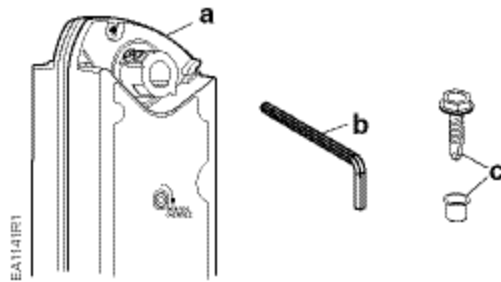


OpenAir™ GND Series Electronic Damper Actuator Designed for UL Listed Fire/Smoke and Smoke Control Dampers



- a. Actuator
- b. Hex key – 3mm
- c. Eyelet and 1/4-inch hex head screw

Figure 1. GND Actuator Parts.

Product Description

Step-by-step description for direct-coupled mounting of the OpenAir GND fast-acting two-position rotary electronic damper actuator. Actuator is intended for control of approved fire and smoke leakage-rated HVAC dampers.

Product Numbers

GND12x.1x
 GND22x.1x
 GND32x.1x

Warning/Caution Notations

WARNING:		Personal injury/loss of life may occur if you do not follow a procedure as specified.
CAUTION:		Equipment damage or loss of data may occur if you do not follow a procedure as specified.

Required Tools

- 3 mm hex wrench (provided)
- No. 2 Phillips screwdriver
- 1/4-inch (6.4 mm) hex driver
- Marker or pencil

Prerequisites



WARNING:

Do not open the actuator housing.

Installation

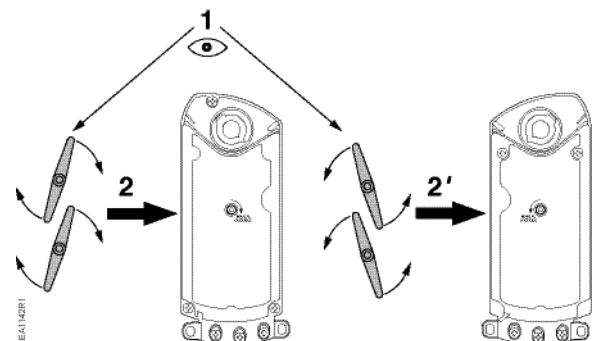


Figure 2. Actuator Mounting Orientation.

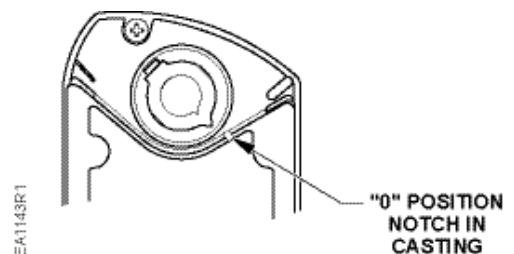


Figure 3. Actuator Internal End Stops.

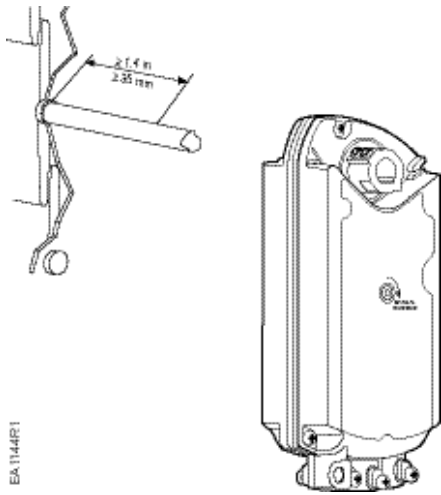


Figure 4. Shaft Length and Proper Shaft Adapter Location.

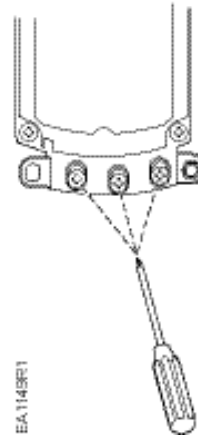


Figure 7. Tighten Conduit Screws (No. 2 Phillips Driver).

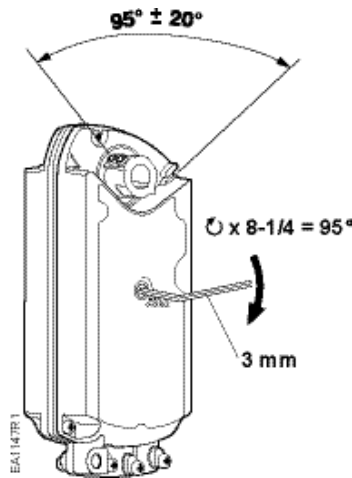


CAUTION:
 Apply 60 in-lb to 90 in-lb
 (7 Nm to 10 Nm) maximum
 torque to the shaft fixation
 set screws.
 All four screws must be

Figure 5. Fasten the Shaft Adapter to the Damper Shaft.

Manual Override

For adjustment of the damper/actuator when there is no power.



CAUTION:
 Always turn key in
 direction of the
 arrow.

Figure 8. Manual Override.

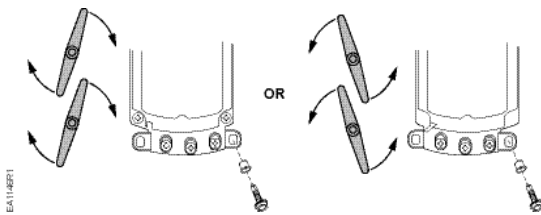


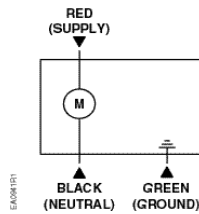
Figure 6.

1. Insert the eyelet through housing ear.
2. Insert screw through eyelet and tighten using 1/4-inch (32 mm) hex driver.

Wiring Diagrams

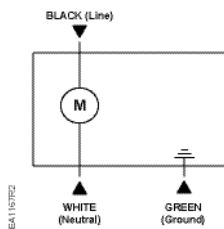
NOTE: All wiring must conform to NEC and local codes and regulations.

24 Vac/dc



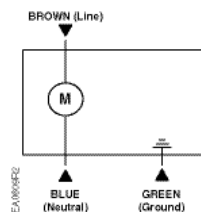
Function	Color
Supply	Red
Neutral	Black
Ground	Green

120 Vac



Function	Color
Line	Black
Neutral	White
Ground	Green

230 Vac



Function	Color
Line	Brown
Neutral	Blue
Ground	Green

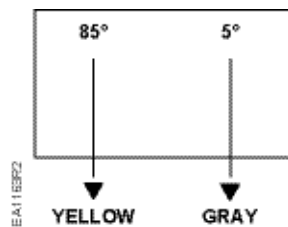


CAUTION:

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

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

Fixed Dual End Switches



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.

Wiring, Continued

Electronic Fusible Link (EFL)

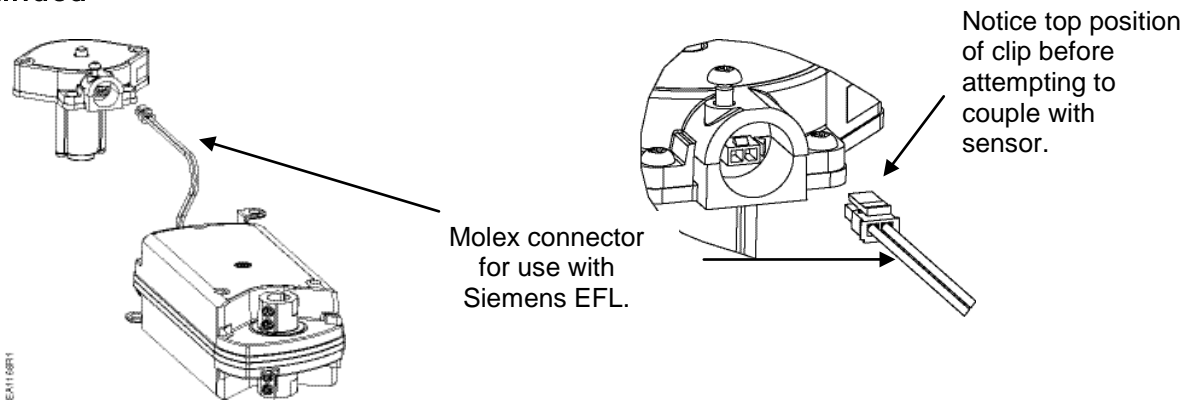


Figure 9. GND EFL Models Come Pre-wired for Assembly.

NOTE: The GND models pre-wired for assembly with the EFL (GNDxxx.1U/F) will only operate when an EFL, (ASK79.xxx) is attached.

Maintenance



CAUTION:

The GND actuator does not require any periodic cycling to function properly as an integral part of an active smoke control damper system. **The National Fire Alarm Code NFPA 72 states that all life safety systems are to be functionally checked at least annually.** Check the smoke control damper/actuator every time you functionally check your smoke detectors, emergency lights, and/or power generators for operation.

Electronic Fusible Link (EFL)

Versions GNDxxx.1U/F contain wire with a Molex connector (See Figure 9) to accommodate an EFL. EFLs are purchased separately. See Table 1.

Table 1. Electronic Fusible Link Product Numbers.

Part Number	Operation
ASK79.165	165°F (74°C)
ASK79.212	212°F (100°C)
ASK79.250	250°F (121°C)
ASK79.350	350°F (177°C)

Dimensions

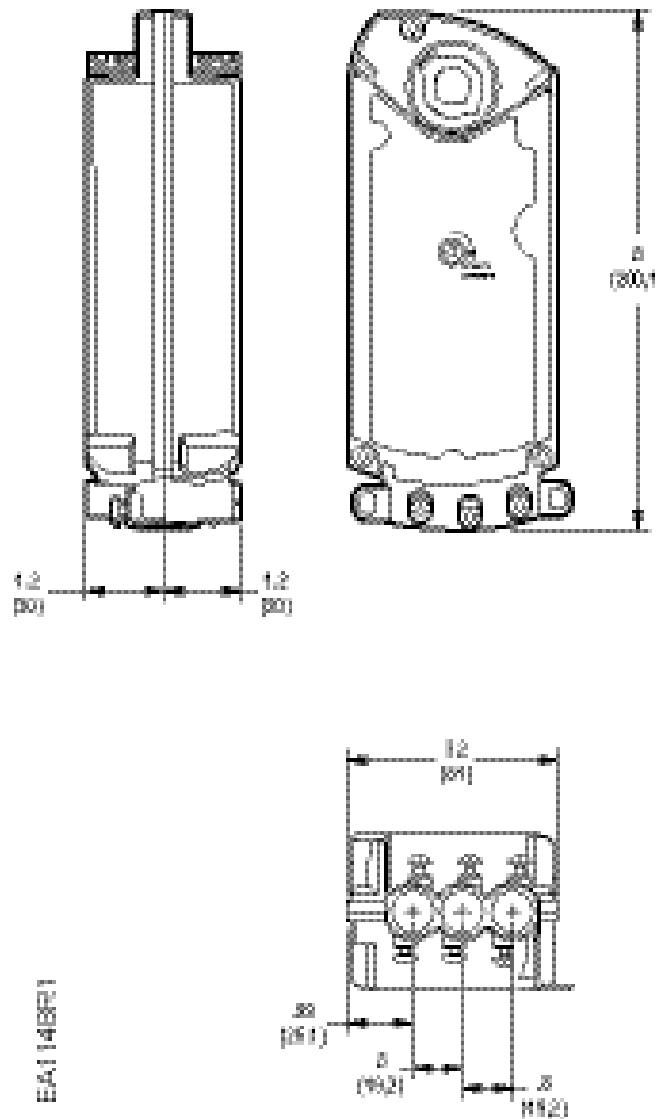


Figure 10. Dimensions of GND OpenAir Actuator in Inches (mm).

References

Technical Instructions
OpenAir Electric Damper Actuator Designed
for UL Listed Fire/Smoke and Smoke Control
Dampers

155-746

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