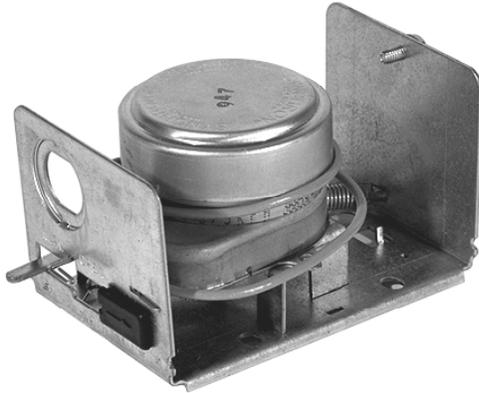


☆STAR ZONE VALVES ASTRAL ACTUATOR (ZA SERIES)

On/Off Motorized 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.



Astral Actuator



BENEFITS & SPECIAL FEATURES

- 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
- Convertible Spring Return™ can be set to open or close on power failure
- FlowTab™ converts valve from normally closed to normally open on 2-port valves; from continuous to intermittent feed on 3-port valves.
- Optional high temperature ratings using "F" coil motor
- Digital 2 wire control signal
- 11 second complete cycle time does not cause water hammer
- Delrin bearing for long life
- Manual lever with Autoresume™ for filling or draining the system; will return to auto position once power is applied
- Position indicator
- Auxiliary switches available
- Four year warranty on entire valve
- Deluxe version available (see reverse for description)

Description

A spring return, on/off, motorized actuator that is both normally closed and normally open. Controlled by a two- or three- wire thermostat.

Application

The Astral ☆Star valve is used where on-off control is required. 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. They may be used 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-port valves are directional; flow must be from W to □ port. Three port valves use the bottom (W□) port as the inlet, but are otherwise unidirectional. The valve may be installed at any angle so long as water is not likely to drip into the actuator.

Operation

The Astral ☆Star actuator utilizes a synchronous hysteresis motor which drives a paddle in one direction while powered until it reaches a stop. The motor can remain stalled under power indefinitely. Upon discontinuing power the spring return overcomes the motor and returns the valve to its "normal" position. A unique feature of the Astral is the ability to change the "normal" position at any time. An optional auxiliary switch at the end of the travel triggers an external device. The actuator may be replaced or upgraded (and reused elsewhere) to another ☆Star series actuator without draining the system.

Warranty

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

SPECIFICATIONS

POWER REQUIREMENTS either 24, 100, 115, 208, 230, or 277 VAC, 50/60Hz.

MINIMUM WIRING REQUIREMENTS ... 18 gauge 90° C.

VALVE MOTOR

Power draw requirements 6 watts.

Torque (running) 26 in./oz. (.182 N/M) minimum at 90% of rated power.

Timing motor cycles in 3 seconds (0.05 min.), spring cycles in 8 seconds (0.1333 min.).

Characteristics power close, spring open or power open, spring close.

Type synchronous, hysteresis.

AUXILIARY SWITCH 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 - 244 cm.

TEMPERATURE RATINGS (ambient) class A motor: 221° F (105° C)

class F motor: 311° F (155° C)

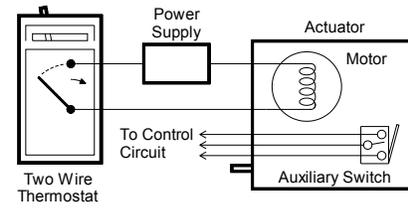
auxiliary switch: 185° F (85° C)

GROSS WEIGHT (average)

Individually packed, actuator only 15 ozs. (425g)

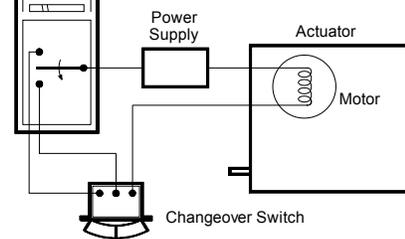
WIRING DIAGRAMS

WITH OPTIONAL SPDT AUXILIARY SWITCH

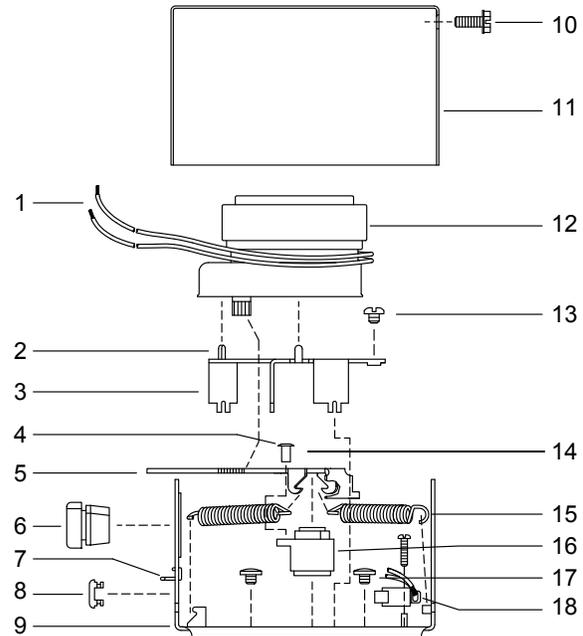


Three Wire Thermostat

WITH CHANGEOVER SWITCH



EXPLODED VIEW



Exploded View

MATERIALS

- | | |
|--|-----------------------------|
| 1. Motor leads | 9. Frame (galvanized steel) |
| 2. Motor mounting post | 10. Cover screw |
| 3. Motor mounting plate (galvanized steel) | 11. Cover (aluminum) |
| 4. Eyelet (brass) | 12. Motor |
| 5. Sector gear (brass) | 13. Ground screw |
| 6. <i>Strain relief</i> | 14. Retaining nut |
| 7. Manual open spring | 15. Extension spring |
| 8. FlowTab (nylon) | 16. Bushing (Delrin) |
| | 17. Mounting screw |
| | 18. Auxiliary switch |

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: "F" coil, condensate protected motor, which includes: nickel plated gear cup and top plate, black anodized top & bottom cover, and stainless steel shaft, black anodized actuator cover, stainless steel springs and screws (may be standard on non-deluxe), silicone sealing of all critical joints.

REFERENCE

For more information on:	see:
compatible bodies	body pages (this section)
other ☆Star actuators	actuator pages (this section)
reference material	appendix
weight & shipping information	appendix
suggested pricing	pricing section

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



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