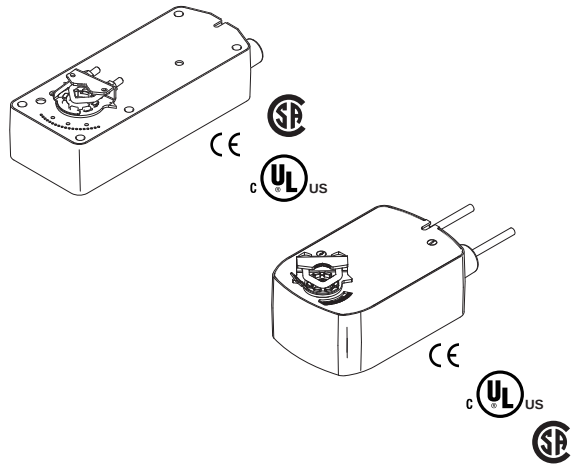
Spring Return DuraDrive® Two-Position Actuator

For spring return applications that require two-position control of dampers and valves in HVAC system.



Features:

- 35 lb.-in. (4 N-m), 60 lb.-in (7 N-m), 133 lb.-in (15 N-m).
- On-off control.
- Rugged die cast housings rated for NEMA 2/IP54.
- Overload protection throughout rotation.
- Optional built-in auxiliary switch to provide for interfacing or signaling.
- Provides 95° of rotation.
- Visual position indicator provided.
- Rotation limiting available.
- MA41 series manual override.

Model Chart

Part Number	Actuator Power Input								Auxiliary Switch	Approximate Timing in Seconds @ 70° (21°C)[a]		Output Torque Rating lb-in (N-m)[b]		Manual Override
	Voltage	VA		Watts										
		50 Hz	60 Hz	Running		DC Amps	Holding			Powered	Spring Return	Minimum	Maximum Stall	
				50 Hz	60 Hz		50 Hz	60 Hz						
MA41-7153	24 Vac ± 20% 22-30 Vdc	9.8	9.7	7.5	7.5	0.29	2.8	2.8	No	<190	<30	133 (15)	350 (40)	Yes
MA41-7153-502									Two[c]					
MA41-7150	120 Vac ± 10%	11.7	10.0	8.8	8.4	—	5.0	3.6	No					
MA41-7150-502									Two[c]					
MA41-7151	230 Vac ± 10%	15.5	10.6	9.5	8.5		4.6	3.3	No					
MA41-7151-502									Two[c]					
MA41-7073	24 Vac ± 20 % 22-30 Vdc	4.8	4.8	3.2	3.2	0.13	0.8	0.8	No	<80	<40	60 (7)	250 (28)	
MA41-7073-502									Two[c]					
MA41-7070	120 Vac ± 10%	10.7	5.6	4.2	3.6	—	2.0	1.2	No					
MA41-7070-502									Two[c]					
MA41-7071	230 Vac ± 10%	17.0	8.0	5.1	4.0		2.7	1.4	No					
MA41-7071-502									Two[c]					
MA40-7043	24 Vac ± 20% 22-30 Vdc	4.4	4.4	2.9	2.9	0.11	0.8	0.8	No	<50	<28	35 (4)	150 (17)	No
MA40-7043-501									One[d]					
MA40-7040	120 Vac ± 10%	6.4	4.3	3.8	3.4	—	1.6	1.2	No					
MA40-7040-501									One[d]					
MA40-7041	230 Vac ± 10%	5.8	4.6	4.1	3.9		1.5	1.2	No					
MA40-7041-501									One[d]					

[a] Timing was measured with no load applied to the actuator.

[b] De-rating is required at low temperatures.

[c] One adjustable from 25 to 85° rotation and one set to operate @ 5° fixed.

[d] One adjustable from 0 to 95° rotation (0 to 1 scale).

Specifications

Inputs		
	Control signal	On-off SPST contacts or Triacs (500 mA).
	Power	Refer to Model Chart.
	Connections	3 ft. (0.9 m) long, appliance cable, 1/2 in. conduit connectors. For M20 Metric conduit, use AM-756 adaptor.
Outputs		
	Motor Type	**MA40-704x, MA41-707x:** Brush. **MA41-715x:** Brushless DC.
	Electrical	**MA40-7043-501:** One auxiliary switch available, SPDT 6A resistive @ 24 Vac, adjustable 0 to 95° (0 to 1 scale). UL listed, switch meets VDE requirements for 6 (1.5)A, 24 Vac. **MA40-7040-501 or MA40-7041-50:** One auxiliary switch available, SPDT 6A resistive @ 240 Vac, adjustable 0 to 95° (0 to 1 scale). UL listed, switch meets VDE requirements for 6 (1.5)A, 24 Vac. **MA41-715x-502 or MA41-707x-502:** Two auxiliary switches available, SPDT 7A resistive @ 250 Vac, one fixed @5 ° and one adjustable 25 to 85°. UL Listed, meets VDE requirements for 7 (2.5)A, 250 Vac.
	Mechanical	Direction of rotation: CW or CCW rotation is available through reverse mounting.
		Shaft clamp: Direct coupled using a through hole output hub. **MA40-704x:** Up to 5/8 in. round, 1/2 in. square shafts. **MA41-71xx:** Up to 3/4 in. round, 1/2 in. square shafts. See Accessories for larger shaft options.
		Position Indicator: **MA40-704x:** Visual indicator, 0 to 1 (0 is the spring return position). **MA41-707x, MA41-715x:** Pointer (-5 to 90°) and scale are provided for position indication (-5 is normal or spring return position).
Environment		
	Ambient Temperature limits	Shipping and storage: -40 to 160°F (-40 to 71°C). Operating: -22 to 140°F (-30 to 60°C).
	Humidity	5 to 95% RH, non-condensing.
	Locations	**MA40-704x**: NEMA 2 (IEC 1P54) no restrictions.
		MA41-707x: NEMA 1 (IEC IP30), NEMA 2 (IEC IP54) with conduit in the down position.
		MA41-715x: NEMA 1 (IEC IP30), NEMA 2 (IEC IP54) with conduit in the down position.
Dimensions		**MA41-707x, MA41-715x:** 10-1/2 H x 4 W x 3-1/2 D in. (287 x 100 x 89 mm). **MA40-704x:** 6-51/64 H x 4 W x 3-1/2 D in. (68 x 100 x 89 mm).
Agency Listings		
	UL	UL-873, Underwriters Laboratories Listed (File #E9429 Category Temperature-Indicating and Regulating Equipment).
	European Community	EMC Directive (89/336/EEC). Low Voltage Directive (72/23/EEC).
	CUL	Canadian Standards C22.2 No. 24-93.
	Australia	This product meets requirements to bear the C-Tick mark according to the terms specified by the Communications Authority under the Radio Communications Act 1992.
General Instructions		Refer to F-26642.

Accessories

Model No.	Description
MA41-707x, MA41-715x	
AM-671[abcd]	Mounting bracket.
AM-672[abcd]	Mounting bracket.
AM-673[a]	Mounting bracket.
AM-674	Weather shield.
AM-675	Weather shield base.
AM-676	Universal shaft extension, approximately 9-1/2 in. long (242 mm) for use on 3/8 to 11/16 in. (10 to 17 mm) round shafts, 3/8 to 9/16 in. square shafts. AM-753 clamps required).
AM-686	Position indicator.
AM-687	V-clamp for 1.05 in. round shafts.
AM-688	Replacement universal clamp.
AM-689	Rotation limiter.
AM-690	Crank arm.
AM-691	Crank arm.
AM-692	V-bolt.
AM-693[ef]	Crank arm kit.
AM-714	Weather shield.
AM-756	Metric conduit adaptor M20 x 1.5 to 1/2 in. NPT (two per package).
AM-758	Universal short “U” mounting bracket.
AM-759	Universal Long “U” mounting bracket.
AM-760	Universal slotted “L” mounting bracket.
AM-761	Replacement 7-inch anti-rotation bracket.
AM-762	Replacement 9-inch anti-rotation bracket.
AM-763	1/8 inch hex crank for manual override.
AV-602	Vx-7xxx 1/2 to 2 in. valve linkage.
AV-607	Vx-9xxx 2-1/2 to 4 in. valve linkage.
MA40-704x	
AM-673	Mounting bracket.
AM-674	Weather shield.
AM-675	Weather shield base.
AM-676	Universal shaft extension, approximately 9-1/2 in. long (242 mm) for use on 3/8 to 11/16 in. (10 to 17 mm) round shafts, 3/8 to 9/16 in. square shafts. (AM-753 clamps required).
AM-709	Position indicator and stroke limiter.
AM-710	V-clamp for 3/4 in. round shafts.
AM-711	Crank arm adaptor kit.
AM-712[e]	Crank arm adaptor kit
AM-713[e]	Bracket.
AM-714	Weather shield
AM-715[e]	Crank arm adaptor kit.
AM-717	Replacement universal clamp
AM-756	Metric conduit adapter
AM-761	Replacement 7-inch anti-rotation bracket.
AM-762	Replacement 9-inch anti-rotation bracket.
AV-605	Vx-7xxx 1/2 to 2 in. valve linkage.

[a] Drill appropriate mounting holes where needed.

[b] AM-693 crank arm kit required.

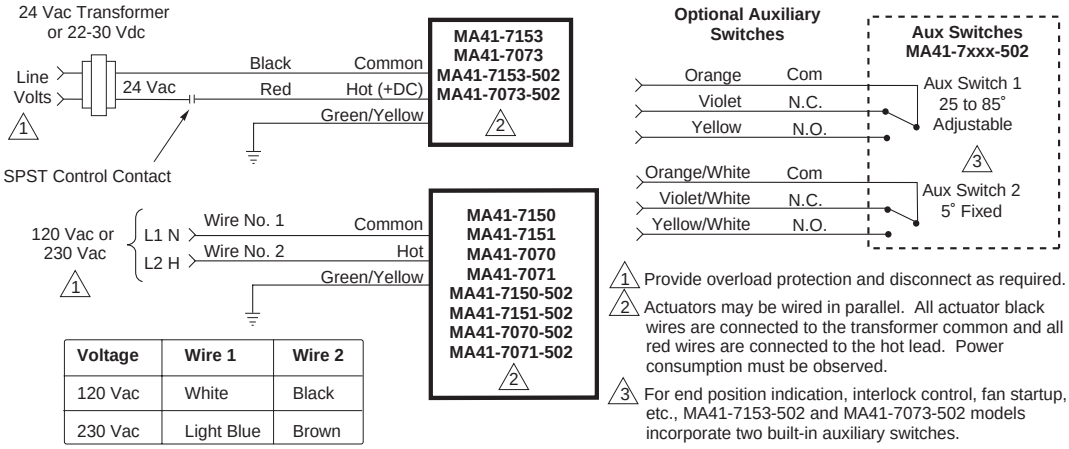
[c] Cannot be used with Mx41-634x or Mx40-717x series actuators.

[d] The large “C”-shaped clamps included in AM-693 crank arm kit are required for mounting the actuator. Drill appropriate mounting holes where needed.

[e] Use the self-tapping screws and flat washers provided in kit to mount actuator.

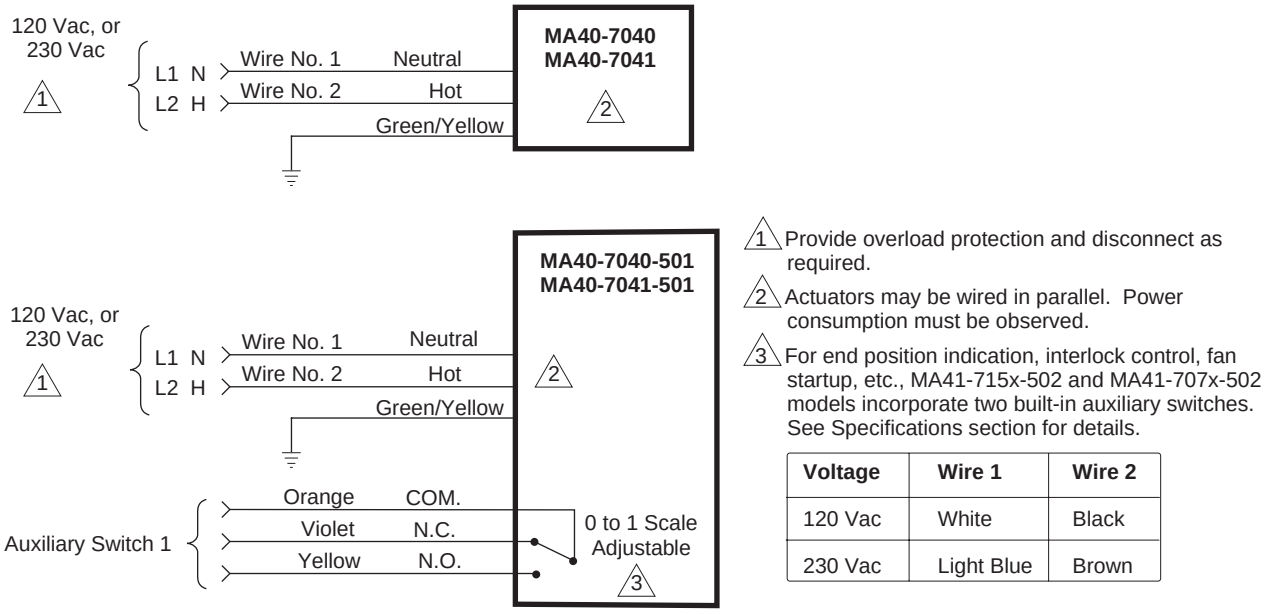
[f] AM-692 V-bolt kit required.

Typical Applications



Voltage	Wire 1	Wire 2
120 Vac	White	Black
230 Vac	Light Blue	Brown

Figure 1 Typical Wiring Diagram for 24, 120, or 240 Vac Basic and Double Auxiliary Switch Models.



Voltage	Wire 1	Wire 2
120 Vac	White	Black
230 Vac	Light Blue	Brown

Figure 2 Typical Wiring Diagram for 120 Vac or 230 Vac Basic and Single Auxiliary Switch Models.