

# ACTUATORS & DAMPERS

## FIRE AND SMOKE DAMPER ACTUATORS

GND, GGD SERIES

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ACTUATORS & DAMPERS

### DESCRIPTION

Siemens fire/smoke damper actuators are spring return, 2-position, 15 second actuators designed to operate UL Listed smoke control dampers and combination fire/smoke dampers. The **GND Series** has 53 in-lb (6 Nm) of torque and the more powerful **GGD Series** has 142 in-lb (16 Nm) of torque. These actuators have patented built-in electronic fusible links; there is no need to buy/install separate parts to perform that function.

### FEATURES

- **Reversible fail-safe spring return for CCW, CW rotation in the same actuator**
- **Patented built-in electronic fusible link**
- **Fast, 15-second operation**
- **2 year warranty**

NEW!

SIEMENS



GGD221.1U



GND221.1U



MADE IN USA



UL LISTED

INDIVIDUAL SPECIFICATIONS							
MODEL	TORQUE	SUPPLY VOLTAGE	SUPPLY VA	CONTROL SIGNAL	DRIVE TIME	SPRING RETURN TIME	WEIGHT
GGD121.1U	142 in-lb (16 Nm)	24 VAC	150 VA running, 10 VA holding	Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD121.3U	142 in-lb (16 Nm)	24 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD126.1U	142 in-lb (16 Nm)	24 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD221.1U	142 in-lb (16 Nm)	120 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD221.3U	142 in-lb (16 Nm)	120 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD226.1U	142 in-lb (16 Nm)	120 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD321.1U	142 in-lb (16 Nm)	230 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GGD326.1U	142 in-lb (16 Nm)	230 VAC		Two-position	15 seconds	15 seconds	7 lb (3.2 kg)
GND121.1U	53 in-lb (6 Nm)	24 VAC	20 VA running, 8 VA holding	Two-position	15 seconds	15 seconds	4 lb (1.8 kg)
GND126.1U	53 in-lb (6 Nm)	24 VAC		Two Position	15 seconds	15 seconds	4 lb (1.8 kg)
GND221.1U	53 in-lb (6 Nm)	120 VAC	20 VA running, 9 VA holding	Two-position	15 seconds	15 seconds	4 lb (1.8 kg)
GND226.1U	53 in-lb (6 Nm)	120 VAC		Two-position	15 seconds	15 seconds	4 lb (1.8 kg)
GND321.1U	53 in-lb (6 Nm)	230 VAC		Two-position	15 seconds	15 seconds	4 lb (1.8 kg)
GND326.1U	53 in-lb (6 Nm)	230 VAC		Two-position	15 seconds	15 seconds	4 lb (1.8 kg)

Add /B for bulk pack (GGD Series is 8 per pack; GND is 10 per pack)  
Add /F for fusible link (GND Series only)

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GGD SPECIFICATIONS	
<b>Operating Voltage</b>	24 VAC ±20%, 115 VAC ±15%
<b>Power Supply</b>	230 VAC ±10%
<b>Frequency</b>	50/60 Hz
<b>Power Consumption</b>	
<b>Running</b>	150 VA
<b>Holding</b>	10 VA
<b>Running Torque</b>	142 lb-in (16 Nm)
<b>Spring Return Torque</b>	108 lb-in (12 Nm)
<b>Minimum Stall Torque</b>	350 lb-in (39 Nm)
<b>Torque Reduction at Elevated Temperature</b>	Less than 10%
<b>Runtime for 90°</b>	
<b>Operating with Motor at 60 Hz</b>	15 seconds nominal
<b>Closing (On Power Loss) with Spring Return</b>	15 seconds maximum
<b>Life Expectancy</b>	Minimum 35,000 stroke cycles
<b>Damper Shaft Size</b>	
<b>Standard</b>	3/8" to 1" (8 to 25.6 mm)
<b>Oversize</b>	1.05 inch maximum (26.6 mm)
<b>Enclosure</b>	NEMA 1
<b>Housing Material</b>	Die cast aluminum alloy
<b>Ambient Temperature</b>	
<b>Operation</b>	0° to 130°F (-18° to 55°C) One time 350°F (177°C) for 1/2 hour (per UL555S)
<b>Storage and Transport</b>	-25° to 158°F (-32° to 70°C)
<b>Agency Certification</b>	UL listed to UL873, cUL certified to Canadian standard C22.2 No. 24-93
<b>Pre-Cabled Connection</b>	18 AWG
<b>Dimensions</b>	See dimensions table
<b>Weight</b>	≈7 lbs. (3.2 kg) Eight pack ≈56 lbs. (25.4 kg)

GND SPECIFICATIONS	
<b>Operating Voltage</b>	24 VAC/VDC ±20%, 230 VAC ±10%, 50/60 Hz 120 VAC ±10%, 60 Hz only
<b>Power Consumption</b>	24 VAC/VDC
<b>Running</b>	20 VA/12W
<b>Holding</b>	8 VA/6W
<b>Power Consumption 120 VAC/230 VDC</b>	
<b>Running</b>	20 VA
<b>Holding</b>	9 VA
<b>Running Torque</b>	53 lb-in (6 Nm) (minimum)
<b>Stall Torque (Minimum)</b>	160 lb-in (18 Nm)
<b>Torque reduction at elevated temperature</b>	Less than 10%
<b>Runtime for 90°</b>	15 seconds nominal
<b>Closing (on power loss) with spring return</b>	15 seconds maximum
<b>Nominal angle of rotation</b>	95°
<b>Life Expectancy</b>	Minimum 35,000 full stroke cycles
<b>Damper Shaft Size</b>	0.5" (12.7 mm) round
<b>Damper Shaft Length, Minimum</b>	1.4" (36 mm)
<b>Enclosure</b>	NEMA 1
<b>Housing Material</b>	Die cast aluminum alloy
<b>Ambient Conditions</b>	
<b>Operation</b>	0° to 140°F (-18° to 60°C) one time 350°F (177°C)
<b>Storage and Transport</b>	-40° to 158°F (-40° to 70°C)
<b>Humidity (Non-condensing)</b>	Maximum 95% RH non-condensing
<b>Teflon® Cable</b>	400°F (200°C)
<b>Fixed Dual End Switches</b>	
<b>AC Rating</b>	24 VAC to 250 VAC, 24 VDC 6A resistive/ 2 FLA/12 LRA
<b>Temperature Rating</b>	350°F (177°C)
<b>Agency Certification</b>	UL873, cUL C22.2 No. 24-93, AS/ NZS 2064 1/2:1997; conforms to CE requirements for the EMC and low voltage directives; Australian Electromagnetic Compatibility (EMC) per AS/NZS 4251.1/2:1999 (C-tick)
<b>Pre-Cabled Connection</b>	
<b>Type</b>	FEP Teflon® jacketed
<b>Length</b>	3 ft (0.9m), 19/30 strand 18 GA
<b>Country of Origin</b>	USA
<b>Dimensions</b>	See dimensions table
<b>Weight</b>	≈4 lb (1.8 kg) Ten pack ≈40 lb (18 kg)



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DIMENSIONS						
MODEL	TORQUE	DIMENSIONS	MAXIMUM SHAFT DIAMETER	MINIMUM SHAFT LENGTH	ENCLOSURE RATING	WEIGHT
GGD121.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD121.3U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1.05" (26.6mm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)t
GGD126.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD221.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD221.3U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1.05" (26.6mm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD226.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD321.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GGD326.1U	142 in-lb (16 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	4.8 (2.2 kg)
GND121.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)
GND126.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)
GND221.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)
GND226.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)
GND321.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)
GND326.1U	53 in-lb (6 Nm)	3.25"H x 3.9"W x 11"L (8.26 x 9.9 x 27.9 cm)	1" (2.54 cm)	3/4" (1.9 cm)	Nema 1	2.9 (1.3 kg)

NEW!

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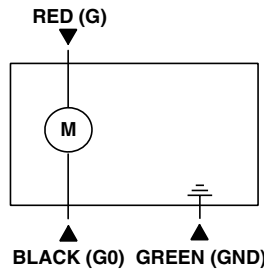
GND, GGD SERIES



### WIRING

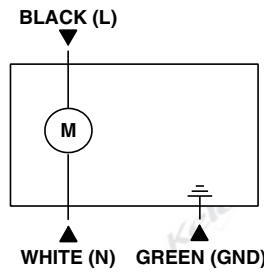
#### Wire Designations

24 VAC



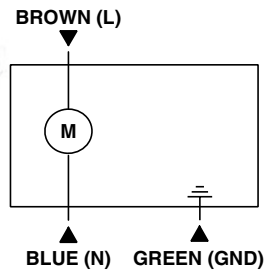
Function	Color
Supply (SP)	Red
Neutral (SN)	Black
Ground	Green

115 VAC



Function	Color
Line	Black
Neutral	White
Ground	Green

230 VAC



Function	Color
Line	Brown
Neutral	Blue
Ground	Green

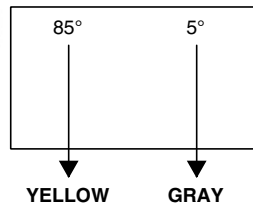
All wiring must conform to NEC and local codes and regulations.



**CAUTION:** The actuator must be wired with a 230 VAC line with respect to neutral and the ground lead must be connected for proper protection of the actuator. Any other connection, such as phase to phase, can damage the actuator.

#### GND, GGD Actuators

#### Fixed Dual End Switches



Switch	Wire Color	Switch Makes	Switch Breaks
5°	Gray	<5°	>5°
85°	Yellow	>85°	<85°

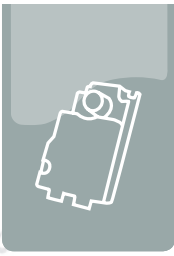
**NOTE:** Both sets of contacts are open when actuator is between 5° and 85°.



**CAUTION:** Mixed switch operation to the switching outputs of both dual end switches (5° and 85°) is not permitted.

Either AC line voltage from the same phase must be applied to all four outputs of the fixed dual end switches, or UL-Class 2 voltage must be applied to all four outputs.

#### GND Actuators ONLY



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### ORDERING INFORMATION

MODEL	DESCRIPTION
<b>GGD121.1U</b>	F/S, 142 in-lb, 2-position, 24 VAC, 15-second return
<b>GGD121.3U</b>	F/S, 142 in-lb, 2-position, 24 VAC, 15-second return, oversize shaft adapter
<b>GGD126.1U</b>	F/S, 142 in-lb, 2-position, 24 VAC, 15-second return, auxiliary switches
<b>GGD221.1U</b>	F/S, 142 in-lb, 2-position, 120 VAC, 15-second return
<b>GGD221.3U</b>	F/S, 142 in-lb, 2-position, 120 VAC, 15-second return, oversize shaft adapter
<b>GGD226.1U</b>	F/S, 142 in-lb, 2-position, 120 VAC, 15-second return, auxiliary switches
<b>GGD321.1U</b>	F/S, 142 in-lb, 2-position, 230 VAC, 15-second return
<b>GGD326.1U</b>	F/S, 142 in-lb, 2-position, 230 VAC, 15-second return, auxiliary switches
<b>GND121.1U</b>	F/S, 53 in-lb, 2-position, 24 VAC, 15-second return
<b>GND126.1U</b>	F/S, 53 in-lb, 2-position, 24 VAC, 15-second return, auxiliary switches
<b>GND221.1U</b>	F/S, 53 in-lb, 2-position, 120 VAC, 15-second return
<b>GND226.1U</b>	F/S, 53 in-lb, 2-position, 120 VAC, 15-second return, auxiliary switches
<b>GND321.1U</b>	F/S, 53 in-lb, 2-position, 230 VAC, 15-second return, auxiliary switches
<b>GND326.1U</b>	F/S, 53 in-lb, 2-position, 230 VAC, 15-second return, auxiliary switches

**NOTES:** Add /B for bulk pack (GGD Series is 8 per pack; GND is 10 per pack)  
Add/F for fusible link (GND Series only)

Standard shaft adapter is 3/8 to 1 in (8 to 25.6mm)

Oversize shaft adapter is 1.05 in maximum (26.6mm) - (GGD series only)

### ACCESSORIES

#### GND SERIES

<b>ASK79.165</b>	Electronic fusible link 165°F, 74°C
<b>ASK79.212</b>	Electronic fusible link 212°F, 100°C
<b>ASK79.250</b>	Electronic fusible link 250°F, 121°C
<b>ASK79.350</b>	Electronic fusible link 350°F, 177°C

#### GGD SERIES

<b>985-006</b>	Anti-rotation bracket
<b>985-004</b>	Self centering adapter
<b>ASK74.1</b>	Oversized shaft adapter up to 1.05 in (26.6mm)
<b>985-035P25</b>	Conduit adapter male (box of 25 only)
<b>985-008P20</b>	Conduit adapter female 1/2 in (12mm) (box of 20 only)

NEW!