

Direct Coupled, Spring Return Actuators, 135 in-lb



DESCRIPTION

Electronic, motor-driven, reversible, noiseless, direct coupled spring return actuators with fail-safe control.

GA-SRP135-024

Spring Return

2-10 VDC, or 4-20 mA*

APPLICATION

Actuators may be easily installed by direct shaft mounting on air dampers, shutters and butterfly valves in ventilation and air conditioning systems. The mechanical spring return function operates only upon a power failure or power interruption caused by an unsafe condition. Can be controlled by any compatible electric or electronic analog controller, DDC/PLC control or automation system.



CE
ISO 9001



FEATURES

- *Direct coupled, easy to install*
- *Feedback signal*
- *Optional aux. switches*
- *Manual override*
- *Overload protected*
- *Tested for 60,000+ full operations including safety strokes for mechanical spring return*
- *Maintenance-free*
- *Five-year warranty*

SPECIFICATIONS

Control

Input signal	Proportional 2-10 VDC, or 4-20 mA *w/500 Ω resistor
Input impedance	100 kΩ
Feedback signal	2-10 VDC, 0.5 mA

Electrical

Power supply	24 VAC/VDC ± 20%, 50/60 Hz
Over voltage	Up to 40 V, max. 5 sec.
Power consumption	7.0 W (9.0 VA)
- holding	4.0 W

Performance

Torque	135 in-lb (15 Nm)
Damper size	Up to 34 sq. ft. (3.0 m ²)
Angle of rotation	100° (-5 to 95°)
- direction	Spring return can be selected by CCW/CW mounting

Rotation time

- actuator rotation	< 150 sec/0-90°
- spring return	< 20 sec/90-0°
Power failure	Spring return to -5° position

Position indicator

Synchronization	± 1%
Overload protection	Electronic throughout rotation
Manual override	3 mm hex crank, shipped w/actuator

Noise level

- motor	Max. 50 dB(A)
- spring return	Max. 62 dB(A)

Environmental

Permissible ambient	
- working temperature	-22°F to 122°F (-30°C to 50°C)
- storage temperature	-40°F to 176°F (-40°C to 80°C)
- humidity	5-95% RH, non-condensing

Physical

Enclosure	Zinc coated steel
- cover plates	PA 6.6
- base	Silver and black
- color	NEMA 2
- protection	Any position
Mounting position	Included w/actuator
Anti-rotation bracket	Refer to table
Stacking/paralleling	"Multiple Actuators"
Clamp connection to	
- round shaft	Ø 3/8" to 3/4" (9 to 20 mm)
- square shaft	□ 3/8" to 5/8" (9 to 16 mm)
Wire connection	3 ft. (0.9 m) appliance cable, color coded
- option, on request	Plenum rated cable
Wire size	18 AWG (0.75 mm ²)
Conduit connector	1/2", built-in
Dimensions	9.84 x 3.86 x 2.28 in. (250 x 98 x 58 mm)

Weight

Weight	4.4 lbs. (2.0 kg)
Manufacturing	ISO 9001 certified
Listings/Approvals	CE

Warranty

Warranty	UL and CSA
	Five-year material and workmanship (Two-year standard, three-year conditional)

OPTIONS

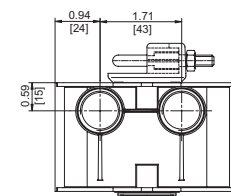
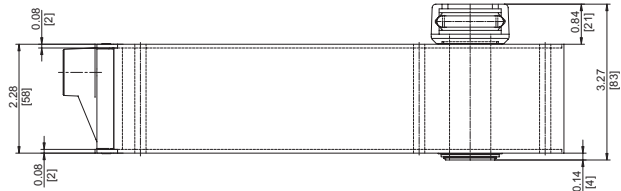
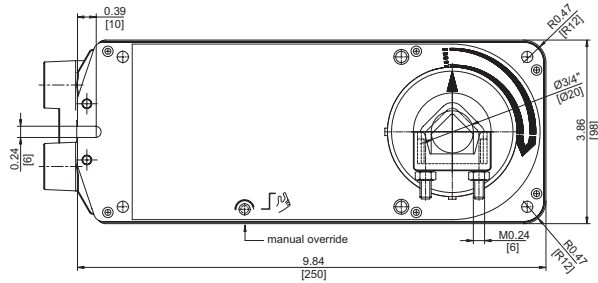
- **S2** (2) Aux. switches built-in SPDT 250 VAC, 5 (2.5) A, position adj. between 0-72° and 18-90°, incl. 3 ft. (0.9 m) appliance cable, number coded, and 1/2" conduit connector

ORDERING INFORMATION

- GA-SRP135-024** Standard
- GA-SRP135-024-S2** w/(2) Aux. switches

DIMENSIONS

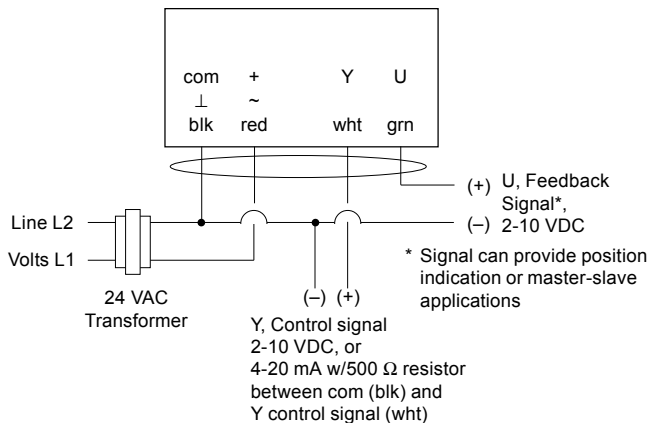
inches (mm)



Note: Anti-rotation mounting bracket and 3 mm hex crank for manual override supplied w/actuator

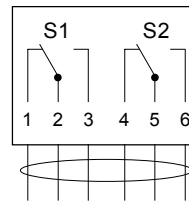
WIRING CONFIGURATION

GA-SRP135-024 Proportional control



- Notes:
- Actuators are provided with color coded wires. Wires for optional switches are number coded.
 - Observe polarity on secondary of transformers. All common and signal (-) must be connected in line. Incorrect polarity can cause controller damage or operation error.
 - Long wire runs requires a 4-wire configuration (connect common for power and control signal at the actuator or close by). Greater than a 0.2 V drop must be avoided for any common wire.
 - Always use a separate transformer when controller power is full-wave rectified.
 - Controller and actuators must have separate transformers for paralleled multi-actuator application.
 - Provide overload protection for line voltage and disconnect as required.
 - Power supply and auxiliary switch connections meet UL and CSA requirements without the need of an electrical ground connection.

Option S2



(2) Auxiliary switches, SPDT, 250 VAC, 5 (2.5) A, w/ adjustable cam for setting between 0-72° and 18-90°
Factory set: S1 @ 4.5°
S2 @ 72.0°

Selection of direction, Spring return CCW or CW mounted

Pos. of Select.	Angle of Rotation	Proportional Control Signal Y
CW	0 - 90°	2-10 VDC
CCW	90 - 0°	2-10 VDC

Multiple Actuators (maximum quantities)	GA-SRP135-024 Proportional
Stacking (torque is additive)	4*
Parallel connection, 2-10 VDC	20
Parallel connection, 4-20 mA, w/500 Ω resistor	10
Master-slave, via U, feedback signal	10

* Stacking options for continuous control
Sum of total torque:
2 actuators = (2 x 100%)
3 actuators = (2 x 100%) + (1 x 80%)
4 actuators = (2 x 100%) + (1 x 80%) + (1 x 50%)