

# Honeywell

## ML4105, ML4115, ML8105, ML8115

### Fast-Acting, Two-Position Actuators

#### FOR FIRE/SMOKE CONTROL APPLICATIONS



#### Electrical Connections:

ML4105A,B, ML4115A,B, ML8105, ML8115: Two color coded 16 in. leads; includes ground screw.

ML4105C1008, ML4105D1007: Terminal block and ground screw with option for connecting thermal switch.

ML4105C1016, ML4105D1015, ML4115C,D: 1m appliance cable. Three 7/8 in. holes for conduit connections (fittings not included).

**Mounting:** 3/8 to 1/2 in. square or round damper shafts. Actuator can be mounted with shaft in any position. Secure hub to shaft with:

ML4105A,B, ML8105: Four 1/4-28 UNF set screws. Use 1/8 in. Allen wrench to tighten set screws.

ML4105C,D: Four 3 mm set screws. Use 3 mm Allen wrench to tighten set screws.

ML4115, ML8115: 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.

#### 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.

**Noise Rating (Maximum):**

Driving Open: 65 dBA at 1m.

Holding: 20 dBA at 1m (no audible noise).

#### Controller Type:

ML4105A,B, ML4115A,B: Line voltage (120 Vac), two-position,

spst (Series 40).

ML4105C,D, ML4115C,D: Line voltage (230 Vac), two-position,

spst (Series 40).

ML8105, ML8115: Low voltage (24 Vac), two-position,

spst (Series 80).

Table 1. ML4105, ML4115, ML8105, ML8115 DCA Models.

TABLE 1. ML4105, ML4115, ML8105, ML8115 DCA MODELS

Model	Spring Return Direction	Power Consumption		Torque in lb-in. (N*m)	Voltage Input in Vac
		Running	Holding		
ML4105A	ccw	.20A, 18W	0.11A, 9W	50 (5.7)	120 +10%, -15%, 60Hz
ML4105B	cw				
ML4105C	ccw	.12A, 22W	0.08A, 10W	50 (5.7)	230 ±10%, 50/60 Hz
ML4105D	cw				
ML4115A	ccw	.18A, 18W	0.11A, 9W	30 (3.4)	120 ±10%, 60 Hz
ML4115B	cw				
ML4115C	ccw	.13A, 18W	0.10A, 11W	30 (3.4)	230 ±10%, 50/60 Hz
ML4115D	cw				
ML8105A	ccw	20VA	8 VA	50 (5.7)	24 +20%, -10% 50/60 Hz
ML8105B	cw				
ML8115A	ccw	16VA	8 VA	30 (3.4)	
ML8115B	cw				

## Installation

### CAUTION

#### Device Malfunction Hazard.

**Improper set screw tightening causes device malfunction.**  
Tighten set screws with proper torque to prevent damper shaft slippage.

### CAUTION

#### Actuator Damage Hazard.

**Using actuator as shaft bearing causes device damage.**  
Use actuator only to supply rotational torque. Avoid any side loads to actuator output coupling bearings.

To install actuator, proceed as follows:

1. Place actuator over damper shaft; and hold mounting bracket in place. See Fig. 2.
2. Mark screw holes on damper housing.
3. Remove actuator and mounting bracket.
4. Drill or center-punch holes for mounting screws (or use no.10 self-tapping sheet metal screws).
5. Turn damper blades to desired normal (closed) position.
6. Place actuator and mounting bracket back into position and secure bracket to damper box with sheet metalscrews.
7. Tighten set screws securely into damper shaft using minimum 30 lb-in., maximum 60 lb-in. torque. Use 1/8 in. or 3 mm Allen wrench (see Specifications for details) to tighten set screws.

## Wiring

See Fig. 4 through 8 for typical wiring diagrams.

### WARNING

#### Electrical Power Hazard.

**Line voltage can cause death or serious injury and short equipment circuitry.**

Disconnect power supply before installation.

### CAUTION

#### Electrical Shock or Equipment Damage Hazard.

**Low voltage can shock individuals or short equipment circuitry.**

Disconnect power supply before installation.

#### IMPORTANT

1. All wiring must comply with local electrical codes, ordinances and regulations.
2. Voltage and frequency of transformer used with ML8105 and ML8115 must correspond with the characteristics of power supply and actuator.
3. Use wires rated for at least 75°C (167°F).

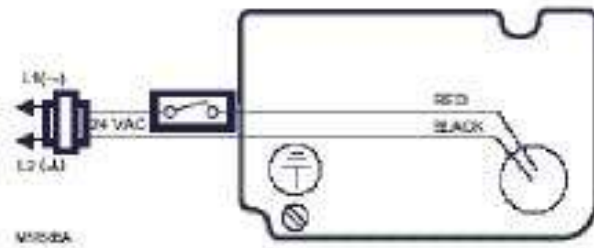


Fig. 4. Typical 24 Vac wiring.

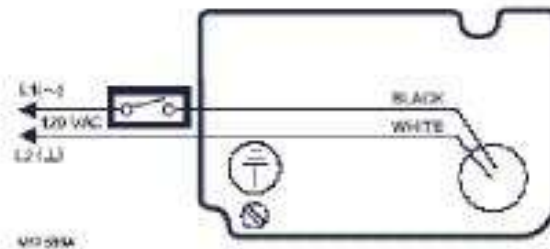


Fig. 5. Typical 120 Vac wiring.

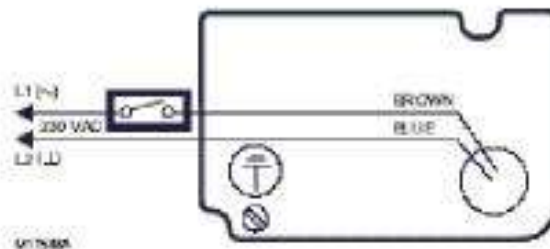


Fig. 6. Typical 230 Vac wiring.

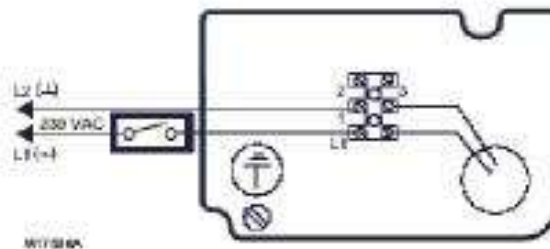


Fig. 7. 230 Vac terminal-strip wiring.

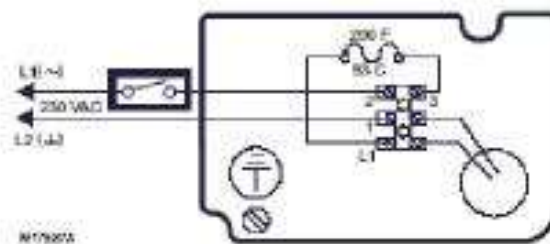


Fig. 8. 230 Vac terminal-strip wiring with a thermal fuse.

NOTE: Terminal strip included with ML4105C1008 and ML4105D1007.