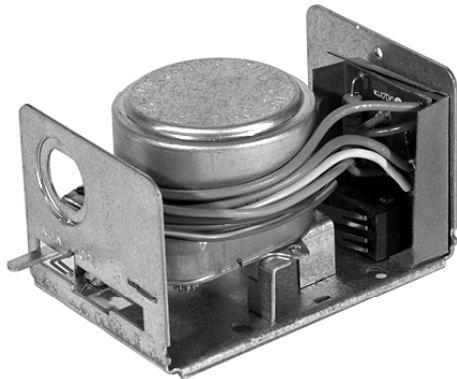


★STAR ZONE VALVES CORVUS ACTUATOR (ZC SERIES)

Mid-position 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.



Corvus Actuator



BENEFITS & SPECIAL FEATURES

- Actuator is removable without draining the system
- Actuator is interchangeable with all ★Star series actuators
- Actuator fits all ★Star series 3 and 4 port bodies
- Actuator fits all Superior™ series 3 port bodies (with adaptor plate)
- FlowTab™ converts valve from normally closed to normally open on 2-port valves; from continuous to intermittent feed on 3- and 4-port valves.
- Motor is replaceable without removing the actuator
- One port will open on power failure
- Digital 3 or 4 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
- Same envelope dimension as the *Astral* actuator
- Deluxe version available (see reverse for description)
- Four year warranty on entire valve

Description

A spring return, on/off and mid-position motorized actuator. Controlled by (two) two-wire thermostats.

Application

The Corvus ★Star actuator is used in conjunction with a 3-port body where on-off control is required with port sharing. 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

Used only on 3-port bodies. Valves are labelled with two symbols (W and □) for port indication. Three port valves use the bottom (W□) port as the inlet; using two different orifices (seats) flow may be balanced. The valve may be installed at any angle so long as water is not likely to drip into the actuator.

Operation

The Corvus★Star actuator utilizes a synchronous hysteresis motor which drives a paddle in one direction while powered until it reaches a stop. The stop is electronically controlled at the mid-position or physically controlled at either extreme. 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. An auxiliary switch at the 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 ★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) 26in./oz. (.182N/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 one port is powered open, one port is spring open. Port sharing is controlled electronically under power.

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. (The second switch is used for the mid-position feature.)

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

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

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

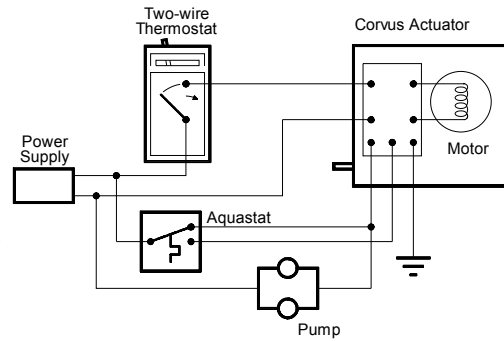
class F motor: 311° F (155 C)

auxiliary switch: 185° F (85° C)

GROSS WEIGHT (average)

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

WIRING DIAGRAMS



Typical application using a two-wire thermostat and domestic hot water aquastat.

EXPLODED VIEW

MATERIALS

- | | |
|--|--------------------------------------|
| 1. Motor retainer tab | 10. Cover (aluminum) |
| 2. Motor mounting plate (galvanized steel) | 11. Motor |
| 3. Eyelet (brass) | 12. <i>Ground screw</i> |
| 4. Sector gear (brass) | 13. Extension spring |
| 5. Bushing (Delrin) | 14. <i>Ground lug</i> |
| 6. <i>Strain relief</i> | 15. Insulator shield |
| 7. Mounting screw | 16. PC board, motor & cable assembly |
| 8. Frame (galvanized steel) | 17. Position/auxiliary switches |
| 9. Cover screw | |

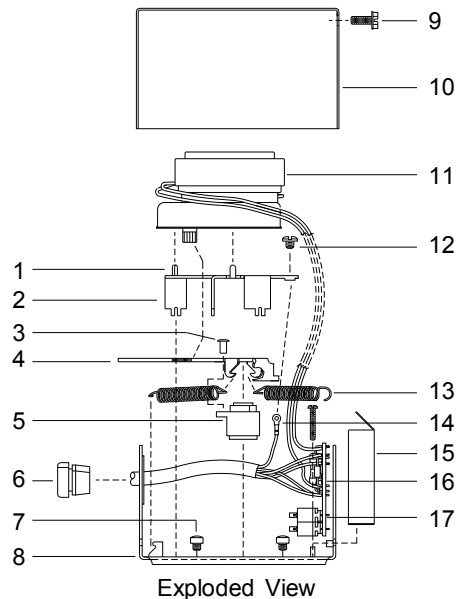
Items in *italic* type are optional. Other options not shown.

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.

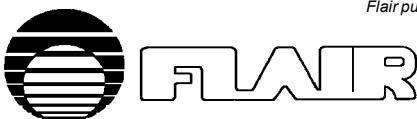
Deluxe: All actuators are available in a deluxe model suitable for harsh and high humidity environments. Upgrade includes: "F" coil, condensate protected motor, which includes: nickel plated gear cup and top plate, black anodized top & bottom cover, and stainless steel shaft, black anodized actuator 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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