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

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).

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%/ 24 Vdc+20%-10%
120 Vac ±10%/ 230 Vac ±10%

CAUTION:
Continuous use at voltages above the recommended tolerances may damage the actuator.

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)

Power Consumption:
GRD12x.1U
GRD22x.1U:
GRD32x.1U:
Dampers shaft size:
Dampers shaft length, minimum:
Agency listings:

<table>
<thead>
<tr>
<th>Product Number</th>
<th>Operating Voltage</th>
<th>24 Vac ±20%</th>
<th>24 Vdc+20%-10%</th>
<th>120 Vac ±10%</th>
<th>230 Vac ±10%</th>
<th>341 Plenum Cable</th>
<th>Two Fixed Auxiliary Switches</th>
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<tbody>
<tr>
<td>GRD121.1U</td>
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<td>GRD221.1U</td>
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<td>GRD321.1U</td>
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<td>GRD328.1U</td>
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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)

Dimensions (Approximate):
8.5" H × 3.5" W × 3.0" D
(215.9 mm H × 88.9 mm W × 76.2 mm D)

Weight:
~4 lbs. (1.8 kg)

Country of Origin
USA

Siemens Industry, Inc.
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.

Wiring Diagrams

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

<table>
<thead>
<tr>
<th>Switch</th>
<th>Wire Color</th>
<th>Switch Makes</th>
<th>Switch Breaks</th>
</tr>
</thead>
<tbody>
<tr>
<td>5°</td>
<td>Gray</td>
<td>&lt; 5°</td>
<td>&gt; 5°</td>
</tr>
<tr>
<td>85°</td>
<td>Yellow</td>
<td>&gt; 85°</td>
<td>&lt; 85°</td>
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Electronic Fusible Link

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

Figure 1. 24 Vac/dc.
Figure 2. 120 Vac.
Figure 3. 230 Vac.
Figure 4. GRD Actuator and EFL.
Figure 5. GRD Series Damper Actuator and Mounting Bracket Dimensions in Inches (Millimeters).

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