

OpenAir™ GEB Enhanced Series Non-spring Return 177 lb-in, Direct-Coupled Electronic Damper Actuators

Product Number	Operating Voltage		Control		Cable		Built-in Control Options				
	24 Vac/Vdc ±20%	100 to 240 Vac	Modulating (0 to 10 Vdc)	On/Off & Floating	Plenum	Standard	Position Feedback	Feedback Potentiometer	Dual Auxiliary Switches	Offset and Span	Input Signal Selectable 0-10 Vdc or 2-10 Vdc
GEB141.1P	•	-	-	•	•	-	-	-	-	-	-
GEB141.1U	•	-	-	•	-	•	-	-	-	-	-
GEB142.1U	•	-	-	•	-	•	-	•	-	-	-
GEB146.1U	•	-	-	•	-	•	-	-	•	-	-
GEB161.1P	•	-	•	-	•	-	•	-	-	-	•
GEB161.1U	•	-	•	-	-	•	•	-	-	-	•
GEB164.1U	•	-	•	-	-	•	•	-	•	•	•
GEB166.1U	•	-	•	-	-	•	•	-	•	-	•

Technical Data

Torque:	177 lb-in (20 Nm)	
Frequency:	50/60 Hz	
Runtime for 90°:	150 seconds	
Operating Voltage:	24 Vac/Vdc ±20%	
	100 to 240 Vac ±10%	
Power consumption	Running	Holding
GEB14x	2.3VA/1.1 W	0.5 W
GEB16x	2.5VA/1.2W	0.65 W
Equipment rating (24 Vac):	Class 2 per UL/CSA Class III per EN 60730	
Angle of rotation:	90° nominal, 95° max. +/- 2° max.	
Shaft dimensions:	1/4 to 3/4-in. (6 to 20.5 mm) diameter 1/4 to 1/2-in. (6.4 to 13 mm) square 3/4-in. (20 mm) min. length	
Operating temperature:	-25 to 130°F (-32 to 55°C)	
Storage temperature:	-40 to 158°F (-40 to 70°C)	
Ambient humidity:	95% rh (non-condensing)	
Pre-cabled connection:	18 AWG, 3 ft (0.9 m) long	
Enclosure:	NEMA 1; IP54 to EN 60 529	
Material:	Die cast aluminum alloy	
Agency listings:	UL60730 (to replace UL873) cUL CAN/CSA E60730	

CE Conformity:	
Low Voltage Directive:	2006/95/EC
Product safety:	EN 60 730-2-14 (Type1)
Electromagnetic compatibility (EMC)	2004/108/EC
Emissions Standards	EN61000-6-3
Immunity Standards	EN61000-6-1
Gear Lubrication:	Silicone-free
Dimensions: Inches (mm)	7.56 H x 3.23 W x 2.36 D (192 H x 82 W x 60 D)

Weight:	
Non-switch models	2.4 lb (1 kg)
Switch models	2.9 lbs (1.3 kg)
Country of Origin	USA

Description

The OpenAir direct-coupled, 24Vac/Vdc, non-spring return electronic damper actuator provides modulating and combined on/off and floating control of building HVAC dampers.



Features

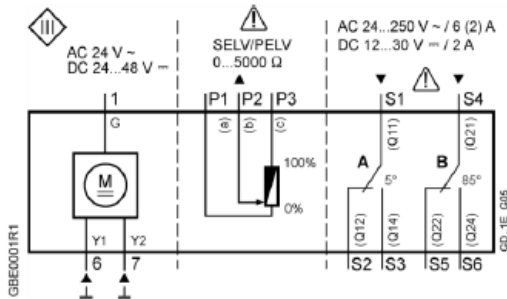
- Brushless motor technology with stall protection
- Unique self-centering shaft coupling
- Models available with dual independently adjustable auxiliary switches
- Floating control models available with feedback potentiometer
- All modulating control models include built-in feedback capability
- All metal housing
- Manual override
- Mechanical adjustable span between 0 and 90°
- Easily visible position indicator
- Pre-cabled
- UL60730 (to replace UL873) and cUL (C22.2 No. 24-93) listed, **CE** certification
 - Small actuator footprint with 177 lb-in (20 Nm) of torque

Typical Specifications

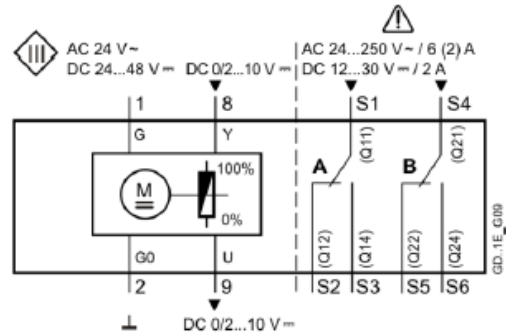
All non-spring return damper actuators shall be direct-coupled and require no connecting linkages. The non-spring return actuators have a self-centering damper shaft coupling that assures concentric alignment of the actuator's output coupling with the damper shaft. It is capable of direct mounting to a shaft up to 3/4-inch diameter. Actuators shall provide stall protection throughout the full range of rotation. These non-spring return actuators are capable of both clockwise and counterclockwise operation. Actuators shall hold position in the event of a power failure. The actuator returns to the 0 position when so commanded or when the control signal of the modulating actuator is zero. Actuator shall provide a means of manually positioning the output coupling in the absence of power. Dual, independent, adjustable auxiliary switches are available. The actuators are pre-cabled and provide an easy, readable high contrast yellow on black position indicator. Actuators are UL60730 (to replace UL873) and CSA22.2 listed, CE certified and manufactured under ISO 9002 and ISO 14000 procedures. Actuators shall be as manufactured by Siemens Industry, Inc.

Wiring Diagrams

24 Vac/Vdc 3-Position Control GEB14x.1U/1P



24 Vac/Vdc Continuous Control 0 to 10 V GEB16x.1U/1P



24 Vac/Vdc Modulating Controls CD 0 to 10V GEB164.1U

