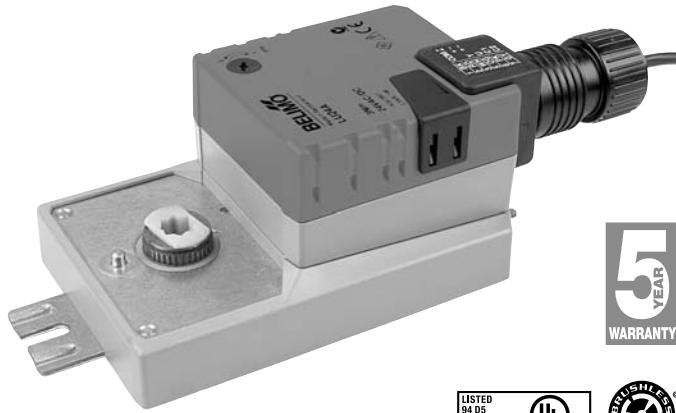


# LUX120-3

On/Off, Floating Point, Non-Spring Return, 360°, 100 to 240 VAC



Technical Data	LUX120-3
Power supply	100-240 VAC ± 20% 50/60 Hz
Power consumption	3 W (1.5 W)
Transformer sizing	2.5 VA (Class 2 power source)
Electrical connection	18 GA appliance rated cable 1/2" conduit connector protected NEMA 2 (IP54) 3 ft [1m] 10 ft [3m] 16 ft [5m]
Overload protection	electronic throughout full rotation
Control	on/off, floating point
Input impedance	600 Ω
Angle of rotation	endless adjustable 0 to 330° with ZDB-LU
Torque	27 in-lb [3 Nm]
Direction of rotation	reversible with  switch
Manual override	external push button
Running time (per 90 degrees)	150 seconds (1.25 rpm) 95 seconds (1.6 rpm) 75 seconds (2.5 rpm)
Humidity	5 to 95% RH non condensing (EN 60730-1)
Ambient temperature	-22°F to 122°F [-30°C to 50°C]
Storage temperature	-40°F to 176°F [-40°C to 80°C]
Housing	NEMA 2, IP54, UL enclosure type 2
Housing material	UL94-5VA
Agency listings†	cULus acc. to UL 60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EEC and 2006/95/EC
Noise level (max)	35dB(A)
Servicing	maintenance free
Quality standard	ISO 9001
Weight	1.43 lbs [0.65 kg]

†Rated Impulse Voltage 800V, Type of action 1, Control Pollution Degree 3.

Torque min. 27 in-lb for control of damper surfaces up to 6.8 sq. ft.

## 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.

Control is floating point from a triac or relay, or on/off from an auxiliary contact from a fan motor contactor, controller, or manual switch.

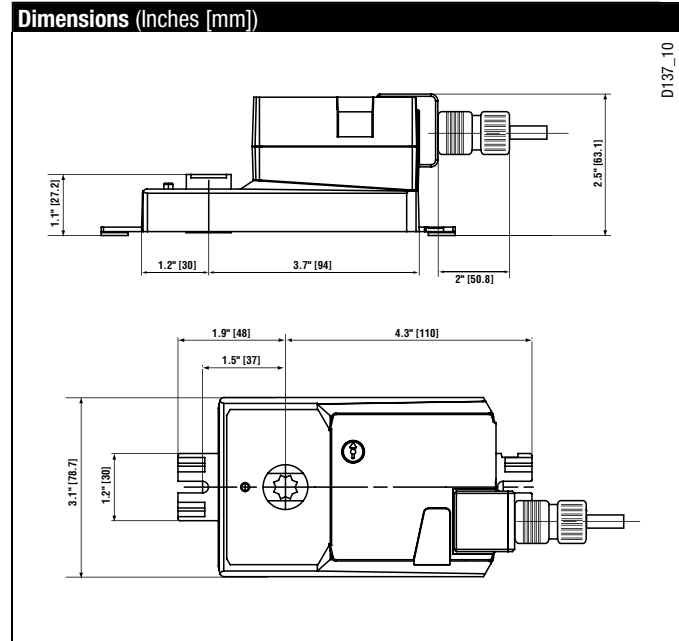
## Operation

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 LUB(X) series provides 330° of rotation with angle of rotation limiter, ZDB-LU. Without ZDB-LU the LUB(X) provides endless rotation.

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 LUX120-3 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.



M40024 - 05/10 - Subject to change. © Belimo Aircontrols (USA), Inc.

#### Accessories

K-LU	1/3" to 1/2" [8 to 12 mm] Shaft Clamp
ZDB-LU	Angle of Rotation Limiter with Scaling
P370	Shaft Mount Auxiliary Switch

**NOTE:** When using LUX120-3 actuators, only use accessories listed on this page.

#### Typical Specification

Floating point, on/off control damper actuators shall be electronic type, which require no crank arm and linkage. 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 Approved, have a 5-year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

#### Wiring Diagrams

##### ✂️ INSTALLATION NOTES

- 1 Provide overload protection and disconnect as required.
- 2 Actuators may be connected in parallel. Power consumption must be observed.

##### 📄 APPLICATION NOTES

- ◆ Meets cULus or UL and CSA Standard requirements without the need of an electrical ground connection.

##### ⚠️ WARNING Live Electrical Components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

