



H-2000, H-2024, H-2230 Fast-Acting, Two-Position Actuators FOR FIRE/SMOKE CONTROL APPLICATIONS

The H-2000, H-2024, and H-2230 Fast-Acting, Two-Position Actuators are spring return direct coupled actuators (DCA) with an integral junction box for on/off damper control. The actuator accepts an on/off signal from a single-pole, single-throw (spst) controller. Models are available with clockwise (cw) or counterclockwise (ccw) spring return and are designed to operate reliably in smoke control systems requiring Underwriter's Laboratories Inc. UL555S ratings up to 350°F.

SPECIFICATIONS

Models:

| Model | Torque | Spring Return Direction | Voltage in Vac |
|-----------|--------|-------------------------|----------------|
| H-2000A/3 | Low | ccw | 120 |
| H-2000A/6 | Medium | | |
| H-2000A/8 | High | | |
| H-2000B/3 | Low | cw | 120 |
| H-2000B/6 | Medium | | |
| H-2000B/8 | High | | |
| H-2024A/3 | Low | ccw | 24 |
| H-2024A/6 | Medium | | |
| H-2024A/8 | High | | |
| H-2024B/3 | Low | cw | 24 |
| H-2024B/6 | Medium | | |
| H-2024B/8 | High | | |
| H-2230A/3 | Low | ccw | 230 |
| H-2230A/6 | Medium | | |
| H-2230A/8 | High | | |
| H-2230B/3 | Low | cw | 230 |
| H-2230B/6 | Medium | | |
| H-2230B/8 | High | | |

Device Weight:

- 5 lb (2.3 kg).

Electrical Ratings:

- Power Input:
 - H-2000: 120 Vac \pm 10%, 60 Hz.
 - H-2024: 24 Vac +20%, -10%, 50/60 Hz.
 - H-2230: 230 Vac \pm 10%, 50/60 Hz
- Power Consumption (maximum):
 - H-2000: Running: 0.18A, 18W. Holding: 0.11A, 9W.
 - H-2024: Running: 16 VA. Holding: 8 VA.
 - H-2230: Running: 0.13A, 18W. Holding: 0.10A, 11W.

Electrical Connections:

- Two color coded 16 in. leads; includes ground screw.
- Three 7/8 in. holes for conduit connections (fittings not included).

SPECIFICATION DATA

FEATURES

- Designed to operate reliably in smoke control systems requiring Underwriter's Laboratories Inc. UL555S ratings up to 350°F.
- Integral spring return ensures level of return torque.
- Stainless steel internal spring.
- Fifteen-second spring return timing.
- No special cycling required during long-term holding.
- No audible noise during holding.
- Patent pending design eliminates need for limit switches to reduce power consumption.
- Models available for 24, 120, and 230 Vac.
- Ninety-five degree angle of rotation.
- Actuator holds rated torque at reduced power level.
- Die-cast aluminum housing.
- Housing design allows flush mounting to damper.
- Integral junction box with three conduit openings eliminates need for separate wiring box.
- High-temperature indicator included.

Controller Type:

- H-2000: Line voltage (120 Vac), two-position, spst (Series 40).
- H-2024: Low voltage (24 Vac), two-position, spst (Series 80).
- H-2230: Line voltage (230 Vac), two-position, spst (Series 40).

Temperature Ratings:

- Ambient: 0°F to 130°F (-18°C to 55°C).
- Shipping and Storage: -40°F to 140°F (-40°C to 60°C).

IMPORTANT

The actuator is designed to meet UL555S standards at 350°F (176°C). The actuator must be tested with the damper to achieve this rating.

Humidity Ratings:

- 5% to 95% RH noncondensing.

Stroke:

- 95° \pm 3°, mechanically limited.

Design Life (at Rated Voltage):

- 60,000 full stroke cycles.

Timing (At Rated Torque and Voltage):

- Drive Open:
 - H-2000: 25 sec maximum, 18 sec typical.
 - H-2024: 25 sec maximum, 22 sec typical.
 - H-2230:
 - Ambient Conditions: 25 sec maximum, 14 sec typical.
 - At 350°F: 75 sec maximum.
- Spring Close: 20 sec maximum, 15 seconds typical.



Cycling Requirements:

- ❑ Prolonged holding-period (1 year) testing of these actuators has been performed with no spring return failures. The actuator and the internal spring are designed to require no special cycling during long-term holding.
- ❑ Honeywell recommends following all local, state and national codes for periodic testing of the entire smoke control system. Refer to National Fire Protection Association (NFPA) National Fire Codes®: NFPA90A, NFPA92A and NFPA92B for your application.
- ❑ NFPA recommends periodic examination of each fire/smoke damper (semi-annually or annually) to ensure proper performance.

Noise Rating (Maximum):

- ❑ Driving Open:
 - ❑ H-2000, H2024: 65 dBA at 1m.
 - ❑ H-2230: 80 dBA at 1m.
- ❑ Holding: 20 dBA at 1m (no audible noise).

Minimum Damper Shaft Length:

- ❑ 1-1/2 in. (38 mm).

Mounting:

- ❑ 3/8 to 1/2 in. square or round damper shafts.
- ❑ Can mount actuator with shaft in any position.
- ❑ Secure hub to shaft with:
 - ❑ H-2000, H-2024: Two 1/4-28 UNF set screws. Use 1/8 in. Allen wrench to tighten set screws.
 - ❑ H-2230: Four 3 mm set screws. Use 3 mm Allen wrench to tighten set screws.

IMPORTANT

Honeywell does not recommend using linkages with these actuators because side-loading of the output hub reduces actuator life.

Environmental Protection Ratings:

- ❑ NEMA1.

Accessories (not supplied with actuator):

- ❑ 201391 Shaft Adapter for 3/8 in. shafts.
- ❑ 205649 Mounting Bracket.
- ❑ 32003532-002 Dual Auxiliary Switch Package for UL555(S) applications.

Approvals:

| | H-2000 | H-2024, H-2230 |
|--|--------|----------------|
| UL/cUL | X | X |
| UL873 Plenum Rating, File No. E4436; Guide No. XAPX. | X | X |
| CE | | X |
| C-TICK | | X |

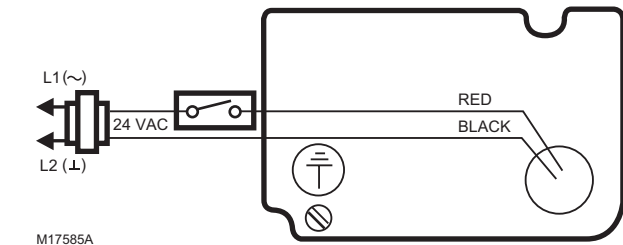


Fig. 1. Typical 24 Vac wiring.

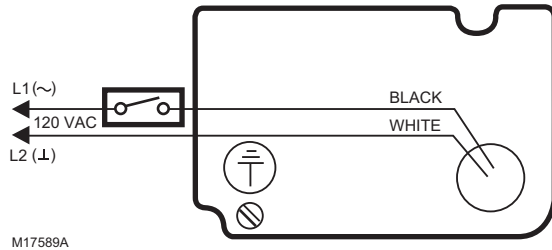


Fig. 2. Typical 120 Vac wiring.

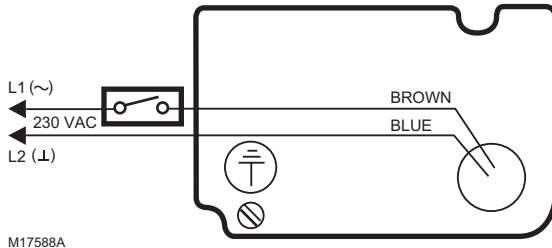
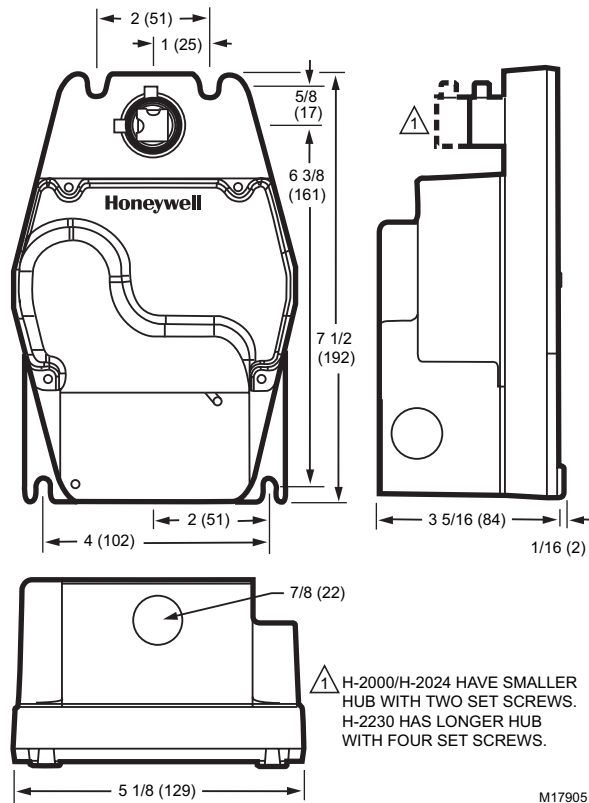


Fig. 3. Typical 230 Vac wiring.

Dimensions:



IMPORTANT

A power break of less than two seconds can cause the actuator to spring-return 5 degrees or less and remain in place until a power break of longer duration.

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