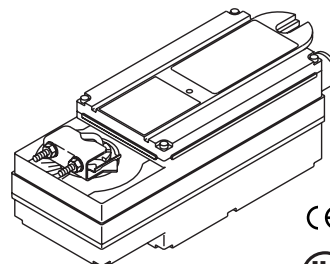


Non-Spring Return DuraDrive® Proportional Actuator

For non-spring return applications that require proportional modulation control of dampers and valves in HVAC systems.

Features:

- Direct mount to round or square damper shaft.
- 300 lb.-in (34 N-m) rated torque.
- Overload protection throughout rotation.
- Oil immersed gear train provides continuous lubrication.
- NEMA 4 housing (IEC IP56).
- Manual override to allow positioning for installation and manual operation.
- Automatic current sensing motor control provides extended reliability and repeatable timing.
- Proportional control compatible with 2 to 10 Vdc or 4 to 20 mAdc with integrated resistor.



Model Chart

Damper Actuators.

Model No.	Output Torque Rating lb.-in. (N-m)		Power Input @ 50/60 Hz				SPDT Auxiliary Switches	Approximate Timing in Seconds @ 70°F (21°C) with No Load	Shaft Size
			Voltage	VA	Watts				
	Minimum	Maximum Stall			Running	Holding			
MS41-6343	300 (34)	600 (68)	24 Vac ± 20%	8	10	NA	No	<145	1/2 to 1 in. diameter 1/2 to 5/8 in. square
MS41-6340 ^a			120 Vac ± 10%						
MS41-6341			240 Vac ± 10%						

^a The CE directive is not applicable to this model.

Valve Actuator/Linkages.

Model No.	Linkage (Included) ^a	Actuator Power Input 50/60 Hz.				SPDT Auxiliary Switches
		Voltage	VA	Watts		
				Running	Holding	
MS41-6043-200	AV-609	24 Vac ± 20%	8	10	N/A	No

^a AV-609: Use with 5 and 6 in. VB-9xxx and 6 in. VB-8xxx globe valves.

Specifications

Inputs

Control signal	Proportional, 2 to 10 Vdc or 4 to 20 mAdc with intergral 500 ohm resistor.
Power	Refer to Model Chart.
Connections	2 ft. (0.6 m) appliance cable. 1/2 in. conduit connectors. For M20 metric conduit, use AM-756 adaptor.

Outputs

Motor Type	Brushless DC.
Mechanical	Direction of rotation: CW or CCW rotation is available through reverse mounting. Dual shaft clamp: Direct coupled using a through hole output hub for 3/8 to 1/2 in. round included. Position indicator: Pointer and scale.

MS41-634x Series

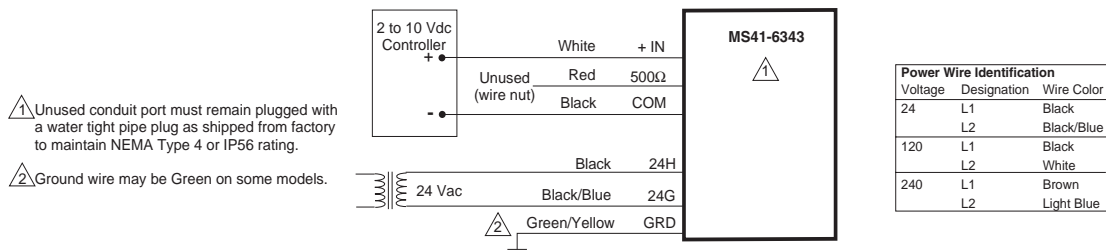
Specifications (Continued)

Environment	
Temperature limits	Shipping and Storage: -40 to 160°F (-40 to 71°C) ambient. Operating: -25 to 140°F (-32 to 60°C).
Humidity	5 to 95% RH, non-condensing.
Locations	NEMA 1, NEMA 4 (IEC IP56) with customer supplied water tight connectors.
Dimensions	
Dimensions	10-27/32 H x 4 W x 4 D in. (275 x 102 x 102 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).
CSA	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	
General Instructions	Refer to F-26745.

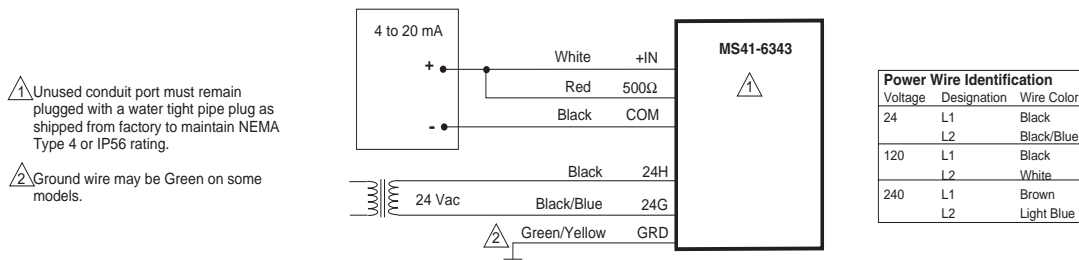
Accessories

Model No.	Description
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-703	Span adjustment module mA/Vdc input to 2 to 10 Vdc output.
AM-704	Modulating interface pulse to 2 to 10 Vdc control.
AM-705	Positioner for 0 to 10 Vdc control.
AM-706	Positioner for 0 to 10 Vdc control.
AM-751	Standard anti-rotation bracket 9 in. long x 13/16 in. wide (229 x 21 mm), included with actuator.
AM-752	Optional anti-rotation bracket 4 in. long x 1-11/16 in. wide (102 x 43 mm), for narrow spaces.
AM-753	Damper shaft mounting clamps for 5/8 in. square shaft, 3/4 in. and 1 in. round shafts (two per package).
AM-754	Standard universal mounting clamps for 3/8 in. to 1/2 in. (10 to 13 mm) round and square shafts, two included with actuator.
AM-755	Manual override crank.
AM-756	Metric conduit adaptor M20 x 1.5 to 1/2 in. NPT (two per package).
AV-609	5 and 6 in. Vx-9xxx valve linkage or 6 in VX-8000.

Typical Applications



**Figure 1 Typical Wiring Diagram for 2 to 10 Vdc Controller with a 24 Vac Actuator
(See Power Wiring Identification for 120 or 240 V Power).**



**Figure 2 Typical Wiring Diagram for 4 to 20 mA Controller with a 24 Vac Actuator
(See Power Wiring Identification for 120 or 240 V Power).**