BELIMO

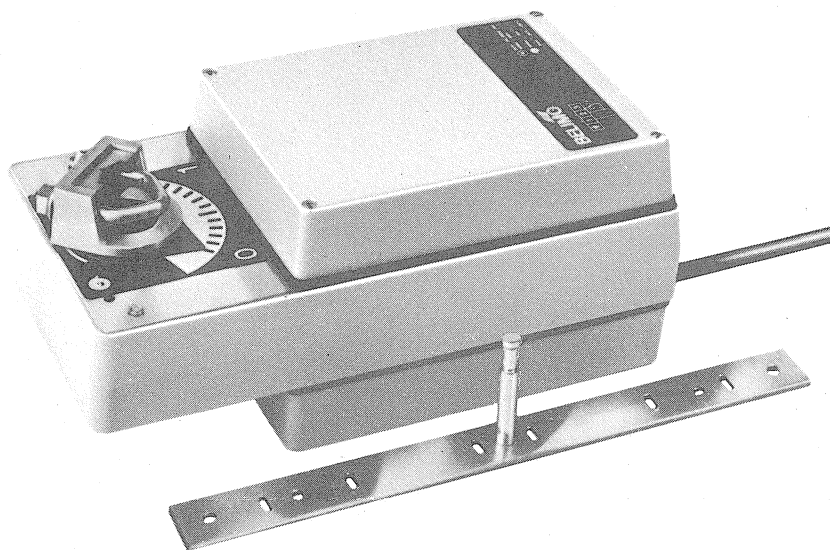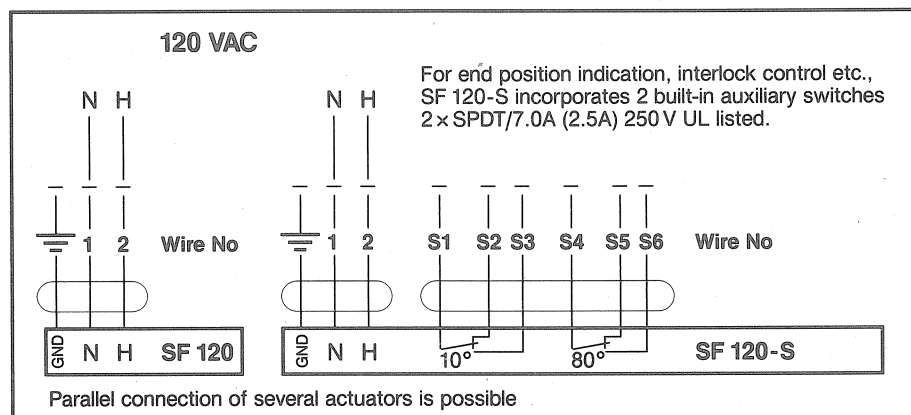**On-off, spring return safety, 120 V**

Torque min. 133 in-lb, for control of damper surface up to 35 ft². UL listed.

Application

For on-off damper operation. This actuator performs a reliable safety function offering not only freeze protection on outside air dampers, but also hygenic protection on airtight dampers.
The actuator can be mounted by means of a special clamp, directly onto the damper shaft. As an alternative, the unit can also be mounted inside the damper, under, or in, the duct with the use of the ZG-100 series universal mounting bracket. For out-door mounting, use weather shield ZS-100.
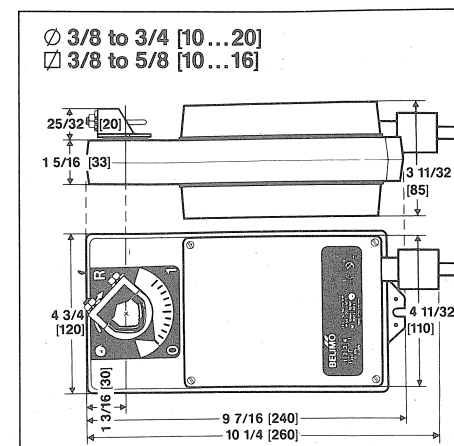
Operation

When power is applied, the actuator moves to its normal working position, at the same time tensioning the spring return safety mechanism. When the power is disengaged, the spring return function returns the actuator to its safety position. On the SF 120-S version, two built-in end switches are provided for safety interfacing or signaling. These are fixed to operate at 0° and 80°.

Wiring diagram

120 VAC

For end position indication, interlock control etc., SF 120-S incorporates 2 built-in auxiliary switches 2 × SPDT/7.0A (2.5A) 250 V UL listed.

Parallel connection of several actuators is possible

Accessories

ZDB	Angle of rotation limiter
ZG-FM2	Damper linkage kit
ZG-100	Universal mounting bracket
ZG-101	Universal mounting bracket
ZG-102	Multiple actuator mounting bracket
ZS-100	Weather shield

Technical Data	SF 120 / SF 120-S
Power supply	120 VAC ± 10 % 50/60 Hz
Power consumption	Running approx. 6W Holding approx. 4W
Transformer sizing	8 VA
Electrical connections	3 ft, 18 GA cable, 1/2" conduit connector
Angle of rotation	mechanically limited to 90°
Torque – at rated voltage	min. 133 in-lb [15 Nm]
– with spring return	min. 133 in-lb [15 Nm]
Direction of rotation	can be selected by L/R hand mounting
Position indication	0…1 (0 = safety position)
Running time – actuator operation	approx. 110…140 sec } 0 to 133 in-lb [0 to 15m]
– spring return	approx. 10…19 sec
Humidity	5 to 80 % RH noncondensing
Ambient temperature	−22°F to +122°F [−30°C to +50°C]
Storage temperature	−40°F to +176°F [−40°C to +80°C]
Noise level – motor	max. 45 db (A)
– spring return	> 45 db (A)
Servicing	maintenance free
Lifespan	60,000 open-close operations
Weight	6.2 lb [2.8 kg]

Dimensions

All ratings in brackets are metric

⌀ 3/8 to 3/4 [10…20]
▱ 3/8 to 5/8 [10…16]

3/8...5/8 [10...16 mm]

3/8...3/4 [10...20 mm]

min. 3 1/2 [90 mm]

R

min. 3/4 [20 mm]

R

L

L

ZG-FM...

ZDB

70%