

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

- Torque motor 90 in-lb [10 Nm]
- Nominal voltage AC 100...240 V
- Control On/Off, Floating point



5-year warranty



Technical data

<b>Electrical data</b>	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	0.6 W	
	Transformer sizing	5.5 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	
<b>Functional data</b>	Torque motor	90 in-lb [10 Nm]	
	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	
	Running time motor variable	45, 60, 150 s	
	Noise level, motor	45 dB(A)	
	Position indication	Mechanical, 30...65 mm stroke	
<b>Safety data</b>	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	
	<b>Weight</b>	Weight	1.7 lb [0.77 kg]
		<b>Materials</b>	Housing material

†Rated Impulse Voltage 4kV, Type of action 1, Control Pollution Degree 3.

Product features

**Application** For on/off and floating point control 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" diameter by means of its universal clamp, 1/2" self-centered default. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft.

**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 NMX120-3... 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.

**Typical specification** Floating point, on/off control damper actuators shall be electronic type, with integrated linear stroking arm. Actuators shall have brushless DC motor technology and be protected from overload at all positions of linear stroke. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cUL listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

Accessories

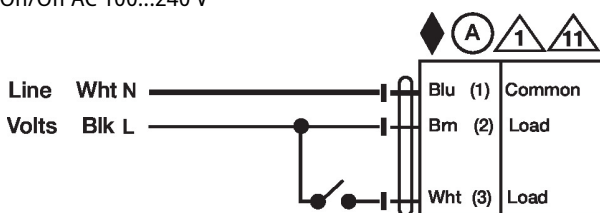
Mechanical accessories	Description	Type
	Shaft clamp reversible, clamping range ø8...20 mm	K-NA
	Mounting bracket for AF..	ZG-100
	Mounting bracket	ZG-101
	Mounting bracket	ZG-103
	Mounting bracket	ZG-104
	Mounting kit for linkage operation for flat installation	ZG-NMA
	Shaft extension 240 mm ø20 mm for damper shaft ø8...22.7 mm	AV8-25
	Shaft extension for 1/2" diameter shafts (3.8" L).	ZG-NMSA-1
	Weather shield 13x8x6" [330x203x152 mm] (LxWxH)	ZS-100
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-150
	Wrench 0.32 in and 0.39 in [8 mm and 10 mm]	TOOL-06
	Linkage kit	ZG-JSL
	Jackshaft Retrofit Linkage with Belimo Rotary Actuators	

Electrical installation

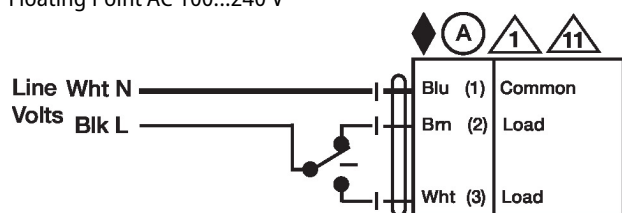
- Ⓐ Actuators with appliance cables are numbered.
- ⚠ Provide overload protection and disconnect as required.
- ⚠⚠ Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

Wiring diagrams

On/Off AC 100...240 V



Floating Point AC 100...240 V



## Dimensions

