



5-year warranty



## Type overview

|             |           |
|-------------|-----------|
| <b>Type</b> | <b>DN</b> |
| G225B-K     | 25        |

## Technical data

|                           |                                   |   |
|---------------------------|-----------------------------------|---|
| <b>Functional data</b>    | Valve Size                        | 1" [25]                                       |
|                           | Fluid                             | chilled or hot water, up to 60% glycol, steam |
|                           | Fluid Temp Range (water)          | 20...280°F [-7...138°C]                       |
|                           | Body Pressure Rating              | ANSI Class 250, up to 400 psi below 150°F     |
|                           | Body pressure rating note         | up to 400 psi below 150°F                     |
|                           | Flow characteristic               | modified equal percentage                     |
|                           | Servicing                         | repack kits available                         |
|                           | Rangeability Sv                   | 100:1   |
|                           | Max Differential Pressure (Steam) | 20 psi [103 kPa]                              |
|                           | Flow Pattern                      | 2-way   |
|                           | Leakage rate                      | ANSI Class VI                                 |
|                           | Controllable flow range           | stem up - open A - AB                         |
|                           | Cv                                | 10  |
|                           | Maximum Inlet Pressure (Steam)    | 35 psi [241 kPa]                              |
| <b>Materials</b>          | Valve body                        | Bronze  |
|                           | Valve plug                        | brass   |
|                           | Stem                              | stainless steel                               |
|                           | Stem seal                         | EPDM O-ring                                   |
|                           | Seat                              | Bronze  |
| Pipe connection           | NPT female ends                   |   |
| <b>Suitable actuators</b> | Non-Spring                        | LVB(X)  |
|                           | Spring                            | LF  |
|                           | Electronic fail-safe              | LVKB(X)                                       |

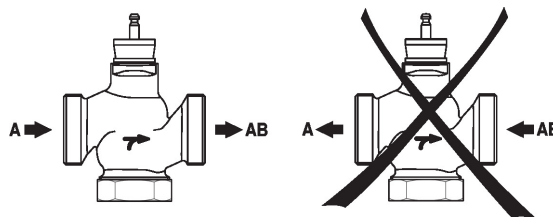
Safety notes



- **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](http://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 authorized 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.

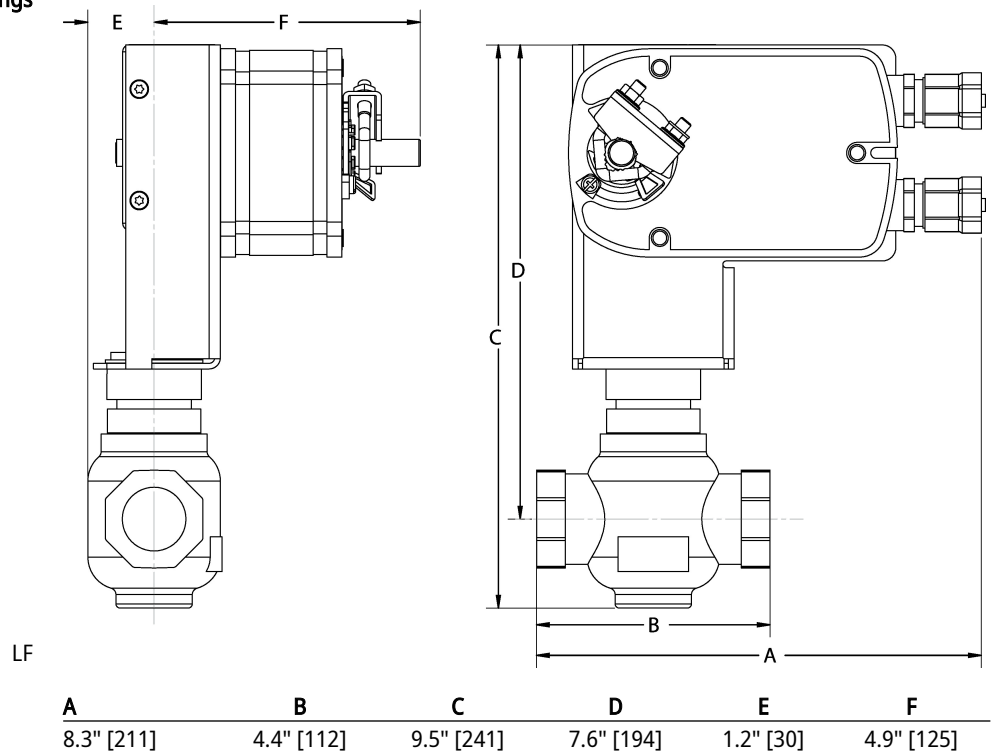
Installation notes

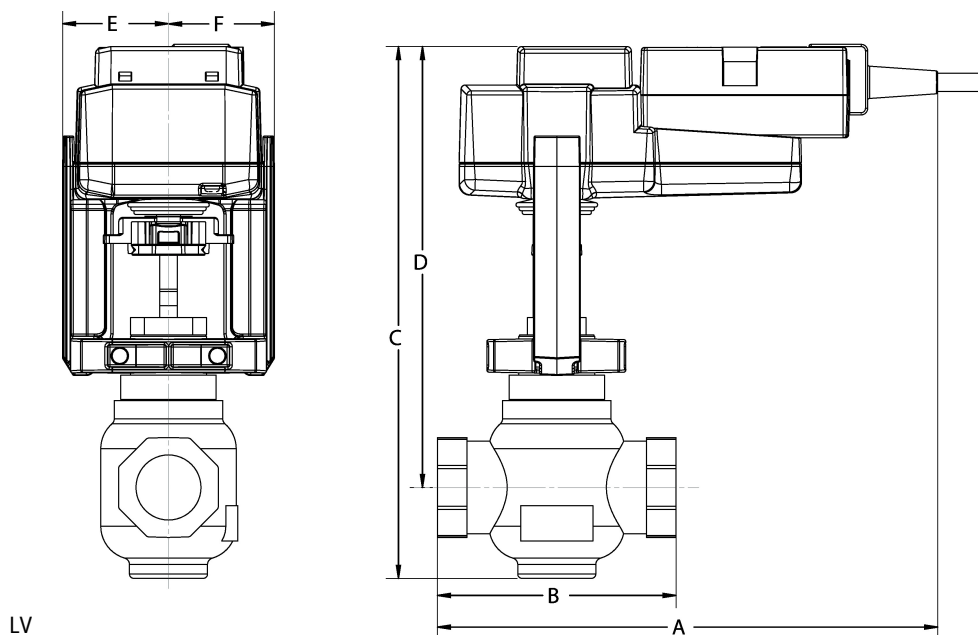
**Flow direction** The direction of flow, specified by an arrow on the housing, is to be complied with, since otherwise the valve could become damaged.



Dimensions

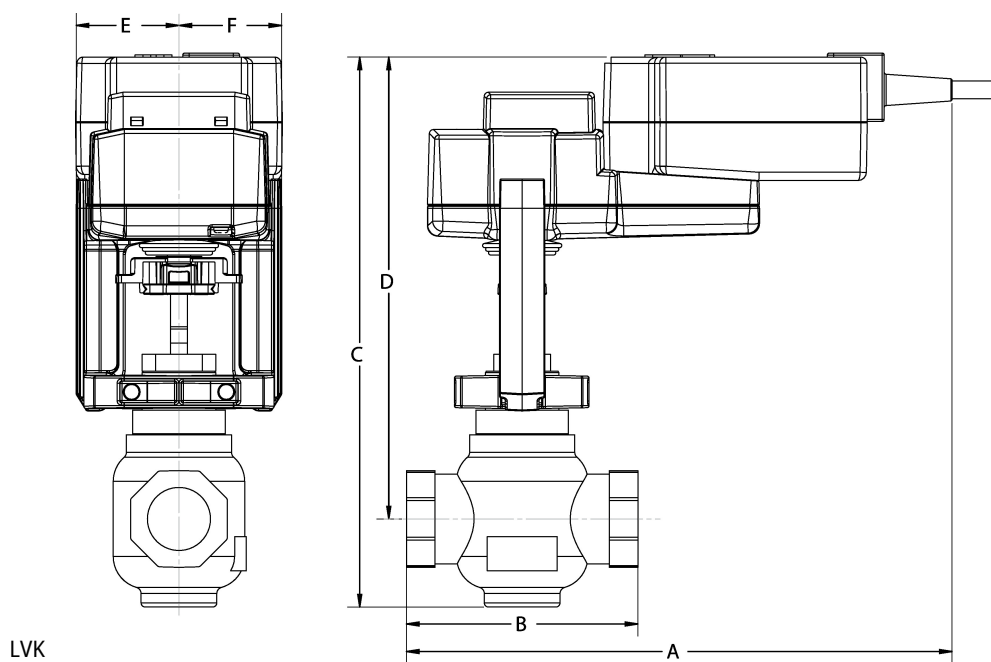
Dimensional drawings





LV

| A          | B          | C          | D          | E         | F         |
|------------|------------|------------|------------|-----------|-----------|
| 9.1" [231] | 4.4" [112] | 9.6" [244] | 8.0" [203] | 1.9" [48] | 1.9" [48] |



LVK

| A           | B          | C          | D          | E         | F         |
|-------------|------------|------------|------------|-----------|-----------|
| 10.2" [260] | 4.4" [112] | 9.4" [240] | 8.6" [218] | 1.9" [48] | 1.9" [48] |



5-year warranty



Technical data

|                        |                                     |   |
|------------------------|-------------------------------------|---|
| <b>Electrical data</b> | Nominal voltage                     | AC 120 V  |
|                        | Nominal voltage frequency           | 50/60 Hz  |
|                        | Power consumption in operation      | 5.5 W   |
|                        | Power consumption in rest position  | 3.5 W   |
|                        | Transformer sizing                  | 7.5 VA  |
|                        | Auxiliary switch                    | 1 x SPDT, 3 A resistive (0.5 A inductive) @ AC 250 V, adjustable 0...95°  |
|                        | 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  |
|                        | Electrical Protection               | actuators are double insulated  |
| <b>Functional data</b> | Torque motor                        | 35 in-lb [4 Nm]   |
|                        | Direction of motion motor           | selectable with switch 0/1  |
|                        | Direction of motion fail-safe       | reversible with cw/ccw mounting   |
|                        | Angle of rotation                   | Max. 95°,   |
|                        | Running Time (Motor)                | 75 s  |
|                        | Running time fail-safe              | <25 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C]  |
|                        | Noise level, motor                  | 50 dB(A)  |
|                        | Noise level, fail-safe              | 62 dB(A)  |
|                        | Shaft Diameter                      | 3/8...1/2" round, centers on 1/2"   |
|                        | Position indication                 | Mechanical  |
| <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 UL 873 and CAN/CSA C22.2 No. 24-93; Listed to UL 2043 - suitable for use in air plenums per Section 300.22(c) of the NEC and Section 602.2 of the IMC |
|                        | Quality Standard                    | ISO 9001  |
|                        | 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>Weight</b>                       | Weight  |
| <b>Materials</b>       | Housing material                    | galvanized steel  |

**Accessories**

| Electrical accessories | Description   | Type          |
|------------------------|---|---------------|
|                        | Auxiliary switch, mercury-free  | P475          |
|                        | Auxiliary switch, mercury-free  | P475-1        |
|                        | Signal simulator, Power supply AC 120 V   | PS-100        |
|                        | Conduit box converter   | ZG-CBLS       |
| Mechanical accessories | Description   | Type          |
|                        | Shaft extension 170 mm Ø10 mm for damper shaft Ø 6...16 mm  | AV6-20        |
|                        | End stop indicator  | IND-LF        |
|                        | Shaft clamp<br>for LF..   | K6 US         |
|                        | Shaft clamp reversible, clamping range Ø16...20 mm  | K6-1          |
|                        | Ball joint suitable for damper crank arm KH8 / KH10   | KG10A         |
|                        | Ball joint suitable for damper crank arm KH8  | KG6           |
|                        | Ball joint suitable for damper crank arm KH8  | KG8           |
|                        | Actuator arm, clamping range Ø8...16 mm, Slot width 8.2 mm  | KH-LF         |
|                        | V-bolt Kit for KH-LF.   | KH-LFV        |
|                        | Damper crank arm Slot width 8.2 mm, for Ø1.05"  | KH12          |
|                        | Damper crank arm Slot width 6.2 mm, clamping range Ø10...18 mm  | KH6           |
|                        | Damper crank arm Slot width 8.2 mm, clamping range Ø10...18 mm  | KH8           |
|                        | Anti-rotation bracket LF.   | LF-P          |
|                        | Push rod for KG10A ball joint 36" L, 3/8" diameter  | SH10          |
|                        | Push rod for KG6 & KG8 ball joints (36" L, 5/16" diameter).   | SH8           |
|                        | Wrench 0.32 in and 0.39 in [8 mm and 10 mm]   | TOOL-06       |
|                        | Angle of rotation limiter, with end stop  | ZDB-LF        |
|                        | Form fit adapter 8x8 mm   | ZF8-LF        |
|                        | Mounting Bracket: ZS-260 Right Angle  | ZG-109        |
|                        | Linkage kit   | ZG-110        |
|                        | Mounting bracket<br>for LF..  | ZG-112        |
|                        | Damper clip for damper blade, 3.5" width.   | ZG-DC1        |
|                        | Damper clip for damper blade, 6" width.   | ZG-DC2        |
|                        | LF crankarm adaptor kit (includes ZG-112).  | ZG-LF112      |
|                        | LF crankarm adaptor kit (T bracket included).   | ZG-LF2        |
|                        | Shaft extension for 3/8" diameter shafts (4" L).  | ZG-LMSA-1     |
|                        | Shaft extension for 1/2" diameter shafts (5" L).  | ZG-LMSA-1/2-5 |
|                        | Weather shield 330x203x152 mm [13x8x6"] (LxBxH)   | ZS-100        |
|                        | Base plate, for ZS-100  | ZS-101        |
|                        | Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)   | ZS-150        |
|                        | Explosion proof housing 406x254x164 mm [16x10x6.435"] (LxBxH), UL<br>and CSA, Class I, Zone 1&2, Groups B, C, D, (NEMA 7), Class III, Hazardous<br>(classified) Locations | ZS-260        |
|                        | Weather shield 438x222x140 mm [17-1/4x8-3/4x5-1/2"] (LxBxH), NEMA<br>4X, with mounting brackets   | ZS-300        |
|                        | Weather shield 438x222x140 mm [17-1/4x8-3/4x5-1/2"] (LxBxH), NEMA<br>4X, with mounting brackets   | ZS-300-5      |
|                        | Shaft extension 1/2"  | ZS-300-C1     |
|                        | Shaft extension 3/4"  | ZS-300-C2     |
|                        | Shaft extension 1"  | ZS-300-C3     |

**Electrical installation**

**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.

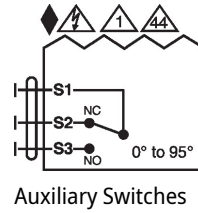
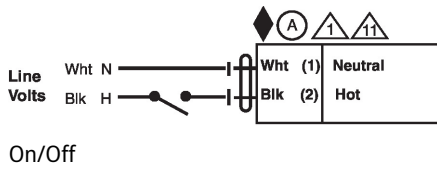


Meets cULus requirements without the need of an electrical ground connection.



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.

- Ⓐ Actuators with appliance cables are numbered.
- ⚠ Provide overload protection and disconnect as required.
- ⚠⚠ Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.
- ⚠⚠⚠ One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.



Dimensions

Dimensional drawings

