

Customizable Non Fail-Safe modulating actuator for controlling dampers in typical commercial HVAC applications.

- Torque motor 90 in-lb [10 Nm]
- Nominal voltage AC 100...240 V
- Control Modulating
- Position feedback 2...10 V



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 100...240 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 85...265 V
	Power consumption in operation	3.5 W
	Power consumption in rest position	1 W
	Transformer sizing	6.5 VA
	Electrical Connection	18 GA appliance cable, 1 m, 3 m or 5 m, with 1/2" NPT conduit connector, degree of protection NEMA 2 / IP54
	Overload Protection	electronic throughout 0...95° rotation
Functional data	Torque motor	90 in-lb [10 Nm]
	Operating range Y	2...10 V
	Operating range Y note	4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor)
	Input impedance	100 kΩ (0.1 mA), 500 Ω
	Position feedback U	2...10 V
	Position feedback U note	Max. 0.5 mA
	Direction of motion motor	selectable with switch 0/1
	Manual override	external push button
	Angle of rotation	Max. 95°
	Angle of rotation note	adjustable with mechanical stop
	Running Time (Motor)	95 s / 90°
	Running time motor note	constant, independent of load
	Noise level, motor	45 dB(A)
	Position indication	Mechanical, 30...65 mm stroke
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Enclosure	UL Enclosure Type 2
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU
	Quality Standard	ISO 9001
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC
	Ambient humidity	Max. 95% RH, non-condensing
	Ambient temperature	-22...122°F [-30...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free

Weight	Weight	□
Materials	Housing material	UL94-5VA

Product features

Application For proportional modulation of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. The actuator is mounted directly to a damper shaft up to 1.05" in diameter by means of its universal clamp. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft. The actuator operates in response to a 2...10 V, or with the addition of a 500 Ω resistor, a 4...20 mA control input from an electronic controller or positioner. A 2...10 V feedback signal is provided for position indication or primary/secondary operation.

Operation The actuator is not provided with and does not require any limit switches, but is electronically protected against overload. The anti-rotation strap supplied with the actuator will prevent lateral movement.

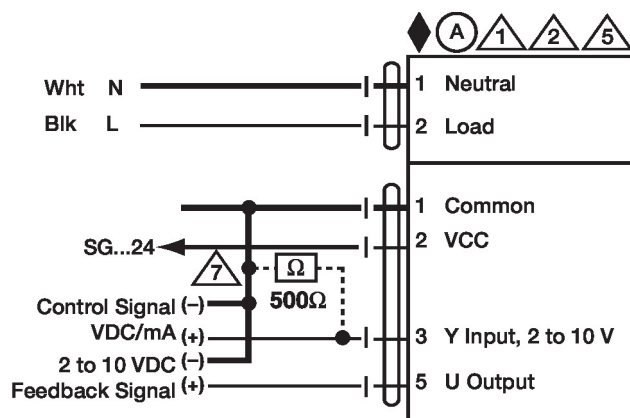
The NMX series provides 95° of rotation and a visual indicator indicates position of the actuator. When reaching the damper or actuator end position, the actuator automatically stops. The gears can be manually disengaged with a button on the actuator cover.

The NMX120-SR actuators use a sensorless, brushless DC motor, which is controlled by an Application Specific Integrated Circuit (ASIC). The ASIC monitors and controls the actuator's rotation and provides a digital rotation sensing (DRS) function to prevent damage to the actuator in a stall condition. Power consumption is reduced in holding mode.

Add-on auxiliary switches or feedback potentiometers are easily fastened directly onto the actuator body for signaling and switching functions.

Electrical installation

- Ⓐ Actuators with appliance cables are numbered.
- 1 Provide overload protection and disconnect as required.
- 5 Only connect common to negative (-) leg of control circuits.
- 7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 11 Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.



2...10 V / 4...20 mA Control AC 100...240 V