

OpenAir™ GCA Series, 142 lb-in, Spring Return, Direct-Coupled Electronic Damper Actuators

Description

The OpenAir direct-coupled, spring return electronic damper actuators provide modulating, two-position, three-position and electronic tandem control of building HVAC dampers.

Product Number	Operating Voltage			Control			Cables		Built-in Control Options				Electric Tandem Control		
	24 Vac ± 20%	24 Vdc ± 10%	120 Vac ± 10%	0 to 10 Vdc	2 to 10 Vdc	3-position	2-position	Standard	Plenum	Position Feedback	Dual Auxiliary Switches	Signal Inversion	Offset 0 to 5 Vdc Span 2 to 30 Vdc	Master	Slave
GCA121.1U	•	•					•	•							
GCA121.1P	•	•					•	•							
GCA126.1U	•	•					•	•		•					
GCA126.1P	•	•					•	•		•					
GCA221.1U			•				•	•							
GCA226.1U			•				•	•		•					
GCA131.1U	•	•				•		•							
GCA131.1P	•	•				•		•							
GCA132.1P	•	•				•		•	•						
GCA132.1U	•	•				•		•	•						
GCA136.1P	•	•				•		•		•					
GCA136.1U	•	•				•		•	•	•					
GCA151.1U	•	•				•		•	•		•				
GCA151.1P	•	•				•		•	•		•				
GCA156.1U	•	•				•		•	•	•	•				
GCA156.1P	•	•				•		•	•	•	•				
GCA161.1U	•			•				•	•						
GCA161.1P	•			•				•	•						
GCA163.1U	•			•				•	•			•			
GCA163.1P	•			•				•	•			•			
GCA164.1U	•			•				•	•	•		•			
GCA164.1P	•			•				•	•	•		•			
GCA166.1U	•			•				•	•	•					
GCA166.1P	•			•				•	•	•					
GCA161.1P/MAS	•			•				•	•				•		
GCA164.1P/MAS	•			•				•	•	•		•	•		
GCA161.1P/SLA	•							•							•



Features

- Brushless DC motor technology with stall protection
- Bi-directional fail-safe spring return
- Unique 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
- UL60730 and cUL (C22.2 No. 24-93) listed

Technical Data

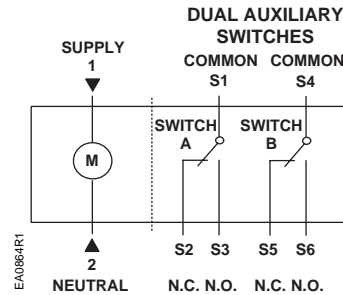
24 Vac, 120 Vac Torque:	142 lb-in (16 Nm) running and spring return <360 lb-in (40 Nm) maximum
GCA12x, GCA13x, GCA15x Only: 24 Vdc Torque	106 lb-in (12 Nm) running and spring return
Runtime for 90°:	90 sec. operating, 15 sec. typical (30 sec. max.) closing on power loss
Frequency:	50/60 Hz
Power consumption: Running:	8 VA/6W (24Vac, GCA12x, GCA13x) 9 VA/7W (24V, GCA15x) 9 VA (24Vac GCA16x) 9 VA (120 Vac GCA22x)
Power consumption: Holding	3 VA/3W (24V, GCA12x) 5 VA/4W (24V, GCA13x, GCA15x) 5 VA (24Vac, GCA16x) 9 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, IP40 per EN60529
Material:	Die cast aluminum alloy
Agency listings:	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

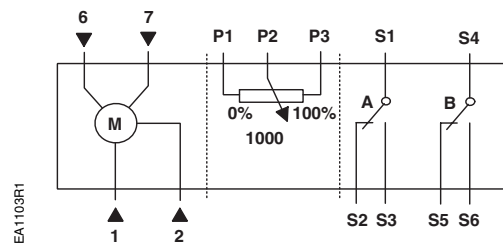
Spring-return damper actuators shall be the direct-coupled type that requires no connecting linkages. The spring return actuators shall have a self-centering damper shaft coupling that assures concentric alignment of the actuator's output coupling with the damper shaft and be capable of direct mounting 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 50,000 full stroke cycles at the actuators rated torque and temperatures. Actuators shall be as manufactured by Siemens Building Technologies.

Wiring Diagrams

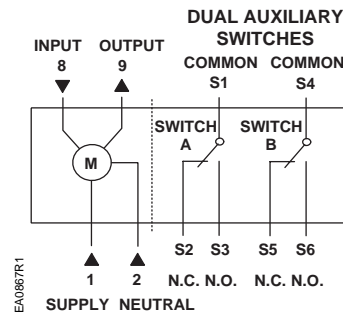
2-Position, 24 Vac/dc:



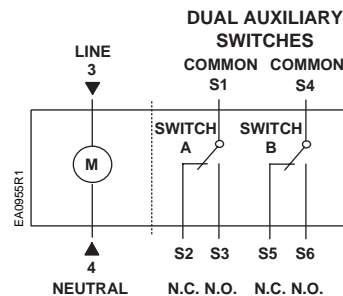
3-Position, 24 Vac/dc:



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



2-Position, 120 Vac:



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