

ACTUATORS & DAMPERS

DIRECT COUPLED ACTUATORS SPRING RETURN

MS SERIES

DESCRIPTION

The **MS Series** high-performance spring return direct coupled actuators from Honeywell are designed and tested to provide reliable spring return control for dampers and valves. The **MS Series** has an excellent feature set that combines flexibility and simplicity.

FEATURES

- *Self-centering shaft adapter for steady operation*
- *Auto adapt on modulating models for stroke precision*
- *Selector switch for proportional or floating control*
- *Detachable wiring cover*



MS7510



MS8103A

Honeywell



COMMON SPECIFICATIONS

Input Impedance	100 kΩ @ 0/2-10 VDC; 500Ω @ 4-20 mA	Spring Return Time	
Motor	DC with brushes	27, 44 in-lb	25 seconds
2-position	Brushless DC	88, 175 in-lb	20 seconds
Modulating	Enclosed terminals	Manual Override	Manual crank (88, 175 in-lb only)
Wiring		Noise	<50 db @ 3' (1m)
Action		Life Expectancy	60,000 cycles, 1.5 million repetitions
2-position	Mounting orientation direct/reverse acting	Operating Temperature	
Modulating	Switch selectable direct/reverse acting	MSxx03, xx05 2-pos.	-22° to 150°F (-30° to 65°C)
Rotation	95° ± 3°	MSxx03, xx05 Mod.	-40° to 150°F (-40° to 65°C)
Drive Time		MXxx10, xx20	-40° to 140°F (-40° to 60°C)
2-position	45 seconds	Operating Humidity	5 to 95% RH
Modulating	90 seconds	Enclosure Rating	NEMA 2 (IP54)
		Approvals	cULus, CE, C-tick, plenum rated
		Warranty	5 years

INDIVIDUAL SPECIFICATIONS

Model	Torque	Supply Voltage	Supply VA	Control Signal	Feedback	Auxiliary Switch
MS8103A1030	27 in-lb (3 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	7 VA	Two-position	None	None
MS8103A1130	27 in-lb (3 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	7 VA	Two-position	None	One SPDT
MS4103A1030	27 in-lb (3 Nm)	120 VAC, 50/60 Hz	10 VA	Two-position	None	None
MS4103A1130	27 in-lb (3 Nm)	120 VAC, 50/60 Hz	10 VA	Two-position	None	One SPDT
MS7503A2030	27 in-lb (3 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	7 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	None
MS7503A2130	27 in-lb (3 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	7 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	One SPDT
MS8105A1030	44 in-lb (5 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	8 VA	Two-position	None	None
MS8105A1130	44 in-lb (5 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	8 VA	Two-position	None	One SPDT
MS4105A1030	44 in-lb (5 Nm)	120 VAC, 50/60 Hz	11 VA	Two-position	None	None
MS4105A1130	44 in-lb (5 Nm)	120 VAC, 50/60 Hz	11 VA	Two-position	None	One SPDT
MS7505A2030	44 in-lb (5 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	8 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	None
MS7505A2130	44 in-lb (5 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	8 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	One SPDT
MS8110A1008	88 in-lb (10 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	30 VA	Two-position	None	None
MS8110A1206	88 in-lb (10 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	30 VA	Two-position	None	Two SPDT
MS4110A1002	88 in-lb (10 Nm)	120 VAC, 50/60 Hz	45 VA	Two-position	None	None
MS4110A1200	88 in-lb (10 Nm)	120 VAC, 50/60 Hz	45 VA	Two-position	None	Two SPDT
MS7510A2008	88 in-lb (10 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	14 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	None
MS7510A2206	88 in-lb (10 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	14 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	Two SPDT
MS8120A1007	175 in-lb (20 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	40 VA	Two-position	None	None
MS8120A1205	175 in-lb (20 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	40 VA	Two-position	None	Two SPDT
MS4120A1001	175 in-lb (20 Nm)	120 VAC, 50/60 Hz	60 VA	Two-position	None	None
MS4120A1209	175 in-lb (20 Nm)	120 VAC, 50/60 Hz	60 VA	Two-position	None	Two SPDT
MS7520A2007	175 in-lb (20 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	16 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	None
MS7520A2205	175 in-lb (20 Nm)	20-28 VAC 50/60 Hz, 22-30 VDC	16 VA	Prop. VDC/mA, 2-pos., floating	0/2-10 VDC	Two SPDT

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MS SERIES



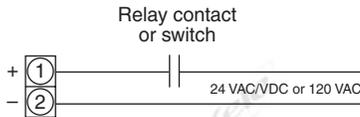
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ACTUATORS & DAMPERS

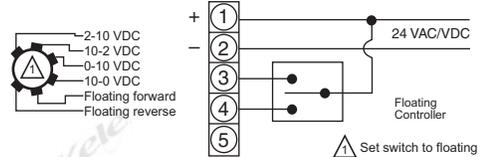
DIMENSIONS

Model	Dimensions	Maximum Shaft Diameter	Minimum Shaft Length	Weight
MSxx03, MSxx05	3.2"H x 3.9"W x 7.0"L (8.0 x 10.0 x 17.7 cm)	0.6" (1.6 cm)	1.0" (2.5 cm)	3.5 lb (1.6 kg)
MSxx10, MSxx20	2.9"H x 3.9"W x 9.8"L (7.5 x 10.0 x 25.0 cm)	1.06" (2.7 cm)	1.0" (2.5 cm)	7.0 lb (3.2 kg)

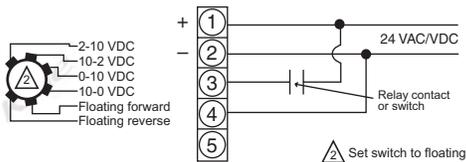
WIRING



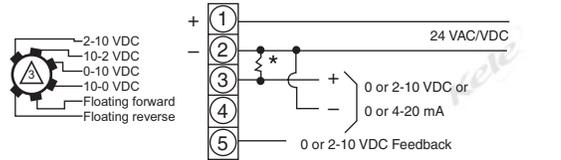
MS81xx, MS41xx — Two-position Control



MS75xx — Floating Control

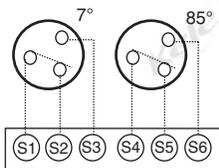


MS75xx — Two-position Control



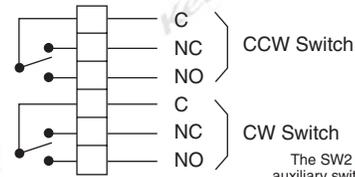
*ZG-R01 500Ω, 1/2W or greater resistor required when control signal is 0/4-20 mA

MS75xx — Proportional Control



Internal Auxiliary Switch

Dual shown; 27 and 44 in-lb models have only one auxiliary switch.
Switch ratings: 250 VAC, 5A resistive, must use same power source on both contact sets



SW2 Auxiliary Switch Kit

Switch ratings: Adjustable between 5 and 85 degrees, 24 VAC/VDC, 5A resistive, 3A inductive

ORDERING INFORMATION

MODEL	DESCRIPTION
MS8103A1030	Spring return, 27 in-lb (3 Nm), two-position, 24 VAC, two-wire control
MS8103A1130	Spring return, 27 in-lb (3 Nm), two-position, 24 VAC, two-wire, 1 aux sw.
MS4103A1030	Spring return, 27 in-lb (3 Nm), two-position, 120 VAC, two-wire control
MS4103A1130	Spring return, 27 in-lb (3 Nm), two-position, 120 VAC, two-wire, 1 aux sw.
MS7503A2030	Spring return, 27 in-lb (3 Nm), modulating control (proportional or tri-state)
MS7503A2130	Spring return, 27 in-lb (3 Nm), modulating control (prop/tri-state), 1 aux sw.
MS8105A1030	Spring return, 44 in-lb (5 Nm), two-position, 24 VAC, two-wire control
MS8105A1130	Spring return, 44 in-lb (5 Nm), two-position, 24 VAC, two-wire, 1 aux sw.
MS4105A1030	Spring return, 44 in-lb (5 Nm), two-position, 120 VAC, two-wire control
MS4105A1130	Spring return, 44 in-lb (5 Nm), two-position, 120 VAC, two-wire, 1 aux sw.
MS7505A2030	Spring return, 44 in-lb (5 Nm), modulating control (proportional or tri-state)
MS7505A2130	Spring return, 44 in-lb (5 Nm), modulating control (prop/tri-state), 1 aux sw.
MS8110A1008	Spring return, 88 in-lb (10 Nm), two-position, 24 VAC, two-wire control
MS8110A1206	Spring return, 88 in-lb (10 Nm), two-position, 24 VAC, two-wire, 2 aux sw.
MS4110A1002	Spring return, 88 in-lb (10 Nm), two-position, 120 VAC, two-wire control
MS4110A1200	Spring return, 88 in-lb (10 Nm), two-position, 120 VAC, two-wire, 2 aux sw.
MS7510A2008	Spring return, 88 in-lb (10 Nm), modulating control (proportional or tri-state)
MS7510A2206	Spring return, 88 in-lb (10 Nm), modulating control (prop/tri-state), 2 aux sw.
MS8120A1007	Spring return, 175 in-lb (20 Nm), two-position, 24 VAC, two-wire control
MS8120A1205	Spring return, 175 in-lb (20 Nm), two-position, 24 VAC, two-wire, 2 aux sw.
MS4120A1001	Spring return, 175 in-lb (20 Nm), two-position, 120 VAC, two-wire control
MS4120A1209	Spring return, 175 in-lb (20 Nm), two-position, 120 VAC, two-wire, 2 aux sw.
MS7520A2007	Spring return, 175 in-lb (20 Nm), modulating control (proportional or tri-state)
MS7520A2205	Spring return, 175 in-lb (20 Nm), modulating control (prop/tri-state), 2 aux sw.

ACCESSORIES

Part Number	Description
32004254-002	Replacement shaft coupler for KAS-88, -175
50000407-001	Tandem mount bracket for KAS-175 actuators
50001194-001	Universal surface mount bracket with crank arm and 1/2" shaft
SW2	Auxiliary switch kit for KA-175/301 and KAS-88/175
ZG-R01	500Ω, 1/2W, 1% resistor

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