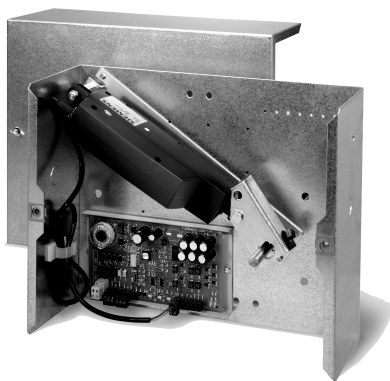


# Laboratory Electronic Actuator



## Description

The Laboratory Electronic Actuator Assembly is designed to work in VAV applications where rapid movement of the damper actuator is required for control of pressurization of the space. Typical applications include fume hood damper actuation and room pressurization control.

## Features

- Maintenance free high speed actuator
- Floating control or analog (0-10Vdc, 4-20mA) control signal
- Power failure options: maintain current position or fails NO/NC
- NEC Class 2
- Manual override
- Integral current sensing provides actuator protection
- 60° or 90° rotation angle
- Plenum rated enclosure

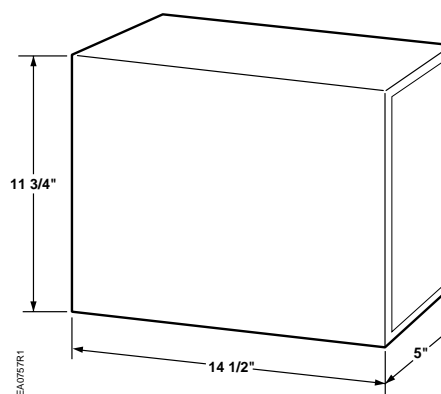
## Application

LA 546 laboratory electronic damper actuators are designed specifically for applications in critical environments where rapid response to change in pressurization is required. This includes operation of the exhaust damper for fume hoods as well as supply and exhaust terminal boxes for room pressurization. The actuator is offered in two models. One uses a 24Vac floating control signal. The other uses a 0-10Vdc or 4-20mA input control signal. The choice of control signal is dependent upon the output signal of the controlling device.

## Specifications

Power Supply	Operating Voltage Frequency Power Consumption	24Vac (18-30Vac) 50/60Hz	
		In-lbs	VA
		5	10.5
		10	12.2
		15	13.9
		20	15.6
		25	17.3
		30	19.0
		35	20.7
		40	22.3

Control Signal	Input Signal (24Vac Floating)	
	Voltage input	15-35Vac or 10-47 Vdc
	Input Signal (0-10Vdc)	
	Voltage input	0-10Vdc
	Input resistance	100 K Ohms
Function	Input Signal (4-20mA)	
	Current input	4-20mA
	Input resistance	250 Ohms
Function	Torque	
	60° rotation	55 lb-in (6.2 Nm)
	90° rotation	40 lb-in (4.5 Nm)
	Stroke time: 1.0 seconds for flow change from minimum flow to 90%, @ nominal load, using Siemens Single Blade Damper.	
	Rotation:	60° or 90° via linkage setting
Mounting	Shaft size	½ in to ¾ in (12.7mm to 19mm)
	Minimum shaft length	2.5 inches (63.5mm)
Housing	Material	Galvanized 18 ga steel
Ambient condition	Ambient temperature	
	Operation	40 to 104°F (5 to 40°C)
	Transportation and storage	15 to 140°F (-9 to 60°C)
Misc.	Ambient humidity	5% to 95% (non-condensing)
	Dimensions	Refer to Figure 1.
	Weight	12.3 lbs. (5.6 kg)
	US Patent	5,833,529



**Figure 1. Enclosure.**

## Operation

Floating control	A floating control signal controls the damper actuator. The angle of rotation is proportional to the length of time of the signal.
0-10Vdc/4-20mA	A 0-10Vdc/4-20mA control signal controls the damper actuator. The angle of rotation is proportional to the control signal.
Power failure	Upon loss of power the actuator will either maintain current position or fail NO/NC. The user can select the appropriate failure operation for the application.
Wiring	All wiring must conform to NEC and local codes and regulations.  Use isolating step-down Class 2 transformers. Do not use autotransformers.  Determine the supply transformer rating by summing total VA of the load (controllers and actuators).

## Product Ordering Information

Description	Part Number
Laboratory Electronic Actuator Assembly – Floating Control	546-00439
Laboratory Electronic Actuator Assembly – Analog Control	546-00438
Both assemblies include: an enclosure, actuator and hardware and AOE interface board.	

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