

# Direct Coupled, Spring Return Actuators, 135 in-lb



## DESCRIPTION

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

## 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.

## FEATURES

- *Direct coupled, easy to install*
- *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 On/Off, 2-wire

### Electrical

Power supply

- GA-SRO135-120 120 VAC ± 15%, 50/60 Hz
- GA-SRO135-230 230 VAC ± 15%, 50/60 Hz
- GA-SRO135-024 24 VAC/VDC ± 20%, 50/60 Hz

Over voltage Up to 40 V, max. 5 sec.

Power consumption

- GA-SRO135-120 holding 10.0 W (12.0 VA)  
7.0 W
- GA-SRO135-230 holding 9.0 W (10.0 VA)  
7.0 W
- GA-SRO135-024 holding 6.0 W (8.0 VA)  
4.0 W

### Performance

- Torque 135 in-lb (15 Nm)
- Damper size Up to 34 sq. ft. (3.0 m<sup>2</sup>)
- 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 Visual scale

Synchronization ± 1%

Electrical protection for GA-SRO135-120/230 Double insulated

Overload protection Electronic throughout rotation

Manual override 3 mm hex crank, shipped w/actuator

Motor type DC motor

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

- cover plates Zinc coated steel
- base PA 6.6
- color Silver and black
- protection NEMA 2
- Mounting position Any position
- Anti-rotation bracket Included w/actuator
- Stacking/paralleling Refer to table  
"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

Wire size

- Conduit connector 18 AWG (0.75 mm<sup>2</sup>)
- Dimensions 1/2", built-in  
9.84 x 3.86 x 2.28 in.  
(250 x 98 x 58 mm)

Weight 4.4 lbs. (2.0 kg)

### Manufacturing

### Listings/Approvals

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

### Warranty

## GA-SRO135-120(230,024) Spring Return On/Off



CE  
ISO 9001



# GA-SRO135-120(230/024)



## OPTIONS

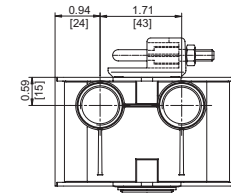
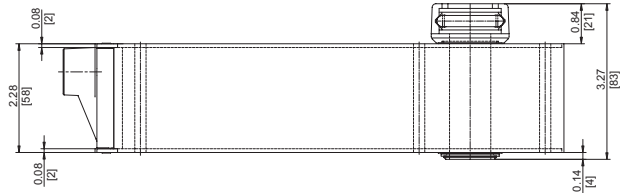
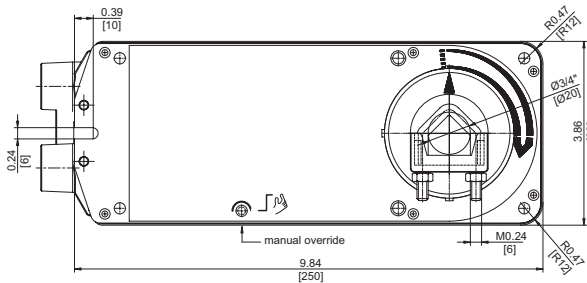
- **S2** (2) Aux. switches built-in SPDT 250 VAC, 5 (2.5) A, position adj. between 0-72° and 18-90°, incl. 3 ft. (0.9 m) appliance cable, number coded, and 1/2" conduit connector

## ORDERING INFORMATION

- GA-SRO135-120** 120 VAC
- GA-SRO135-120-S2** 120 VAC, w/(2) Aux. switches
- GA-SRO135-230** 230 VAC
- GA-SRO135-230-S2** 230 VAC, w/(2) Aux. switches
- GA-SRO135-024** 24 VAC/VDC
- GA-SRO135-024-S2** 24 VAC/VDC, w/(2) Aux. switches

## DIMENSIONS

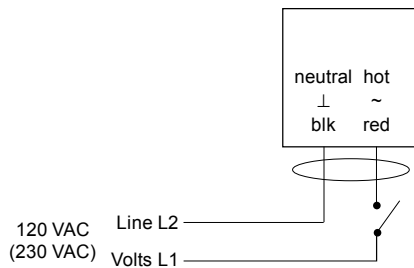
inches (mm)



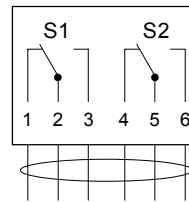
Note: Anti-rotation mounting bracket and 3 mm hex crank for manual override supplied w/actuator

## WIRING CONFIGURATION

### GA-SRO135-120(230) On/Off Control

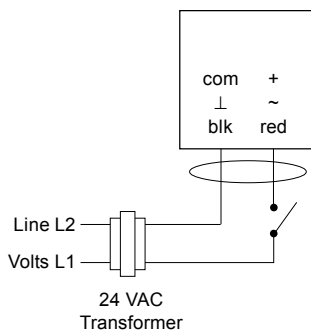


### Option S2



(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°

### GA-SRO135-024 On/Off Control



- Notes:
- Actuators are provided with color coded wires. Wires for optional switches are number coded.
  - Observe polarity on secondary transformers. Incorrect polarity can cause controller damage or operation error.
  - 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.

Multiple Actuators (maximum quantities)	GA-SRO135-120(230,024) On/Off
Stacking (torque is additive)	4*
Parallel connection	20

- \* 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%)