

# Modutrol IV Motors

## M4185 Line Volt; M8185 Low Volt Two-Position Modutrol IV™ Motors



Series 41 and Series 81 Modutrol IV motors are 2-position (line- and low-voltage per motor control) spring-return motors. They are used to operate dampers or valves in applications where it is necessary or desirable to have the controlled element return to the starting position in the event of power failure or interruption.

- Fixed torque throughout the entire voltage range
- Integral spring return returns motor to normal position in the event of power failure
- Integral junction box provides NEMA 3 weather protection if motor is mounted in the upright position
- Motor and circuitry operate from 24 Vac
- Quick-connect terminals are standard – screw terminal adapter is available
- Adapter bracket for matching shaft height of older motors is available
- Motors have field adjustable stroke (90 to 160 degrees)
- Motors are designed for either normally open or normally closed valves and damper
- Integral auxiliary switches are available factory mounted, or can be field added
- Motors can operate valve linkages from the power end or auxiliary end shafts for normally closed or normally open valve applications
- All models have dual shafts (slotted and tapped on both ends)

**Application:** Electric

**Control Signal:** Two position, SPST

**Frequency:** 50 Hz; 60 Hz

**Fail Safe Mode:** Spring Return

**Auxiliary Switch Ratings:** AFL - 120 Vac – 7.2A; ALR - 120 Vac – 43.2A; AFL - 240 Vac – 3.6A; ALR - 240 Vac – 21.6A

**External Auxiliary Switches Available:** Yes

**Shaft Rotation (upon control signal increase):** Clockwise (as viewed from power end) (normally closed)

**Electrical Connections:** Quick-connect terminals

**Mounting:** Foot-mounted

**Power Consumption:** Driving – 20 VA

**Timing, Nominal:** 30 - 60 sec

**Feedback:** No

**Shaft Dimensions:** 0.375 in. Square (10 mm Square)

**Motor shafts:** 2; Dual-ended shaft

**Deadweight Load on Shaft:** Either End – 200 lbs.; Combined on both Shafts – 300 lbs.

**Approximate, Dimensions:** 6 7/16 in. high x 5 1/2 in. wide x 8 3/4 in. deep (164 mm high x 140 mm wide x 222 mm deep)

**Ambient Temperature Range:** -40°F to +150°F (-40°C to +60°C)

**Approvals, Underwriters Laboratories Inc.:** Listed: File No. E4436, Guide No. XAPX for USA and Canada

**Approvals, CE:** EN55011 (Emission) EN50082-2 (Immunity) 73/23/EEC (LVD)

**Approvals, RoHS:** 2011/65/ES

### Accessories:

**220736A/U** – Internal Auxiliary Switch Assembly - 1 Switch

**220736B/U** – Internal Auxiliary Switch Assembly - 2 Switches

**220738A/U** – Adapter Bracket. Adjusts shaft height to match Modutrol III motors

**220741A2-TP/U** – Screw Terminal Adapter Kit for 2 position Modutrol IV Series 2 motors - Converts quick-connect terminals to screw terminals

**221455A/U** – Infinitely adjustable Motor Crank Arm

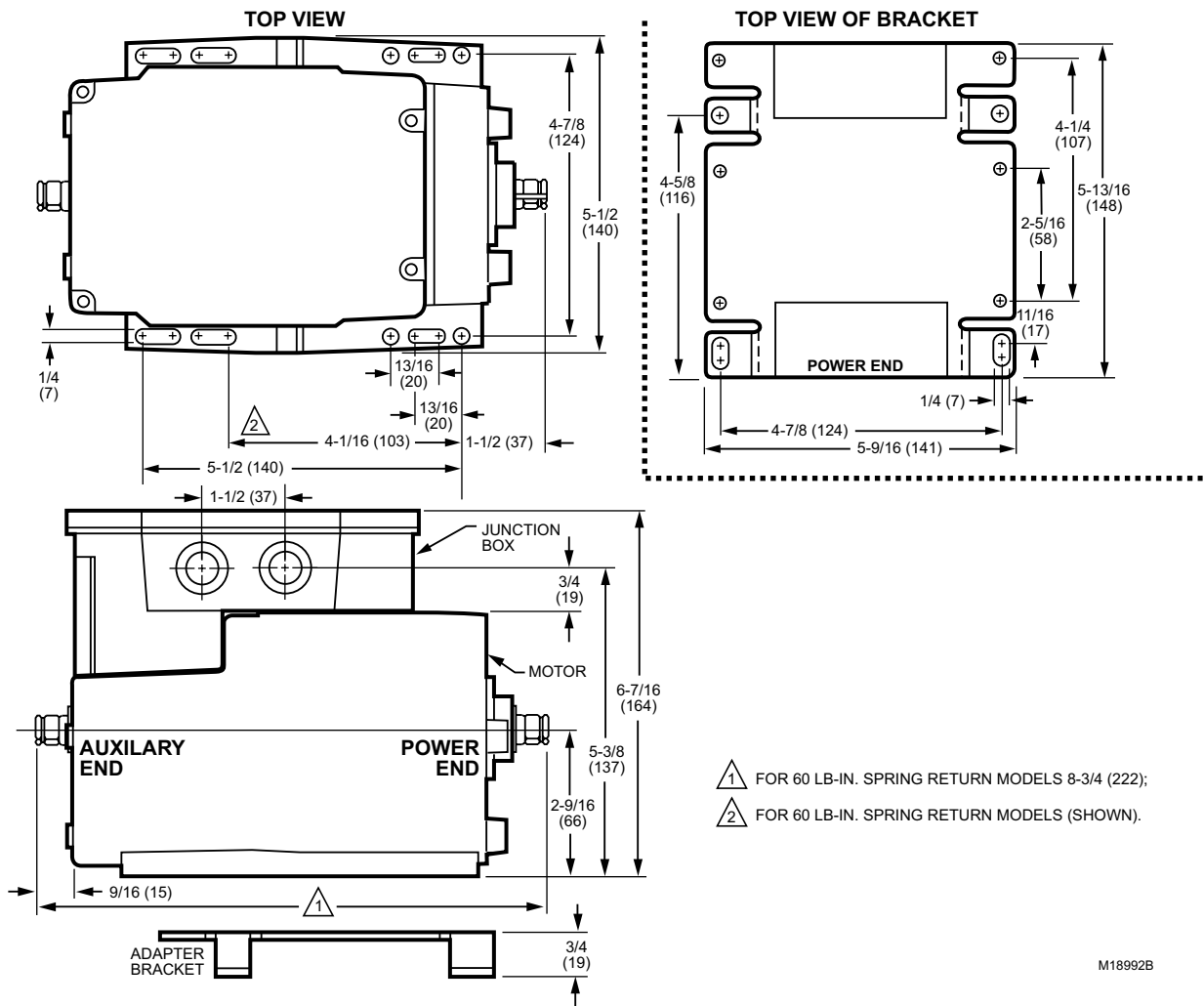
**4074ERU/U** – Weatherproofing kit. Protects motor from driving rain when mounted in any position. Not needed if motor is mounted upright.

**50017460-001/U** – 24/120/230 Vac Internal Transformers for Series 2 Motors

**50017460-003/U** – 120 Vac Internal Transformers for Series 2 Motors

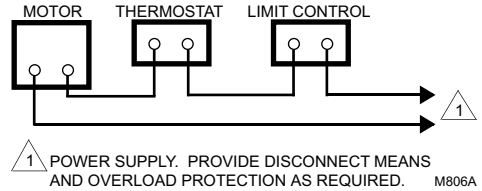
Material Number	Torque Rating (lb-in.)	Torque Rating (Nm)	Supply Voltage	Internal Auxiliary Switch	Factory Stroke Setting	Stroke	Internal Transformer	Weight	Includes	Tradeline Value
M4185A1001/U	60 lb-in.	6.8 Nm	120V	0	160 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-003	9.5 lb	Transformer	
M4185B1009/U	60 lb-in.	6.8 Nm	120V	1	160 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-003	9.5 lb	Transformer	
M4185B1058/U	60 lb-in.	6.8 Nm	24V; 120V; 230V	1	90 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-001	9.5 lb	Transformer	
M4185C1007/U	60 lb-in.	6.8 Nm	120V	2	90 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-003	9.5 lb	Transformer	
M4185E4006/U	60 lb-in.	6.8 Nm	24V; 120V; 230V	1	160 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-001	9.5 lb	Transformer	Tradeline
M4185E4014/U	60 lb-in.	6.8 Nm	120V	1	160 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	50004263-003	9.5 lb	Transformer	Tradeline
M8185D1006/U	60 lb-in.	6.8 Nm	24V	0	160 degrees	Adjustable; 90 to 160 degrees, Asymmetrical	None	8.5 lb		Tradeline

Dimensions in inches (millimeters)



M18992B

**Typical connections for Series 41 motors**



**Typical connections for Series 81 motors**

