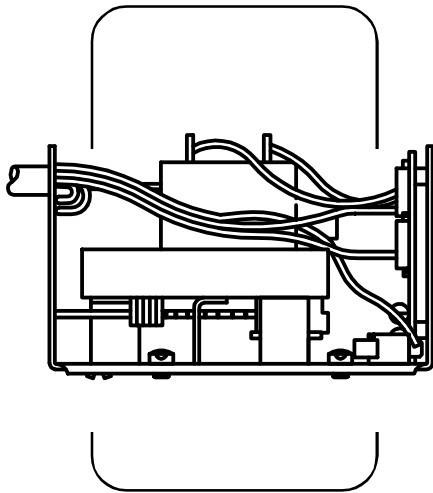


## ☆STAR DAMPERS PULSAR ACTUATOR (DP SERIES)

A 3-point Floating Control Damper Actuator.

☆Star dampers are designed primarily for use on cool or warm air ducted systems. ☆Star actuators are compatible and interchangeable with all ☆Star series linkages, dampers and accessories.



**Pulsar Actuator**



### BENEFITS & SPECIAL FEATURES

- Actuator is removable without removing or dismantling the damper housing or vane.
- Actuator is interchangeable with all ☆Star series actuators
- Actuator fits all ☆Star series dampers and may be linked to virtually any other damper.
- Motor is replaceable without removing the actuator
- Power open - power close
- No current draw while stopped
- 0 - 90 degree travel - with Autostop™ and reversing features
- Very high temperature ratings using class "E" coil motor
- Digital 3-wire control signal
- 90 second complete cycle time
- Delrin bearing for long life
- Position indicator
- Auxiliary switch available

### Description

A floating control, modulating motorized actuator. Controlled by a standard, PI or PID three wire thermostat with continuous or pulsed output. May be stopped at any intermediate position and reversed an infinite number of times.

### Application

The Pulsar ☆Star damper is used where continuous modulating control is required. Applications include but are not limited to the control of duct mounted zone dampers for heating and cooling, humidity control, and industrial and process control. Other applications include fresh air inlets on fan coils, air control for burners, make-up air units and damper dampers.

### Installation Notes

Dampers may be installed without regard to direction. Damper rods may be mounted at any angle but care should be taken to avoid placement of actuator in an inaccessible location, directly above a heating duct if maximum exhaust temperature may be exceeded or where condensation or leaking water could enter the actuator. Several mounting systems and linkages are available.

### Operation

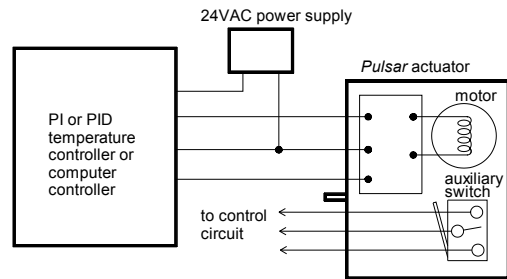
The Pulsar ☆Star actuator utilizes a powerful dc motor which drives a shaft in either direction. The stop is electronically controlled without using a limit switch. With this unique feature, the Pulsar has the ability to detect end of travel or a malfunction and stop automatically. It is automatically self-adjusting for wear. An optional auxiliary switch at either end of the travel can trigger an external device. The actuator may be replaced or upgraded (and reused elsewhere) to another ☆Star series actuator without disabling the system.

### Warranty

All ☆Star dampers and actuators are warranted against defects in materials and workmanship for a period of 30 months. Some restrictions apply. See complete warranty for details.

## SPECIFICATIONS

POWER REQUIREMENTS .....	24 VDC.
MINIMUM WIRING REQUIREMENTS .....	18 gauge 90° C.
<b>ACTUATOR MOTOR</b>	
Power draw requirements .....	6 watts when opening or closing. No draw while at rest.
Torque (running) .....	62.6 in./oz. (.44 N/M) minimum at 90% of rated power at the valve stem
Timing .....	motor cycles in 90 seconds (1.5 min.)
Characteristics .....	power close, power open; can be stopped and/or reversed at any point
Type .....	dc
AUXILIARY SWITCHES .....	1 or 2 snap acting micro switches, 5 amps resistive at 125/250 VAC, N/O, N/C or N/O/C contacts.
WIRE TYPE .....	BX, cable, leads, plenum cable, modular plug-in cable.
WIRE LENGTH .....	4 - 96", 10 - 244cm.
TEMPERATURE RATINGS (ambient) .....	class E motor - 275° F / 135° C auxiliary switch - 185° F / 85° C
<b>GROSS WEIGHT (average)</b>	
Individually packed, actuator only .....	12 ozs. (340g)

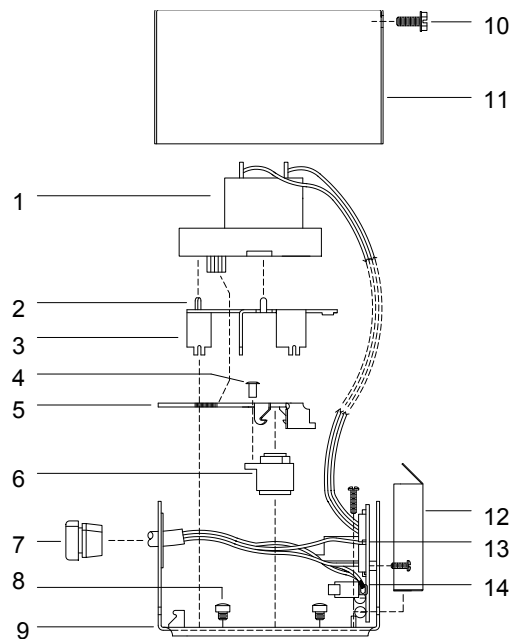


Typical application wiring diagram using controller, providing an incremental output signal, direct or reverse acting, through 24VAC, 0.5A, switching triacs or relay contacts.

## MATERIALS

- |  |                             |
|--|-----------------------------|
| 1. Motor (class "E")                       | 8. Mounting screw           |
| 2. Motor retainer tab                      | 9. Frame (galvanized steel) |
| 3. Motor mounting plate (galvanized steel) | 10. Cover screw             |
| 4. Eyelet                                  | 11. Cover (aluminum)        |
| 5. Sector gear/position indicator (brass)  | 12. Insulator shield        |
| 6. Bushing (delrin)                        | 13. PC board                |
| 7. <i>Strain relief</i>                    | 14. <i>Auxiliary switch</i> |
|  | 15. <i>Cable</i>            |

Items in *italic* type are optional. Other options not shown.



Exploded View

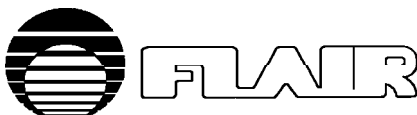
## OPTIONS

- See power, auxiliary switch, wire type and wire length in "specifications".
- Packaging:** Actuators may be ordered assembled with a damper, individually packed. Actuators may also be ordered separately and bulk packed with like actuators or in mixed lots of 24.
- Deluxe:** All actuators are available in a deluxe model suitable for harsh and high humidity environments. Upgrade includes: stainless steel: springs and screws, sealed auxiliary switch, and heavy duty condensate protected motor.

## REFERENCE

- For more information on:
- compatible dampers
  - other ☆Star damper actuators
  - mounting and linkage accessories
  - other Flair products
  - reference material
  - weight & shipping information
  - suggested pricing
- See:
- damper pages
  - actuator pages (this section)
  - actuator pages (this section)
  - other sections
  - appendix
  - appendix
  - pricing section

Flair pursues a policy of constant improvement. For this reason, all specifications are subject to change without notice.



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