



ACTUATORS & DAMPERS

DIRECT COUPLED ACTUATORS NON-SPRING RETURN M9100 SERIES

DESCRIPTION

The Johnson Controls M9100 Series non-spring return actuators offer consistent designs and operating features to make installation easy, and they have many built-in features to minimize the need for add-on options. Manufactured in an ISO-9001 facility, these actuators are high quality, reliable, and long lasting.

FEATURES

- Manual override
- Electronic stall detection
- Travel indicator



M9104



M9106



M9108, M9116,
M9124, M9132



COMMON SPECIFICATIONS

Supply Voltage	20-30 VAC, 50/60 Hz	Manual Override	Disengage button
Motor		Noise	
M9104, 06	Synchronous with magnetic clutch	M9104, 06	<35 dB @ 3' (1m)
M9108, 16, 24 32	Brushless DC	M9108, 16, 24, 32	<45 dB @ 3' (1m)
Wiring		Resolution	100 Steps
M9104	48" (1.2 m) plenum leads	Life Expectancy	100,000 cycles, 2.5 million repositions
M9106	0.25" (6 mm) spade terminals	Operating Temperature	-4° to 122°F (-20° to 50°C)
M9108, 16, 24, 32	Screw terminals 22-14 AWG	Operating Humidity	0 to 90% RH
Action	DA/RA wiring connections (2-pos., floating); Jumper selection (proportional)	Approvals	CE, UL File #E27734, CSA, C-Tick, C-tick, CSA (varies by model)
Rotation	90°	Warranty	5 years

INDIVIDUAL SPECIFICATIONS

Model	Torque	Supply VA	Control Signal	Input Impedance	Feedback	Auxiliary Switch	Drive Time
M9104-AGA-2S	35 in-lb (4 Nm)	2.1 VA	Two-position, floating		None	None	60 seconds
M9104-GGA-2S	35 in-lb (4 Nm)	3.6 VA	Prop. 0-10 VDC, 4-20 mA	100k Ω (VDC input); 500 Ω (mA input)	None	None	60 seconds
M9106-AGA-2	53 in-lb (6 Nm)	2.5 VA	Two-position, floating		None	No, order - AGC model	60 seconds
M9106-GGA-2	53 in-lb (6 Nm)	3.2 VA	Prop. 0-10 VDC, 4-20 mA	100k (VDC input); 500 (mA input)	0/2-10 VDC	None	60 seconds
M9108-AGA-2	70 in-lb (8 Nm)	6.5 VA	Two-position, floating		No, order -AGD, -AGE	No, order - AGC model	25-50 seconds
M9108-GGA-2	70 in-lb (8 Nm)	7.5 VA	Prop. 0-10 VDC, 4-20 mA	100k Ω (VDC input); 500 Ω (mA input)	0/2-10 VDC	No, order - GGC model	25-50 seconds
M9116-AGA-2	140 in-lb (16 Nm)	6.5 VA	Two-position, floating		No, order -AGD, -AGE	No, order - AGC model	70-115 seconds
M9116-GGA-2	140 in-lb (16 Nm)	7.5 VA	Prop. 0-10 VDC, 4-20 mA	100k (VDC input); 500 (mA input)	0/2-10 VDC	None	70-115 seconds
M9124-AGA-2	210 in-lb (24 Nm)	6.5 VA	Two-position, floating		No, order -AGD, -AGE	No, order - AGC model	115-175 seconds
M9124-GGA-2	210 in-lb (24 Nm)	7.5 VA	Prop. 0-10 VDC, 4-20 mA	100k Ω (VDC input); 500 Ω (mA input)	0/2-10 VDC	No, order - GGC model	115-175 seconds
M9132-AGA-2	280 in-lb (32 Nm)	6.5 VA	Two-position, floating		None	None	115-205 seconds
M9132-GGA-2	280 in-lb (32 Nm)	7.5 VA	Prop. 0-10 VDC, 4-20 mA	100k Ω (VDC input); 500 Ω (mA input)	0/2-10 VDC	None	115-205 seconds

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M9100 SERIES



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DIMENSIONS

Model	Torque	Dimensions	Maximum Shaft Diameter	Minimum Shaft Length	Enclosure Rating	Weight
M9104-AGA	35 in-lb (4 Nm)	2.6"H x 2.8"W x 5.2"L (6.7 x 7.1 x 13.1 cm)	0.5" (1.3 cm)	1.25" (3.2 cm)	NEMA 2 (IP42)	1.0 lb (0.4 kg)
M9104-GGA	35 in-lb (4 Nm)	2.6"H x 2.8"W x 5.2"L (6.7 x 7.1 x 13.1 cm)	0.5" (1.3 cm)	1.25" (3.2 cm)	NEMA 2 (IP42)	1.3 lb (0.6 kg)
M9106	53 in-lb (6 Nm)	2.6"H x 4.2"W x 5.9"L (6.7 x 10.7 x 15.0 cm)	0.5" (1.3 cm)	1.75" (4.5 cm)	NEMA 2 (IP42)	2.5 lb (1.0 kg)
M9108	70 in-lb (8 Nm)	2.5"H x 3.9"W x 7.1"L (6.5 x 10.0 x 18.0 cm)	0.75" (1.9 cm)	2.25" (5.7 cm)	NEMA 2 (IP42)	2.9 lb (1.3 kg)
M9116	140 in-lb (16 Nm)	2.5"H x 3.9"W x 7.1"L (6.5 x 10.0 x 18.0 cm)	0.75" (1.9 cm)	2.25" (5.7 cm)	NEMA 2 (IP42)	2.9 lb (1.3 kg)
M9124	210 in-lb (24 Nm)	2.5"H x 3.9"W x 7.1"L (6.5 x 10.0 x 18.0 cm)	0.75" (1.9 cm)	2.25" (5.7 cm)	NEMA 2 (IP42)	2.9 lb (1.3 kg)
M9132	280 in-lb (32 Nm)	2.5"H x 3.9"W x 7.1"L (6.5 x 10.0 x 18.0 cm)	0.75" (1.9 cm)	2.25" (5.7 cm)	NEMA 2 (IP42)	2.9 lb (1.3 kg)

WIRING

M9104-AGA-2S Tri-state	M9104-GGA-2S Proportional	M9106-AGA Tri-state	M9106-GGA Proportional	<table><tr><th>Terminal</th><th>Description</th></tr><tr><td>4</td><td>Current input</td></tr><tr><td>5</td><td>Voltage input</td></tr><tr><td>6</td><td>Feedback</td></tr></table> M9108 M9116, M9124, M9132 (GGA) Proportional	Terminal	Description	4	Current input	5	Voltage input	6	Feedback	M9108 M9116, M9124, M9132 (AGA) Tri-state/ Two-position
Terminal	Description												
4	Current input												
5	Voltage input												
6	Feedback												

* Provide constant power to terminal 2 for two-position control.

ORDERING INFORMATION

MODEL

M9104-AGA-2S
M9104-GGA-2S
M9106-AGA-2
M9106-AGC-2
M9106-GGA-2
M9108-AGA-2
M9108-AGC-2
M9108-AGE-2
M9108-GGA-2
M9108-GGC-2
M9116-AGA-2
M9116-AGC-2
M9116-AGD-2
M9116-AGE-2
M9116-GGA-2
M9124-AGA-2
M9124-AGC-2
M9124-AGD-2
M9124-AGE-2
M9124-GGA-2
M9124-GGC-2
M9132-GGA-2
M9132-AGA-2

DESCRIPTION

Non-spring return 35 in-lb (4 Nm), two-position and tri-state control
Non-spring return 35 in-lb (4 Nm), 0-10 VDC proportional control
Non-spring return 53 in-lb (6 Nm), two-position and tri-state control
Non-spring return 53 in-lb (6 Nm), two-position and tri-state control, aux. switches
Non-spring return 53 in-lb (6 Nm), 0-10VDC proportional control
Non-spring return 70 in-lb (8 Nm), two-position and tri-state control
Non-spring return 70 in-lb (8 Nm), two-position and tri-state control, aux. switches
Non-spring return 70 in-lb (8 Nm), two-position and tri-state control, 135Ω feedback
Non-spring return 70 in-lb (8 Nm), two-position and tri-state control, 1000Ω feedback
Non-spring return 70 in-lb (8 Nm), 0-10 VDC proportional control
Non-spring return 70 in-lb (8 Nm), 0-10 VDC proportional control, aux. switches
Non-spring return 140 in-lb (16 Nm), two-position and tri-state control
Non-spring return 140 in-lb (16 Nm), two-position and tri-state control, aux. switches
Non-spring return 140 in-lb (16 Nm), two-position/tri-state, aux. switches, 135Ω feedback
Non-spring return 140 in-lb (16 Nm), two-position/tri-state, aux. switches, 1000Ω feedback
Non-spring return 140 in-lb (16 Nm), 0-10 VDC proportional control
Non-spring return 210 in-lb (24 Nm), two-position and tri-state control
Non-spring return 210 in-lb (24 Nm), two-position and tri-state control, aux. switches
Non-spring return 210 in-lb (24 Nm), two-position/tri-state, aux. switches, 135Ω feedback
Non-spring return 210 in-lb (24 Nm), two-position/tri-state, aux. switches, 1000Ω feedback
Non-spring return 210 in-lb (24 Nm), 0-10 VDC proportional control
Non-spring return 210 in-lb (24 Nm), 0-10 VDC proportional control, aux. switches
Non-spring return 280 in-lb (32 Nm), 0-10 VDC proportional control
Non-spring return 280 in-lb (32 Nm), two-position and tri-state control

ACCESSORIES

M9000-103
M9000-151
M9000-154
M9000-158
ZG-R01
120/24 VAC, 14 VA inline transformer
Floor mount linkage kit
Jackshaft coupler, 1", for M9100 actuators
Tandem mount kit for M9132/M9220 actuators
500Ω, 1/2W, 1% resistor