

# M9104-AGP-2S Series Electric Non-Spring Return Actuator with Pressure Sensor for VAV Applications

## Description

The M9104-AGP-2S synchronous motor-driven actuator provides floating (3-wire) control and is easily installed on a VAV box that has a round shaft up to 1/2 inch (13 mm) in diameter or a 3/8 inch (10 mm) square shaft.

This compact, non-spring return actuator has a 35 lb-in (4 N-m) running torque in a compact easy-to-install package. It has a nominal 60-second travel time at 60 Hz (72 seconds at 50 Hz) for 90° of rotation.

The M9104-AGP-2S Actuator/Transmitter includes a Differential Pressure Transmitter that has a 0 to 1.5 inch W.C. (0 to 374 Pa) differential pressure range.

Refer to the *M9104-AGP-2S Series Electric Non-Spring Return Actuator with Pressure Sensor for VAV Applications Product Bulletin (LIT-12011975)* for important product application information.



**M9104-AGP-2S Non-Spring Return Actuator with Pressure Sensor for VAV Applications**

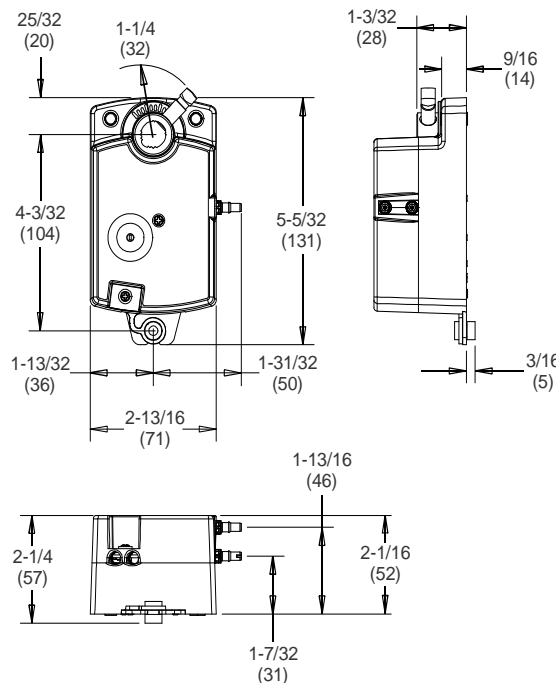
## Features

- 35 dBA maximum audible noise rating
- automatic differential pressure sensor polarity detection
- synchronous drive
- 100,000 cycle rating
- direct mounting with single screw coupler
- magnetic clutch
- manual gear release

## Repair Information

If the M9104 Series Electric Non-Spring Return Actuator with Pressure Sensor for VAV Applications fails to operate within its specifications, replace the unit. For a replacement actuator, contact the nearest Johnson Controls® representative.

## Dimensions



**M9104-AGP-2S Dimensions, in. (mm)**

## M9104-AGP-2S Series Electric Non-Spring Return Actuator with Pressure Sensor for VAV Applications

### Selection Chart

Product Code Number	Description
M9104-AGP-2S	35 lb·in (4 N·m) Electric Non-Spring Return Actuator with floating control (includes differential pressure sensor)

### Technical Specifications

M9104-AGP-2S		
Power Requirements	M9104-AGP-2S	20 to 30 VAC at 50/60 Hz, 2.1 VA Supply, Class 2
	Differential Pressure Sensor	15 VDC (14.5 to 17 VDC) unregulated; 15 mA maximum or 24 VAC +/- 20% at 50/60 Hz
Control Signal		24 VAC (20 to 30) at 50/60 Hz
Control Input Impedance		250 ohms, nominal
Differential Pressure Sensor	Pressure Range	0 to 1.5 in. W.C. (0 to 374 Pa)
	Over Pressure Limit	150 in. W.C. (37.36 kPa)
	Output Voltage	0.5 to 4.5 VDC with 25,000 ohm minimum load impedance
	Total Error Band	1.3% FS (Combined error from calibration, accuracy, and temperature effects)
	Accuracy at 77°F (25°C)	0.25% FS Accuracy (Includes non-linearity, hysteresis, and non-repeatability)
	Long-Term Stability	0.5% FS
Running Torque		35 lb·in (4 N·m)
Rotation Range		0 to 90°, CW or CCW
Rotation Time		Nominal 60 seconds at 60 Hz for 90° Nominal 72 seconds at 50 Hz for 90°
Cycles		100,000 Full Stroke Cycles; 2,500,000 Repositions at Rated Running Torque, 35 lb·in (4 N·m)
Audible Noise Rating		35 dBA maximum at 1 m
Enclosure		NEMA 1, IP42
Ambient Conditions	Operating	32 to 125°F (0 to 52°C); 90% RH maximum, non-condensing
	Storage	-20 to 150°F (-29 to 66°C); 90% RH maximum, non-condensing
Dimensions (Height x Width x Depth)		5.67 x 2.80 x 2.24 in. (144 x 71 x 57mm)
Shipping Weight		1.0 lb (0.45 kg)
Compliance	United States	UL Listed, to UL 60730-1A: 2009-10-19, Ed. 4.0, Automatic Electrical Controls for Household and Similar Use; and UL 60730-2-14: 2013-02-27, Ed. 2, Part 2 Particular Requirements for Electric Actuators Plenum Rated (UL 2043). Suitable for use in Other Environmental Air Space (Plenums) in accordance with section 300.22 (C) of the National Electric Code
	Canada	UL Listed, CCN XAPX7, File E27734; to UL 60730-1:02-CAN/CSA: July 2002, 3rd Ed., Automatic Electrical Controls for Household and Similar Use; and CSA C22.2 No. 24-93 Temperature Indicating and Regulating Equipment Actuator Housing is Plenum Rated per CSA C22.2 No. 236/UL 1995, Heating and Cooling Equipment
	Europe	IEC 60730-1: Automatic Electrical Controls for Household and Similar Use, Part 1: General Requirements: 2010-03, Edition 4; IEC 60730-1-14, Automatic Electrical Controls for Household and Similar Use; Part 2: Particular Requirements for Electric Actuators CE Mark – Johnson Controls declares that this product is in compliance with the essential requirements and other relevant provisions of the EMC Directive 2004/108/EC and the Low Voltage Directive 2006/95/EC.
	Australia and New Zealand	C-Tick Mark, Australia/NZ Emissions Compliant

