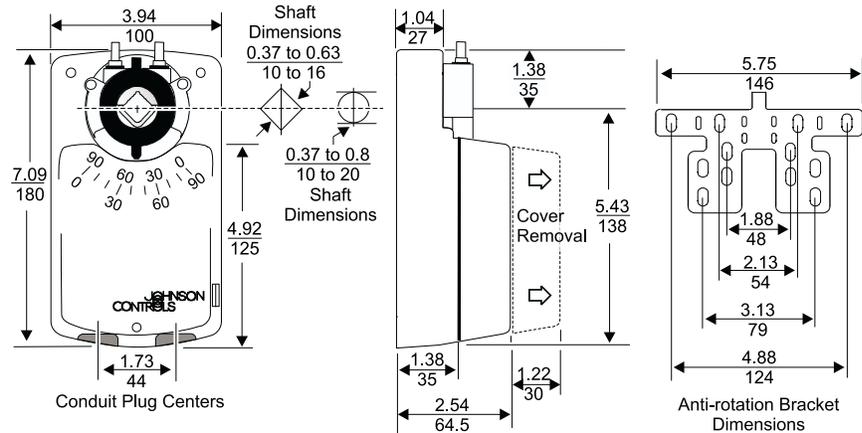


M9108, M9116, M9124, and M9132 Series Electric Non-Spring Return Actuators (Continued)

Applications (Continued)

An anti-rotation bracket prevents lateral movement of the actuator. Pressing the spring-loaded gear release on the actuator cover disengages the gear train for manual repositioning of the coupler.

For more information, refer to the *M9108, M9116, M9124, M9132 Series Electric Non-spring Return Actuators Product Bulletin, LIT-2681058* or the *M9108, M9116, M9124, M9132 Series Electric Non-spring Return Actuators Installation Instructions, Part No. 34-636-399*.



Dimensions, in./mm

Repair Parts

Replace the unit.

Specifications

M91xx Series Electric Non-spring Return Actuators	
Power Requirements	M9108- and M9116-AGx: 20 to 30 VAC at 50/60 Hz or 24 VDC \pm 10%; 6.5 VA supply minimum All Other Models: 20 to 30 VAC at 50/60 Hz or 24 VDC \pm 10%; 7.5 VA supply minimum
Input Signal	AGx: 24 VAC at 50/60 Hz or 24 VDC GGx and HGx: 0 (2) to 10 VDC, 0 (4) to 20 VDC, or 0 (4) to 20 mA JGx: Potentiometer value is 100 ohms minimum to 10,000 ohms maximum
Input Signal Adjustments	AGx: Factory Setting, Terminals 1 and 2, CW rotation; Terminals 1 and 3, CCW rotation GGx and HGx (Voltage Input or Current Input): Jumper selectable: 0 (2) to 10 VDC, 0 (4) to 20 VDC, or 0 (4) to 20 mA Adjustable: Zero, 0 to 6 VDC, 0 to 12 VDC, or 0 to 12 mA Span, 2 to 10 VDC, 4 to 20 VDC, or 4 to 20 mA Factory Setting: 0 to 10 VDC, 0 to 20 mA, CW rotation with signal increase GGx, HGx, and JGx: Action is jumper selectable Direct (CW) or Reverse (CCW) with signal increase.
Input Impedance	GGx and HGx: Voltage Input, 205,000 ohms for 0 (2) to 10 V and 410,000 ohms for 0 (4) to 20 V; Current Input, 500 ohms JGx: 1.8 Megohms
Feedback Signal	AGD: 135 ohm feedback potentiometer AGE: 1,000 ohm feedback potentiometer GGx and HGx: 0 to 10 VDC or 2 to 10 VDC for 90° (10 VDC at 1 mA) Corresponds to input signal span selection. JGx: 0 to 10 VDC for 90° (10 VDC at 1 mA)
Auxiliary Switch Rating	xGC: Two Single-Pole, Double-Throw (SPDT) switches rated at 24 VAC 1.5 A inductive, 3.0 A resistive, 35 VA maximum per switch, Class 2
Mechanical Output (Running Torque)	M9108: 70 lb-in (8 N-m) for one unit; not intended for tandem use M9116: 140 lb-in (16 N-m) for one unit, 280 lb-in (32 N-m) for two in tandem (GGx, HGx) M9124: 210 lb-in (24 N-m) for one unit, 420 lb-in (48 N-m) for two in tandem (AGx, GGx, HGx) M9132: 280 lb-in (32 N-m) for one unit, 560 lb-in (64 N-m) for two in tandem (AGx, GGx)
Audible Noise Rating	45 dBA at 1 m
Rotation Range	0 to 90° in 5-degree increments, mechanically limited to 93°
Rotation Time	M9108: 30 seconds at 50% rated load, 25 to 50 seconds for 0 to 70 lb-in (0 to 8 N-m) M9116: 80 seconds at 50% rated load, 70 to 115 seconds for 0 to 140 lb-in (0 to 16 N-m) M9124: 130 seconds at 50% rated load, 115 to 175 seconds for 0 to 210 lb-in (0 to 24 N-m) M9132: 140 seconds at 50% rated load, 115 to 205 seconds for 0 to 280 lb-in (0 to 32 N-m)
Electrical Connection	M9124- and M9132-AGx: 1/4 in. spade terminals with pluggable 3-terminal blocks (See Accessories chart.) All Other Models: Screw terminals for 22 to 14 AWG; maximum of two 18, 20, or 22 AWG per terminal
Mechanical Connection	3/8 to 3/4 in. (10 to 20 mm) diameter round shaft or 3/8 to 5/8 in. (10 to 16 mm) square shaft
Enclosure	NEMA 2, IP42
Ambient Conditions	Operating: -4 to 122°F (-20 to 50°C); 0 to 95% RH, non-condensing Storage: -40 to 186°F (-40 to 86°C); 0 to 95% RH, non-condensing
Dimensions (H x W x D)	7.09 x 3.94 x 2.54 in. (180 x 100 x 64.5 mm)
Shipping Weight	2.9 lb (1.3 kg)
Agency Compliance	UL 873 Listed, File E27734, CCN XAPX CSA C22.2 No. 139 Certified, File LR85083, Class 3221 02 CE Mark, EMC Directive 89/336/EEC

M9108, M9116, M9124, and M9132 Series Electric Non-Spring Return Actuators (Continued)

Accessories

Code Number	Description
DMPR-KR003 (a)	Sleeve Pin Kit for Johnson Controls round dampers with a 5/16 in. (8 mm) diameter shaft
DMPR-KC003 (a)	Blade Pin Extension without Bracket for Johnson Controls CD-1300 direct-mount applications
DMPR-KC254	Inside Frame Mounting Kit for damper applications requiring the actuator within the airstream
M9000-103	14 VA Transformer, 120/24 VAC, 60 Hz, Class 2
M9000-104	14 VA Transformer, 230/24 VAC, 60 Hz, Class 2
M9000-105	Pluggable 3-terminal block
M9000-151	Base Mount Linkage Kit for remote inside duct mounting (not intended for M9132 actuators or any tandem application)
M9000-153	Crank Arm Kit for remote mounting (not intended for M9132 actuators or any tandem application)
M9000-154	1 in. Jackshaft Coupler for mounting on a 1 in. diameter damper shaft
M9000-155	Manual Handle for positioning a damper or valve when power is removed from an M91xx actuator
M9000-158	Mounting Kit to tandem mount two M9116 GGx or HGx models; two M9124 AGx, GGx, or HGx; or two M9132 AGx or GGx models on a damper
M9000-160	Replacement anti-rotation bracket for M91xx Series actuators
M9000-200	Commissioning Tool provides a control signal to drive on/off, floating, proportional, or resistive actuators.
M9000-500	Valve Linkage Kit for mounting M9116 actuators to 1/2 to 2 in. VG7000 Series globe valves
M9000-510	Valve Linkage Kit for mounting M9108, M9116, and M9124 actuators to 1/2 through 1-1/4 in. 2-way and 1/2 and 3/4 in. 3-way VG1000 Series ball valves
M9000-511	Valve Linkage Kit for mounting M9124 actuators to 1-1/2 in. 2-way and 3-way VG1000 Series ball valves, and M9116 and M9124 actuators to 1 and 1-1/4 in. 3-way VG1000 Series ball valves

(a) Furnished with the damper and may be ordered separately.