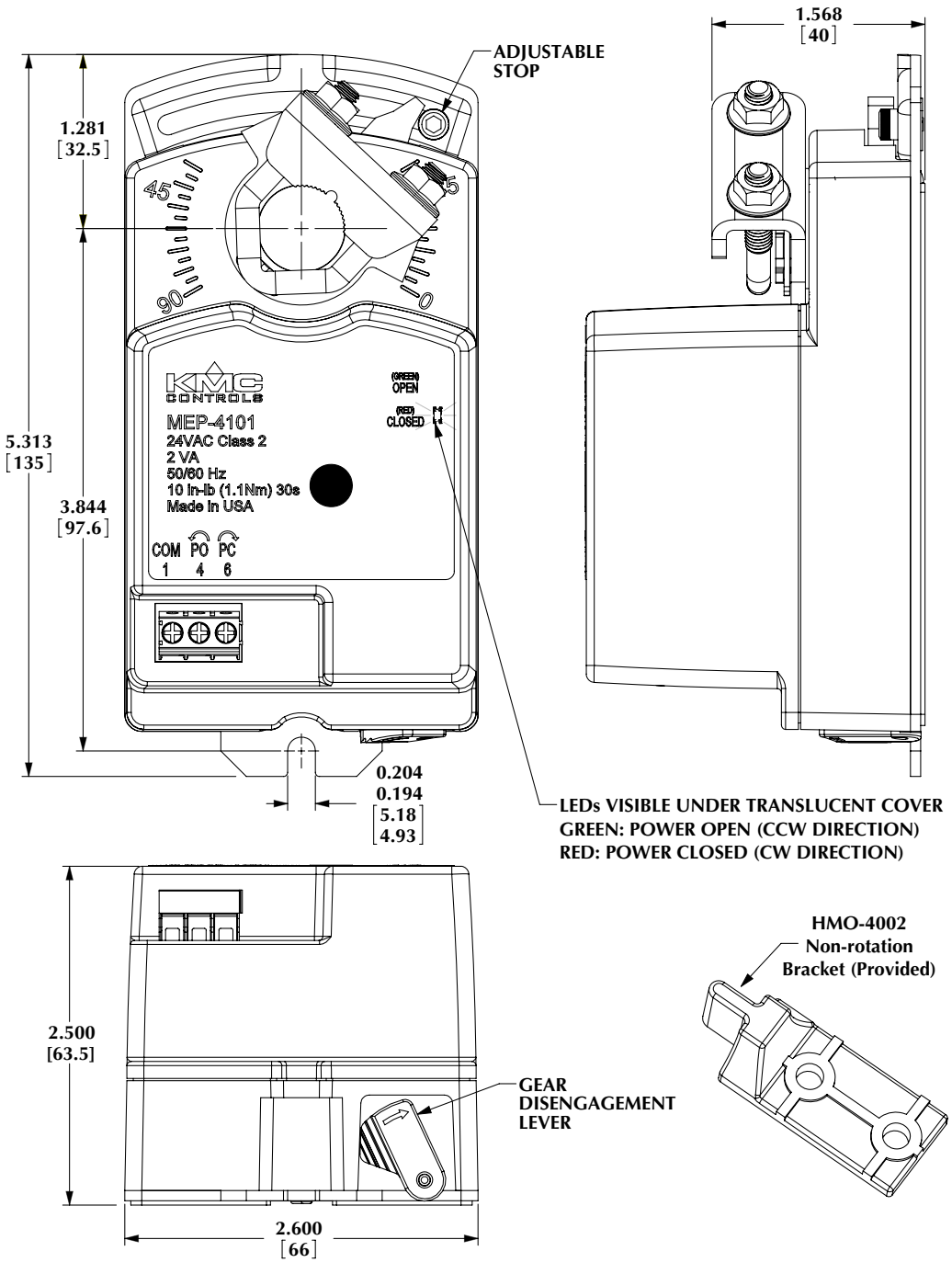
Direct-Coupled ControlSet® Actuator (10 in-lb.)

MEP-4101

Installation Guide

Mounting



All dimensions are in inches (mm)

1. Ensure the damper can move freely through its entire range of motion, and fix any binding before installing the actuator. Turn the damper blade to its fully closed position.
2. Press (to the right) and hold the gear disengagement lever (see the illustration), rotate the actuator to the fully closed position, and release the lever.

NOTE: Depending on the damper-seal design, backing the actuator off its stop approximately 5° may provide tight damper shut-off.

3. Align the actuator and slide it onto the shaft.
4. Leaving a gap between the actuator and mounting surface to prevent any binding, finger-tighten the nuts on the V-bolt.

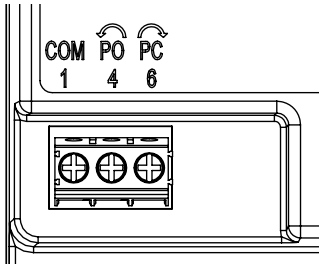
5a. Insert the non-rotation bracket (HMO-4002 supplied or HMO-4001 "T" bracket available separately) into the slot at the base of the actuator and secure the non-rotation bracket with two #8 or #10 self-tapping screws. (This is the recommended method.)

5b. Alternately, insert a single #8 or #10 self-tapping screw directly into the non-rotation slot. Tighten the screw only enough to ensure that the screw will not come out. There should be a bit a play between the screw and the sides of the slot to help prevent binding.

6. Evenly tighten the V-bolt nuts 30 to 35 in-lb.
7. If desired, use a 7/64-inch hex key wrench to loosen and position the end-stop screw.

Wiring

Connect the wires to the terminal block and apply 24 VAC (+20%/–15%) power for tri-state operation.



When the actuator reaches the end of rotation, the motor is disengaged, and (after about five seconds) the appropriate LED indicator under the translucent cover illuminates—**green for "power open" (CCW)** or **red for "power closed" (CW)**. The LED remains on until:

- Power to the terminal is simply removed
- Power is switched to the other terminal, and the actuator starts turning again in the opposite direction

Maintenance

No routine maintenance is required. The motors are permanently lubricated and all internal gear-train components are oil-impregnated. Careful installation will also ensure long term reliability and performance.

Accessories

HCO-1151	Weather shield kit
HMO-4001	Non-rotation "T" bracket
HMO-4002	Replacement non-rotation bracket

Specifications

Supply Voltage	24 VAC (+20%/–15%), Class 2
Supply Power	2 VA
Control Signal	Tri-state, 24 VAC
Frequency	50/60 Hz
Angular Rotation	0 to 95°, fully adjustable with mechanical stop
Motor Timing	30 seconds for 90° @ 60 Hz; 36 seconds for 90° @ 50 Hz
Torque	10 in-lb. (1.1 N•m)
Mounting	Direct on 1/4 to 5/8 inch (6 to 16 mm) round or 1/4 to 7/16 inch (6 to 11 mm) square shaft by adjustable "V" bolt; minimum recommended damper shaft length is 1-5/8 inches
Connections	Wire clamp type; 14 to 22 AWG, copper
Dimensions	5.3 x 2.6 x 2.5 inches (135 x 66 x 63.5 mm)
Weight	1 lb. (0.45 kg)
Enclosure	Flame-retardant plastic black base and translucent cover
Noise Level	< 35 dBA max. at 1 meter
Environmental Limits	
Operating	–22 to 140° F (–30 to 60° C)
Shipping	–40 to 176° F (–40 to 80° C)
Humidity	5 to 95% RH (non-condensing)

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