SIEMENS

Submittal Sheet
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OpenAir™ GBB Series, 24 Vac, 221 lb-in Non-spring Return, Direct-Coupled Electronic Damper Actuators

Description

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

Product Number	Operating Voltage	Control		Cables		Built-in Control Options		
	24 Vac ± 20%	0 to 10 Vdc	3-position	Standard	Plenum	Feedback	Dual Auxiliary Switches	Span and Offset
GBB131.1U	●		●	●				
GBB131.1P	●		●		●			
GBB132.1U	●		●	●		●		
GBB132.1P	●		●		●	●		
GBB136.1U	●		●	●			●	
GBB136.1P	●		●		●		●	
GBB161.1U	●	●		●		●		
GBB161.1P	●	●			●	●		
GBB163.1U	●	●		●		●		●
GBB163.1P	●	●			●	●		●
GBB164.1U	●	●		●		●	●	●
GBB164.1P	●	●			●	●	●	●
GBB166.1U	●	●		●		●	●	
GBB166.1P	●	●			●	●	●	

Features

- Built-in feedback on modulating units
- 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
- UL873 and cUL (C22.2 No.24-93) listed
- CE conformity

Technical Data

Torque:	221 lb-in (25 Nm)
Runtime for 90°:	150 sec, 50 Hz/ 125 sec 60 Hz
Frequency:	50/60 Hz
Power consumption:	13x: 7 VA; 16x: 8 VA
Equipment rating (24 Vac):	Class 2 per UL/CSA
Noise level:	<45 dBA (running)
Angle of rotation:	90° nominal, 95° max.
Shaft dimensions:	3/8 to 1-in. (8 to 25.6 mm) dia. or 1/4 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. (0.9m) long
Enclosure:	NEMA 2, IP54 per EN60529
Material:	Die cast aluminum alloy
Agency listings:	UL873, cUL C22.2 No. 24-93 CE conformity: Electromagnetic compatibility 2004/108/EC Low-voltage directive 2006/95/EC
Gear Lubrication:	Silicone-free
Weight:	4.4 lbs (2 kg)
Country of Origin	USA

Typical Specifications

Non-spring return damper actuators shall be the direct-coupled type that requires no connecting linkages. The non-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 (25 mm) diameter. Actuators shall provide stall protection throughout the full range of rotation. All non-spring return actuators shall be capable of both clockwise and counterclockwise operation. All actuators shall hold position in the event of a power failure. All actuators shall return to the 0 position in the event that only the control signal is lost. 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 UL873, CE 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

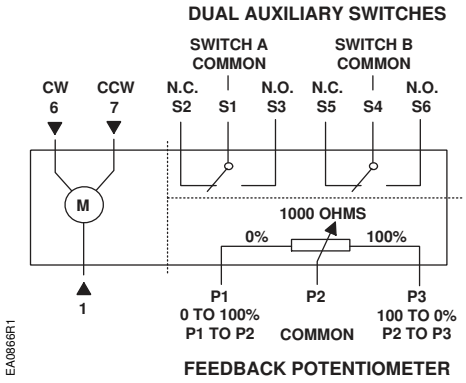

Figure 1. Three-position, 24 Vac.

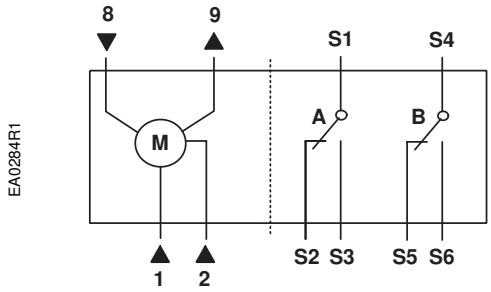

Figure 2. 0 to 10 Vdc, 24 Vac.

Dimensions

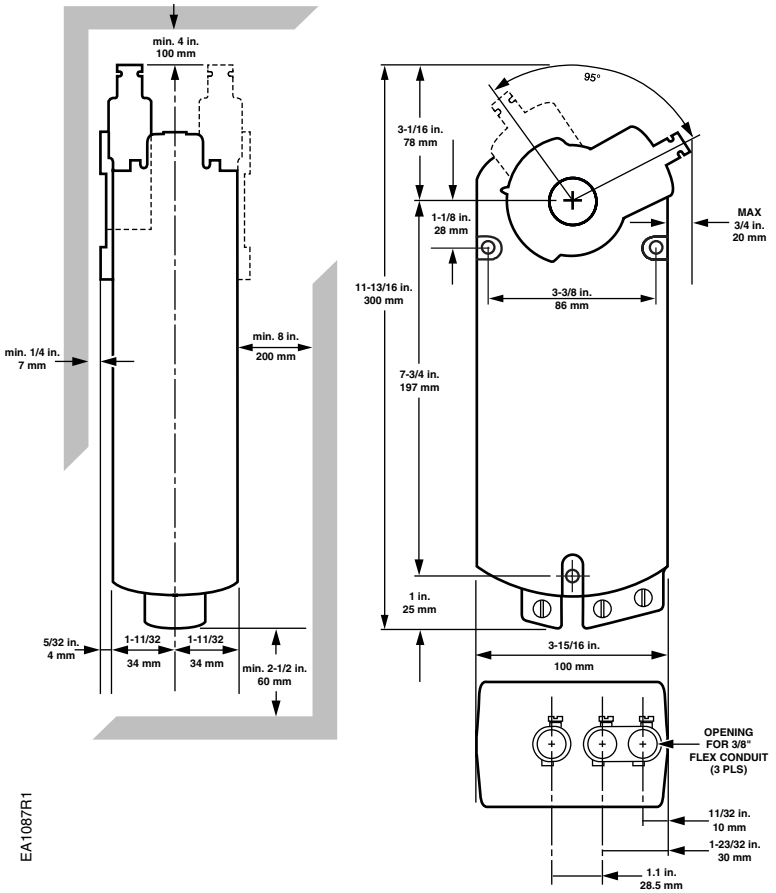

Figure 3. Dimensions in Inches (Millimeters).

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