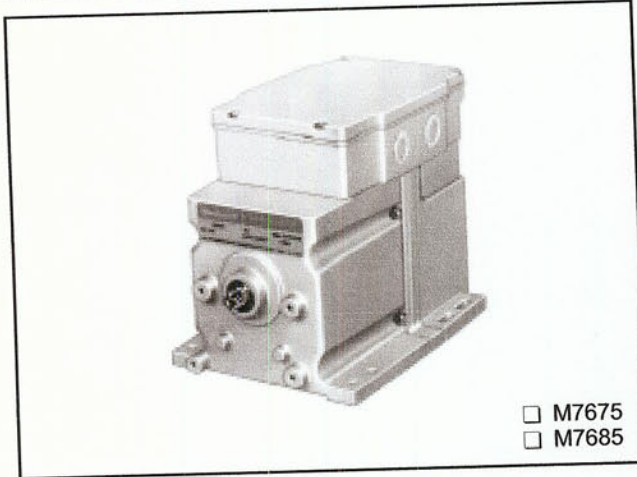


M7675, M7685 Modutrol IV™ Motors

SPECIFICATION DATA



APPLICATION

The M7675 and M7685 Electronic Modutrol Motors provide proportioning control for dampers in air conditioning units. M7685 also provides proportioning control for valves.

FEATURES

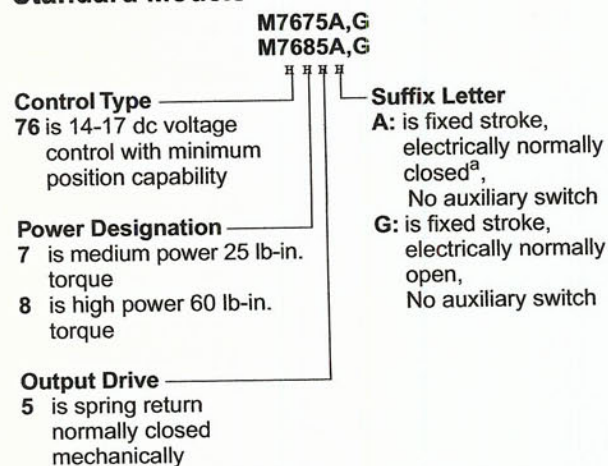
- M7675, M7685 operate from 14-17 Vdc and have minimum position capability.
- M7675A rated for 25 lb-in.; replaces M765L, M7675G replaces M765K.
- M7685A rated for 60 lb-in.; replaces M745L, M7685G replaces M745K.
- Integral spring returns motor to the closed position when power is interrupted.
- M7675G, M7685G are electrically normally open; M7675A, M7685A are normally closed.
- Oil immersed motor and gear train for reliable performance and long life.
- Wiring box provides NEMA 3 weather protection.
- Actuator motor and circuitry operate from 24 Vac. Models available with factory installed transformer, or an internal transformer can be field added.
- 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.
- For use with W7080 Multizone System.

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SPECIFICATIONS

Standard Models



^a Electrical normal position is the position that the motor shaft assumes at minimum input signal; closed is fully counterclockwise ↺ and open is fully clockwise ↻ viewed from the power end.

Electrical Ratings:

M7675	Volts (50/60 Hz)	Current Draw (A)	Power Consumption (W)
Without Transformer	24	0.91	21
With Internal Transformer	120	0.26	26
	208	0.15	26
	240	0.13	26

M7685	Volts (50/60 Hz)	Current Draw (A)	Power Consumption (W)
Without Transformer	24	1.0	23
With Internal Transformer	120	0.28	28
	208	0.16	28
	240	0.14	28

Motor Rotation:

M7675A and M7685A drive closed counterclockwise ↺ as viewed from the power end and M7675G and M7685G drive open, when the input signal is at a minimum. M7675A,G and M7685A,G spring closed when power is interrupted.

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Input Signal:

14-17 Vdc.

Stroke:

Fixed 90° or 160° rotation.

Timing:

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

Torque:

M7675 25 lb-in. (2.83 N•m).
M7685 60 lb-in. (6.8 N•m).

Dead Weight Load on Shaft:

Power or Auxiliary End: 200 lb (90.8 kg) maximum.
Maximum Combined Load: 300 lb (136 kg).

Ambient Temperature Ratings:

Maximum: 150°F (66°C).
Minimum: Minus 40°F (-40°C).

Shaft:

3/8 in. (9.5 mm) square.

Dimensions:

See Fig. 1.

Underwriters Laboratories Inc. Listed:

File No. E4436, Guide No. XAPX.

Canadian Standards Association Certified:

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

Brake:

Electromechanical; holds load when motor is stopped and releases when motor is running or power interrupted.

Minimum Position Option:

M7675A, M7685 include a minimum position capability requiring an external 135-ohm potentiometer.

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. Requires adaptor bracket packed with motor.
- Q209E,F Potentiometer: Limits minimum position of motor.

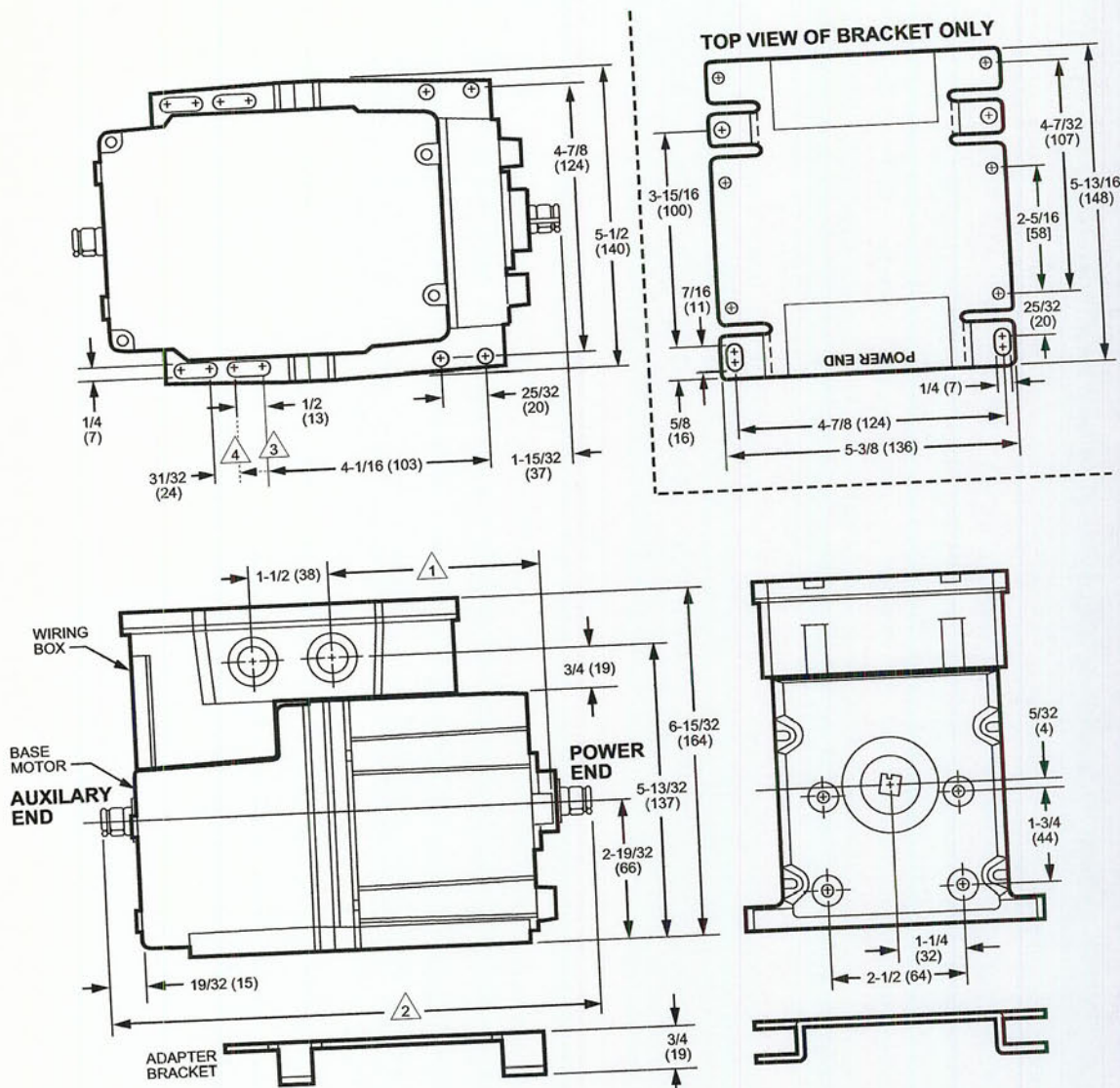
221455A Motor Crank Arm: Infinitely adjustable crank arm. Approximately 0.75 in. shorter than the 7616BR and 4074ELY Crank Arms, can rotate through downward position and clear base of motor without requiring use of adapter bracket.

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

7617ADW Crank Arm: Approximately 0.75 in. shorter than 7616BR Crank Arm.



60 lb.-in. Spring Return Model Shown

- ① For 60 lb.-in. spring return models 3-29/32 (98); For 25 lb.-in. spring return model models 3-13/32 (86).
- ② For 60 lb.-in. spring return models 8-3/4 (223); For 25 lb.-in. spring return models 8-1/4 (210).
- ③ For 60 lb.-in. spring return models.
- ④ For 25 lb.-in. spring return models.

M478F

Fig. 1. Dimensions of M7675, M7685 Motors in in. (mm).

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