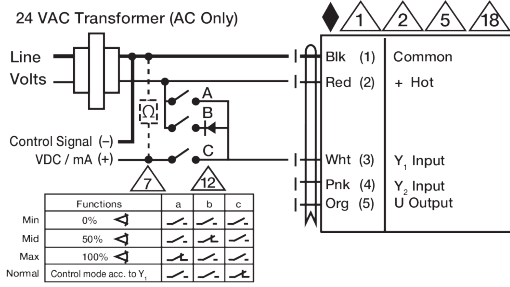
Floating Point



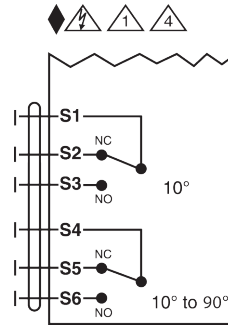
VDC/mA Control



PWM Control



Override Control



Auxiliary Switches