

Zone Valves



A-121

Valves

Ranging from 1/2 to 1-inch (15 to 25 mm), Zone Valves provide excellent control of fan coils, unit ventilators and other applications where on/off, floating or proportional control is required. Featuring direct-coupled technology for quick connection of the valve body and actuator without tools, the Zone Valves and Actuators use all-metal plugs and seat to deliver superior control of water and glycol solutions with NPT connection.

Features

- Metal-to-metal seat/plug design
- Direct coupled installation of actuator to valve without tools
- Low ANSI Class III Leakage for SFA/SFP; ANSI Class IV leakage for SSE/SSF
- Choice of interchangeable on/off (2P), floating (3P), and 0-10V proportional actuators
- On/off actuators available in 24V and 120V supply voltages
- Manual override
- Visual LED motion and position indication on SSE/SSF actuators





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Two- and Three-Way Zone Valves

1/2 to 1" Brass Body

Normally Open/Normally Closed/Diverting



Two-Way NPT Zone Valve



Three-Way NPT Zone Valve

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Valves

Description

Two- and Three-Way Zone Valves have a 1/10-inch (2.5 mm) stroke. The Zone Valves work with any SFA/SFP Series or SSE/SSF Series electric actuator. The actuators accept one of either 24 Vac or 120 Vac power supply signal to provide on/off, floating or 0 to 10 Vdc control.

Features

- All metal plug and seat for superior control
- Direct-coupled universal bonnet – install actuators without tools
- NPT end connection
- Order separately or with an actuator as a complete assembly

Applications

Typical applications for Two- and Three-Way Zone Valves are hot or chilled water for zones with radiators; floor heating via manifolds; fan coil units; cooling ceilings; wall-mounted boilers; and VAV applications.

Recommendation:

Use only with Zone Valve Actuators.

Specifications

Line Size 1/2-inch to 1-inch (15 mm to 25 mm)
Body Style Globe
Action
 2-way NO/NC Determined by Actuator
 3-way Diverting/Mixing (Limited Application)
Valve Body Rating 232 PSI
Stem Travel (Stroke) 1/10-inch (2.5 mm)
Materials
 Body Brass
 Trim Brass
 Stem Stainless Steel ASTM A582 Type 303
 Packing EPDM O-rings

Controlled Medium Water, Glycol Solutions to 50%
Medium Temperature Range 34° to 230°F (1° to 110°C)
Maximum Inlet Pressure 232 PSI
Leakage Rate See close-off tables
Close-off Ratings According to ANSI/FCI 70-2
Flow Characteristic Linear

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Valve Product Ordering

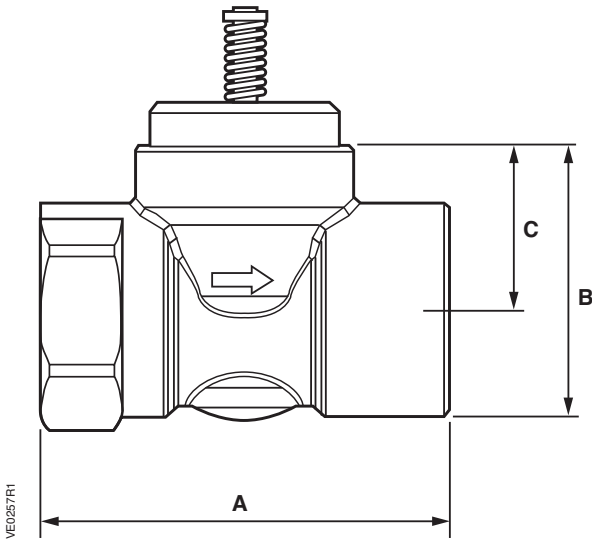
Nominal Valve Size		Flow Rate		NPT Part No.	Sweat Part No.*
Inch	mm	Cv	(Kvs)		
Two-Way Valve Bodies					
1/2	15	1.0	(0.85)	599-00210	599-00510
1/2	15	2.5	(2.15)	599-00211	599-00511
1/2	15	4.0	(3.4)	599-00214	599-00514
3/4	20	4.1	(3.5)	599-00212	599-00512
1	25	7.0	(6.0)	599-00213	599-00513
Three-Way Valve Bodies					
1/2	15	1.0	(0.85)	599-00230	599-00530
1/2	15	2.5	(2.15)	599-00231	599-00531
1/2	15	4.0	(3.4)	599-00234	599-00534
3/4	20	4.1	(3.5)	599-00232	599-00532
1	25	7.0	(6.0)	599-00233	599-00533

* Sweat valves are not available as valve/actuator assemblies from the factory.
 Sweat valves and actuators must be ordered separately and assembled in the field

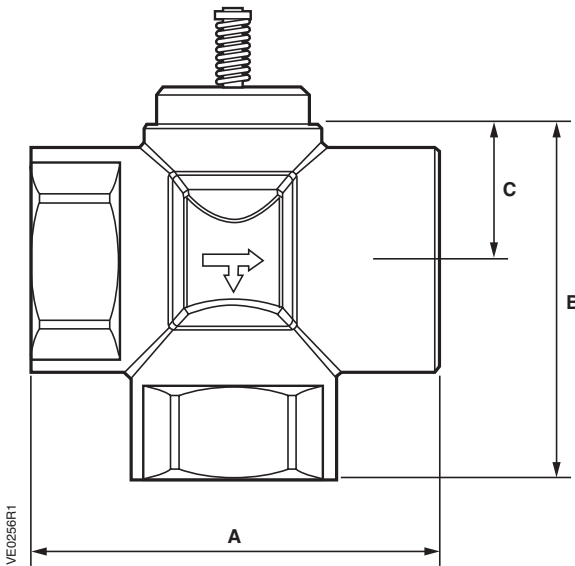
Actuator Product Ordering

Description		Part No.	Actuator Prefix Code
Two-Way Valves	Three-Way Valves		
Normally Open			
24 Vac/dc, 0 to 10 Vdc, Modulating	24 Vac/dc, 0-10 Vdc, Modulating	S55180-A158 (SSF161.05U)	248
24 Vac, 2-Position, Spring Return	24 Vac, 2-Position, Fail AB→A	SFP71U	243
120 Vac, 2-Position, Spring Return	120 Vac, 2-Position, Fail AB→A	SFP11U	241
Normally Closed			
24 Vac, Floating	24 Vac, Floating	S55180-A156 (SSE131.09U)	244
24 Vac/dc, 0 to 10 Vdc, Modulating	24 Vac/dc, 0-10 Vdc, Modulating	S55180-A157 (SSE161.05U)	245
24 Vac, 2-Position, Spring Return	24 Vac, 2-Position, Fail AB→B	SFA71U	242
120 Vac, 2-Position, Spring Return	120 Vac, 2-Position, Fail AB→B	SFA11U	240

Two-Way Zone Valve Body



Three-Way Zone Valve Body



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Valves

Valve Size in. (mm)	2-Way Valve				3-Way Valve			
	A	B	C	Weight lb. (kg)	A	B	C	Weight lb. (kg)
NPT								
0.5 (15)	2.76 (70)	1.63 (41.5)	1.00 (25.4)	0.82 (0.37)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	1.08 (0.49)
0.75 (20)	2.76 (70)	1.77 (45)	1.00 (25.4)	0.99 (0.45)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	1.26 (0.57)
1.0 (25)	3.50 (89)	2.10 (54)	1.00 (25.4)	1.68 (0.76)	3.50 (89)	2.85 (67.3)	1.00 (25.4)	2.14 (0.97)
Sweat								
0.5 (15)	2.66 (66)	1.48 (38)	1.00 (25.4)	0.60 (0.27)	2.66 (68)	2.26 (57.5)	1.00 (25.4)	0.71 (0.32)
0.75 (20)	2.76 (70)	1.63 (41.5)	1.00 (25.4)	0.71 (0.32)	2.76 (70)	2.34 (59.5)	1.00 (25.4)	0.86 (0.39)
1.00 (25)	3.50 (89)	1.77 (45)	1.00 (25.4)	1.06 (0.48)	3.50 (89)	2.65 (67)	1.00 (25.4)	1.24 (0.56)

Table Notes:
Table expressed in inches (mm).

HIT

HVAC Integrated Tool



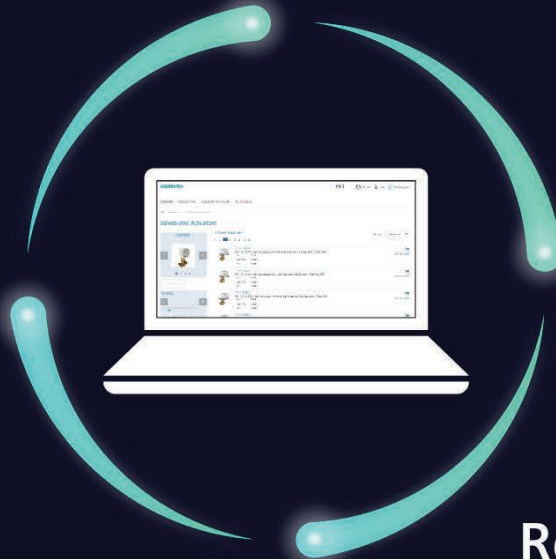
Order



Selection



Projects



Replacement

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An intuitive selection tool that **makes it faster and easier to find the right products** for your projects.

Siemens HVAC Integrated Tool (HIT) is an intuitive online selection tool with enhanced filters and calculators that make it faster and easier to find the right products for your projects. HIT is continually updated with the latest products and pricing for accurate planning and budgeting.

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SIEMENS

SFA/SFP Series Electronic Valve Actuator

24 and 120 Vac, Two-Position Control
Spring Return



SFA/SFP Series Electronic Valve Actuator

A-127

Valves

Description

The SFA/SFP Series of Electronic Valve Actuators accepts 24 or 120 Vac power supply signal to provide two-position control. This actuator works with Zone Valves with 1/10-inch (2.5 mm) stroke.

Features

- UL listed for plenum installations
- Direct coupled installation without tools
- Manual override with auto unlock
- Visual position indication

Applications

The SFA/SFP Series of Electronic Valve Actuators is for use in heating and cooling HVAC applications with Zone Valves.



Siemens offers a 5-year warranty on valves and actuators.

Specifications

Power Supply

Operating Voltage24 Vac ±20%, 120 Vac ±20%
Frequency
24 Vac..... 50/60 Hz
120 Vac..... 60 Hz
Power Consumption
24/120 Vac..... 9.8 VA

Function

Running Time10 Seconds
Nominal Stroke..... 1/10-in. (2.5 mm)
Nominal Force SFA: 31.5 lb. (140N)
SFP: 28 lb. (125N)

Agency Certifications..... UL Listed to UL 873
cUL Certified to Canadian Standard
C22.2 No. 24-93

Ambient Temperature

Operation.....41° to 122°F (5° to 50°C)
Transport and Storage -13° to 158°F (-25° to 70°C)

Mounting Location NEMA 1 (Interior Only)

Noise <35 db

Medium Temperature34° to 230°F (1° to 110°C)

Dimensions 3.4" H x 4.4" W x 2.3" D
(85.2 mm H x 111 mm W x 58 mm D)

Shipping Weight1.18 lb. (0.54 kg)

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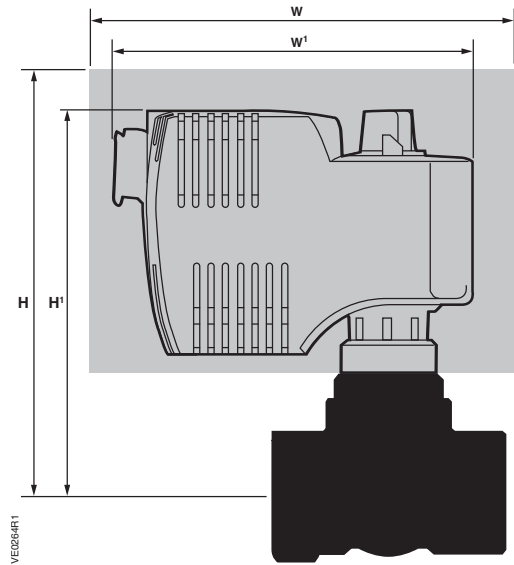
Valves

Product Ordering

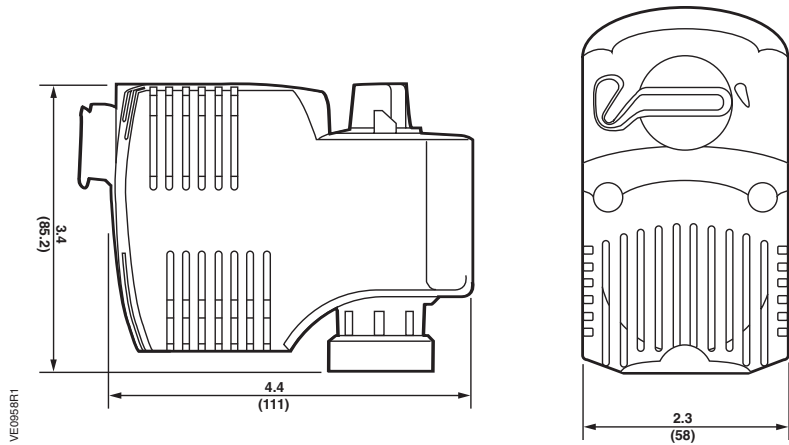
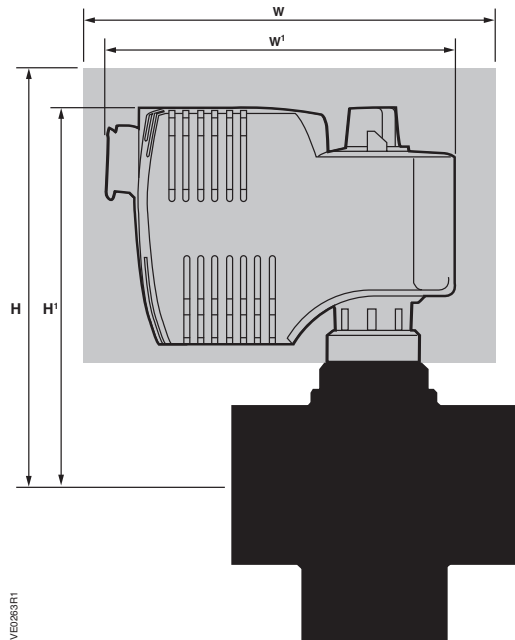
Description	Part No.	Actuator Prefix Code
Normally Open		
24 Vac	SFP71U	243
120 Vac	SFP11U	241
Normally Closed		
24 Vac	SFA71U	242
120 Vac	SFA11U	240

Dimensions

SFA/SFP Series Actuator:
Service Envelope for 2-Way Valve Assembly



SFA/SFP Series Actuator:
Service Envelope for 3-Way Valve Assembly



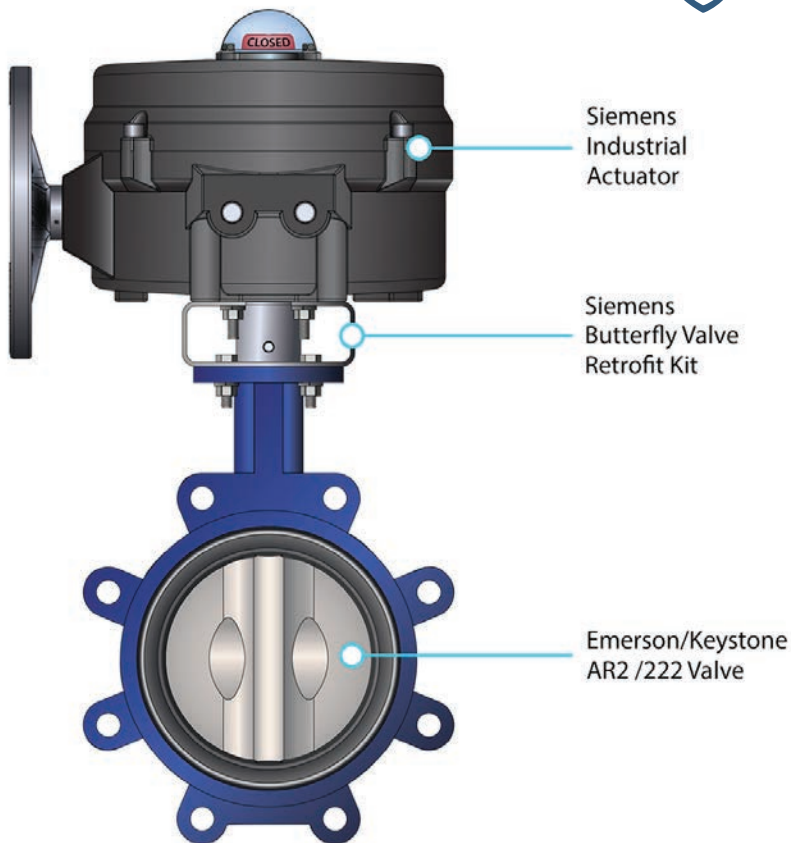
Dimensions shown in inches (mm)

Valve Size in. (mm)	Valve Center Line to Top of Actuator H'		Service Height H		Width or Diameter of Actuator W'		Service Width W	
	2-Way	3-Way	2-Way	3-Way	2-Way	3-Way	2-Way	3-Way
0.5 (15)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)
0.75 (20)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)
1.00 (25)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)	4.38 (112)	4.38 (112)	12.38 (315)	12.38 (315)

Table Notes:
Table expressed in inches (mm).
Service height and width are the recommended dimensions to allow access to the product.



Siemens offers a 5-year warranty on valves and actuators.



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Replace Emerson/Keystone EPI2 actuators with Siemens butterfly valve retrofit kits

Retrofit kits are a quick, easy, and cost-effective solution to replacing failed Emerson/Keystone EPI2 actuators. The kits are available to retrofit 2-way valves, sizes 2-12" and enable field assembly of Siemens actuators onto Emerson valves.

Visit usa.siemens.com/valves to learn more.

SIEMENS

SSE/SSF Series Electronic Valve Actuator

*24 Vac Floating or 24 Vac/dc 0-10V Control
Non-Spring Return*



SSE/SSF Series Electronic Valve Actuator

A-131

Valves

Description

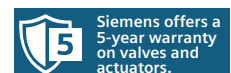
The SSE Floating Electronic Valve Actuator requires 24 Vac for power and control. The SSE/SSF Modulating Electronic Valve Actuators require a 24 Vac or 24 Vdc power supply and receive a 0 to 10 Vdc signal to control a valve. These actuators are designed to work with Zone Control Valves with a 1/10-inch (2.5 mm) stroke and a threaded valve bonnet that fits the actuator.

Applications

The SSE/SSF Electronic Valve Actuators are for use with heating and cooling HVAC applications with Zone Valves.

Features

- UL listed for plenum installations
- Direct-coupled installation without tools
- Manual override with hex wrench
- Visual LED motion and position indication
- Self-calibration to valve stroke with modulating actuators
- Non-spring return



Specifications

Power Supply Voltage
 SSE131.09U..... DC 24 V (±20%)
 SSE161.05U, SSF161.05U AC 24 V (± 15 %); DC 24 V (±20%)

Power Consumption
 SSE/SSF161.05U..... AC 3 VA or DC 1.2 W
 SSE131.09U..... AC 1 VA

Agency Certifications
 EMC Directive2014/30/EU
 UL listedUL as per UL 60730-1, UL 60730-2-14
cUL as per CSA – CAN E60730-1, E730-2-14

Function
 Running Time12.5 s ± 25 %
 Nominal Stroke..... 1/10-inch (2.5 mm)
 Nominal Force.....45 lb. (200N)

Ambient Temperature
 Operation.....34° to 122°F (1° to 50°C)
 Transport and Storage-13° to 158°F (-25° to 70°C)

Medium Temperature34° to 230°F (1° to 110°C)

Dimensions 3.7" H x 4.1" W x 1.9" D
 (92.6 mm H x 104.4 mm W x 49 mm D)

Shipping Weight..... 7.7 oz. (0.22 kg)

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Product Ordering

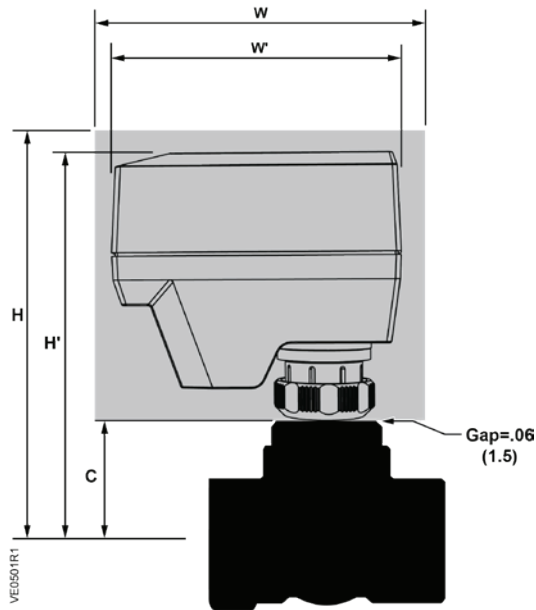
Description	Part No.	Actuator Prefix Code
24 Vac, Floating *	S55180-A156 (SSE131.09U)	244
24 Vac/dc, 0-10 Vdc, AB-A NC	S55180-A157 (SSE161.05U)	245
24 Vac/dc, 0-10 Vdc, AB-A NO	S55180-A158 (SSF161.05U)	248

* Connecting Y1 and Y2 normally will provide AB-A NC functionality and wiring Y1 and Y2 opposite will provide AB-A NO functionality

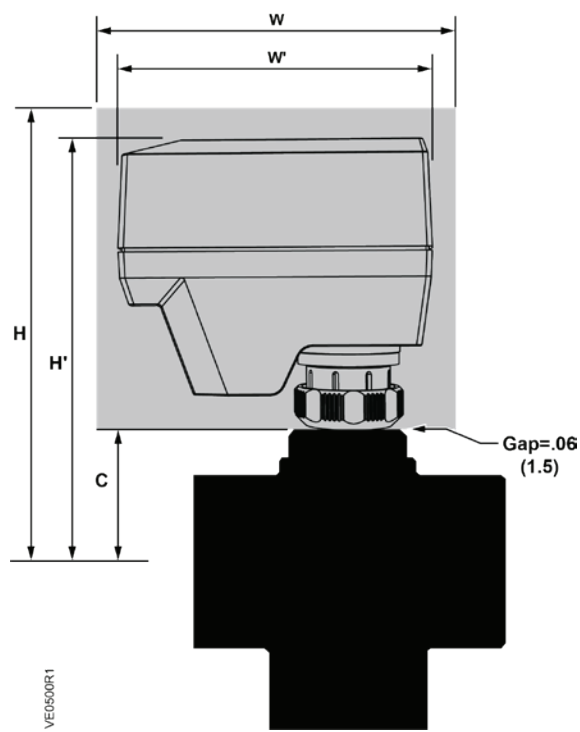
Valves

Dimensions

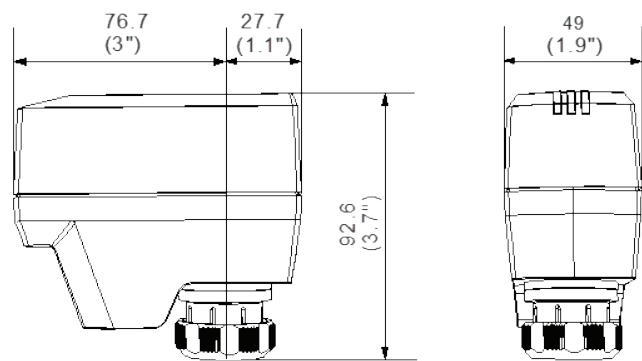
SSE/SSF Series Actuator:
Service Envelope for 2-Way Valve Assembly



SSE/SSF Series Actuator:
Service Envelope for 3-Way Valve Assembly



A-133
Valves



Dimensions shown in inches (mm)



Siemens offers a 5-year warranty on valves and actuators.

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A complete line of globe valves for any HVAC application

Siemens offers a large selection of globe valves to suit any heating or cooling application using water or low-pressure steam. This complete portfolio allows you to meet your design needs and helps ensure that heating and cooling systems are operating at optimum levels. Siemens globe valves have the highest close-off in the industry. For wider selection, reliable shut off and precision control, choose Siemens globe valves.

Visit usa.siemens.com/valves to learn more.



Complete Product Portfolio
Largest selection of globe valves in the industry



Quality
Siemens standards



75+ Years
Innovating control valves



100%
Factory tested



Up to 5 Million
Repositions for longer life



Up to 100 Thousand
Full strokes

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