

HVAC CONTROL PRODUCTS

Actuators

Non Spring Return Damper Actuators

M910x-xGA-xS

(Joventa DAB / DAD / DMD)

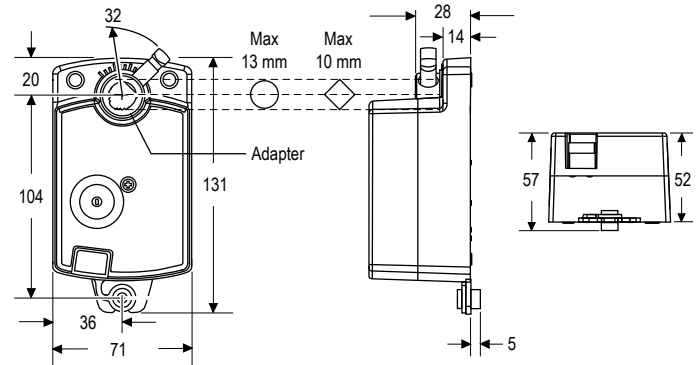
2 and 4 Nm, ON/OFF, Floating and Proportional Control

The Small Family electric damper actuator series have been developed to operate small air dampers in ventilation and air conditioning systems.

The compact design make this actuator highly versatile.

Features

- Floating, ON/OFF and Proportional Control
- Load-independent running time
- Up to 5 actuators in parallel operation possible
- Actuators available with PVC cable or with Plug-in terminal block connection
- Simple direct mounting with universal adapter for fitting to \varnothing 8...13 mm or with 8...10 mm square shaft. 45 mm minimum shaft length
- Selectable direction of rotation
- Manual release button



Dimensions in mm

Ordering Codes		Torque	Running Time	Damper Size	Control Signals	Supply Voltage (50/60Hz)	Connection
Johnson Controls	Joventa						
M9102-AGA-1S	DAB1.4	2 Nm	36 s	0.4 m ²	Floating without timeout	AC 24 V	PVC-cable
M9102-AGA-5S	DAB1.4C				ON/OFF and Floating with timeout		Terminal block
M9102-IGA-1S	DAB1				Floating without timeout		PVC-cable
M9102-IGA-5S	DAB1C						Terminal block
M9104-AGA-1S	DAD1.4	4 Nm	72 s	0.8 m ²	Floating without timeout		PVC-cable
M9104-AGA-5S	DAD1.4C						Terminal block
M9104-IGA-1S	DAD1				ON/OFF and Floating with timeout		PVC-cable
M9104-IGA-5S	DAD1C						Terminal block
M9104-IUA-5S	DAD2			AC 100 to 240 V	PVC-cable		
M9104-GGA-1S	DMD1.2			Proportional 0...10 VDC	AC 24 V	PVC-cable	
M9104-GGA-5S	DMD1.2C					Terminal block	

HVAC CONTROL PRODUCTS

Actuators

Non Spring Return Damper Actuators

M9304-xxx-1N

(Joventa DAN / DAN2 / DMN)

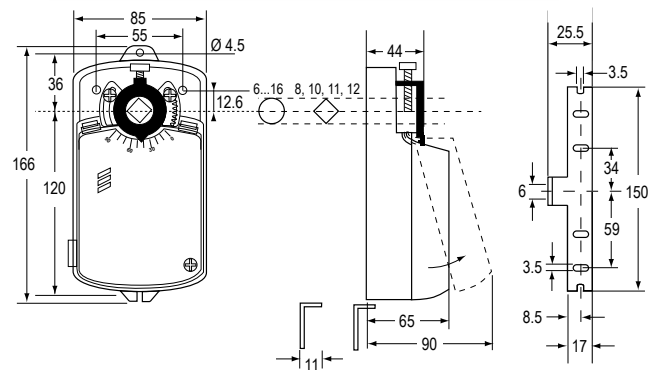
4 Nm, ON/OFF, Floating and Proportional Control

The Silence electric damper actuator series have been developed to operate small and medium air dampers in ventilation and air conditioning systems. The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.

A key feature of the design is the Johnson Controls stem adapter which also incorporates angle-of-rotation limiting and position indication.

Features

- ON/OFF, Floating and Proportional Control
- Load-independent running time
- Up to 5 actuators in parallel operation possible
- Plug-in terminal block connection
- Simple direct mounting with universal adapter for fitting to \varnothing 6 mm to 16 mm shaft or with M9000-ZxxDN adapter kit for 8, 10, 11 and 12 mm square shaft. 45 mm min shaft length
- Selectable direction of rotation
- Limitation of rotation angle
- Manual release button
- 2 adjustable auxiliary switches
- Automatic shut-off at end position (overload switch)
- Energy saving at end positions
- Actuators available with 1 m halogen-free cable



Dimensions in mm

Ordering Codes		Torque	Running Time	Damper Size	Control Signals	2 x Adjustable Auxiliary Contacts	Supply Voltage (50/60Hz)
Johnson Controls	Joventa *						
M9304-AGA-1N	DAN1N	4 Nm	35 s	0.8 m ²	ON/OFF and Floating	---	24 VAC/DC
M9304-AGC-1N	DAN1.SN					●	
M9304-ADA-1N	DAN2N					---	
M9304-ADC-1N	DAN2.SN					●	230 VAC
M9304-AGA-1N	DAN5N					---	
M9304-AKC-1N	DAN5.SN					●	
M9304-BDA-1N	DAN2.C					---	230 VAC
M9304-BDC-1N	DAN2.SC					●	
M9304-GGA-1N	DMN1.2N					---	
M9304-GKA-1N	DMN5.2N					---	DC 1...10 V
		---	---	48 VAC/DC			

Note

* by adding a K after the type number you will acquire the same model with a Halogene free cable (1 m)

HVAC CONTROL PRODUCTS

Actuators

Non Spring Return Damper Actuators

M9100

(Joventa DAS-DMS / DA-DM / DAL-DML / DAG-DMG)

8, 16, 24 and 32 Nm, ON/OFF, Floating and Proportional Control

The M9100 Series Electric Actuators are direct-mount actuators. These bidirectional actuators do not require a damper linkage, and are easily installed on round shafts or square shafts using the standard shaft clamp included with the actuator.

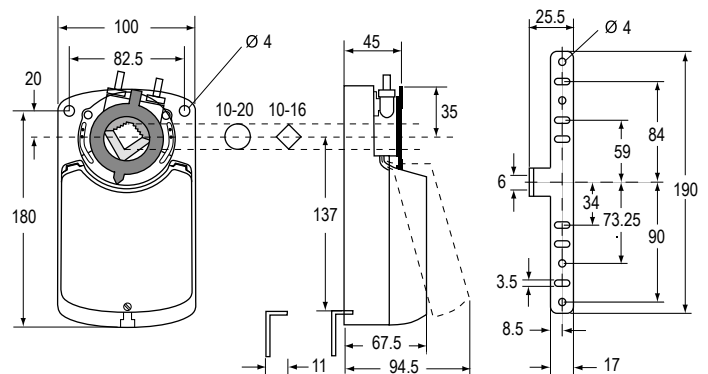
A single M9100 Series Electric Non Spring Return Actuator provides 8, 16, 24 or 32 Nm torque depending on the model. Two integral line voltage auxiliary switches, available only on the M91xx-xxC models, indicate end stop position or performs switching functions within the selected rotation range.

M9100 Series Actuators provide 90° of rotation. A graduated scale from 0° to 90° and a position indicator provide visual indication of stroke.



Features

- Direct-Coupled Design
- Selectable direction of rotation
- Electronic Stall Detection
- Double-Insulated Construction
- Load independent
- Optional Integrated Auxiliary Switches
- Manufactured under International Standards Organization (ISO) 9001 Quality Control Standards



Dimensions in mm

HVAC CONTROL PRODUCTS Actuators

Non Spring Return Damper Actuators

M9100

(Joventa DAS-DMS / DA-DM / DAL-DML / DAG-DMG)

Ordering Codes		Running Time	Damper Size	Control Signals	2 x Auxiliary Contacts	Feedback Potentiometer	Supply Voltage (50/60Hz)		
Johnson Controls	Joventa*								
8 Nm									
M9108-AGA-1N	DAS1	30 s	1.5 m ²	ON/OFF and Floating	---	---	24 VAC/DC		
M9108-AGC-1N	DAS1.S				•	---			
M9108-AGE-1N	DAS1.P1				---	1 KOhm			
M9108-AGD-1N	DAS1.P2				---	140 Ohm			
M9108-AGF-1N	DAS1.P4				---	2 KOhm			
M9108-ADA-1N	DAS2				---	---			
M9108-ADC-1N	DAS2.S				•	---			
M9108-ADE-1N	DAS2.P1				---	1 KOhm			
M9108-ADD-1N	DAS2.P2				---	140 Ohm			
M9108-ADF-1N	DAS2.P4				---	2 KOhm			
M9108-GGA-1N	DMS1.1				Proportional 0(2)...10 VDC / 0(4)...20 mA	---	---	24 VAC/DC	
M9108-GGC-1N	DMS1.1S					•	---		
M9108-GDA-1N	DMS2.2			Proportional 0(2)...10 VDC		---	---	230 VAC	
M9108-GDC-1N	DMS2.2S					•	---		
M9108-GDA-1N1	DMS2.5					Proportional 0(4)...20 mA	---		---
M9108-GDC-1N1	DMS2.5S						•		---
16 Nm									
M9116-AGA-1N	DA1	80 s	3 m ²	ON/OFF and Floating	---	---	24 VAC/DC		
M9116-AGC-1N	DA1.S				•	---			
M9116-AGE-1N	DA1.P1				---	1 KOhm			
M9116-AGD-1N	DA1.P2				---	140 Ohm			
M9116-AGF-1N	DA1.P4				---	2 KOhm			
M9116-ADA-1N	DA2				---	---			
M9116-ADC-1N	DA2.S				•	---			
M9116-ADE-1N	DA2.P1				---	1 KOhm			
M9116-ADD-1N	DA2.P2				---	140 Ohm			
M9116-ADF-1N	DA2.P4				---	2 KOhm			
M9116-GGA-1N	DM1.1				Proportional 0(2)...10 VDC / 0(4)...20 mA	---	---	24 VAC/DC	
M9116-GGC-1N	DM1.1S					•	---		
M9116-GDA-1N	DM2.2			Proportional 0(2)...10 VDC		---	---	230 VAC	
M9116-GDC-1N	DM2.2S					•	---		
M9116-GDA-1N1	DM2.5					Proportional 0(4)...20 mA	---		---
M9116-GDC-1N1	DM2.5S						•		---

Note

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HVAC CONTROL PRODUCTS Actuators

Non Spring Return Damper Actuators

M9100

(Joventa DAS-DMS / DA-DM / DAL-DML / DAG-DMG)

Ordering Codes		Running Time	Damper Size	Control Signals	2 x Auxiliary Contacts	Feedback Potentiometer	Supply Voltage (50/60Hz)		
Johnson Controls	Joventa*								
24 Nm									
M9124-AGA-1N	DAL1	125 s	4.5 m ²	ON/OFF and Floating	---	---	24 VAC/DC		
M9124-AGC-1N	DAL1.S				•	---			
M9124-AGE-1N	DAL1.P1				---	1 KOhm			
M9124-AGD-1N	DAL1.P2				---	140 Ohm			
M9124-AGF-1N	DAL1.P4				---	2 KOhm			
M9124-ADA-1N	DAL2				---	---			
M9124-ADC-1N	DAL2.S				•	---			
M9124-ADE-1N	DAL2.P1				---	1 KOhm			
M9124-ADD-1N	DAL2.P2				---	140 Ohm			
M9124-ADF-1N	DAL2.P4				---	2 KOhm			
M9124-GGA-1N	DML1.1				24 VAC/DC	Proportional 0(2)...10 VDC 0(4)...20 mA	---	---	
M9124-GGC-1N	DML1.1S						•	---	
M9124-GDA-1N	DML2.2			230 VAC			Proportional 0(2)...10 VDC	---	---
M9124-GDC-1N	DML2.2S							•	---
M9124-GDA-1N1	DML2.5							---	---
M9124-GDC-1N1	DML2.5S							•	---
32 Nm									
M9132-AGA-1N	DAG1	140 s	6 m ²	ON/OFF and Floating	---	---	24 VAC/DC		
M9132-AGC-1N	DAG1.S				•	---			
M9132-AGE-1N	DAG1.P1				---	1 KOhm			
M9132-AGD-1N	DAG1.P2				---	140 Ohm			
M9132-AGF-1N	DAG1.P4				---	2 KOhm			
M9132-ADA-1N	DAG2				---	---			
M9132-ADC-1N	DAG2.S				•	---			
M9132-ADE-1N	DAG2.P1				---	1 KOhm			
M9132-ADD-1N	DAG2.P2				---	140 Ohm			
M9132-ADF-1N	DAG2.P4				---	2 KOhm			
M9132-GDA-1N	DMG2.2				230 VAC	Proportional 0(2)...10 VDC	---	---	
M9132-GDC-1N	DMG2.2S						•	---	
M9132-GGA-1N	DMG1.1			200 s	Proportional 0(2)...10 VDC 0(4)...20 mA	---	---	24 VAC/DC	
M9132-GGC-1N	DMG1.1S					•	---		

Note

* by adding a K after the type number you will acquire the same model with a Halogene free cable (1 m)

HVAC CONTROL PRODUCTS
Actuators

Spring Return Damper Actuators

M9203

*(Joventa DxF1.03S-Z)**3 Nm, ON/OFF, Floating and Proportional Control*

The M9203 Series Electric Spring Return Actuators are direct-mount actuators.

These bidirectional actuators do not require a damper linkage, and are easily installed on round shafts or square shafts using the standard shaft clamp included with the actuator.

A single M9203 Series Electric Spring Return Actuator provides 3 Nm running and spring return torque.

An integral line voltage auxiliary switch, available only on the M9203-xxB-1(Z) models, indicates end stop position, or performs switching functions within the selected rotation range.

M9203 Series Actuators provide 95° of rotation. A graduated scale from -5° to 90° and a position indicator provide visual indication of stroke.

When power fails during service, the mechanical spring return system provides rated torque to the connected equipment, returning it to the home position.

The series includes the following control options:

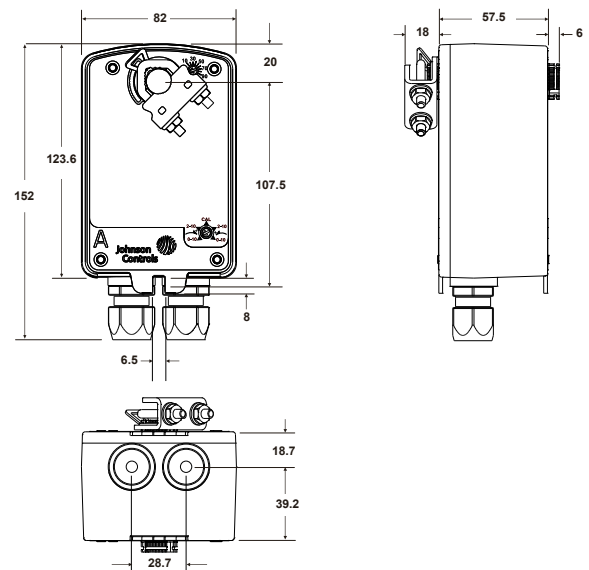
ON/OFF, 24 V, 100 to 240 VAC power

ON/OFF and Floating Point, 24 V power

Proportional, 24 V power, for 0(2) to 10 VDC or 0(4) to 20 mA Control Signal.

Features

- 3 Nm Rated Torque
- Direct-Coupled Design
- Reversible Mounting
- Electronic Stall Detection
- Double-Insulated Construction
- Microprocessor-controlled Brushless DC Motor (-AGx and GGx types)
- External Mode Selection Switch (-AGx and -GGx types)
- Integral Cables with Colored and Numbered Conductors
- Optional Integrated Auxiliary Switch
- Override Control (Proportional Models Only)
- Manufactured under International Standards Organization (ISO) 9001 Quality Control Standards



Dimensions in mm

Spring Return Damper Actuators

M9203

(Joventa DxF1.03S-Z)

Ordering Codes		
Johnson Controls	Joventa	Description
M9203-AGA-1	DBF1.03	3 Nm, 24 V AC/DC Floating and ON/OFF, 150 sec. running time
M9203-AGB-1	DBF1.03S	3 Nm, 24 V AC/DC Floating and ON/OFF, 150 sec. running time, 1 auxiliary switch
M9203-AGA-1Z	DBF1.03Z	3 Nm, 24 V AC/DC Floating and ON/OFF, 90 sec. running time
M9203-AGB-1Z	DBF1.03SZ	3 Nm, 24 V AC/DC Floating and ON/OFF, 90 sec. running time, 1 auxiliary switch
M9203-BGA-1	DAF1.03	3 Nm, 24 V AC/DC ON/OFF, 60 sec. running time
M9203-BGB-1	DAF1.03S	3 Nm, 24 V AC/DC ON/OFF, 60 sec. running time, 1 auxiliary switch
M9203-BUA-1	DAF2.03	3 Nm, 100-240 V AC ON/OFF, 60 sec. running time
M9203-BUB-1	DAF2.03S	3 Nm, 100-240 V AC ON/OFF, 60 sec. running time, 1 auxiliary switch
M9203-BUA-1Z	DAF2.03Z	3 Nm, 100-240 V AC ON/OFF, 27 sec. running time
M9203-BUB-1Z	DAF2.03SZ	3 Nm, 100-240 V AC ON/OFF, 27 sec. running time, 1 auxiliary switch
M9203-GGA-1	DMF1.03	3 Nm, 24 V AC/DC Proportional, 150 sec. running time
M9203-GGB-1	DMF1.03S	3 Nm, 24 V AC/DC Proportional, 150 sec. running time, 1 auxiliary switch
M9203-GGA-1Z	DMF1.03Z	3 Nm, 24 V AC/DC Proportional, 90 sec. running time
M9203-GGB-1Z	DMF1.03SZ	3 Nm, 24 V AC/DC Proportional, 90 sec. running time, 1 auxiliary switch

Accessories (order separately)

Ordering Codes	Description
M9000-321	Weathershield Kit for Damper Application of M9203 and M9208 Series Electric Spring Return Actuators (quantity 1)
M9000-341	Weathershield Kit for VG1000 Series Ball Valve application of M(VA)9104, M(VA)9203, and M(VA)9208 Series Electric Spring Return Actuators (quantity 1)
M9000-400	Jackshaft Linkage Adapter Kit (quantity 1)
M9000-560	Ball Valve Linkage Kit for applying M9203, and M9208 Series Electric Actuators to VG1000 Series Valves (quantity 1)
M9000-561	Thermal Barrier Kit for M9000-560 Ball Valve Linkage. Extends M(VA)9104, M(VA)9203, and M(VA)9208 Series Electric Spring Return Actuators applications to include low pressure steam (quantity 1)
M9000-604	Replacement Anti-Rotation Bracket Kit for M9203, M9208, M9210, and M9220 Series Electric Spring Return Actuators (quantity 1)
M9000-606	Position Indicator for Damper Applications (quantity 5)
M9000-607	Position Indicator for VG1000 Series Ball Valve Applications (quantity 5)
M9203-100	Remote Mounting Kit with Crankarm Kit (quantity 1)
M9203-110	Universal Mounting Kit without Crankarm Kit (quantity 1)
M9203-115	Universal Mounting Kit with Crankarm Kit (quantity 1)
M9203-150	Crankarm Kit (quantity 1)
M9203-250	Remote Mounting Kit with Crankarm Kit and Damper Linkage for D1300 Dampers (quantity 1)
M9203-601	Replacement Standard Coupler Kit (with Retainer) for Mounting M9203 Series Electric Spring Return Actuators (quantity 1)
M9203-602	Replacement Retainer for M9203 Series Electric Spring Return Actuators (quantity 5)
M9203-603	Adjustable Stop Kit for M9203 Series Electric Spring Return Actuators (quantity 1)

HVAC CONTROL PRODUCTS

Actuators

Spring Return Damper Actuators

M9208-xxx-1

(*Joventa DBF1.08 / DAFx.08 / DMF1.08*)

8 Nm, Floating and Proportional Control

The spring return electric damper-actuator series has been specially developed for the motorized operation of air dampers in air conditioning systems.

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.

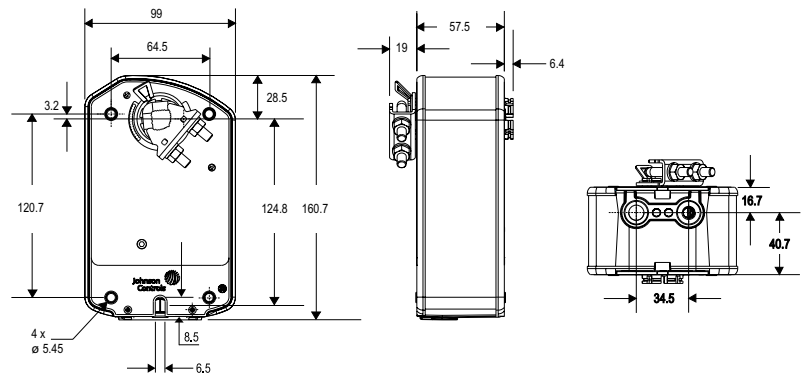
Manual operation is automatically cancelled when the actuator is in electrical operation.

The compact design and universal adapter fitted with limitation of rotation angle make this actuator highly versatile.



Features

- ON/OFF and Floating control signal
- Up to 5 actuators in parallel operation possible
- Electrical connection with halogen-free cable
- Simple direct mounting with universal adapter on \varnothing 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
- 2 auxiliary switches, 1 adjustable



Dimensions in mm

Ordering Codes		Torque	Running Time		Control Signals	2 x Auxiliary contacts	Supply Voltage (50/60Hz)
Johnson Controls	Joventa		Motor	Spring			
M9208-AGA-1	DBF1.08N	8 Nm	150 s	17...25 s	ON/OFF or Floating	---	24 VAC / 24 VDC
M9208-AGC-1	DBF1.08SN					•	
M9208-BGA-1	DAF1.08N		55...71 s	13...26 s	ON/OFF	---	24 VAC
M9208-BGC-1	DAF1.08SN					•	
M9208-BDA-1	DAF2.08N					---	230 VAC
M9208-BDC-1	DAF2.08SN		•				
M9208-GGA-1	DMF1.08N		150 s	17...25 s	Proportional 0...10 VDC 2...10 VDC	---	24 VAC / 24 VDC
M9208-GGC-1	DMF1.08SN					•	

HVAC CONTROL PRODUCTS

Actuators

Spring Return Damper Actuators

M9220-xxx-1

(*Joventa DAFx.20 / DBF1.20 / DMF1.20*)

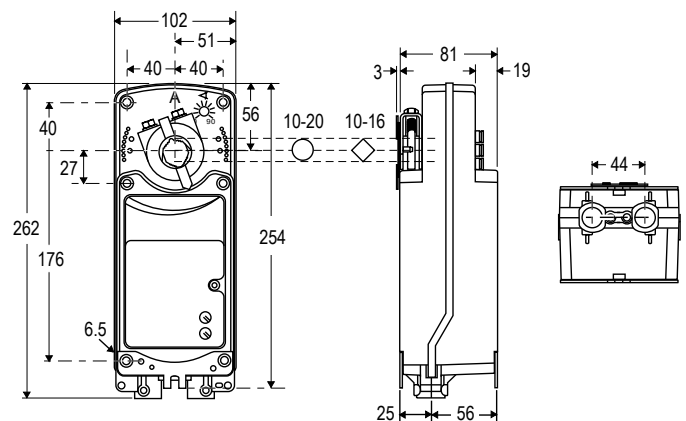
20 Nm, ON/OFF, Floating and Proportional Control

The M9220 Series Actuators are direct mount, spring return electric that provide reliable control of dampers and valves in Heating, Ventilating, and Air Conditioning (HVAC) systems.

The Actuators are available for use with ON/OFF, floating, and proportional controllers. These bidirectional actuators do not require a damper linkage, and are easily installed on dampers.

Features

- ON/OFF, Floating and Proportional Control
- Two or three models mounted in tandem deliver twice or triple the torque
- Up to 5 actuators in parallel operation possible
- Optional adjustable end stops.
The Optional Adjustable End Stops are used to shorten the actuator stroke electronic stall detection throughout entire rotation range that extends the life of the actuator by deactivating the actuator motor when an overload condition is detected
- Integrated cables halogen-free cables
- IP54 (NEMA2)
- Rated Aluminium Enclosure
- Easy-to-Use Locking manual override with auto release and crank storage
- Energy saving at end position
- Two Integral gold Auxiliary switches (xxC Models)



Dimensions in mm

Ordering Codes		Torque	Running Time		Damper Size	Control Signals	2 x Auxiliary contacts	Supply Voltage (50/60Hz)
Johnson Controls	Joventa		Motor	Spring				
20 Nm								
M9220-AGA-1	DBF1.20	20 Nm	150 s	20 s	2.0 m ²	ON/OFF and Floating	---	AC/DC 24 V
M9220-AGC-1	DBF1.20S						•	
M9220-BDA-1	DAF2.20						---	230 VAC
M9220-BDC-1	DAF2.20S		•					
M9220-BGA-1	DAF1.20		25...57 s	11...15 s	4.0 m ²	ON/OFF	---	AC/DC 24 V
M9220-BGC-1	DAF1.20S						•	
M9220-GGA-1	DMF1.20						---	
M9220-GGC-1	DMF1.20S		150 s	26 s		Proportional 0(2)...10 VDC	•	AC/DC 24 V
M9220-HGA-1	DHF1.20						---	
M9220-HGC-1	DHF1.20S	•						
					Proportional 0(2)...10 VDC with Span offset	•		

HVAC CONTROL PRODUCTS

Actuators

Safety Damper Actuators

S9208-BxC-33x

(Joventa SAFx.08Sx/12)

8 Nm, ON/OFF Control

The S9208 Security Fire electric, Spring Return damper actuator series has been specially developed for the motorized operation of fire protection dampers.

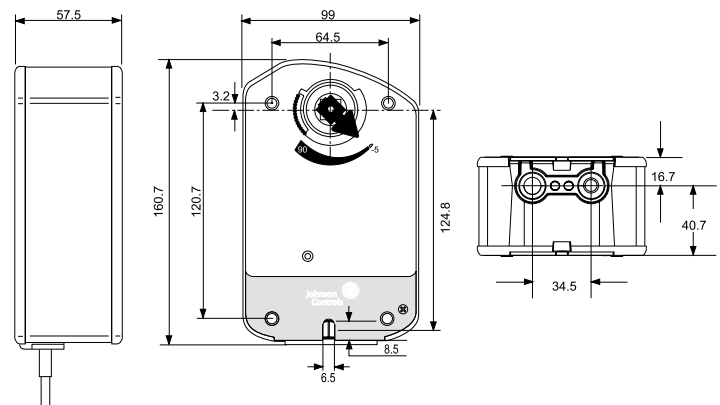
When the control signal is applied the actuator drives the damper to the operational position, while evenly tensioning the integrated spring.

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

- ON/OFF control signal
- 12 mm square shaft and 10 mm, 8 mm adapter inside the package
- Connection with halogen-free cable
- ST1.72E temperature sensor.
Switch point of temperature sensor ca. 72°C
- Actuator temperature sensor to monitor ambient sensor.
- Low noise level
- Manual positioning with crank handle
- 2 fixed auxiliary switches (8° and 83°)



Dimensions in mm

Ordering Codes		Supply Voltage (50-60Hz)	Description
Johnson Controls	Joventa		
S9208-BGC-33	SAF1.08S/12	24 VAC / VDC	Without sensor
S9208-BGC-33A	SAF1.08SA/12		With ambient thermosensor
S9208-BGC-33B	SAF1.08SB/12		With duct sensor
S9208-BGC-33C	SAF1.08SC/12		With duct and ambient sensors
S9208-BDC-33	SAF2.08S/12	230 VAC	Without sensor
S9208-BDC-33A	SAF2.08SA/12		With ambient thermosensor
S9208-BDC-33B	SAF2.08SB/12		With duct sensor
S9208-BDC-33C	SAF2.08SC/12		With duct and ambient sensors