



## S03, S05 Series Low-Torque Spring- Return Direct-Coupled Actuators

S0324, S03230, S03010, S0524, S05230, S05010

S03 and S05 Series Low-Torque Spring-Return Direct-Coupled Actuators (DCA) are used within heating, ventilating, and air-conditioning (HVAC) systems. They can drive a variety of quarter-turn, final control elements requiring spring return fail-safe operation.

### SPECIFICATION DATA

### APPLICATIONS

- Volume control dampers, mounted directly to the drive shaft or remotely (with the use of accessory hardware).
- Quarter-turn rotary valves, such as ball or butterfly valves mounted directly to the drive shaft.

### SPECIFICATIONS

**Models:**

☐ See Table 1.

**Device Weight:**

☐ 1.60 kg

**Ambient Operating Temperature:**

☐ -40° to +65°C

☐ -30° to +65°C (Two-position only)

**Shipping and Storage Temperature:**

☐ -40° to +65°C

Table 1. Models.

OS#	Torque	Control Signal	Power Supply and Frequency	Switch	Drive Timing	VA Driving
S0324-2POS	3Nm	Two-Position SPST	24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	0	45 sec	7 VA
S0324-2POS-SW1			24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	1	45 sec	7 VA
S03230-2POS			120/230 Vac @ 50/60 Hz, +/-10%	0	45 sec	13 VA
S03230-2POS-SW1			120/230 Vac @ 50/60 Hz, +/-10%	1	45 sec	13 VA
S03010		(0)2-10 Vdc, Floating (3-pt.)	24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	0	90 sec	7 VA
S03010-SW1			24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	1	90 sec	7 VA
S0524-2POS	5Nm	Two-Position SPST	24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	0	45 sec	8 VA
S0524-2POS-SW1			24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	1	45 sec	8 VA
S05230-2 POS			120/230 Vac @ 50/60 Hz, +/-10%	0	45 sec	14 VA
S05230-2 POS-SW1			120/230 Vac @ 50/60 Hz, +/-10%	1	45 sec	14 VA
S05010		(0)2-10 Vdc, Floating (3-pt.)	24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	0	90 sec	8 VA
S05010-SW1			24Vac @ 50/60 Hz, +/-20% 24Vdc +/-10%	1	90 sec	8 VA



## S03, S05 SERIES LOW-TORQUE SPRING- RETURN DIRECT-COUPLED ACTUATORS

### Humidity Ratings:

- ❑ 5% to 95% R.H., Non-Condensing

### Electrical Connections:

- ❑ Field wiring 0.5 mm<sup>2</sup> to 1.5 mm<sup>2</sup> conductors (stranded or solid) and up to 2 - 1.5 mm<sup>2</sup> conductors (stranded) to screw terminals, located under the removable access cover.

### Auxiliary Switch (One SPDT):

- ❑ Switch adjustable from 0-95°
- ❑ 500 uA Resistive at 5 Vdc (min.)
- ❑ 250 Vac, 8 A resistive, 5 A inductive (max.)

### Mounting: Self-centering shaft adapter (shaft coupling):

- ❑ Round damper shafts: 9 to 16 mm
- ❑ Square damper shafts: 6 to 13 mm

### Minimum Damper Shaft Length:

- ❑ 25 mm; 76 mm recommended.

### Spring Return Timing (at rated load):

- ❑ < 25 seconds @ -20°C to +65°C
- ❑ < 60 seconds @ -30°C

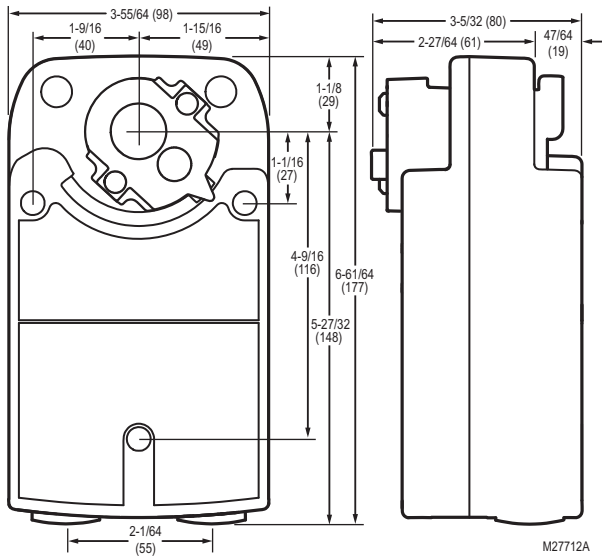


Fig. 1. Dimensional drawing of actuator in inches (mm).

**Stroke:** 95° ±3°, mechanically limited.

### Approvals:

- ❑ UL873
- ❑ IEC 60730-1 and Part 2-14
- ❑ UL1097 for Double Insulation
- ❑ CE Certification Low Voltage Directive 2006/95/EC
- ❑ CE EMC 2004/108/EC
- ❑ C-Tick N314

### Enclosure Ratings:

- ❑ IP54
- ❑ NEMA 2
- ❑ Flame Resistance UL94-5VA

### Input Impedance:

- ❑ 95 kOhms (min.)

### Feedback Signal:

- ❑ 0(2)-10 Vdc, 3 mA (min.)

### Noise Rating at 1m (Max.):

- ❑ Driving
  - ❑ Floating/Modulating/Econ: < 40 dB(A)
  - ❑ 2-Position: < 50 dB(A)
- ❑ Spring Return: < 60 dB(A)

### Accessories:

- ❑ STRN-STRNRLF Water-tight Cable Gland/Strain-relief Fitting (10 pack)

### Lifetime:

- ❑ 60,000 cycles and 1.5 million repositions

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