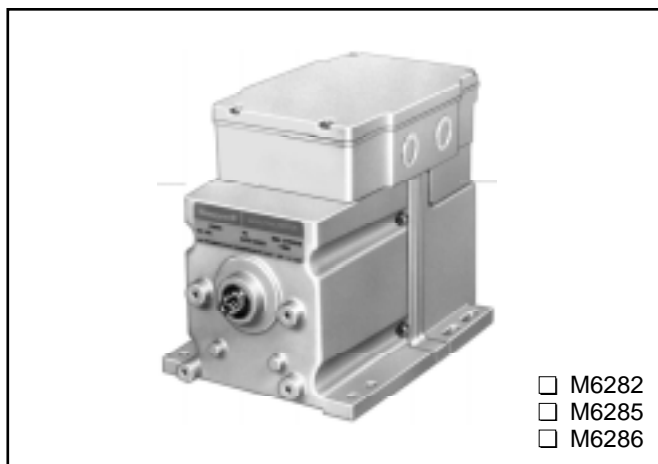


## M6282, M6285, M6286 Modutrol IV™ Motors

### SPECIFICATION DATA



### APPLICATION

M6282, M6285 and M6286 are 3-wire floating control spring return motors with an internal, electrically isolated feedback potentiometer. These motors are used with controllers that provide switched spdt or floating output to operate dampers and valves.

### FEATURES

- Replaces M945B,C,G,AD.
- Rated for 60 lb-in. torque.
- Integral spring returns motor shaft to normal position (fully open or fully closed) when power is interrupted.
- Electrically isolated feedback potentiometer provides indication of shaft position and can be used to slave Series 90 motors or rebalance external control circuit.
- Oil immersed motor and gear train for 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.
- Auxiliary end shaft on TRADELINE® models can operate valve linkage. For use in normally open valve applications.
- Integral auxiliary switches are available factory mounted, or can be field added to TRADELINE® models.



## SPECIFICATIONS

### TRADELINE® Models

TRADELINE® models are selected and packaged to provide ease of stocking, ease of handling, and maximum replacement value. TRADELINE® model specifications are the same as those of standard models, unless otherwise specified. M6285A1005 and M6285A1013 are TRADELINE® models. TRADELINE® models have auxiliary switch cams.

### Standard Models

M6282A,B  
M6285A,B,C  
M6286G

#### Control Type

62 is Series 60 with internal feedback potentiometer

#### Power Designation

8 is high torque: 60 lb-in.

#### Output Drive

5 is dual-ended shaft, spring return, mechanically normally closed.

6 is dual-ended shaft, spring return, mechanically normally open.

2 is single-ended shaft, spring return, mechanically normally closed.

#### Suffix Letter

**A:** Fixed stroke (90° or 160°), No auxiliary switch

**B:** Fixed stroke (90° or 160°), 1 auxiliary switch

**C:** Fixed stroke (90° or 160°), 2 auxiliary switches

**G:** Fixed stroke (90° or 160°), No auxiliary switch, Electrically normally open

### Electrical Ratings:

M6282, M6285, M6286	Voltage (V at 50/60 Hz)	Current Draw (A)	Power Consumption (W)
Without Transformer <sup>a</sup>	24	0.86	20
With Internal Transformer	120	0.25	25
	208	0.14	25
	240	0.13	25

<sup>a</sup> Internal transformer can be field added.

### Feedback Potentiometer:

M6285A1005 is 600 ohms; M6285A1013 is 355 ohms. Both are linear and configurable for W902 control and for slaving Series 90 Motors. Potentiometer on all other models is shunted to 115 ohms.

### Controller Type:

3-wire Floating (Series 60): Drive open, drive closed, hold. Internal, electrically isolated feedback potentiometer provides indication of motor position.

### Auxiliary Switch Ratings (Amperes):

M6285C Motor has two spdt snap switches.

One Contact Rating <sup>a</sup> Amps	120V	240V
Full Load	7.2	3.6
Locked Rotor	43.2	21.6

<sup>a</sup> 40 VA pilot duty, 120/240 Vac on opposite contact.

### Dimensions:

See Fig. 1.

### Maximum Damper Rating:

B dim = 68 in. (1727 mm).

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

### Timing and Torque:

Timing		Torque <sup>a</sup> in lb-in.
90° Stroke	160° Stroke	
30	60	60

<sup>a</sup> Torque applies to both power and auxiliary end shafts.

### Crankshaft:

(M6282 has single shaft only.) 3/8 in. (9.5 mm) square double ended.

### Underwriters Laboratories Inc. Listed:

File No. E4436, Guide No. XAPX.

### Canadian Standards Association Certified:

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

### Dimensions:

See Fig. 1.

### 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.

Internal Auxiliary Switch Kits: Can be field-installed on TRADELINE® models.

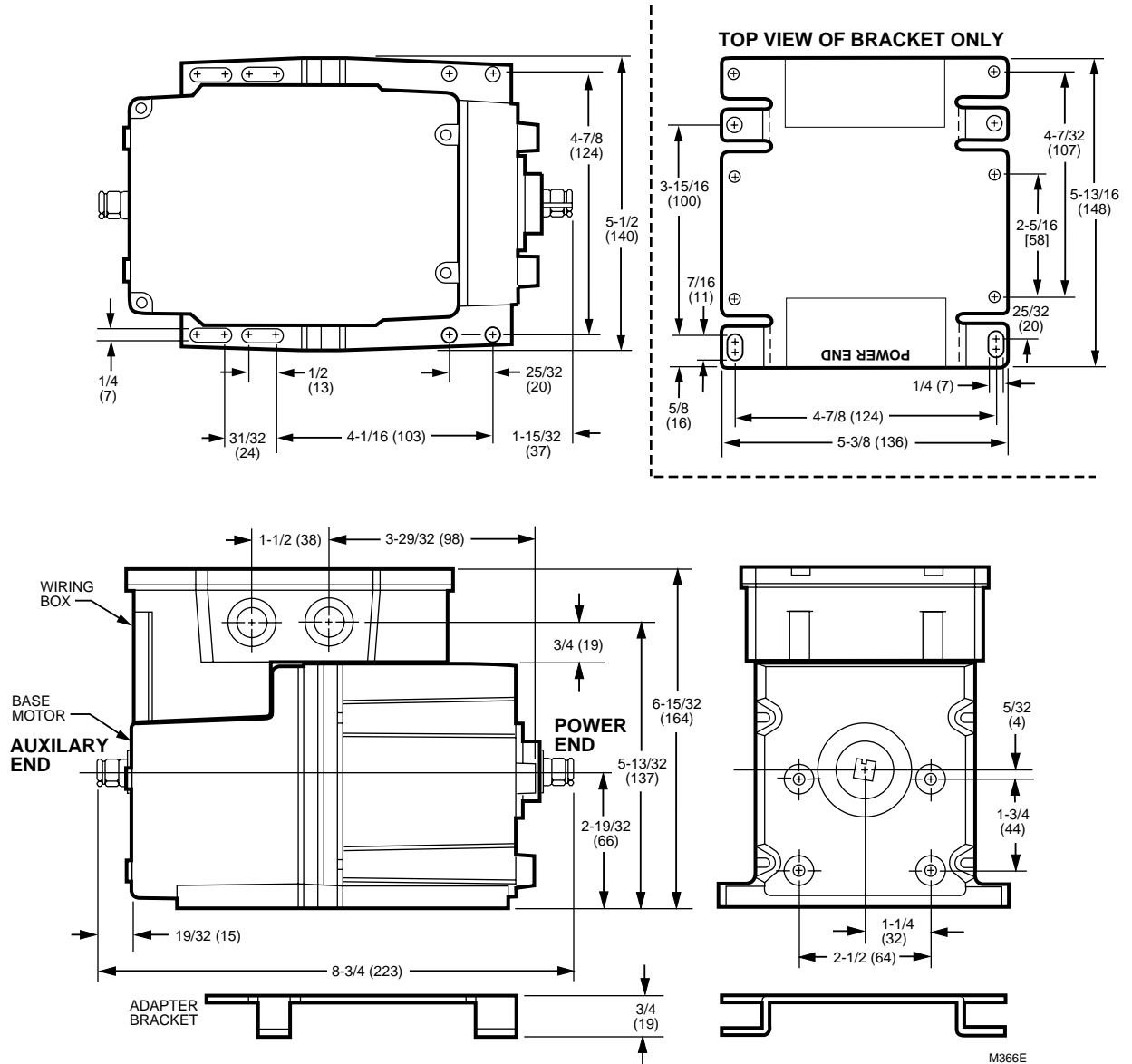
220736A: One-switch Kit.

220736B: Two-switch Kit.

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

- Q607 External Auxiliary Switch: controls auxiliary equipment as a function of motor position.
- 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 in. (19 mm) shorter than the 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 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.
- 7617ADW Adjustable Crank Arm: Approximately 0.75 in. (19 mm) shorter than the 7616BR Crank Arm.



**Fig. 1. Dimensions of M6285 and M6286 in in. (mm).  
NOTE: M6282 does not have auxiliary shaft. All other dimensions are the same.**

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