

LF120 (-S) US / LF230 (-S) US

On-off, Spring Return Fail-Safe, 120/230 VAC



| Technical Data | LF120 (-S) US | LF230 (-S) US |
|------------------------------|---|-------------------------------|
| Power supply | 120 VAC \pm 10% 50/60 Hz | 230 VAC \pm 10% 50/60 Hz |
| Power consumption | running: 5.5 W holding: 3.5 W | 5 W 3 W |
| Transformer sizing | 7.5 VA | 7 VA |
| Electrical connection | 3 ft, 18 GA appliance cable (-S models have 2 cables) 1/2" conduit connector | |
| Overload protection | electronic throughout 0 to 95° rotation | |
| Electrical protection | actuators are double insulated | |
| Angle of rotation | max 95°, adjust. with mechanical stop | |
| Torque | 35 in-lb [4 Nm] constant torque | |
| Direction of rotation | reversible with cw/ccw mounting | |
| Position indication | visual indicator, 0° to 95° (0° is spring return position) | |
| Auxiliary switch (-S models) | 1 x SPDT 6A (1.5A) @ 250 VAC, UL listed adjustable 0° to 95° | |
| Electrical protection | actuators are double insulated | |
| Running time (nominal) | motor: < 40 to 75 sec spring: < 25 sec @ -4°F to +122°F [-20°C to +50°C] < 60 sec @ -22°F [-30°C] | |
| Humidity | 5 to 95% RH non-condensing | |
| 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 type 2 / IP54 | |
| Housing material | zinc coated steel | |
| Agency listings | UL 873, CSA C22.2 No. 24 Certified, CE [LF230(-S) US] | |
| Noise level | max: running < 50 db (A) spring return 62 dB (A) | |
| Servicing | maintenance free | |
| Quality standard | ISO 9001 | |
| Weight | LF120/230 | 3.4 lbs (1.54 kg.) |
| | LF120/230-S | 3.5 lbs (1.60 kg.) |

Torque min. 35 in-lb, for control of air dampers

Application

For on-off, fail-safe control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. Control is on-off from an auxiliary contact, or a manual switch.

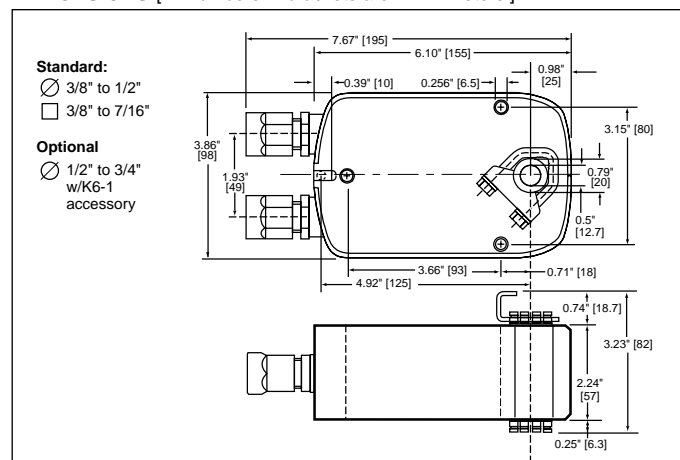
The actuator is mounted directly to a damper shaft from 3/8" up to 1/2" in diameter by means of its universal clamp, 1/2" shaft centered at delivery. For shafts up to 3/4" use K6-1 accessory. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft.

Operation

The LF series actuators provide true spring return operation for reliable fail-safe application and positive close off on air tight dampers. The spring return system provides consistent torque to the damper with, and without, power applied to the actuator. The LF series provides 95° of rotation and is provided with a graduated position indicator showing 0° to 95°. The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches. Power consumption is reduced in holding mode. The actuator is double insulated so an electrical ground connection is not necessary.

The LF120-S US and LF230-S US versions are provided with 1 built-in auxiliary switch. This SPDT switch is provided for safety interfacing or signaling, for example, for fan start-up. The switching function is adjustable between 0° and 95°.

Dimensions [All numbers in brackets are in millimeters.]



120618 - Subject to change. © Belimo Aircontrols (USA), Inc.

Accessories

| | |
|----------|--|
| AV 10-18 | Shaft extension (K6-1 is required) |
| IND-LF | Damper position indicator |
| K6-1 | Universal clamp for up to 3/4" diameter shafts |
| KH-LF | Crankarm for up to 1/2" round shaft |
| Tool-06 | 8mm and 10 mm wrench |
| ZG-LF2 | Crankarm adaptor kit for LF |
| ZG-112 | Mounting bracket for Honeywell Mod IV, M6415 type actuators, and new installations |
| ZG-LF112 | Crankarm adaptor kit for Honeywell Mod IV, M6415 type actuators, and new installations |
| ZS-100 | Weather shield (metal) |
| ZS-150 | Weather shield (polycarbonate) |
| ZS-260 | Explosion-proof housing |

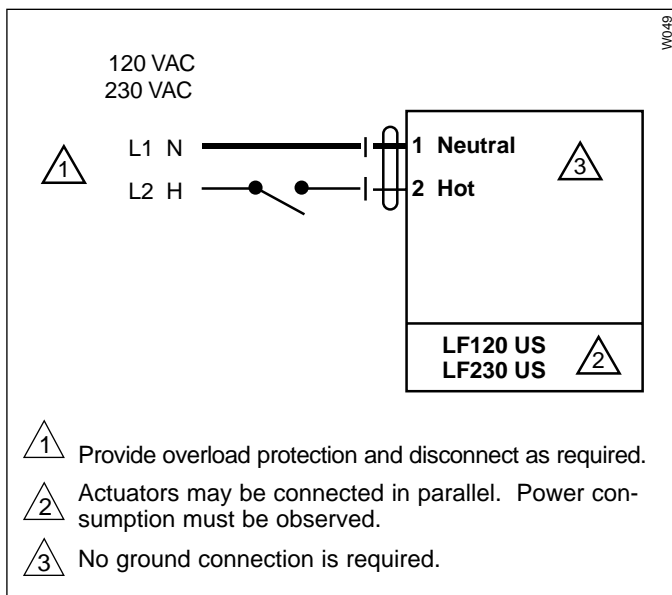
Note: When using LF120/230 US and LF120-S/230-S US actuators, only use accessories listed on this page.

LF120 (-S) US / LF230 (-S) US Typical Specification

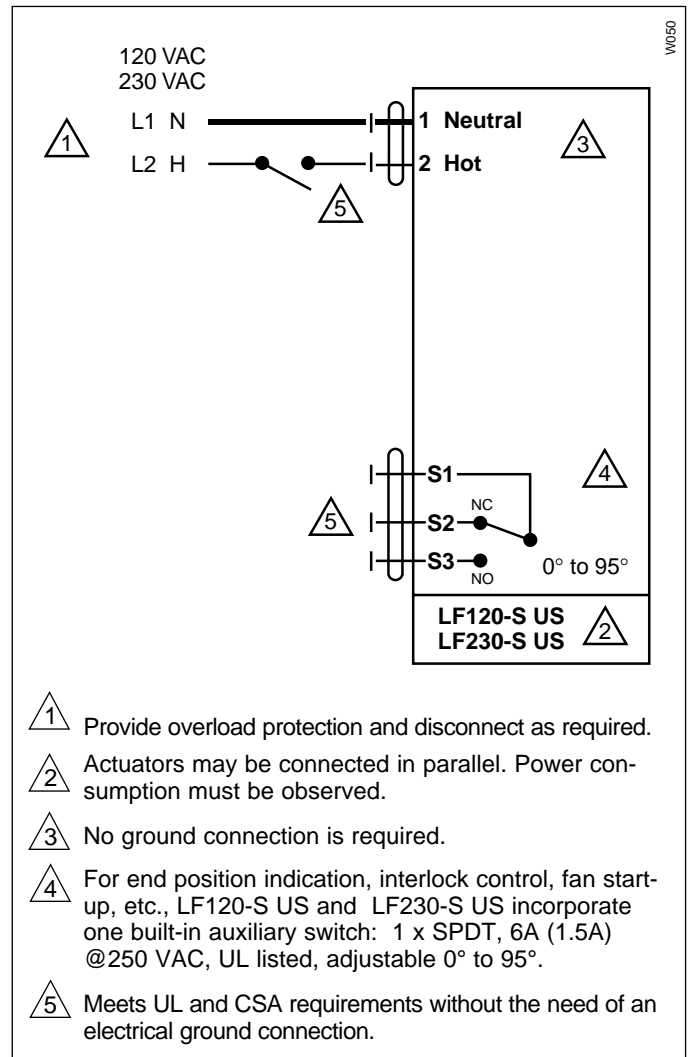
On-off spring return damper actuators shall be direct coupled type which require no crankarm and linkage and be capable of direct mounting to a shaft up to a 3/4" diameter and center a 1/2" shaft. The actuators must be designed so that they may be used for either clockwise or counterclockwise fail-safe operation. Actuators shall be protected from overload at all angles of rotation. If required, 1 SPDT auxiliary switch shall be provided having the capability of being adjustable. Actuators must be constructed to meet the requirements for Double Insulation so an electrical ground is not required to meet agency listings. Actuators shall be UL listed and CSA certified, have a 5 year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo.

For Actuator Wiring Information and Diagrams, Please See Belimo Wiring Guide (pg 317).

Wiring diagrams



On-off wiring for LF120 US / LF230 US



On-off wiring for LF120-S US / LF230-S US