

M2000 Series

M2202-xxx-2 Series Electric Spring Return Actuators**Description**

The M2202-xxx-2 Series electric spring return actuators are designed for On-Off, Floating, or Proportional control of dampers in Heating, Ventilating, and Air Conditioning (HVAC) systems.

The actuator is mounted directly to a damper shaft (up to 1/2 in. diameter) by means of a removable coupler. An optional crank arm, mounting brackets, and weather shields are available to meet various installation requirements.

Features

- Proportional, Floating, and On/Off control models available
- Optional auxiliary switch available
- Reversible mounting design

**M2202 Series Actuator****Selection Chart**

Model	Voltage	Control	Auxiliary Switch
M2202-AGA-2	24 VAC	Floating	No
M2202-AGB-2			Yes
M2202-BAA-2	120 VAC	On/Off	No
M2202-BAB-2			Yes
M2202-BGA-2	24 VAC/VDC	Proportional, 2-10 VDC	No
M2202-BGB-2			Yes
M2202-GGA-2			No
M2202-GGB-2			Yes

Accessories

Code Number	Description
M2202-502	Anti-rotation bracket
M2202-503	Crank arm for 1/2" round shaft
M2202-504	Universal mounting kit, hollow pillars and hardware
M2202-505	Weather shield, metal
M2202-506	Weather shield, polycarbonate
M2202-510	Universal mounting kit without crank arm
M2202-511	L bracket for foot mounting

M2202-xxx-2 Series Electric Spring Return Actuators (Continued)

Technical Specifications

Power Requirements	M2202-AGx-2	24 VAC $\pm 20\%$ at 50/60 Hz, 4 VA
	M2202-BAx-2	85 to 265 VAC at 50/60 Hz, 5 VA
	M2202-BGx-2	24 VAC $\pm 20\%$ at 50/60 Hz, 24 VDC $\pm 10\%$, 5 VA
	M2202-GGx-2	24 VAC $\pm 20\%$ at 50/60 Hz, 24 VDC $\pm 10\%$, 4 VA
Input Signal	M2202-AGx-2	24 VAC $\pm 20\%$ at 50/60 Hz
	M2202-Bxx-2	See power requirements.
	M2202-GGx-2	2 to 10 VDC or 4 to 20 mA (with field furnished 500 ohm resistor)
Input Impedance	M2202-AGx	1,000 ohms (0.6 W)
	M2202-GGx	Voltage: 100,000 ohms (0.1 mA)
		Current: 500 ohms (with field furnished 500 ohm 0.25 W minimum resistor)
Electrical Connections	M2202-AGA-2	Plenum cable, 36 inch, 18 AWG, 1/2 in. conduit connector
	M2202-GGA-2	
	M2202-BxA-2	Appliance cable, 36 inch, 18 AWG, 1/2 in. conduit connector
	M2202-BxB-2 M2202-xGB-2	Two appliance cables, 36 inch, 18 AWG, 1/2 in. conduit connector
Auxiliary Switch Rating	M2202-xxB-2	One SPDT, 3A @ 250 VAC, adjustable 0 to 95°
Mechanical Connection		1/4 to 1/2 in. (10 to 12.7 mm) diameter round shaft 1/4 to 5/16 in. (10 mm) square shaft
Output Torque		18 lb-in (2 N-m) minimum
Rotation Range		Adjustable from 37 to 100%, mechanically limited to 95°
Nominal Run Time	Powered	95 seconds maximum
	Spring Return	25 seconds maximum -4 to 122°F (-20 to 50°C), 60 seconds maximum at -22°F (-30°C)
Cycles		60,000 full stroke cycles; 1,500,000 repositions rated at 16 lb-in (2 N-m)
Enclosure		NEMA 2, IP42
Ambient Conditions	Operating	-22 to 122°F (-30 to 50°C); 5 to 90% RH, noncondensing
	Storage	-40 to 176°F (-40 to 80°C); 5 to 95% RH, noncondensing
Compliance	United States	UL listed according to UL 60730-1, UL 60730-2-14 (XAPX)
	Canada	cUL listed according to CAN/CSA C22.2 No.24 (XAPX7)
	Europe	CE Mark, Low Voltage Directive (73/23/EEC), -xAx and -xxB models only CE Mark, EMC Directive (89/336/EEC), all models
Shipping Weight		1.5 lb (0.7 kg)