

## OpenAir™ GSD Series, Non-Spring Return, 20 lb-in (2 Nm), Rotary Electronic Damper Actuators

### Product Numbers

Product Number	Torque		Voltage		Control Signals		Plenum Cabling	Appliance Cable	Auxiliary Switch
	20 lb-in (2 Nm)	24 Vac/dc	100 to 240 Vac	2-Position/ Floating	Modulating 0(2) to 10 Vdc				
GSD141.1P	-	-	-	-	-	-	-	-	-
GSD146.1P	-	-	-	-	-	-	-	-	-
GSD341.1U	-	-	-	-	-	-	-	-	-
GSD346.1U	-	-	-	-	-	-	-	-	-
GSD161.1P	-	-	-	-	-	-	-	-	-
GSD166.1P	-	-	-	-	-	-	-	-	-

### Technical Data

Operating voltage	(GSD1x) (GSD3x)	24 Vac ± 20%, 50/60 Hz 100 to 240 Vac ± 10%, 50/60 Hz
Torque		20 lb-in (2 Nm)
Runtime for 90°		30 seconds
Nominal angle of rotation		90° typical
Power consumption		<b>Running</b> <b>Holding</b>
GSD14x; 24 Vac/dc 60 Hz		2.2 VA (1.2 W)    1.0 VA (0.5 W)
GSD16x; 24 Vac/dc 60 Hz		2.4 VA (1.4 W)    1.2 VA (0.7 W)
GSD34x; 120 Vac 60 Hz		4.5 VA (1.8 W)    2.4 VA (0.9 W)
Damper shaft size		3/8-inch to 1/2-inch diameter (8 mm to 13 mm) 1/4-inch to 7/16-inch square (6 mm to 11 mm)
Damper shaft length, minimum		3/4-inch (20 mm)
Agency listings		UL listed per UL 60730 cUL listed to CSA C22.2 N. 24-93; CE certified
120 through 240 Vac		EMC and Low Voltage Directives
Ambient temperature		
Operating		-25°F to 130°F (-32°C to 55°C)
Transport		-25°F to 158°F (-32°C to 70°C)
Ambient humidity (non-condensing)		<95% rh
Pre-cabled connection		18 AWG (0.75 mm <sup>2</sup> ), 3 ft (0.9 m) long
Enclosure		IP54
Housing material		Plenum rated rugged plastic
Dimensions:		5.46" x 2.83" x 2.45" (138.8 mm x 72 mm x 62.5 mm)
Weight		1.54 lbs (0.55 kg) 1.77 lbs (0.7 kg) with packaging

### Description

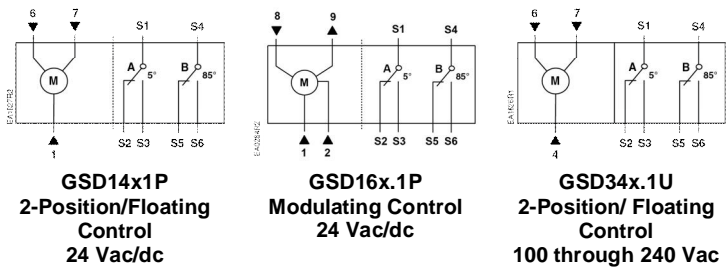
The OpenAir GSD Series direct-coupled, non-spring return rotary electronic damper actuators are 24 Vac/dc rated and available in 2-position, floating, and modulating [0(2) to 10 Vdc or 10 to 0(2) Vdc] control. The small footprint and torque make this actuator ideal for VAV boxes, small HVAC dampers, economizers, or residential zone dampers.



### Features

- Pre-cabled
- Plenum rated models available
- Optional built-in auxiliary switches with fixed switch points at 5° and 85° rotation
- 30-second run time
- Signal inversion capability on modulating type [0(2) to 10 Vdc or 10 to 0(2) Vdc]
- Small footprint for installation flexibility
- UL and cUL listed; CE certified
- These devices were approved for installation in plenum areas by Underwriters Laboratories, Inc. per UL 2043.
- Low voltage models are 24 Vac/dc compatible
- 100 to 240 Vac models available
- Fixed Dual End Switches
  - 24 Vac to 250 Vac/12 to 30 Vdc
  - 6A resistive/2A inductive @ AC
  - 4A resistive/2A inductive @ 30 Vdc
  - 0.8A resistive, 0.5A inductive @ 60 Vdc
- 1/2" NPT conduit

### Wiring Diagrams



### Auxiliary Switches GSDxx6.1x

Actuator Position	Switch A Common Connected to	Switch B Common Connected to
0° to 5°	S3	S6
5° to 85°	S2	S6
85° to 90°	S2	S5

Figure 1. Wiring Diagrams.

### Dimensions in Inches (Millimeters)

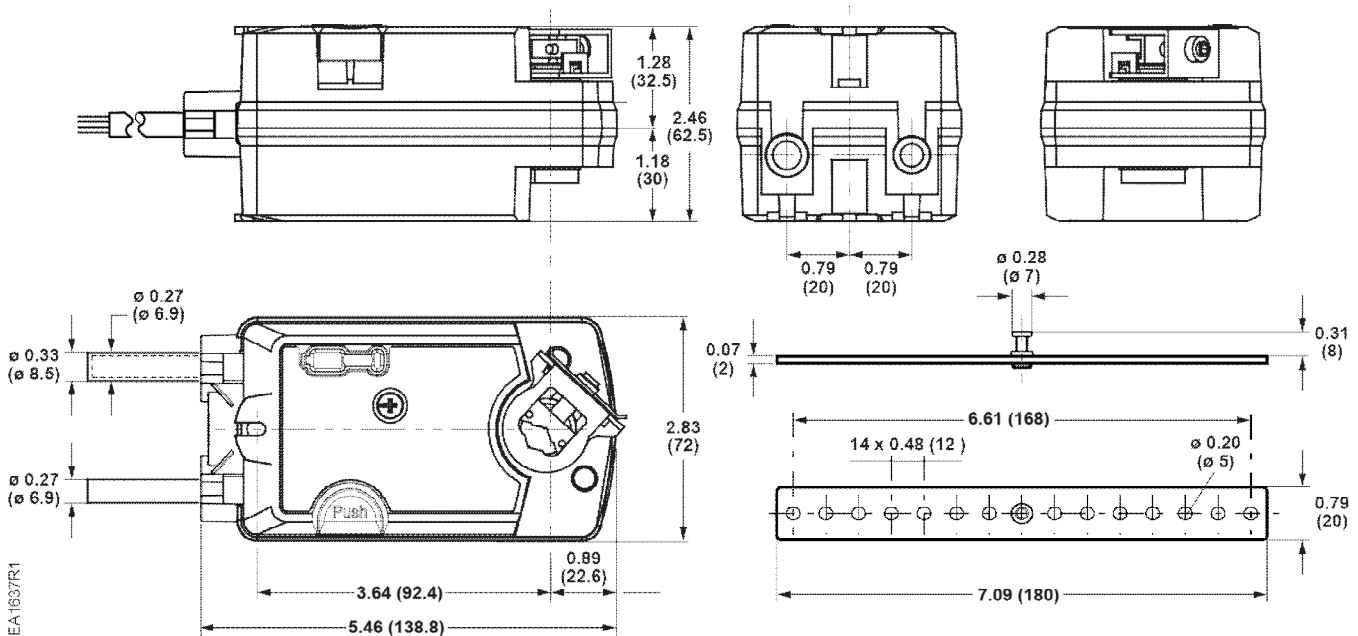


Figure 2. GSD Series Actuators with Mounting Bracket.

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