

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

- Torque motor 180 in-lb [20 Nm]
- Nominal voltage AC 100...240 V
- Control On/Off, Floating point



Picture may differ from product



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 W
	Power consumption in rest position	0.6 W
	Transformer sizing	7 VA
	Electrical Connection	18 AWG 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	180 in-lb [20 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)	90 s / 90°
	Running time motor note	constant, independent of load
	Running time motor variable	90 or 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 NEMA/UL	NEMA 2
	Housing	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	2.1 lb [0.95 kg]

## Technical data

Materials	Housing material	UL94-5VA
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**Footnotes** †Rated Impulse Voltage 800V, Type of action 1, Control Pollution Degree 4.

## Product features

<b>Application</b>	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" in diameter by means of its universal clamp, 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.
<b>Operation</b>	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 AMX 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 AMX120-3 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.

<b>Typical specification</b>	Floating point, on/off control damper actuators shall be electronic direct-coupled type, which require no crank arm and linkage and be capable of direct mounting to a shaft up to 1.05" diameter. Actuators shall have brushless DC motor technology and be protected from overload at all angles of rotation. Actuators shall have reversing switch and manual override on the cover. Run time shall be constant and independent of torque. Actuators shall be cULus listed, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.
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## Accessories

Electrical accessories	Description	Type
Feedback potentiometer 1 kΩ add-on		P1000A
Signal simulator, Power supply AC 120 V		PS-100
Auxiliary switch 1x SPDT add-on		S1A
Auxiliary switch 2x SPDT add-on		S2A
Terminal-strip cover for NEMA 2 rating (-T models).		ZS-T
Mechanical accessories	Description	Type
Clamp NM/AM 1/2", 3/4", 1"		K-AM25
Shaft clamp reversible, clamping range ø10...20 mm		K-SA
Mounting bracket for AF..		ZG-100
Mounting bracket for AF / NF		ZG-101
Mounting bracket		ZG-103
Mounting bracket		ZG-104
Mounting kit for linkage operation for flat installation		ZG-NMA
1" diameter jackshaft adaptor (11" L).		ZG-JSA-1
1-5/16" diameter jackshaft adaptor (12" L).		ZG-JSA-2
1.05" diameter jackshaft adaptor (12" L).		ZG-JSA-3
Baseplate extension for SM..A to SM../AM../SMD24R		Z-SMA
Weather shield 13x8x6" [330x203x152 mm] (LxWxH)		ZS-100
Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)		ZS-150
Explosion proof housing 16x10x6.435" [406x254x164 mm] (LxWxH), UL and CSA, Class I, Zone 1&2, Groups B, C, D, (NEMA 7), Class III, Hazardous (classified) Locations		ZS-260

## Accessories

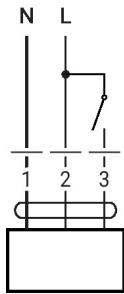
Description	Type
Weather shield 17-1/4x8-3/4x5-1/2" [438x222x140 mm] (LxWxH), NEMA 4X, with mounting brackets	ZS-300
Weather shield 17-1/4x8-3/4x5-1/2" [438x222x140 mm] (LxWxH), NEMA 4X, with mounting brackets	ZS-300-5
Terminal-strip cover for NEMA 2 rating (-T models).	ZS-T
Shaft extension 240 mm ø20 mm for damper shaft ø8...22.7 mm	AV8-25
Actuator arm for standard shaft clamp	AH-GMA
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

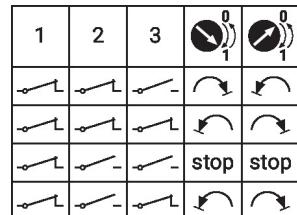
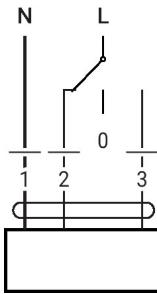
## Wire colors:

1 = blue  
2 = brown  
3 = white

AC 230 V, on/off



AC 230 V, 3-point



## Dimensions

PC

