



DA-008S024Px Series

8Nm Spring Return Damper Actuator - Proportional Control



Applications

- Constant or variable air volume installations for the control of HVAC dampers.

Overview

The 8Nm Spring Return electric damper-actuator series has been specially developed for the motorized operation of air dampers in air conditioning systems. The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.

When the control signal is applied the actuator drives the damper to the operational position, while evenly tensioning the integrated spring. After a power failure the stored energy in the spring immediately brings the damper to the safety position. Manual operation is automatically cancelled when the actuator is in electrical operation.

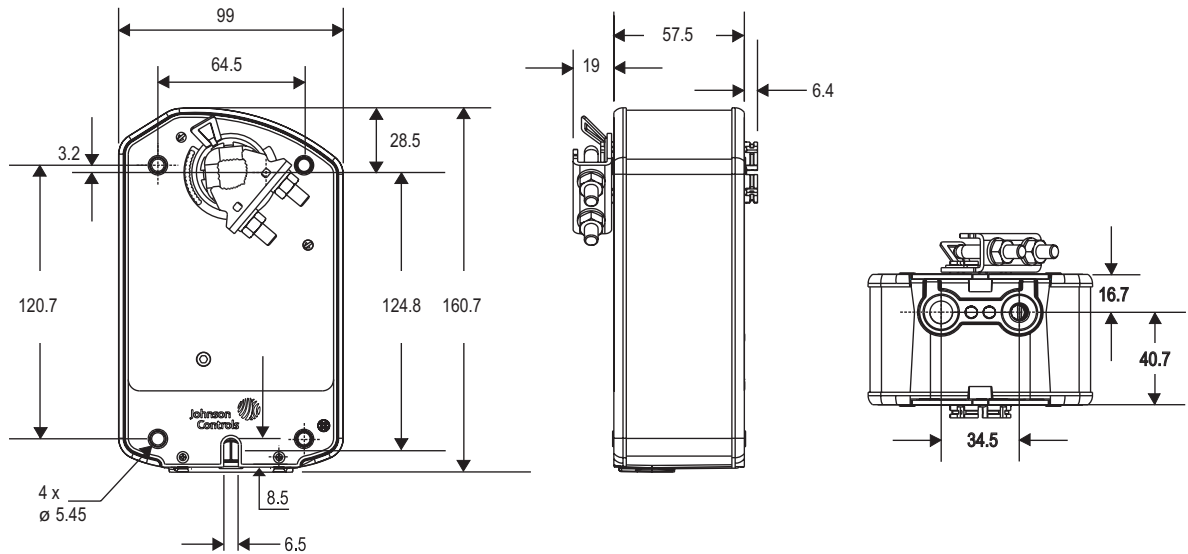
Features & Benefits

- 0(2)..10 V or 0(4)..mA control signal
- Up to 5 actuators in parallel operation possible
- Electrical connection with halogen-free cable
- Simple direct mounting with universal adapter on Ø 8 mm to 16 mm shaft or 6 mm to 12 mm square shaft. An optional M9208-600 Jackshaft Coupler Kit is available for 12 to 19 mm round shafts, or 10 mm to 14 mm square shafts
- Limitation of rotation angle
- Manual positioning with crank handle
- Two auxiliary switches, one adjustable

Model Selection

Product Code	Power Supply	Control Type	Description
DA-008S024PX	24 Vac/Vdc	Proportional	8Nm, spring return actuator
DA-008S024P2	24 Vac/Vdc	Proportional	8Nm, spring return actuator , 2 Auxiliary Switches

Dimensions (in mm)



Product Specifications

Power requirements

Damper actuator	24 Vac/dc at 50/60 Hz (AC 19.2 to 28.8 V) 24 Vdc (DC 21.6 to 28.8 V)
<input type="checkbox"/> Running	7.9 VA (AC); 3.5 W (DC)
<input type="checkbox"/> Holding position	5.5 VA (AC); 1.9 W (DC)
Transformer sizing requirements	8 VA min. per actuator

Control input impedance

Voltage input	100,000 ohms
Current input	500 ohms with Field Furnished 500 ohm Resistor

Signals

Feedback signal	DC 0(2) to 10 V for Desired Rotation Range up to 95° Corresponds to Rotation Limits, 0.5 mA at 10 V Maximum
Input signal	
<input type="checkbox"/> Factory set	DC 0 to 10 V, CW Rotation with Signal Increase
<input type="checkbox"/> Selectable	DC 0(2) to 10 V or 0(4) to 20 mA with Field-Furnished 500 ohm, 0.25 W Minimum Resistor
<input type="checkbox"/> Switch	Selectable Direct or Reverse Action with Signal Increase

Rated torque

Running time and spring return torque	8 Nm at all operating temperature
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Rotation

Rotation range	Maximum Full Stroke: 95° Adjustable Stop: 35° to 95° Maximum Position
Rotation time for 90°	
<input type="checkbox"/> Power on (running)	50 Seconds Constant for 8 Nm Load, at all Operating Conditions 90 Seconds for 0 to 8 Nm in Calibration Mode or Override Mode
<input type="checkbox"/> Power off (spring return)	17 to 25 Seconds for 0 to 8 Nm Load, at Room Temperature 22 Seconds Nominal at Full Rated Load 94 Seconds Maximum with 8 Nm load at -40 °C

Service lifetime

Cycles	60,000 Full Stroke Cycles; 1,500,000 repositions
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Audible noise rating

Power on (running)	<35 dBA at 8 Nm Load, at a Distance of 1 m
Power on (holding)	<20 dBA at a Distance of 1 m
Power off (spring returning)	<52 dBA at 8 Nm Load, at a Distance of 1 m

Electrical connections

Actuators (all models)	1.2 m UL 758 Type AWM Halogen-Free Cable with 0.85 mm ² (18 AWG) conductors and 6 mm ferrule ends
Auxiliary switches (-P2 model)	1.2 m UL 758 Type AWM Halogen-Free Cable with 0.85 mm ² (18 AWG) conductors and 6 mm ferrule ends
Auxiliary switch rating (-P2 models)	Two Single-Pole, Double-Throw (SPDT), Double-Insulated Switches with Gold Flash Contacts: AC 24 V, 50 VA Pilot Duty; AC 240 V, 5.0 A Resistive, 1/4 hp, 275 VA Pilot Duty

Environmental

Standard operating temperature _____ -40 to 60°C; 90% RH Maximum, Non-condensing
Storage temperature _____ -40 to 85°C; 95% RH Maximum, Non-condensing

Mechanical

Dimensions _____ See figure

Shipping weight

DA-008N024PX _____ 1.6 kg

DA-008N024P2 _____ 1.7 kg

Spring return _____ Direction is Selectable with Mounting Position of Actuator:

Side A _____ Actuator faces away from damper for CCW spring return;

Side B _____ Actuator faces Away from damper for CW spring return

Mechanical connections

Standard Shaft Clamp included with actuator _____ 8 to 16 mm Diameter Round Shafts,
_____ or 6 to 12 mm Square Shafts

Optional M9208-600 Jackshaft coupler kit _____ 12 to 19 mm Diameter Round Shafts,
_____ or 10 to 14 mm Square Shafts

Aluminum enclosure rating _____ IP 54 for All Mounting Orientations

Standards and regulations

Compliances _____ CE certification

_____ EMC Directive and Low Voltage Directive compliant