

UGVL Universal Globe Valve Linkage

For Use with LV and SV Series Actuators



Technical Data	
Service	chilled or hot water and steam
Applicable Valve Size	1/2" [13], 3/4" [19], 1" [25], 1-1/4" [32], 1-1/2" [38], 2" [50]
Frame, plate, base	aluminum, steel
Collar	aluminum, steel, (fits bonnets up to 1.7" dia both threaded or notched.)
Coupling	GF Nylon supplied
Stem Adaptor	aluminum, steel (fits stems up to .66" dia both threaded or slotted.)
Stroke	0.6" [15 mm] LV, 3/4" [20 mm] SV
Mounting Position	360°
Media Temperature Range (Water)	20°F to 250°F [-7°C to 120°C]
Media Temperature Range (Steam)	32°F to 338°F [0°C to 170°C]
Weight	4.2 lb [1.9 kg]

For close-off pressure reference Select Pro or Retrofit Technical Documentation.

Application

The UGVL retrofit kit is designed to easily attach LV and SV series actuators to select globe valves. Its unique adjustable design allows the UGVL to be mounted on 1/2" to 2" two-way or three-way valves in both normally open and normally closed configurations.

Operation

The UGVL linkage with actuator will provide 20 mm of linear travel to accommodate a wide range of valves.

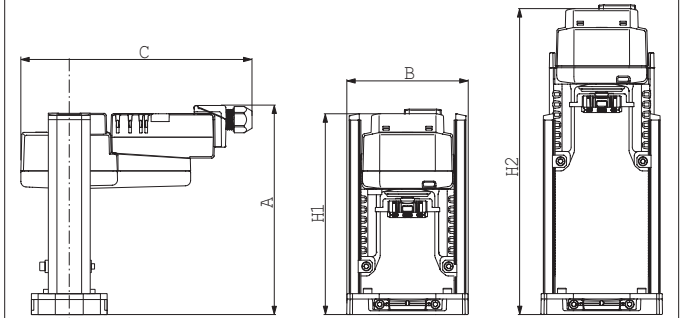
Default/Configuration

The default set up for a UGVL linkage will be factory installed along with a LV or SV series actuator. Included in the kit will be all the necessary hardware to facilitate mounting to the valve.

Suitable Actuators

	Non-Spring	Electronic Fail-Safe
UGVL	LVB(X), SVB(X)	LVKB(X), SVKB(X)

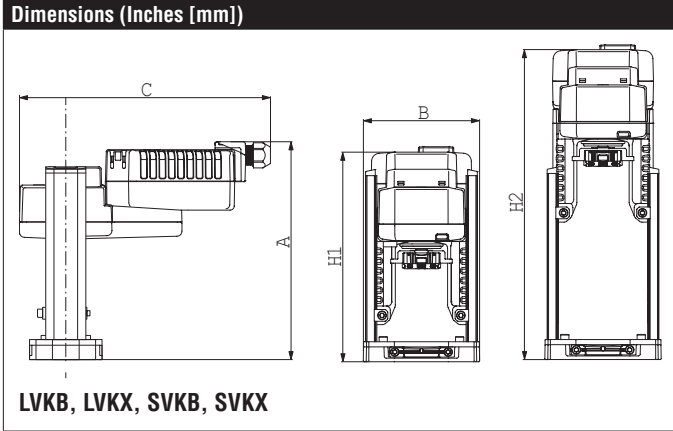
Dimensions (Inches [mm])



LVB, LVX, SVB, SVX

A	B	C	H1	H2
8" [203]	4.4" [113]	8.60" [218]	7.5" [190]	11.4" [290]

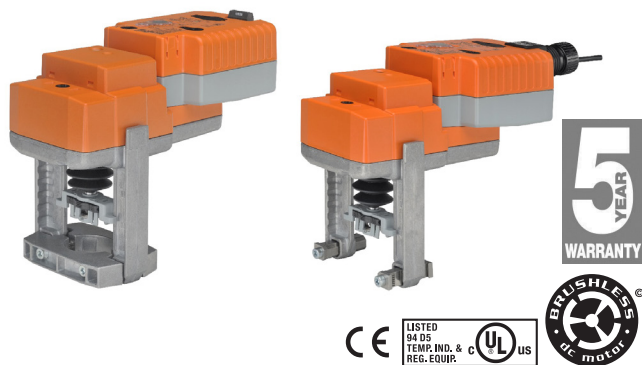
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A	B	C	H1	H2
8.5" [217]	4.4" [113]	9.6" [244]	8.4" [207]	12.1" [307]

SVKX24-MFT

Modulating, Electronic Fail-Safe, Linear, 24 V, Multi-Function Technology®



Technical Data

Power Supply	24 VAC ± 20%, 50/60 Hz, 24 VDC ± 10%
Power Consumption Running	3 W
Power Consumption Holding	2 W
Transformer Sizing	7 VA (class 2 power source)
Electrical Connection	3 ft, 18 GA plenum rated cable with 1/2" conduit connector protected NEMA 2 (IP54)
Overload Protection	electronic throughout full stroke
Electrical Protection	actuators are double insulated
Operating Range Y	2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor), variable (VDC, PWM, floating point, on/off)
Input Impedance	100 k Ω for 2 to 10 VDC (0.1 mA), 500 Ω for 4 to 20 mA, 1500 Ω for PWM, floating point and On/Off
Feedback Output U	2 to 10 VDC
Stroke	0.6" [15 mm] LV, 3/4" [20 mm] SV
Linear Force	337 lbf [1500 N force]
Direction of Rotation (Motor)	reversible with switch
Direction of Rotation (Fail-Safe)	reversible with switch
Position Indication	stroke indicator on bracket
Manual Override	4 mm hex crank (shipped w/actuator)
Running Time (Motor)	90 sec (default), Optional (90 or 150 sec)
Running Time (Fail-Safe)	35 sec
Bridge Time	2 sec delay before fail-safe activates
Pre-charging Time	5 to 20 seconds
Humidity	5 to 95% RH non-condensing
Ambient Temperature Range	-22°F to +122°F [-30°C to +50°C]
Storage Temperature Range	-40°F to +176°F [-40°C TO +80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing Material	Aluminum die cast and plastic casing
Agency Listings†	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise Level (Motor)	<45 dB (A)
Noise Level (Fail-Safe)	<60 dB (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Weight	3.5 lb [1.6 kg]

† 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.

Wiring Diagrams
INSTALLATION NOTES

- Actuators may be connected in parallel. Power consumption and input impedance must be observed.
- Actuators may also be powered by 24 VDC.
- A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 2 to 10 VDC.
- Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC 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.
- 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.
- IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).
- 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.

24 VAC Transformer

Line
Volts

Blk (1) - Common
Red (2) ↑ Hot
Wht (3) ↓ Y₁ Input
Org (5) U Output

2 to 10 VDC
Feedback Signal (-)
Feedback Signal (+)

Blk (1) - Common
Red (2) ↑ Hot
Wht (3) ↓ Y₁ Input
Org (5) U Output

On/Off

24 VAC Transformer

Line
Volts

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

2 to 10 VDC
Feedback Signal (-)
Feedback Signal (+)

Direction of rotation switch

A	B
↑	↓
↓	↑

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

Floating Point

24 VAC Transformer

Line
Volts

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

Control Signal (-)
VDC/mA (+)

500 Ω
1/4 W

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

VDC / 4 to 20 mA

24 VAC Transformer (AC Only)

Line
Volts

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

Control Signal (-)
VDC/mA (+)

500 Ω
1/4 W

Blk (1) - Common
Red (2) + Hot
Wht (3) Y₁ Input
Org (5) U Output

Override Control Min, Mid, Max Positions

Functions	a	b	c
Min 0%			
Mid 50%			
Max 100%			
Normal Control mode acc. to Y			

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