

## OpenAir™ GCA Series, Spring Return, 160 lb-in, Electronic Damper Actuators

### Description

The OpenAir GCA Series spring return, 160 lb-in (18 Nm) electronic damper actuators provide modulating, two-position and floating control of building HVAC dampers.



Product Number	Operating Voltage			Control			Cables		Built-in Control Options				
	24 Vac ± 20%	24 Vdc ± 10%	120 Vac ± 10%	0 to 10 Vdc	2 to 10 Vdc or 0 to 10 Vdc	Floating	2-position	Standard	Plenum	Position Feedback	Dual Auxiliary Switches	Signal Inversion	Offset 0 to 5 Vdc Span 2 to 30 Vdc
GCA121.1U	•	•					•	•					
GCA121.1P	•	•					•	•					
GCA126.1U	•	•					•	•		•			
GCA126.1P	•	•					•	•		•			
GCA221.1U			•				•	•					
GCA226.1U			•				•	•		•			
GCA131.1U	•	•				•		•					
GCA131.1P	•	•				•		•					
GCA132.1U	•	•				•		•	•				
GCA136.1U	•	•				•		•		•			
GCA136.1P	•	•				•		•		•			
GCA151.1U	•	•					•	•	•		•		
GCA151.1P	•	•					•	•	•		•		
GCA156.1U	•	•					•	•	•	•	•		
GCA156.1P	•	•					•	•	•	•	•		
GCA161.1U	•	•		•				•	•				
GCA161.1P	•	•		•				•	•				
GCA163.1U	•	•		•				•	•				•
GCA163.1P	•	•		•				•	•				•
GCA164.1U	•	•		•				•	•	•			•
GCA164.1P	•	•		•				•	•	•			•
GCA166.1U	•	•		•				•	•	•			•
GCA166.1P	•	•		•				•	•	•			•

### Features

- Brushless DC motor technology with stall protection
- Bi-directional fail-safe spring return
- Patented self-centering shaft coupling
- Models available with dual independently adjustable auxiliary switches
- All modulating models offer built-in feedback
- Floating control models available with feedback potentiometer
- All metal housing
- Manual override
- 5° preload as shipped from factory
- Mechanical range adjustment capability by moving shaft coupling to desired position
- Easily visible position indicator
- Precabled
- CE, UL60730, and cUL (C22.2 No. 24-93) listed

**Technical Data**

24 Vac, 120 Vac Torque: 160 lb-in (18 Nm) running and spring return  
 <360 lb-in (40 Nm) maximum

**NOTE:** At -25°F, spring return is 142 lb-in (16 Nm)

Runtime for 90°: 90 sec. operating,  
 15 sec. typical (30 sec. max.) closing on power loss

Frequency: 50/60 Hz

Power consumption: 7 VA/5W (24 Vac/dc; GCA12x, GCA13x)  
 Running: 7 VA/5W (24 Vac/dc, GCA15x)  
 7 VA/5W (24 Vac/dc GCA16x)  
 8 VA (120 Vac GCA22x)

Power consumption: 5 VA/3W (24 Vac/dc, GCA12x)  
 Holding: 5 VA/3W (24 Vac/dc, GCA13x, GCA15x)  
 5 VA (24 Vac/dc, GCA16x)  
 6 VA (120 Vac, GCA22x)

Equipment rating (24V): Class 2 per UL/CSA  
 Noise level: <45 dBA (running)  
 Angle of rotation: 90° nominal, 95° max.  
 Shaft dimensions: 3/8-in to 1-in (8 to 25.6 mm) dia.  
 1/4-in to 3/4-in (6 to 18 mm) sq.  
 3/4-in (20 mm) min. length

Operating temperature: -25°F to 130°F (-32°C to 55°C)  
 Storage temperature: -40°F to 158°F (-40°C to 70°C)

Ambient humidity: 95% rh (non-condensing)

Pre-cabled connection: 18 AWG, 3 ft (0.9 m) long

Enclosure: NEMA 2, IP54 per EN 60 529

Material: Die cast aluminum alloy

Agency listings: CE, UL60730, cUL C22.2 No. 24-93

Gear Lubrication: Silicone-free

Weight: 4.85 lb (2.2 kg)

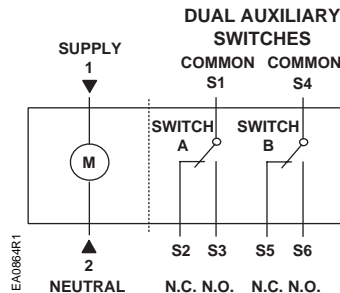
Dimensions: 11-13/16 in (300 mm) H  
 4-3/4 in (120 mm) W  
 2-7/8 in (72 mm) D

**Typical Specifications**

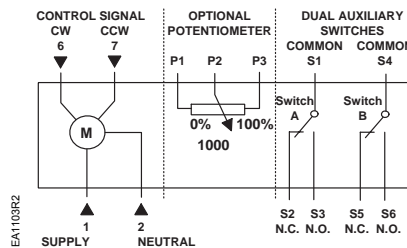
Spring return damper actuators shall be the type that requires no connecting linkages. The spring return actuators shall have a self-centering damper shaft coupling that assures concentric alignment of the actuator's output coupling with the damper shaft and be capable of direct mounting to a shaft up to a 1-inch diameter. Actuators shall use a brushless DC motor and provide stall protection throughout the full range of rotation. All spring return actuators shall be capable of both clockwise and counterclockwise spring return fail-safe operation using a continuously engaged mechanical return spring that returns the actuator to a fail-safe position in <20 seconds in response to a loss of power. All actuators shall provide a means of manually positioning the output coupling in the absence of power. Dual independently adjustable auxiliary switches must be integral to the actuator. All actuators must be precabled and provide an easily readable high contrast yellow on black position indicator. All actuators shall be UL60730 and CSA22.2 listed and manufactured under ISO 9002 and ISO 14000 procedures. Actuators shall be designed for a minimum of 60,000 full stroke cycles at the actuators rated torque and temperatures. Actuators shall be as manufactured by Siemens Industry, Inc.

**Wiring Diagrams**

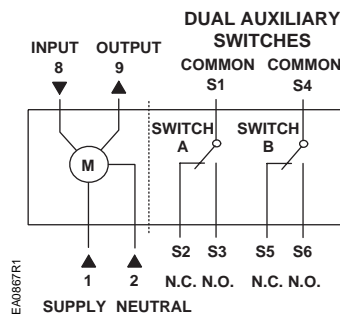
**2-Position, 24 Vac/dc:**



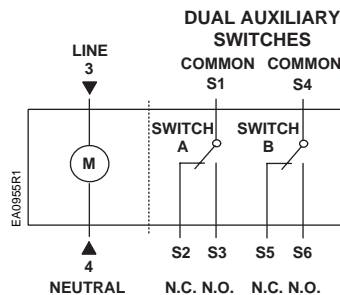
**Floating, 24 Vac/dc:**



**0 to 10 Vdc, GCA16x, 24 Vac/dc;  
 2 to 10 Vdc, GCA15x, 24 Vac/dc:**



**2-Position, 120 Vac:**



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