

M7161, M7164, M7184 Modutrol IV™ Motors

SPECIFICATION DATA



APPLICATION

These Modutrol IV™ Motors provide proportioning control of zone dampers and valves when used with a modulating dc voltage input.

FEATURES

- M7161, M7164 replace M734H,J Motors. M7184 replaces M744D Motors.
- Oil immersed motor and gear train provide reliable performance and long life.
- Wiring box provides NEMA 3 weather protection.
- Quick-connect terminals standard—screw terminal adapter available.
- Adapter bracket for matching shaft height of older motors is standard with replacement motors.
- Die-cast aluminum housing.
- Used with Honeywell W7080 Multizone System.
- Can be used for field replacement of Ranco LA2-1000 and 2000 Linear Actuators.



SPECIFICATIONS

| | |
|---|--|
| M7161A,B,G M7164A,B,G M7184A | |
| Control Type 71 is dc voltage input 4-7, 6-9 or 10.5-13.5 Vdc | Suffix Letter A: is fixed stroke, (90° or 160°) Electrically normally closed, No auxiliary switches B: is fixed stroke (160°), 1 auxiliary switch G: is fixed stroke (90° or 160°), Electrically normally open, No auxiliary switches |
| Power Rating 6 is low torque: 35 lb.-in. 8 is high torque: 150 lb.-in. | |
| Output Drive 4 is dual-ended shaft, non-spring return. 1 is single-ended shaft, non-spring return. | |

Motor Rotation:

Normally closed M7161A,B; M7164A,B; M7184A: Drive to the fully counterclockwise  (as viewed from the power end) to the fully closed position when powered input signal is at a minimum.

Electrically normally open M7161G, M7164G: Drive clockwise  (as viewed from the power end) to the fully open position when the powered input signal is at a minimum.

Stroke:

Fixed 90° or 160° stroke models available.

Timing:

Nominal 30 seconds for 90° stroke and 60 seconds for 160° stroke.

Maximum Damper Rating:

M7161, M7164: B dim = 48 in. (1219 mm).
 M7184: B dim = 202 in. (5131 mm).

Dead Weight Load on Shaft:

Power End: 200 lb (90.8 kg) maximum for M7184. 100 lb (45.4 kg) maximum for M7161, M7164.
 Auxiliary End: 200 lb (90.8 kg) maximum for M7184. 100 lb (45.4 kg) for M7161, M7164. (For dual-ended stroke motors only.)

Ambient Temperature Ratings:

Maximum: 150°F (66°C) at 25% duty cycle.
 Minimum: Minus 40°F (-40°C).

Shaft: 3/8 Inch (9.5 mm) Square.

M7161 models have single-ended shaft.
 M7164 and M7184 models have dual-ended shaft.

Dimensions:

See Fig. 1.

Underwriters Laboratories Inc. Listed:

File No. E4436, Guide No. XAPX.

Canadian Standards Association Certified:

General Listing File No. LR1620, Guide No. 400-E.

Electrical Ratings:

| Modutrol IV™ Motor | Voltage Vac at 50/60 Hz | Current Draw (A) | Power Consumption (W) |
|---------------------------|-------------------------|------------------|-----------------------|
| M7161, M7164 ^a | 24 | 0.62 | 14 |
| M7161, M7164 | 120 | 0.20 | 19 |
| M7184 ^a | 24 | 0.80 | 18 |

^aWithout internal transformer, which can be field added.

Auxiliary Switch Ratings (Amperes):

| One Contact Rating ^a Amps | 120V | 240V |
|--------------------------------------|------|------|
| Full Load | 7.2 | 3.6 |
| Locked Rotor | 43.2 | 21.6 |

^a40 VA pilot duty, 120/240 Vac on opposite contact.

Accessories:

ES650117 Explosion-proof Housing: Encloses motor for use in explosive atmospheres. Not for use with Q601, Q618, and Q455 Linkages. Order separately from Nelson Electric Co. Requires Honeywell 7617DM Coupling.

Q607 External Auxiliary Switch: Controls auxiliary equipment as a function of motor position.

Q605 Damper Linkage: Connects motor to damper. *Includes motor crank arm.*

Q618 Linkage: Connects Modutrol motor to water or steam valve.

Q601 Bracket and Linkage Assembly: Connects Modutrol motor to water or steam valve.

Q100A,B Linkage: Connects Modutrol motor to butterfly valve.

221455A Infinitely Adjustable Crank Arm: Approximately 0.75 inch (19 mm) shorter than the 4074ELY Crank Arm. Can rotate through downward position and clear base of motor without requiring use of adapter bracket.

7617ADW Adjustable Crank Arm: Approximately 0.75 inch (19 mm) shorter than the 7616BR Crank Arm. Can rotate through the downward position and clear base of motor without requiring use of adapter bracket.

220741A Screw Terminal Adapter: Converts the standard quick-connect terminals to screw terminals.

Transformers: Mounted internally, provide 24 Vac power to motor.

198162JA—24 Vac; 50/60 Hz (for electrical isolation).

198162EA—120 Vac; 50/60 Hz.

198162GA—220 Vac; 50/60 Hz.

198162AA—120/208/240 Vac; 50/60 Hz.

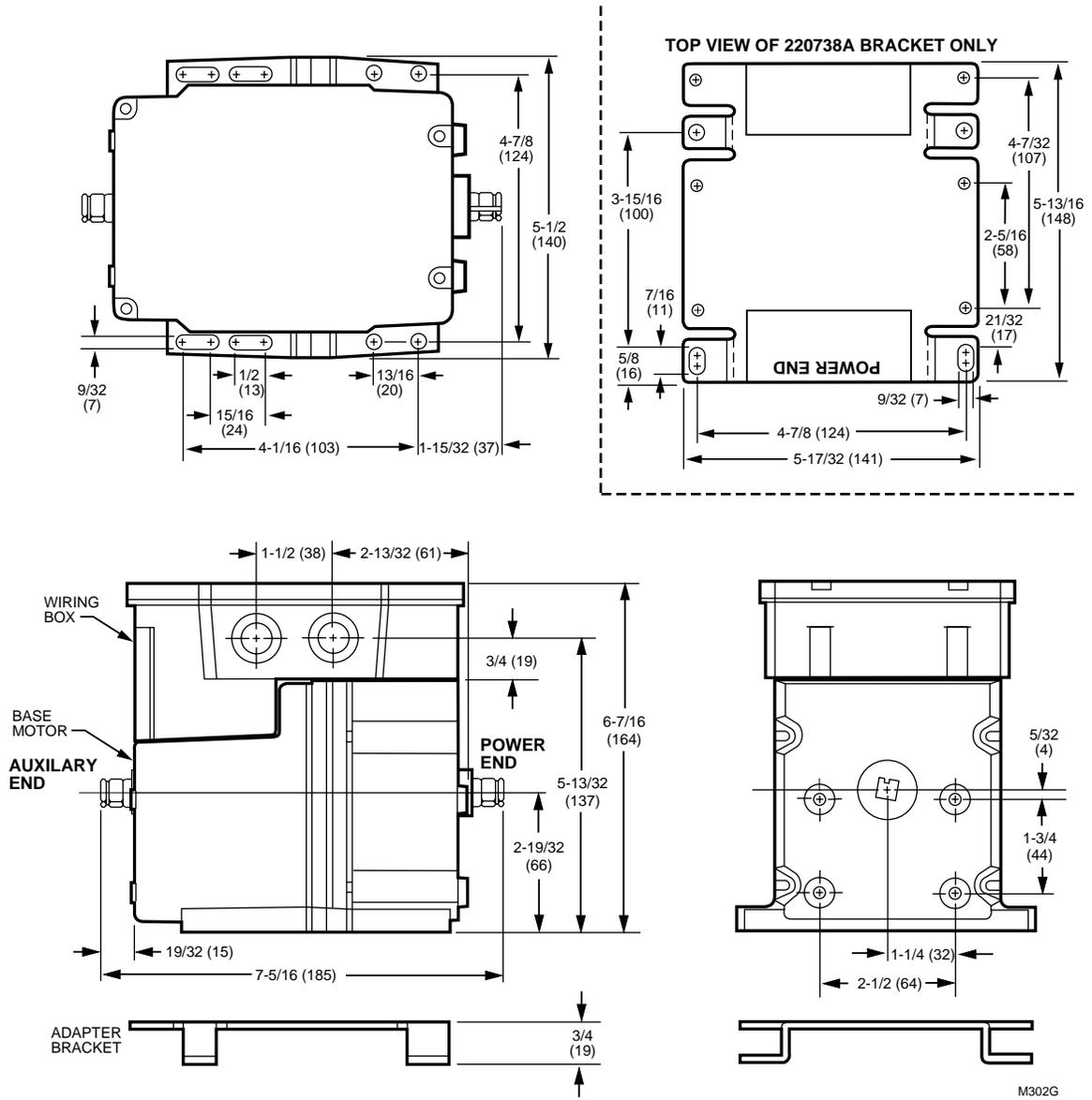


Fig. 1. Dimensions of M7164, M7184 motors in in. (mm). Note: M7161 does not have auxiliary shaft. All other dimensions are the same.

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