

OpenAir® GRD Series Electronic Damper Actuators for UL Listed Fire/Smoke and Smoke Control Dampers 2-Position, 30-second Run Time, 15-second Spring Return Time

Product Number	Operating Voltage			3-ft Plenum Cable	EFL Capability	Two Fixed Auxiliary Switches
	24 Vac ± 20%, 24 Vdc + 20%, - 10%	120 Vac ± 10%	230 Vac ± 10%			
GRD121.1U	•			•	•	
GRD126.1U	•			•	•	•
GRD221.1U		•		•	•	
GRD226.1U		•		•	•	•
GRD321.1U			•	•	•	
GRD326.1U			•	•	•	•

Technical Data

Torque:	30 lb-in (3.4 Nm) (minimum)
Stall Torque:	80 lb-in (9 Nm) (minimum)
Run time for 90°:	30 seconds (nominal)
Spring Return:	15 seconds (maximum)
Nominal angle of rotation:	95°
Operating voltage:	24 Vac ±20%/ 24Vdc+20%-10% 120 Vac ±10%/ 230 Vac ±10%
	CAUTION: Continuous use at voltages above the recommended tolerances may damage the actuator.
Power Consumption:	Running Holding
GRD12x.1U	~14 VA/8W ~4VA/2W
GRD22x.1U:	~12 VA ~4VA
GRD32x.1U:	~12 VA ~4 VA
Damper shaft size:	1/2-inch (12,7 mm) round
Damper shaft length, minimum:	1.4-inch (36 mm) min. length
Agency listings:	UL60730 cUL CSA 60730 CE conformity for Residential, Commercial, and Industrial environments. Australian RCM conformity China-RoHS with Environmental Protection Use Period
Ambient temperature, operating:	0°F to 140°F (-18°C to 60°C), 350°F (177°C) one time per UL555S
Ambient temperature, storage/transport:	-40°F to 158°F (-40°C to 70°C)
Ambient humidity (non-condensing):	Maximum 95% rh non-condensing
Plenum-rated cable:	400°F (200°C)
Enclosure:	NEMA 1/IP40
Housing material:	Plenum-rated plastic
Pre-cabled connection:	3 ft (0.9m), 19/30 strand 18 GA
Dimensions (Approximate):	8.5" H x 3.5" W x 3.0" D (215.9 mm H x88.9 mm Wx76.2 mm D)
Weight:	~4 lbs. (1.8 kg)
Country of Origin	USA

Description

The OpenAir direct-coupled, 2-position, spring return electronic damper actuators are UL listed for smoke control dampers or for combination fire/smoke rated dampers. Actuators are designed to operate reliably in smoke control systems requiring Underwriter's Laboratories, Inc. UL555/555S rating when tested as an assembly with the damper and will meet requirements of UBC for 30-second opening and 15-second closing at 350°F (177°C).



Features

- Optional built-in auxiliary switches with fixed switch points at 5° and 85° rotation.
- Built-in Electronic Fusible Link (EFL) capability with four temperature ratings; 165°F, 212°F, 250°F, and 350°F
- Reversible, fail-safe spring return
- Plenum-rated
- Pre-cabled
- 30-second operation at rated torque, temperature, and voltage
- Fixed Dual End Switches
 - 24 Vdc, 24 Vac to 250 Vac
 - 6A resistive
 - 2FLA/12 LRA
 - SPST
 - Fixed 5° and 85°

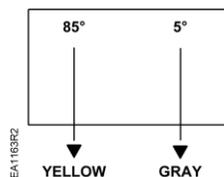
Accessories

Electronic Fuse Link (24 Vac)

ASK791.165	165°F (74°C)
ASK791.212	212°F (100°F)
ASK791.250	250°F (121°C)
ASK791.350	350°F (177°C)

Maintenance

The National Fire Protection Association NFPA 92A Standard for Recommended Practice for Smoke-Control System and UL 864 Standard for Control Units and Accessories for Fire Alarm Systems, require weekly self-test for **dedicated** smoke control equipment used in a smoke control system. The National Fire Protection Association NFPA 72 Standard for National Fire Alarm Codes states that all life safety systems are to be functionally checked at least annually. The GRD actuator is designed such that no special cycling during long-term holding is required. The GRD actuator complies with the AMCA Standard 520 testing revision.



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

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

Wiring Diagrams

NOTE: Actuators may be connected in parallel. Power consumption must be observed.

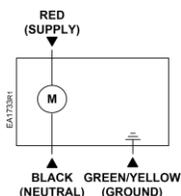


Figure 1.
 24 Vac/dc.

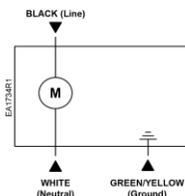


Figure 2
 120 Vac.

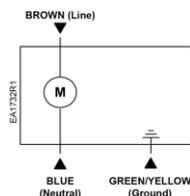


Figure 3.
 230 Vac.

Electronic Fusible Link

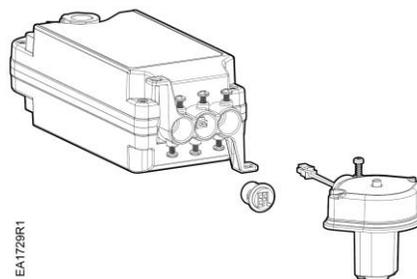


Figure 4. GRD Actuator and EFL.

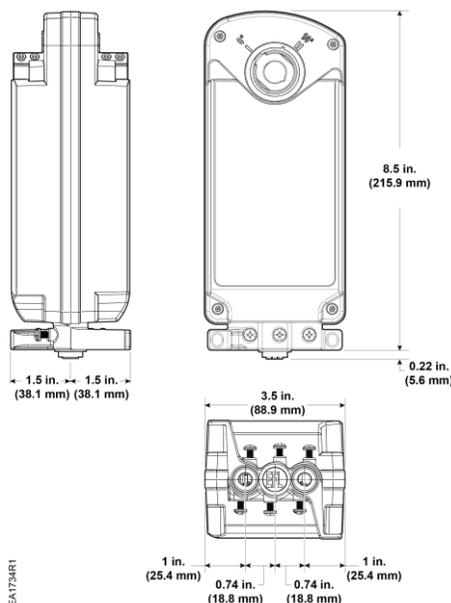


Figure 5. GRD Series Damper Actuator and Mounting Bracket Dimensions in Inches (Millimeters).

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