

Two-way Valves

1/2 to 1-inch

Normally Open or Normally Closed



Powermite MT Series
Two-way Globe Valve

A-145

Valves

Description

The Powermite MT Series Two-way Globe Valves are designed to work with either a pneumatic or electronic actuator with a 7/32-inch (5.5 mm) stroke. Compatible actuators deliver a minimum of 67 lbf. (300 N) of force.

Features

- Direct-coupled universal bonnet/No tools required for installation
- Choice of brass or stainless-steel trim
- ANSI Leakage Class IV (0.01% of Cv)
- ANSI Class 250 body
- Available in 3 to 8 psig, 8 to 13 psig or 10 to 15 psig spring ranges with pneumatic actuation
- Rated for 15 psig steam with stainless-steel trim
- Interchangeable pneumatic or electronic actuators
- Orderable as a valve only or as a complete valve/actuator assembly

Applications

The Powermite MT Series Globe Valves are used for hot or chilled water or low pressure steam (<15 psig with stainless-steel trim only) control on convectors, fan coil units, unit conditioners, radiation, reheat coils, and similar terminal units.

Recommendation:

Only use the MT Series Valve Actuators. When using this valve with a pneumatic actuator, note that MT valve bodies have the spring in the body, rather than the actuator. To order the correct valve body, select the proper spring range.

Alternate spring ranges for pneumatic sequencing are available as valve and actuator factory assemblies only.

Specifications

Valve Size	1/2 to 1" (15 to 25 mm)
Body Style	Globe
Seat Style	Metal to Metal
Action	NO/NC
Valve Body Rating	ANSI Class 250
Stem Travel (Stroke)	7/32" (5.5 mm)
Materials	
Body	Forged Brass C37700 (1/2 and 3/4 inch) or UNS CA 844 Bronze (1 inch)
Trim	Stainless Steel or Brass
Stem	Stainless Steel ASTM A582 Type 303
Packing	EPDM O-rings
Controlled Medium	Water, Low Pressure Steam less than 15 Psi, Glycol Solutions up to 50%
Spring Range	
Standard	
Normally Closed	10 to 15 psig (69 to 103 kPa)
Normally Open	3 to 8 psig (21 to 55 kPa)
Optional	
Normally Closed	3 to 8 psig (21 to 55 kPa) 8 to 13 psig (55 to 90 kPa)
Normally Open	8 to 13 psig (55 to 90 kPa) 10 to 15 psig (69 to 103 kPa)

Medium Temperature Range	35° to 250°F (2° to 120°C)
Max. Recommended Differential Pressure for Modulating Service	
Brass Trim	25 PSI (173 kPa)
Stainless-steel Trim	50 PSI (345 kPa)
Steam Stainless-steel Trim	15 PSI (103 kPa)
Rangeability	
Cv<1	>50:1
Cv≥1	>100:1
Close-off Ratings	According to ANSI/FCI 70-2
Leakage Rate	Class IV (0.01% of Cv)
Flow Characteristics	Modified Equal Percentage
Mounting Location	NEMA 1 (Interior Only)

Refer back to the Selection Charts at the beginning of this section to make sure the configuration is valid.

Valve Product Ordering

Normally Open/Normally Closed, Modified Equal Percentage, Brass Trim



Connection	Valve Size in. (mm)	Flow Rate Cv (Kvs)	Stroke (in.)	Normally Open Part No.	Normally Closed Part No.
Standard Temperature Packing – 20° to 250°F (-7° to 120°C)					
Internal thread x Internal thread	1/2 (15)	0.4 (0.34)	7/32	599-02030	599-02000
	1/2 (15)	0.63 (0.54)	7/32	599-02032	599-02002
	1/2 (15)	1 (0.85)	7/32	599-02034	599-02004
	1/2 (15)	1.6 (1.37)	7/32	599-02036	599-02006
	1/2 (15)	2.5 (2.14)	7/32	599-02038	599-02008
	1/2 (15)	4 (3.42)	7/32	599-02041	599-02010
	3/4 (20)	6.3 (5.38)	7/32	599-02044	599-02012
	1 (25)	10 (8.55)	7/32	599-02046	599-02014
There are no repair parts for this product. Replace the entire valve body if inoperative.					

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Valves

Valve Product Ordering

Normally Open/Normally Closed, Modified Equal Percentage, Stainless-steel Trim



Connection	Valve Size in. (mm)	Flow Rate Cv (Kvs)	Stroke (in.)	Normally Open Part No.	Normally Closed Part No.
Standard Temperature Packing – 20° to 250°F (-7° to 120°C)					
Internal thread x Internal thread	1/2 (15)	0.4 (0.34)	7/32	599-02047	599-02015
	1/2 (15)	0.63 (0.54)	7/32	599-02049	599-02017
	1/2 (15)	1 (0.85)	7/32	599-02051	599-02019
	1/2 (15)	1.6 (1.37)	7/32	599-02053	599-02021
	1/2 (15)	2.5 (2.14)	7/32	599-02055	599-02023
	1/2 (15)	4 (3.42)	7/32	599-02058	599-02025
	3/4 (20)	6.3 (5.38)	7/32	599-02061	599-02027
	1 (25)	10 (8.55)	7/32	599-02063	599-02029
There are no repair parts for this product. Replace the entire valve body if inoperative.					

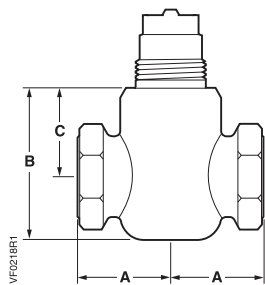
Actuator Product Ordering

Description			Part No.	Actuator Prefix Code
 2"	Pneumatic*	3-8 PSI (21-55 kPa)	599-01088	257
		8-13 PSI (55-90 kPa)	599-01088	—*
		10-15 PSI (69-103 kPa)	599-01088	—*
	Electro-Mechanical	24 V, Floating, Spring Return	S55155-A109 (SSC131.39U)	260
		24 V, Floating, Non-Spring Return	S55155-A108 (SSC131.09U)	259
		24 V, 0-10 V, Spring Return	S55155-A111 (SSC161.35U)	262
		24 V, 0-10 V, Non-Spring Return	S55155-A110 (SSC161.05U)	261
 	Electro-Mechanical	24 V, Floating, Spring Return	SAS81.33U	366
		24 V, Floating, Non-Spring Return	SAS81.03U	363
		24 V, 0-10 V, Spring Return	SAS61.33U	365
		24 V, 0-10 V, Non-Spring Return	SAS61.03U	364

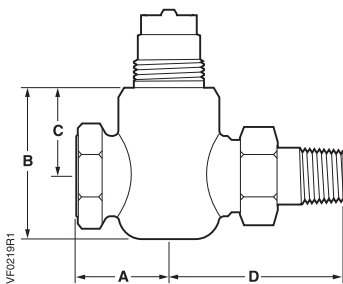
Table Notes:
*Powermite MT Series valve bodies have the spring in the body, rather than in the pneumatic actuator. There are different valve part numbers for the different spring ranges.
Not available as an assembly. Valve and actuator sold separately and will have to be assembled in the field.

Refer back to the Selection Chart at the beginning of this section to make sure the configuration is valid.

Dimensions and Weights



Internal NPT by Internal NPT
(ITxIT)



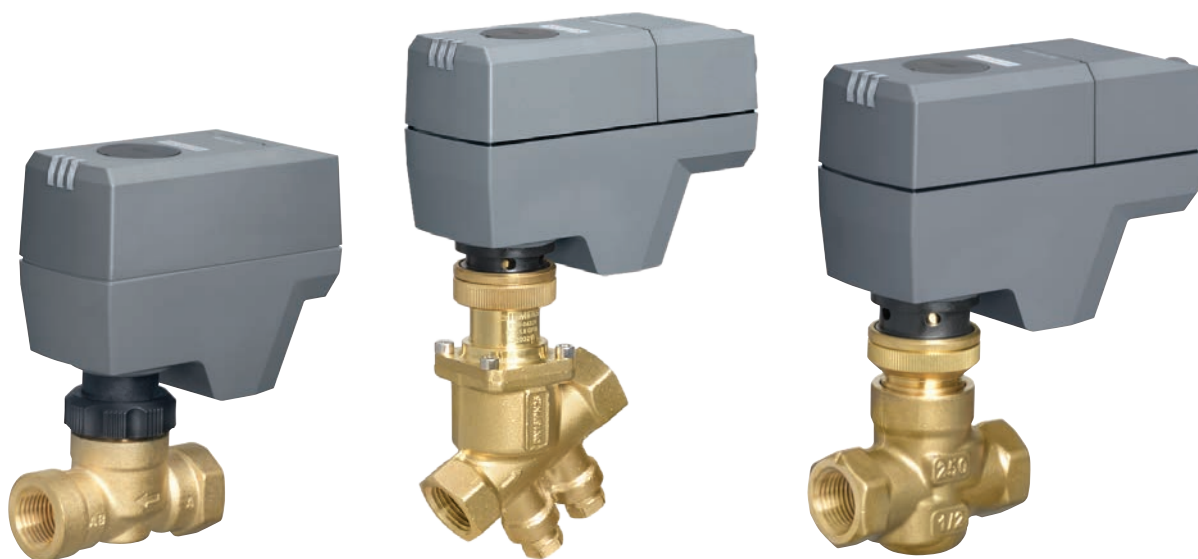
Internal NPT by Union External NPT
(ITxUET)

Valve Size In.	Dimensions						Weight	
	A	B		C		D		
		FxF & FxUM					FxF	FxUM
		NO	NC	NO	NC			
1/2" (15 mm)	1-3/8" (35 mm)	2-1/4" (57 mm)		1-5/16" (33 mm)		2-5/8" (67 mm)	1.3 lb. (0.6 kg)	1.5 lb. (0.7 kg)
3/4" (20 mm)	1-5/8" (41 mm)	2-3/8" (59 mm)		1-5/16" (33 mm)		3-1/8" (79 mm)	1.8 lb. (0.8 kg)	2.2 lb. (1 kg)
1" (25 mm)	1-15/16" (49 mm)	2-3/4" (69 mm)		1-9/16" (39 mm)		—	2.6 lb. (1.2 kg)	—
1-1/4" (32 mm)	2-1/2" (63.5 mm)	4-1/4" (108 mm)	3-7/8" (98.4 mm)	2-3/16" (55.6 mm)	1-11/16" (42.9 mm)	—	4 lb. (1.8 kg)	—
1-1/2" (40 mm)	2-9/16" (65 mm)	4-1/4" (108 mm)	3-7/8" (98.4 mm)	2-1/4" (57.2 mm)	1-5/8" (41.3 mm)	—	5 lb. (2.3 kg)	—



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

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More functions. More applications. **More opportunities.**

Designed with you in mind, the new line of SS series modulating room actuators used with pressure independent control valves (PICVs), zone valves, and Powermite globe valve assemblies have enhanced performance features to improve building operations.

The self-calibrating actuators with three LED indicators for position and actuator motion provide status and actuator information for easier troubleshooting and improved

productivity. More application opportunities await with actuators that have a low noise level, are pre-configured out of the box, and boast a modern and compact design.

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Three-way Mixing Valves

1/2 to 1-inch



Powermite MT Series
Three-way Globe Valve

A-151

Valves

Description

The Powermite MT Series Three-way Globe Valves are designed to work with either a pneumatic or electronic actuator with a 7/32-inch (5.5 mm) stroke.

Features

- Direct-coupled universal bonnet
- No tools required for installation
- Choice of brass or stainless-steel trim
- ANSI Leakage Class IV (0.01% of Cv)
- ANSI Class 250 body
- Available in 3 to 8 psig, 8 to 13 psig or 10 to 15 psig spring ranges with pneumatic actuation
- Interchangeable pneumatic or electronic actuators
- Orderable as valve only or complete valve/actuator assembly

Applications

The Powermite MT Series Three-way Globe Valves are used for mixing of hot or chilled water for convectors, fan coil units, unit conditioners, radiation, reheat coils, and similar terminal units requiring water mixing.

Recommendation:

Only use the MT Series Valve Actuators. When using this valve with a pneumatic actuator, note that MT valve bodies have the spring in the body, rather than the actuator. To order the correct valve body, select the proper spring range.

Alternate spring ranges for pneumatic sequencing are available as valve and actuator factory assemblies only.

Specifications

Valve Size	1/2 to 1" (15 to 25 mm)
Body Style	Globe
Seat Style	Metal to Metal
Action	Three-way Mixing
Valve Body Rating	ANSI Class 250
Stem Travel (Stroke)	7/32" (5.5 mm)
Materials	
Body	Forged Brass C37700 (1/2 and 3/4 inch) or UNS CA 844 Bronze (1 inch)
Trim	Stainless Steel or Brass
Stem	Stainless Steel ASTM A582 Type 303
Packing	EPDM O-rings
Spring Ranges	
Standard	8 to 13 psig
Optional	3 to 8 psig (21 to 55 kPa) 10 to 15 psig (69 to 103 kPa)
Controlled Medium	Water, Low Pressure Steam less than 15 Psi, Glycol Solutions up to 50%
Medium Temperature Range	35° to 250°F (2° to 120°C)

Max. Recommended Differential Pressure for Modulating Service

Brass Trim	25 PSI (173 kPa)
Stainless-steel Trim	50 PSI (345 kPa)
Steam Stainless-steel Trim	15 PSI (103 kPa)

Rangeability

Cv<1	>50:1
Cv≥1	>100:1

Close-off Ratings According to ANSI/FCI 70-2

Leakage Rate Class IV (0.01% of Cv)

Flow Characteristics

A→AB	Modified Equal Percentage
B→AB	Linear

Mounting Location NEMA 1 (interior only)

Refer back to the Selection Charts at the beginning of this section to make sure the configuration is valid.

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Valves

Valve Product Ordering



Valve Size		Flow Rate		Stroke (in.)	Part No.
in.	(mm)	Cv	(Kvs)		
Brass Trim					
1/2	(15)	0.4	(0.34)	7/32	599-02064
1/2	(15)	0.63	(0.54)	7/32	599-02065
1/2	(15)	1	(0.85)	7/32	599-02066
1/2	(15)	1.6	(1.37)	7/32	599-02067
1/2	(15)	2.5	(2.14)	7/32	599-02068
1/2	(15)	4	(3.42)	7/32	599-02069
3/4	(20)	6.3	(5.38)	7/32	599-02070
1	(25)	10	(8.55)	7/32	599-02071
Stainless-steel Trim					
1/2	(15)	0.4	(0.34)	7/32	599-02072
1/2	(15)	0.63	(0.54)	7/32	599-02073
1/2	(15)	1	(0.85)	7/32	599-02074
1/2	(15)	1.6	(1.37)	7/32	599-02075
1/2	(15)	2.5	(2.14)	7/32	599-02076
1/2	(15)	4	(3.42)	7/32	599-02077
3/4	(20)	6.3	(5.38)	7/32	599-02078
1	(25)	10	(8.55)	7/32	599-02079

There are no repair parts for this product. Replace the entire valve body if inoperative.

Actuator Product Ordering

Description			Part No.	Actuator Prefix Code
 2"	Pneumatic*	3-8 PSI (21-55 kPa)	599-01088	257
		8-13 PSI (55-90 kPa)	599-01088	—*
		10-15 PSI (69-103 kPa)	599-01088	—*
	Electro-Mechanical	24 V, Floating, Spring Return	S55155-A109 (SSC131.39U)	260
		24 V, Floating, Non-Spring Return	S55155-A108 (SSC131.09U)	259
		24 V, 0-10 V, Spring Return	S55155-A111 (SSC161.35U)	262
		24 V, 0-10 V, Non-Spring Return	S55155-A110 (SSC161.05U)	261
	Electro-Mechanical	24 V, Floating, Spring Return	SAS81.33U	366
		24 V, Floating, Non-Spring Return	SAS81.03U	363
		24 V, 0-10 V, Spring Return	SAS61.33U	365
		24 V, 0-10 V, Non-Spring Return	SAS61.03U	364

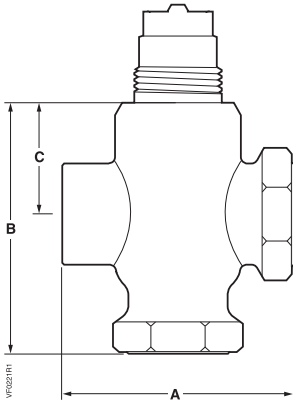
Table Notes:

*Powermite MT Series valve bodies have the spring in the body, rather than in the pneumatic actuator. There are different valve part numbers for the different spring ranges.

Not available as an assembly. Valve and actuator sold separately and will have to be assembled in the field.

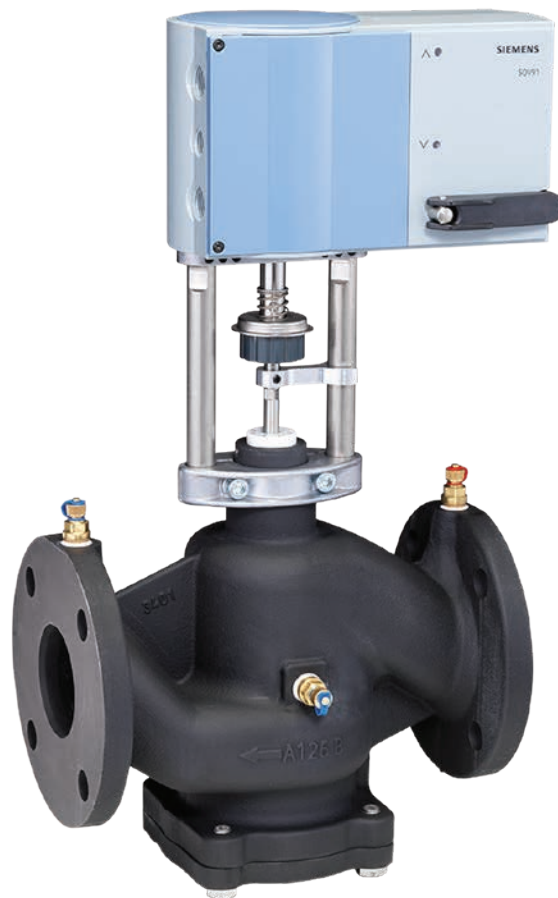
Dimensions and Weights

Valve Size in.	Dimensions			Weight
	A	B	C	
1/2" (15 mm)	2-3/4" (70 mm)	2-15/16" (74 mm)	1-5/16" (33 mm)	1.5 lb. (0.7 kg)
3/4" (20 mm)	3-1/4" (83 mm)	2-3/8" (59 mm)	1-5/16" (33 mm)	2.3 lb. (1.05 kg)
1" (25 mm)	3-7/8" (98 mm)	3-15/16" (99 mm)	1-9/16" (39 mm)	3.3 lb. (1.5 kg)





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on valves and actuators.



A-154

An easier delta-T solution featuring one device with three integrated functions

Siemens PICVs have the unique advantage of always maintaining their full stroke, regardless of the maximum adjustable flow setting, to provide better control. This significantly reduces or eliminates hunting for the right actuator setting, resulting in better control and increased comfort. With Siemens PICVs, there are less components, less installation effort, and fewer leak points, which lead to fewer callbacks.

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Two-inch Pneumatic Valve Actuator



Powermite MT Series
Two-inch Pneumatic Valve Actuator

A-155

Valves

Description

The Powermite Two-inch Pneumatic Valve Actuator is designed for use with the 1/2 to 1-inch Powermite MT Series Terminal Unit Valves with a 7/32-inch (5.5 mm) stroke.

Features

- Low profile
- Freely rotates to aid tubing installation
- Easy installation and removal
- All metal housing
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

The Powermite Two-inch Pneumatic Valve Actuator is designed to be used on 1/2 to 1-inch Powermite Terminal Unit Valves in liquid and steam service applications.

The pneumatic actuator relies on the spring inside the bonnet assembly of the MT Series valve bodies to return to the “normal” position.

Recommendation:

Use only for MT Series valve bodies, 1/2 to 1-inch only.

Specifications

Effective Diaphragm Area	3.4 in. ² (22 cm ²)
Diaphragm Material	Silicone
Nominal Spring Range	Valve Dependent
Span	5 PSI (34 kPa)
Nominal Stroke	7/32" (5.5 mm)
Max. Diaphragm Pressure	35 psig (241 kPa)
Air Connection	1/8" NPT Barbed Fitting for 1/4" (6 mm) OD Polyethylene Tubing
Ambient Temperature	
Transportation	-40° to 180°F (-40° to 82°C)
Mounting Location	NEMA 1 (Interior Only)

Product Ordering

Description	Part No.	Actuator Prefix Code
3-8 psig (21-55 kPa)	599-01088	257
8-13 psig (55-90 kPa)	599-01088	258
10-15 psig (69-103 kPa)	599-01088	256

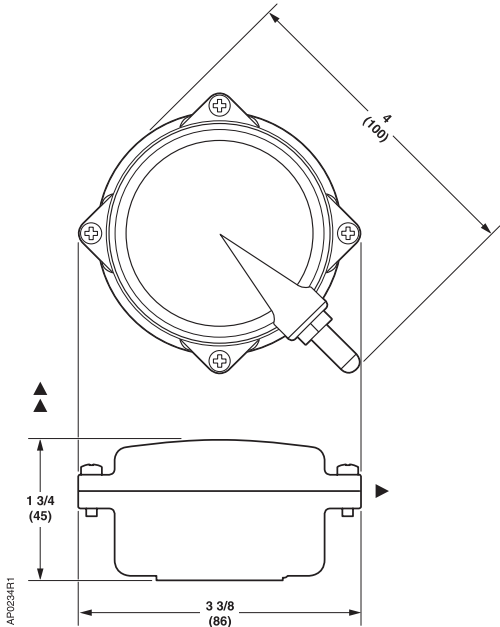
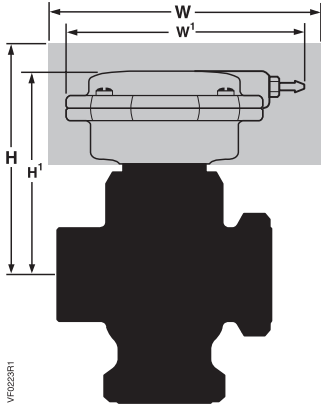
Ordering Note:
Spring is inside bonnet assembly of valve body. Use the Valve Selection Charts at the front of this section on pages A-24 and A-27 to determine spring range.

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Dimensions

Valve Size in.	Center Line to Top of Actuator	Service Height	Actual Width	Service Width
H'	H	W'	W	
1/2" (15 mm)	3-1/16" (78 mm)	11" (280 mm)	4" (100 mm)	10" (250 mm)
3/4" (20 mm)	3-1/16" (78 mm)	11" (280 mm)	4" (100 mm)	10" (250 mm)
1" (25 mm)	3-5/16" (84 mm)	11-1/4" (285 mm)	4" (100 mm)	10" (250 mm)

Table Notes:
Service height and width are the recommended dimensions to allow access to the product.



Dimensions shown in inches (mm)

SSC Electronic Valve Actuator

*24 Vac, Floating Control
Fail-Safe or Fail-in-Place*



SSC131.39U Electronic Valve Actuator

A-157

Valves

Description

The Powermite SSC131._U Electronic Valve Actuators require a 24 Vac supply and receive a floating control signal. This actuator controls Powermite MT Series Valves with a 7/32-inch (5.5 mm) stroke.

Features

- UL listed for plenum installations
- Direct coupled, one step installation without special tools
- Close off up to 120 PSI
- Manual override
- Visual LED motion and position indication
- Fail-in-place or Fail-safe operation
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

The Powermite SSC131._U Electronic Actuators and MT Series Valves are used in heating and cooling applications in liquid and low pressure steam (<15 PSI) applications requiring a minimum of 67 lbs. (300 N) nominal force. The SSC131._U accepts plenum cable or standard 1/2-inch threaded conduit connection.

Specifications

Operating Voltage	24 Vac $\pm$ 20%
Frequency	50/60 Hz $\pm$ 2 Hz
Power Supply	Earth Ground Isolating, Class 2, 24 Vac Transformer
Power Consumption	
SSC131.09U	1 VA
SSC131.39U	3 VA
Control Signal	
Y2	24 Vac Retracts Actuator Shaft
Y1	24 Vac Extends Actuator Shaft
Running Time	
SSC131._U	88 sec $\pm$ 25 %
Fail-safe	< 30 sec
Nominal Stroke	7/32-inch (5.5 mm)
Nominal Force	67 lbs. (300N)

Fail-safe Non-mechanical, Electronic Return
Fails to Stem up (0 Position)

Agency Certifications

EMC Directive 2014/30/EU
UL listed UL as per UL 60730-1, UL 60730-2-14
..... cUL as per CSA – CAN E60730-1, E730-2-14

Media Temperature in Valve 35° to 248° F (2° to 120° C)

Ambient Temperature

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

Ambient Humidity 5 to 95% RH, Non-condensing

Wiring Connection Plenum Cable or
1/2-inch threaded conduit connection

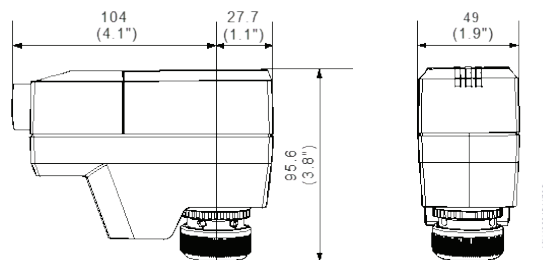
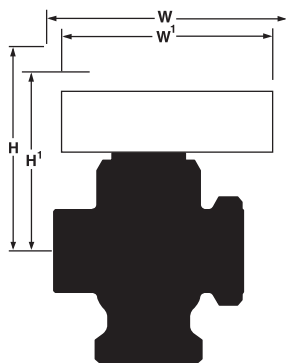
Mounting Location NEMA 2 (Interior Only)

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Product Ordering

Description	Part No.	Actuator Prefix Code
Fail-in Place	S55155-A108 (SSC131.09U)	259
Fail-Safe	S55155-A109 (SSC131.39U)	260

Dimensions



Dimensions shown in inches (mm)

Valve Size in.	Center Line to Top of Actuator	Service Height	Actual Width of Actuator	Service Width
	H'	H	W'	W
1/2" (15 mm)	5" (125 mm)	13" (330 mm)	5.2" (132 mm)	13.2" (335 mm)
3/4" (20 mm)	5" (125 mm)	13" (330 mm)	5.2" (132 mm)	13.2" (335 mm)
1" (25 mm)	5.2" (131 mm)	13.2" (335 mm)	5.2" (132 mm)	13.2" (335 mm)

Table Notes:

Service height and width are the recommended dimensions to allow access to the product.

SSC Electronic Valve Actuator

*24 Vac/dc, Proportional Control
Fail-Safe or Fail-in-Place*



SSC161...U Electronic Valve Actuator

A-159

Valves

Description

The Powermite SSC161.05U and SSC161.35U Electronic Valve Actuators require a 24 Vac/dc supply and receive a 0 to 10 Vdc control signal to control Powermite MT series valves with a 7/32-inch (5.5 mm) stroke and a threaded valve bonnet that fits the actuators.

Features

- UL listed for plenum installations
- Direct coupled, one step installation without special tools
- Close off up to 120 PSI
- Manual override
- Self-calibrating to stroke of valve
- Visual LED motion and position indication
- Spring return or non-spring return
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

The Powermite SSC161... electronic actuators and MT Series Valves are used in heating and cooling applications to control hot or chilled water or low pressure steam (<15 PSI) for convectors, fan coil units, unit conditioners, radiation, reheat coils and similar terminal units requiring a minimum of 67 lbs. (300 N) nominal force. The SSC161... accepts a standard 1/2 inch threaded conduit fitting connection.

Specifications

Operating Voltage	24 Vac ($\pm 15\%$) or 24 Vdc ($\pm 20\%$)
Frequency	50/60 Hz
Power Supply	Earth Ground Isolating Class 2, 24 Vac Transformer
Power Consumption	Normal operation 3.5 VA (ac), 1.5W (dc)
Control Signal (Y)	
Voltage	0 to 10 Vdc
Input Impedance.....	100 kOhm
Running Time	
at 50/60 Hz.....	27.5 sec ($\pm 25\%$)
Fail-safe	<30 sec
Nominal Stroke	7/32" (5.5 mm)
Nominal Force	67 lbs. (300 N)

Stroke/Signal Relationship	Linear
Spring Return (SSC161.35U only)	Non-mechanical, Electronic Return Fails to Stem up (0 Position)
Agency Approvals	UL/cUL 67030 Listed
Media Temperature in Valve	34° to 248° F (1° to 120° C)
Ambient Temperature	
Operation.....	34° to 122°F (1° to 50°C)
Transport and Storage	-13° to 158°F (-25° to 70°C)
Ambient Humidity	5 to 95% RH, Non-condensing
Wiring Connection	Plenum Cable or 1/2-inch threaded conduit fitting
Protection Rating.....	NEMA 2/IP20

A-160

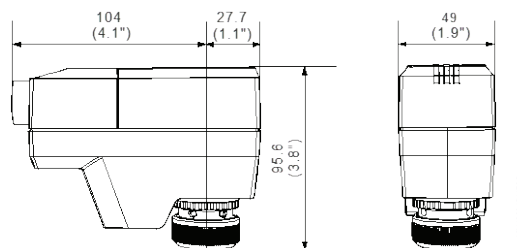
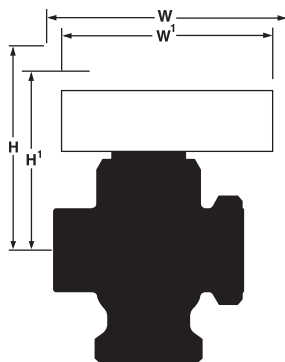
Product Ordering

Description	Part No.	Actuator Prefix Code
Fail-in Place	S55155-A108 (SSC131.09U)	259
Fail-Safe	S55155-A109 (SSC131.39U)	260

Product Ordering

Description	Part No.	Actuator Prefix Code
Fail-Safe	S55155-A111 (SSC161.35U)	262
Fail-in-Place	S55155-A110 (SSC161.05U)	261

Dimensions



Dimensions shown in inches (mm)

Valve Size in.	Center Line to Top of Actuator H'	Service Height H	Actual Width of Actuator W'	Service Width W
1/2" (15 mm)	5" (125 mm)	13" (330 mm)	5.2" (132 mm)	13.2" (335 mm)
3/4" (20 mm)	5" (125 mm)	13" (330 mm)	5.2" (132 mm)	13.2" (335 mm)
1" (25 mm)	5.2" (131 mm)	13.2" (335 mm)	5.2" (132 mm)	13.2" (335 mm)

Table Notes:

Service height and width are the recommended dimensions to allow access to the product.

SAS Electronic Valve Actuator

*24 Vac, Proportional Control
Spring Return or Non-Spring Return*



Powermite MT Series SAS Spring Return
Electronic Valve Actuator



Powermite MT Series SAS Non-Spring Return
Electronic Valve Actuator

A-161

Valves

Description

The Powermite SAS Electronic Valve Actuators require a 24 Vac supply and receive a 0 to 10 Vdc or a 4 to 20 mA control signal to proportionally control a valve. This actuator is designed to work with Powermite MT Series Valves with a 7/32-inch (5.5 mm) stroke.

Features

- Maintenance-free with reversible motor
- UL listed for plenum installations
- Close off up to 160 PSI
- Position output signal 0 to 10 Vdc
- Non-spring return or spring return
- Small, compact design
- Manual adjustment knob with indication of stroke allows for repositioning in power-off condition
- Mechanical spring allows the valve to return to normal position in power-off condition (SAS61.33U actuator only)
- Suitable for low pressure (<15 PSI) steam applications
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

For use in small to medium HVAC installations with Powermite valves with a 7/32-inch (5.5 mm) stroke requiring a minimum of 90 pounds force (400 N). These valves can be used in liquid and low pressure (<15 PSI) steam service applications.

Recommendation:

Use only with the MT Series valve bodies. This actuator is not recommended for 2-position or pulse applications.

Specifications

Operating Voltage 24 Vac, ±20%; 24 Vdc, +20%/-15%
Frequency 45 to 65 Hz
Power Supply Earth Ground Isolating, Class 2, 24 Vac Transformer
Do not power more than 10 actuators with one transformer.
Power Consumption (Max.)
SAS61.03U 5.3 VA
SAS61.33U 5.9 VA
Control Signal (Y) 0 to 10 Vdc, 4 to 20 mA
Current Draw ≤0.1 mA for 0 to 10 Vdc control
4 to 20 mA ± 1% for 4 to 20 mA control
Input Impedance >100K ohms
Position Feedback (U)
Voltage 0 to 10 Vdc ± 1%
Load impedance >10K Ω res.
Current load 1 mA max.
Forced control (Z)
Resistance 0 to 1000Ω, stroke proportional to R
Z connected to G Max. stroke 100%
Z connected to G0 Min. stroke 0%
Voltage Max. 24 Vac to 20%,
Max 24 Vdc+20%,-15%
Current draw ≤0.1 mA

Running Time
at 60 Hz 30 sec.
Spring Return (SAS61.33U only) <14 sec.
Nominal Stroke 7/32" (5.5 mm)
Nominal Force 90 lbf. (400 N)
Agency Approvals UL/cUL, UL 873
CSA C22.2 No. 24-93
Media Temperature in Valve 34° to 248° F (1° to 120° C)
Ambient Temperature
Operation 23° to 131°F (-5° to 55°C)
Transport and Storage -13°F to 158°F (-25°C to 70°C)
Ambient Humidity 5 to 95% RH, Non-condensing
Wiring Connection Plenum Cable or Conduit via a 1/2" Knockout
Mounting Location NEMA 1 (Interior Only)

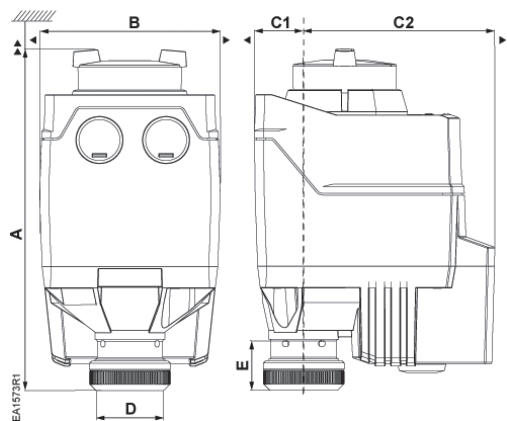
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Valves

Product Ordering

Description	Part No.	Actuator Prefix Code
Spring Return	SAS61.33U	365
Non-Spring Return	SAS61.03U	364

SAS Series Spring Return Actuator

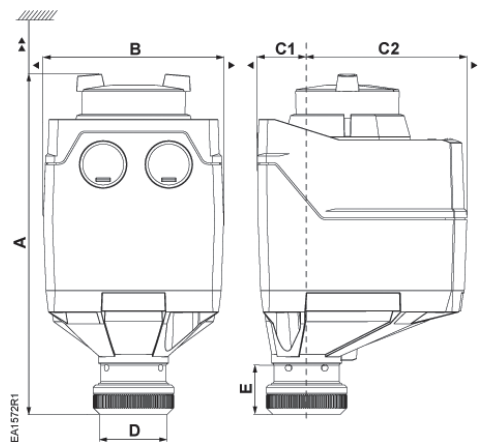


Dimensions shown in inches (mm)

Dimensions							
A	B	C1	C2	D	E	►	►►
5.9 (151 mm)	3.1 (80 mm)	0.9 (21.9 mm)	3.3 (84.6 mm)	1.2 (29.9 mm)	0.9 (21.8 mm)	4 (100 mm)	8 (200 mm)

Table Notes: **Service envelope** Minimum access space recommended
 ► 4 inch (100 mm) ►► 8 inch (200 mm)

SAS Series Non-Spring Return Actuator



Dimensions shown in inches (mm)

Dimensions							
A	B	C1	C2	D	E	►	►►
5.9 (151 mm)	3.1 (80 mm)	0.9 (21.9 mm)	2.8 (71.1 mm)	1.2 (29.9 mm)	0.9 (21.8 mm)	4 (100 mm)	8 (200 mm)

Table Notes: **Service envelope** Minimum access space recommended
 ► 4 inch (100 mm) ►► 8 inch (200 mm)



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SIEMENS

SAS Electronic Valve Actuator

24 Vac, Floating Control

Spring Return or Non-Spring Return



Powermite MT Series SAS Spring Return
Electronic Valve Actuator



Powermite MT Series SAS Non-Spring Return
Electronic Valve Actuator

A-165

Description

The Powermite SAS Electronic Valve Actuators require a 24 Vac supply and receive a floating signal to provide three-position control of a valve. This actuator is designed to work with Powermite MT Series Valves with a 7/32-inch (5.5 mm) stroke.

Features

- Maintenance-free with reversible motor
- Small compact design
- UL listed for plenum installations
- Close off up to 160 PSI
- Non-spring return or spring return
- Floating control signal input
- Manual adjustment knob with indication of stroke allows for repositioning in power off condition
- Mechanical spring returns the valve to its normal (spring return) position in power off condition (SAS81.33U only)
- Suitable for liquid and low pressure (15 PSI) steam applications
- Orderable as an actuator only or as a complete valve/actuator assembly

Applications

For use in small to medium HVAC installations with Powermite valves with a 7/32-inch (5.5 mm) stroke requiring a minimum of 90 pounds force (400 N). These valves can be used in liquid and low pressure (<15 PSI) steam service applications.

Recommendation:

Use only with the MT Series valve bodies. This actuator is not recommended for 2-position or pulse applications.

Valves

Specifications

Operating Voltage 24 Vac, ±20%; 24 Vdc, +20%/-15%
Frequency 45 to 65 Hz
Power Supply Earth Ground Isolating, Class 2, 24 Vac Transformer
Do not power more than 10 actuators with one transformer.
Power Consumption (Max.)
SAS81.03U 2.5 VA
SAS81.33U 3.4 VA
Control signal Floating (3-position)
Y1 Positioning signal extends actuator stem
Y2 Positioning signal retracts actuator stem
Running Time
at 60 Hz 30 sec.
Spring Return (SAS81.33U only) <14 sec.

Nominal Stroke 7/32" (5.5 mm)
Nominal Force 90 lbf. (400 N)
Agency Approvals UL/cUL, UL 873
CSA C22.2 No. 24-93
Media Temperature in Valve 34° to 248° F (1° to 120° C)
Ambient Temperature
Operation 23° to 131°F (-5° to 55°C)
Transport and Storage -13° to 158°F (-25° to 70°C)
Ambient Humidity 5 to 95% RH, Non-condensing
Wiring Connection Plenum Cable or Conduit via a 1/2" Knockout
Mounting Location NEMA 1 (Interior Only)

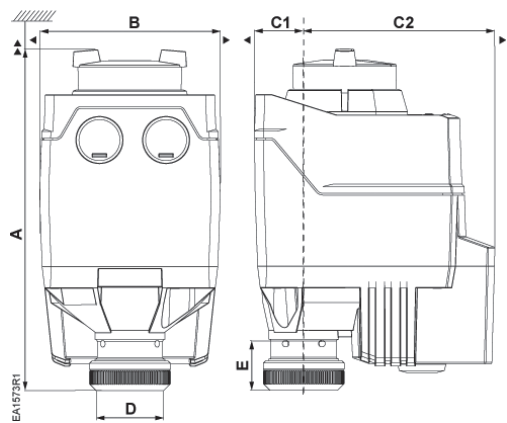
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Valves

Product Ordering

Description	Part No.	Actuator Prefix Code
Spring Return	SAS81.33U	366
Non-Spring Return	SAS81.03U	363

SAS Series Spring Return Actuator

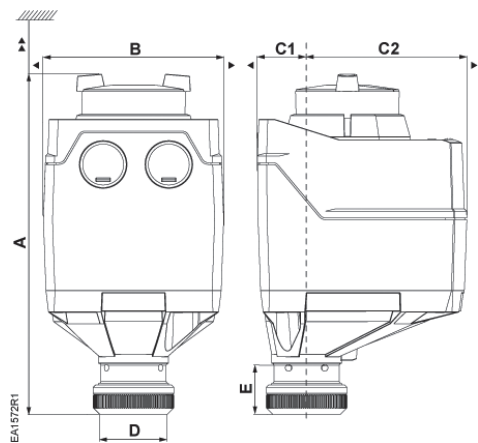


Dimensions shown in inches (mm)

Dimensions							
A	B	C1	C2	D	E	►	►►
5.9 (151 mm)	3.1 (80 mm)	0.9 (21.9 mm)	3.3 (84.6 mm)	1.2 (29.9 mm)	0.9 (21.8 mm)	4 (100 mm)	8 (200 mm)

Table Notes: **Service envelope** Minimum access space recommended
 ► 4 inch (100 mm) ►► 8 inch (200 mm)

SAS Series Non-Spring Return Actuator



Dimensions shown in inches (mm)

Dimensions							
A	B	C1	C2	D	E	►	►►
5.9 (151 mm)	3.1 (80 mm)	0.9 (21.9 mm)	2.8 (71.1 mm)	1.2 (29.9 mm)	0.9 (21.8 mm)	4 (100 mm)	8 (200 mm)

Table Notes: **Service envelope** Minimum access space recommended
 ► 4 inch (100 mm) ►► 8 inch (200 mm)

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