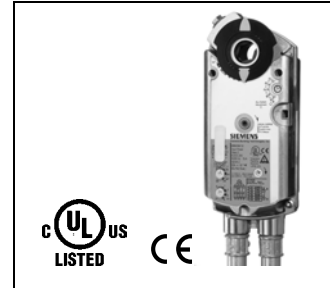


OpenAir™ GMA Series, 24 Vac/dc and 120 Vac, 62 lb-in, Spring Return, Direct-Coupled Electronic Damper Actuators

Product Number	Operating Voltage		Control				Cables		Built-In Control Options				
	24 Vac ±20% 24 Vdc ±15%	120 Vac ±10%	Modulating 0 to 10 Vdc	Modulating 2 to 10 Vdc	3-position	2-position	Standard	Plenum	Position Feedback	Dual Auxiliary Switches	Offset 0 to 5 Vdc Span 2 to 30 Vdc	Input Signal Inversion (Direct or Inverse Acting)	Feedback Signal Inversion
GMA121.1U	•					•	•						
GMA121.1P/B	•					•	•						
GMA121.1P	•					•	•						
GMA126.1U	•					•	•		•				
GMA126.1P	•					•	•		•				
GMA221.1U		•				•	•						
GMA226.1U		•				•	•		•				
GMA131.1U	•				•		•						
GMA132.1U	•				•		•		•				
GMA136.1U	•				•		•		•				
GMA151.1U	•			•			•		•		•	•	
GMA151.1P	•			•			•		•		•	•	
GMA156.1U	•			•			•		•		•	•	
GMA156.1P	•			•			•		•		•	•	
GMA161.1U	•		•				•		•				
GMA161.1P	•		•				•		•				
GMA163.1U	•		•				•		•	•			
GMA163.1P	•		•				•		•	•			
GMA164.1U	•		•				•		•	•	•		
GMA166.1U	•		•				•		•	•			
GMA166.1P	•		•				•		•	•			

Description

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



Features

- Brushless motor technology
- Bi-directional fail-safe spring return
- Unique self-centering shaft coupling
- Models available with dual, independently adjustable auxiliary switches
- Floating control models available with feedback potentiometer
- All modulating control types include built-in feedback capability
- All metal housing
- Manual override
- Mechanical range adjustment capability
- Easily visible position indicator
- Precabled
- UL60730 (to replace UL873) and C-UL (C22.2 No. 24-93) listed conformance
- Small actuator footprint with 62 lb-in of torque
- 24 Vac/dc compatible

Technical Data

Runtime for 90°:	90 sec. operating
Spring Return:	15 sec. typical (<60 seconds max. at -25°F (-32°C))
Frequency:	50/60 Hz
Power consumption: 24 Vac/dc	
Running:	5 VA/3.5W
Holding:	4 VA/3W
Power Consumption: 120 Vac	
Running and holding:	≤7 VA/5W
Equipment rating (24V):	Class 2 per UL/CSA
Angle of rotation:	90° nominal, 95° max.
Shaft dimensions:	1/4 to 3/4-in. (6.4 to 20.5 mm) dia., 1/4 to 1/2-in. (6.4 to 13 mm) sq., 1-in. (25.4 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)

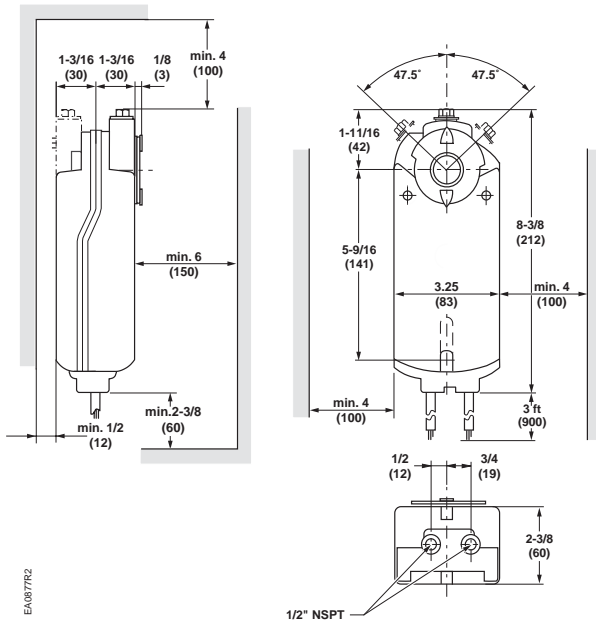
Technical Data, continued

Enclosure: NEMA 1
 Precabled connection: 18 AWG, 3 ft (0.9 m) long
 Agency listings: UL60730 (to replace UL873)
 C-UL C22.2 No. 24-93
 Material: Die cast aluminum alloy
 Gear lubrication: Silicone free
 Dimensions: 8-3/8" H x 3-1/4" W x 2-2/3" D
 (212 mm H x 83 mm W x 68 mm D)
 Weight: 2.9 lb (1.3 kg)

Typical Specifications

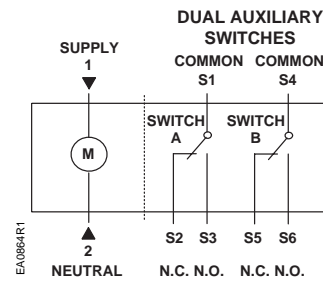
Spring-return damper actuators shall be the direct-coupled type that requires no connecting linkages. These spring return actuators shall have a self-centering damper shaft coupling that assures concentric alignment of the actuator's output coupling with the damper shaft for <60 lb-in torque and be capable of direct mounting to a shaft up to a 3/4-inch in diameter. Actuators shall 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 <15 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 are available for these actuators. All actuators must be precabled and provide an easily readable high contrast yellow on black position indicator. All actuators shall be CE conforming; UL60730 (to replace UL873) and CSA22.2 listed and manufactured under ISO 9002 and ISO 14000 procedures. Actuators shall be as manufactured by Siemens.

Dimensions in Inches (Millimeters)

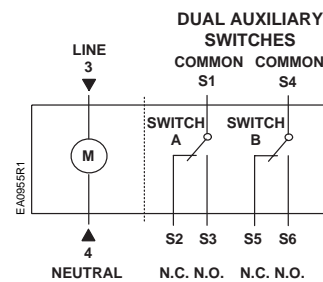


Wiring Diagrams

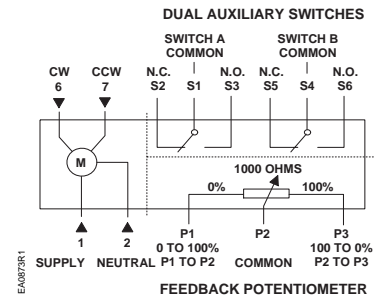
GMA12x, 2-Position, 24 Vac/dc:



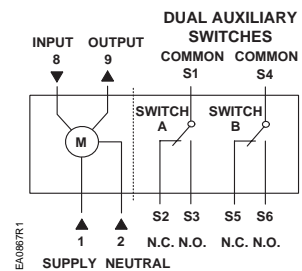
GMA22x, 2-Position, 120 Vac:



GMA13x, 3-Position, 24 Vac/dc:



GMA16x, GMA15x; Modulating; 24 Vac/dc:



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