

# Direct Coupled Damper Actuators—Non-Spring Return

## ML6161; ML7161

### Non-Spring Return Direct Coupled Damper Actuators, 35 lb-in



ML6161A,B

ML6161C,D

ML7161

Used to control dampers in HVAC applications and for mounting on ball valves; suitable for use with modulating (2-10 Vdc) thermostats or building automation controls.

- Control for air damper applications with up to 10 sq.ft. assuming 3.5 in-lb per sq.ft. of damper area, velocity independent
- Superior A/C synchronous submotor for consistent timing and actuator longevity
- Eliminate need for limit switches or mechanical stops by providing magnetic coupling
- All models include manual declutch lever, and bag assembly with two minimum position setscrews
- Mount directly on 3/8 inch or 1/2 inch square or round damper shaft
- Selectable 45, 60, and 90 stroke in either clockwise or counterclockwise direction

**Actuator Type:** Damper

**Rotational Stroke:** 90 degrees

**Fail Safe Mode:** Non-Spring Return

**Torque Rating:** 35 lb-in. (4 Nm)

**External Auxiliary Switches Available:** Yes, 201052B

**Number of Internal Auxiliary Switch:** 0

**Electrical Connections:** Screw terminals

**Environmental Rating:** NEMA1

**Frequency:** 50 Hz; 60 Hz

**Manual operation:** Declutch mechanism

**Mounting:** Direct Coupled

**Maximum Noise Rating, Driving (dBA @ 1m):** 45

**Rotation to Open:** By wiring

**Rotational Stroke Adjustment:** Mechanically limited at 45 or 60 degrees in cw or ccw directions

**Compatible Damper Shafts:** 3/8 to 1/2 in. square or round (10 to 13 mm square/round)

**Shaft Adapter Type:** Aluminum Hub, two set screws

**Supply Voltage:** 24 Vac  $\pm$ 20%

**Materials:** Steel plate and Plenum rated plastic

**Operating Humidity Range (% RH):** 5 to 95% RH, non-condensing

**Ambient Temperature Range:** 20 F to 125 F (-18 C to +50 C)

**Storage Temperature Range:** 20 F to 130 F (-18 C to +54 C)

**Weight:** 1.5 lb (0.68 kg)

**Includes:** 4074ENY Bag Assembly

**Approvals**

**CE:** 89/336/ECC, 73/23/EEC

**C-Tick:** N314

**Underwriters Laboratories, Inc:** UL873, Plenum Rated

**Canadian Underwriters Laboratories, Inc:** cUL C22.2 No. 24-93

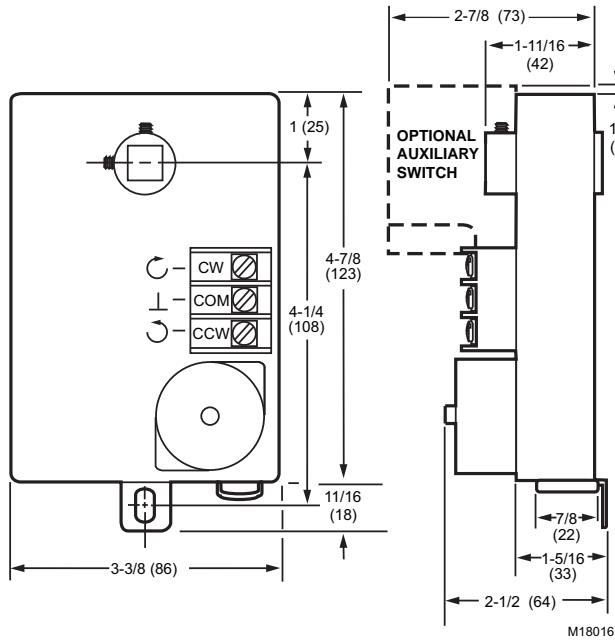
	Product Number	Control Signal	Feedback	Timing (seconds)		Power Consumption, Driving	Supply Voltage	Input Impedance	Comments
				Maximum Driving @ 60 Hz	Nominal Driving @ 60 Hz				
*	ML6161A2009/U	On/Off; SPDT; Floating	With accessory	—	90 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
—	ML6161A2017/U	On/Off; SPDT; Floating	With accessory	—	420 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
*	ML6161A2025/U	On/Off; SPDT; Floating	With accessory	—	180 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
*	ML6161B2024/U	On/Off; SPDT; Floating	—	—	90 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
*	ML6161B2032/U	On/Off; SPDT; Floating	—	—	420 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
*	ML6161B2073/U	On/Off; SPDT; Floating	—	—	180 sec	1.8 VA	24 Vac $\pm$ 20%	—	—
	ML6161C2007/U	On/Off; SPDT; Floating	With accessory	—	90 sec	1.8 VA	24 Vac $\pm$ 20%	—	Includes two 5/8 x 7/8 in. double knock-out conduit openings
	ML6161D2006/U	On/Off; SPDT; Floating	—	—	90 sec	1.8 VA	24 Vac $\pm$ 20%	—	Includes two 5/8 x 7/8 in. double knock-out conduit openings
	ML7161A2008/U	4-20 mA; 2-10 Vdc	—	—	90 sec	5.4 VA	24 Vac $\pm$ 20%	45K ohm (2-10 Vdc signal), 536 ohm (4-20 mA signal)	—

\* TRADELINE models • SUPER TRADELINE models

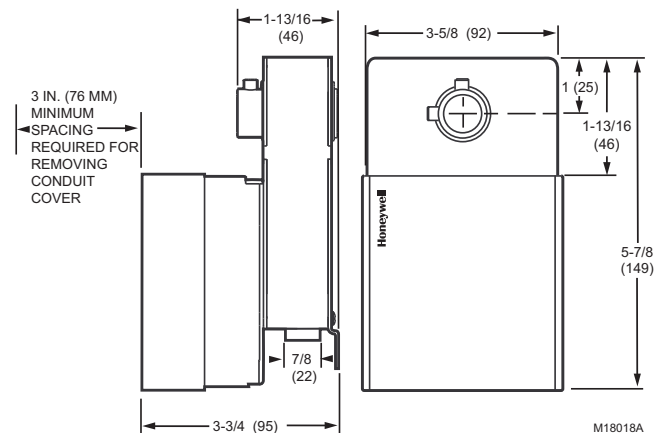
# Direct Coupled Damper Actuators—Non-Spring Return

## Dimension and Wiring Diagrams—ML6161; ML7161; ML6174; ML7174

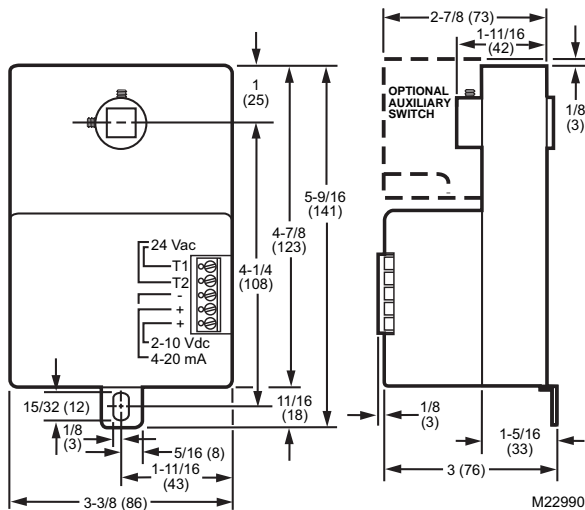
ML6161A, B or ML6174A, B Dimensions in inches (millimeters)



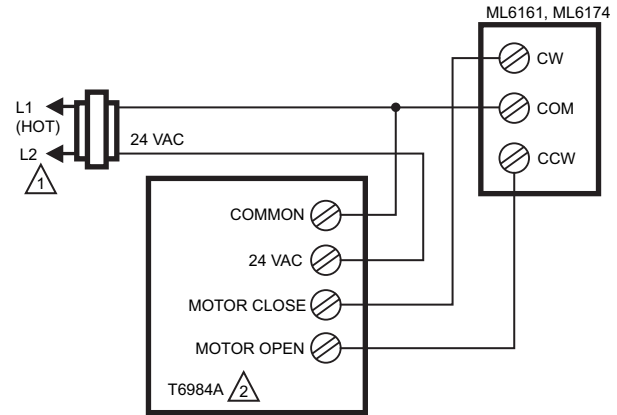
ML6161A, B or ML6174A, B Dimensions in inches (millimeters)



ML6161A, B or ML6174A, B Dimensions in inches (millimeters)



Typical Wiring of ML6161 or ML6174 using Electronic Floating T6984 Thermostat

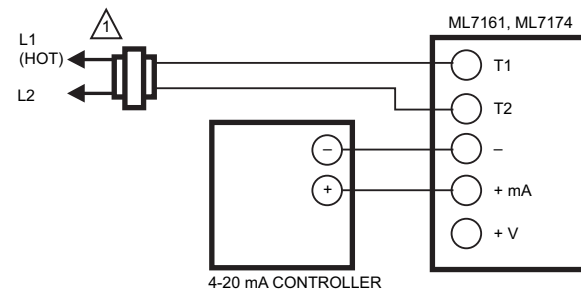


1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION, AS REQUIRED.

2 T6984A SHOWN WIRED FOR COOLING ONLY. TO WIRE FOR HEATING ONLY, REVERSE OPEN AND CLOSE CONTACTS.

M18023

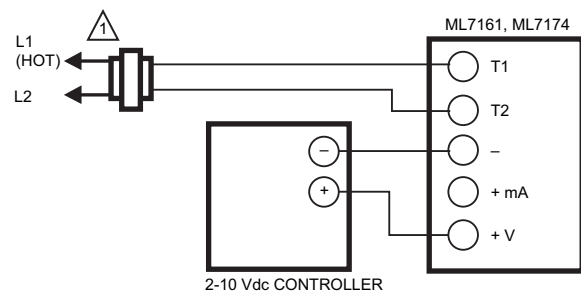
ML7161 or ML7174 used with 4-20 mA control



1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

M18071

ML7161 or ML7174 used with 2-10 Vdc control



1 POWER SUPPLY. PROVIDE DISCONNECT MEANS AND OVERLOAD PROTECTION AS REQUIRED.

M18072