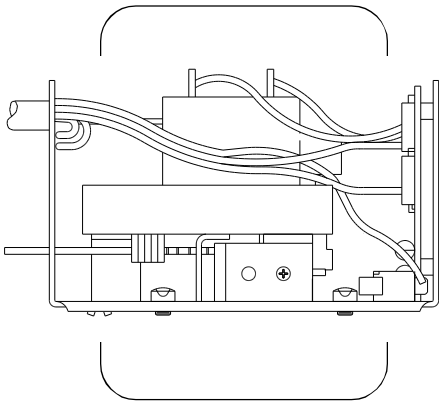


## ☆STAR ZONE VALVES LUMINA ACTUATOR (ZL SERIES)

A Highpower Reversible Actuator.

☆Star zone valves are designed primarily for use on chilled or hot water and low-pressure steam. The valves are compatible with hundreds of other fluids in many environments. ☆Star actuators are compatible with all ☆Star series 2 and 3 port bodies.

### BENEFITS & SPECIAL FEATURES



Lumina Actuator



- Actuator is removable without draining the system
- Actuator is interchangeable with all ☆Star series actuators
- Actuator fits all ☆Star series bodies
- Actuator fits all Superior™ series bodies (with adaptor plate)
- Motor is replaceable without removing the actuator
- Limitless™ circuit detects end of travel and turns off motor
- Switchable between 2- and 3-wire on/off control signal
- 15 second complete cycle time
- Delrin bearing for long life
- Self-adjusting for paddle wear
- Position indicator
- Auxiliary switch available
- Same envelope dimension as the *Astral* actuator
- One year warranty

### Description

A high-torque, on/off, motorized actuator used where high flow, high pressure differential conditions exceed the specifications of the *Astral* valve. Controlled by a standard two- or three-wire thermostat.

### Application

The Lumina ☆Star valve is used where on-off control is required in combination with a high flow and pressure differential. Applications include but are not limited to: hydronic baseboard loops, control of domestic water coils, fan coils for heating and cooling, humidity control, industrial and process control and in place of motorized or manual globe, gate or ball valves. Superior and some competitive bodies may be upgraded to ☆Star compatibility with all or partial specification.

### Installation Notes

Valves are labelled with two symbols (W and □) for port indication. Two- and three-port valves are unidirectional; flow can be from either port. The valve may be installed at any angle so long as water is not likely to drip into the actuator.

### Operation

The ☆Star Lumina actuator utilizes a powerful dc motor which drives the paddle in either direction. The stop is electronically controlled without using a limit switch. With this unique feature, the Lumina has the ability to detect end of travel or a malfunction and stop automatically. It is self adjusting for paddle 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 draining the system.

### Warranty

All Lumina ☆Star valves are warranted against defects in materials and workmanship for a period of one year. Some restrictions apply. See complete warranty for details.

## SPECIFICATIONS

POWER REQUIREMENTS ..... either 24, 100, 115, 208, or 230, 50/60Hz.

MINIMUM WIRING REQUIREMENTS ... 20 gauge 90° C.

### VALVE MOTOR

Power draw requirements ..... 2.5 watts when opening or closing. No draw while at rest.

Torque (running) ..... 120 in./oz. (.84 N/M) minimum at 90% of rated power at the valve stem

Timing ..... motor cycles in 11 seconds (0.25 min.) complete without causing water hammer

Characteristics ..... power close, power open; can be stopped and/or reversed at any point

Type ..... dc

AUXILIARY SWITCHES ..... snap acting micro switch, 5 amps resistive at 125/250 VAC, N/O, N/C, or N/O/C contacts.

CONNECTIONS/WIRE ..... BX, cable, leads, terminal strip, modular plug-in cable.

WIRE LENGTH ..... 4 - 96", 10 - 244cm.

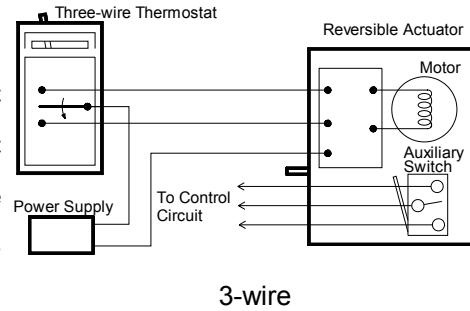
TEMPERATURE RATINGS (ambient) .... class E motor: 120° F (49° C)

auxiliary switch: 185° F (85° C)

### GROSS WEIGHT (average)

Individually packed, actuator only ..... 17 ozs. (482g)

## WIRING DIAGRAMS



## MATERIALS

- |                                      |                             |
|--------------------------------------|-----------------------------|
| 1. Motor                             | 9. Frame (galvanized steel) |
| 2. Motor retainer tab                | 10. Cover screw             |
| 3. Motor mounting plate (galvanized) | 11. Cover (aluminum)        |
| 4. Eyelet                            | 12. <i>Ground screw</i>     |
| 5. Sector gear (brass)               | 13. <i>Ground lug</i>       |
| 6. Bushing (delrin)                  | 14. Insulator shield        |
| 7. <i>Strain relief</i>              | 15. PC board assembly       |
| 8. Mounting screw                    | 16. <i>Auxiliary switch</i> |
|                                      | 17. <i>Terminal block</i>   |

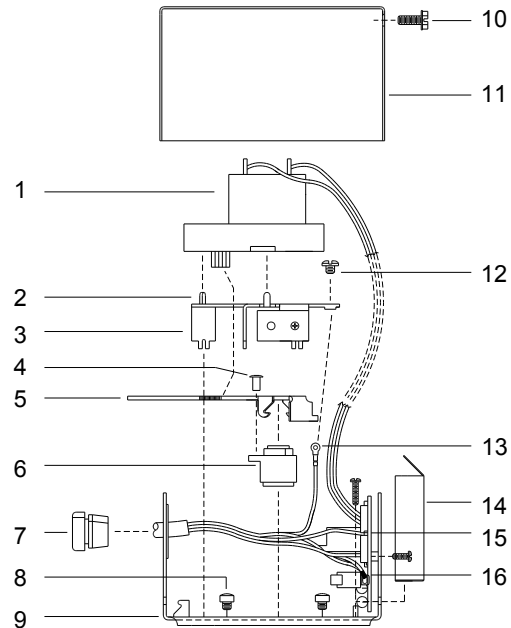
Items in *italic* type are optional. Other options not shown.

## OPTIONS

See power, auxiliary switch, wire type and wire length in "specifications" section.

**Packaging:** Actuators may be ordered assembled with a valve body, individually packed; actuators may be ordered separately.

**Deluxe:** All actuators are available in a deluxe model suitable for harsh and high humidity environments. Upgrade includes: black anodized cover, stainless steel screws (may be standard on non-deluxe), silicone sealing of all critical joints.

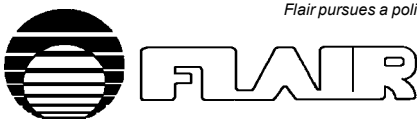


## REFERENCE

For more information on:  
 compatible bodies  
 other ☆Star actuators  
 reference material  
 weight & shipping information  
 suggested pricing

see:  
 body pages (this section)  
 actuator pages (this section)  
 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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