



# techsystem

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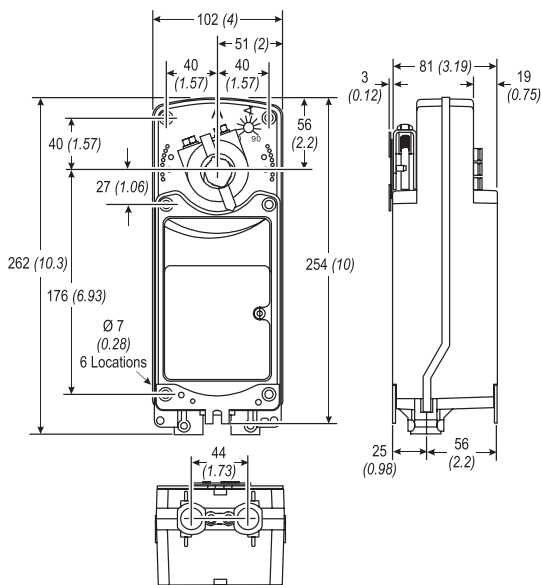
### Rotary Actuators / Springback Family

M9210 / M9220-xxx-3 Electric Actuators (1/2)

(Joventa DAF1.10 / DAF1.20)



**M9210-M9220-xxx-3  
ON/OFF Electric Actuators**



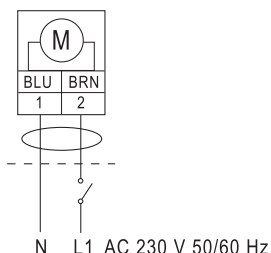
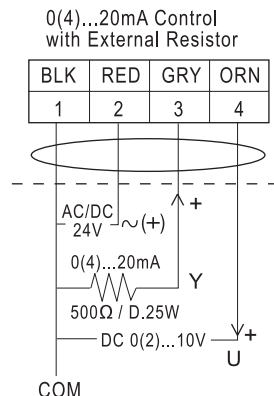
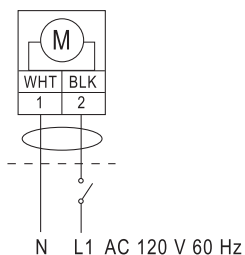
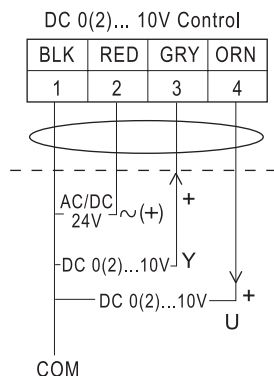
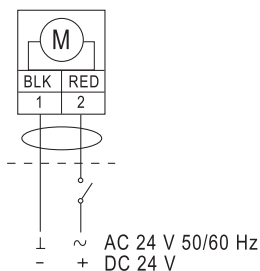
Dimensions in mm (inches)

### Description

The M9210 and 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

- Two or three models mounted in tandem deliver twice or triple the torque 2- and 3- point control signal
- 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
  - 1.2 m (48 inch) 18 AWG halogen-free cables with color
  - Coded and numbered conductors
- 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)



### Wiring Diagrams

**Rotary Actuators / Springback Family**

M9210 / M9220-xxx-3 Electric Actuators (2/2)

(Joventa DAF1.10 / DAF1.20)

**Accessories and Replacement Parts (Order Separately)**

Description	Code Number
178 mm (7 in.) Blade Pin Extension (without Bracket) for Johnson Controls® Direct Mount Damper Applications	DMPR-KC003*
Tandem Mounting Kit used to Mount Two Models of M9220-xxx-3 Series Proportional Electric Spring Return Actuators	M9000-158
Crank arm	M9000-153
Remote Mounting Kit, Horizontal. Kit includes Mounting Bracket, M9000-153 Crank Arm, Ball Joint and Mounting Bolts	M9000-170
Remote Mounting Kit, Vertical. Kit includes Mounting Bracket, M9000-153 Crank Arm, Ball Joint and Mounting Bolts	M9000-171
Commissioning Tool that Provides a Control Signal to Drive 24 V Floating, Floating, Proportional and/or Resistive Electric Actuators	M9000-200
Replacement Anti-rotation Bracket Kit (with Screws) for M9220-xxx-3 Series Proportional Electric Spring Return Actuators	M9000-604
25 mm (1 in.) Jackshaft Coupler Kit (with Locking Clip) for Mounting M9220-xxx-3 Series Proportional Electric Spring Return Actuators on Dampers with 19 to 27 mm (3/4 to 1-1/16 in.) Round Shafts, or 16, 18 and 19 mm (5/8 and 3/4 in.) Square Shafts	M9220-600
Replacement Coupler Kit (with Locking Clip) for Mounting M9220-xxx-3 Series Proportional Electric Spring Return Actuators on Damper with 12 to 19 mm (1/2 to 3/4 in.) Round Shafts, or 10, 12 and 14 mm (3/8 and 1/2 in.) Square Shafts	M9220-601
Replacement Locking Clips for M9220-xxx-3 Series Proportional Electric Spring Return Actuators (FiveperBag)	M9220-602
Adjustable Stop Kit for M9220-xxx-3 Series Proportional Electric Spring Return Actuators	M9220-603
Replacement Manual Override Cranks for M9220-xxx-3 Series Proportional Electric Spring Return Actuators (Five per Bag)	M9220-604
Replacement Shaft Gripper, 10 mm Square Shaft with Locking Clip	M9220-610
Replacement Shaft Gripper, 12 mm Square Shaft with Locking Clip	M9220-612
Replacement Shaft Gripper, 14 mm Square Shaft with Locking Clip	M9220-614

**Notes:** \*Furnished with the damper and may be ordered separately.

**M9210-M9220 Standard Actuators - Selection Table**

Torque	Control Signal	Power Supply	Auxiliary switches	Ordering Codes		
				Joventa*	Johnson Controls	
10 Nm	Floating	AC/DC 24 V	---	DBF1.10	M9210-AGA-3	
			With Gold Contact	DBF1.10S	M9210-AGC-3	
	ON/OFF	AC 230 V	---	DAF2.10	M9210-BDA-3	
			With Gold Contact	DAF2.10S	M9210-BDC-3	
		AC/DC 24 V	---	DAF1.10	M9210-BGA-3	
			With Gold Contact	DAF1.10S	M9210-BGC-3	
	Proportional (without Span offset)	AC/DC 24 V	---	DMF1.10	M9210-GGA-3	
			With Gold Contact	DMF1.10S	M9210-GGC-3	
	Proportional (with Span offset)	AC/DC 24 V	---	DHF1.10	M9210-HGA-3	
			With Gold Contact	DHF1.10S	M9210-HGC-3	
	20 Nm	Floating	AC/DC 24 V	---	DBF1.20	M9220-AGA-3
				With Gold Contact	DBF1.20S	M9220-AGC-3
ON/OFF		AC 230 V	---	DAF2.20	M9220-BDA-3	
			With Gold Contact	DAF2.20S	M9220-BDC-3	
		AC/DC 24 V	---	DAF1.20	M9220-BGA-3	
			With Gold Contact	DAF1.20S	M9220-BGC-3	
Proportional (without Span offset)		AC/DC 24 V	---	DMF1.20	M9220-GGA-3	
			With Gold Contact	DMF1.20S	M9220-GGC-3	
Proportional (with Span offset)		AC/DC 24 V	---	DHF1.20	M9220-HGA-3	
			With Gold Contact	DHF1.20S	M9220-HGC-3	