

## ML4115, ML8115 Fast-Acting, Two-Position Actuators

### FOR FIRE/SMOKE CONTROL APPLICATIONS



The ML4115, ML8115 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   | Spring Return Direction | Voltage in Vac | Torque in lb-in. (N•m) |
|---------|-------------------------|----------------|------------------------|
| ML4115A | ccw                     | 120            | 30 (3.4)               |
| ML4115B | cw                      |                |                        |
| ML4115C | ccw                     | 230            |                        |
| ML4115D | cw                      |                |                        |
| ML8115A | ccw                     | 24             |                        |
| ML8115B | cw                      |                |                        |

### Electrical Ratings:

- ☐ Power Input:
  - ☐ ML4115A,B: 120 Vac  $\pm$ 10%, 60 Hz.
  - ☐ ML4115C,D: 230 Vac  $\pm$ 10%, 50/60 Hz.
  - ☐ ML8115: 24 Vac  $\pm$ 20%, -10%, 50/60 Hz.
- ☐ Power Consumption:
  - ☐ ML4115A,B: Running: 0.18A, 18W. Holding: 0.11A, 9W.
  - ☐ ML4115C,D: Running: 0.13A, 18W. Holding: 0.10A, 11W.
  - ☐ ML8115: Running: 16 VA. Holding: 8 VA.

### Electrical Connections:

- ☐ ML4115A,B, ML8115: Two color coded 16 in. leads; includes ground screw.
- ☐ ML4115C,D: 1m appliance cable.
- ☐ Three 7/8 in. holes for conduit connections (fittings not included).

### Controller Type:

- ☐ ML4115A,B: Line voltage (120 Vac), two-position, spst (Series 40).
- ☐ ML4115C,D: Line voltage (230 Vac), two-position, spst (Series 40).
- ☐ ML8115: Low voltage (24 Vac), two-position, spst (Series 80).

### Device Weight:

- ☐ 5 lb (2.3 kg).

### Noise Rating (Maximum):

- ☐ Driving Open: 65 dBA at 1m.
- ☐ Holding: 20 dBA at 1m (no audible noise).

## SPECIFICATION DATA

## FEATURES

- 30 lb-in. (3.4 N•m) minimum driving torque at 350°F (176°C).
- 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 and 120 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.

### 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.

### Torque Rating (at rated voltage):

- ☐ Typical Holding (0°F to 350°F): 30 lb-in. (3.4 N•m).
- ☐ Typical Driving (0°F to 350°F): 30 lb-in. (3.4 N•m).
- ☐ Spring Return: 30 lb-in. (3.4 N•m).
- ☐ Stall Maximum: 150 lb-in. (17 N•m).

### Timing (At Rated Torque and Voltage):

- ☐ Drive Open:
  - ☐ ML4115: 25 sec maximum, 18 sec typical.
  - ☐ ML8115: 25 sec maximum, 22 sec typical.
- ☐ Spring Close: 15 sec.

### Design Life (at Rated Voltage):

- ☐ 60,000 full stroke cycles.

### Cycling Requirements:

- ☐ Prolonged holding period (1 year) testing of these actuators has been performed with no evidence of reduced spring return performance.

### Minimum Damper Shaft Length:

- ☐ 1-1/2 in. (38 mm).



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### 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: Two 1/4-28 UNF set screws. Use 1/8 in. 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:

- NEMA 1.

### Accessories (not supplied with actuator):

- 201391 Shaft Adapter for 3/8 in. shafts.
- 205649 Mounting Bracket.
- 32003532-005 Dual Auxiliary Switch Package for UL555(S) applications.

### Approvals:

|                                                            | ML4115A,B | ML4115C,D<br>ML8115 |
|------------------------------------------------------------|-----------|---------------------|
| UL/cUL                                                     | X         | X                   |
| UL873 Plenum Rating,<br>File No. E4436;<br>Guide No. XAPX. | X         | X                   |
| CE                                                         |           | X                   |
| C-TICK                                                     |           | X                   |

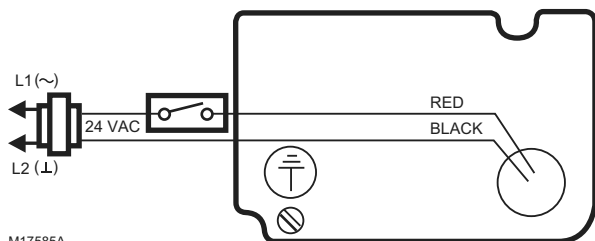


Fig. 1. Typical 24 Vac wiring.

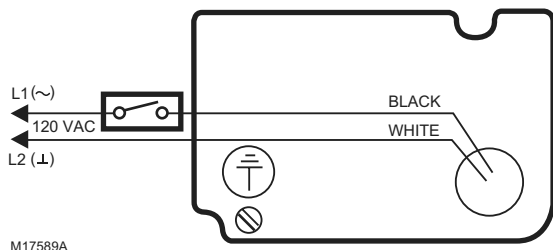


Fig. 2. Typical 120 Vac wiring.

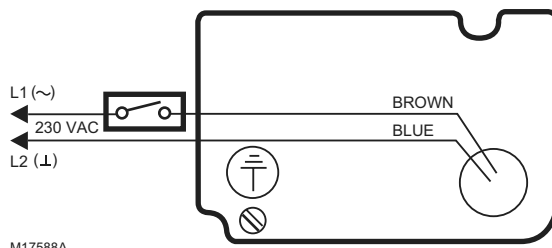
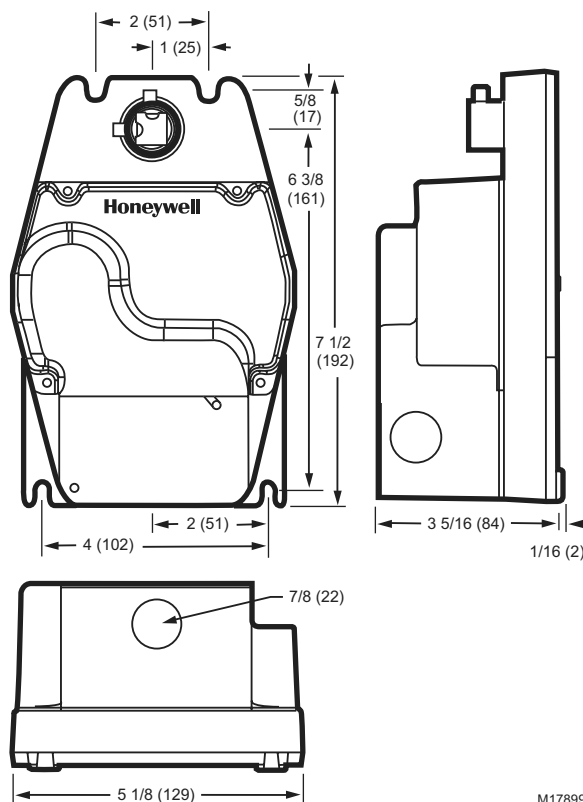


Fig. 3. Typical 230 Vac wiring.

### Dimensions:



M17899

### IMPORTANT

*For actuators with a product date code before 0527, 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. For actuators with a product date code of 0527 or after, a power break of any duration will cause the actuator to spring-return and be able to drive immediately when power is reapplied.*

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