

Fire & Smoke Actuator, 18 in-lb [2 Nm], Spring return, AC 230 V, On/Off

Multipack 60 pcs.



5-year warranty


**Technical data**

<b>Electrical data</b>	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 207...253 V
	Power consumption in operation	5 W
	Power consumption in rest position	4.5 VA
	Electrical Connection	18 GA appliance cable, 3 ft [1 m], with 1/2" NPT conduit connector
	Overload Protection	electronic throughout 0...95° rotation
	Electrical Protection	actuators are double insulated
	<b>Functional data</b>	Torque motor
Direction of motion motor		selectable by ccw/cw mounting
Direction of motion fail-safe		reversible with cw/ccw mounting
Angle of rotation		95°
Running Time (Motor)		75 s / 90°
Running time motor note		@ 250°F [121°C]
Running time fail-safe		<25 s @ 32...122°F [0...50°C]
Noise level, motor		45 dB(A)
Noise level, fail-safe		62 dB(A)
Position indication		Mechanical
<b>Safety data</b>	Degree of protection IEC/EN	IP42
	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
	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	32...122°F [0...50°C]
	Storage temperature	-40...176°F [-40...80°C]
	Servicing	maintenance-free
<b>Weight</b>	Weight	1.6 lb [0.60 kg]
	Packaging quantity	Multipack 60 pcs.
<b>Materials</b>	Housing material	UL94-5VA

Technical data

**Footnotes** Part no. Clamp side spring-return  
 FSTF120 US CW  
 FSTF120.1 US CW (bulk pack)  
 FSTF120.1 CCW CCW (bulk pack)  
 FSTF120-S US CW CW  
 FSTF120-S.1 US CW (bulk pack)  
 FSTF120-S.1 CCW CCW (bulk pack)  
 FSTF24-S.1 US CW (bulk pack)  
 † UL File XAPX.E108966

Product features

**Application** The FS series of spring-return actuators are designed for the operation of UL555 and UL555S listed fire/smoke dampers in ventilation and air-conditioning systems.

**Operation** The actuator is mounted in its fail safe position with the damper blade(s) typically closed. Upon applying power, the actuator drives the damper to the open position. The internal spring is tensioned at the same time. If the power supply is interrupted, the spring moves the damper back to its fail-safe position.

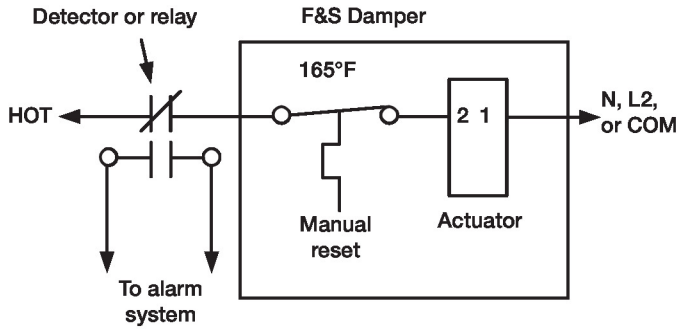
**Typical specification** All smoke and combination fire and smoke dampers shall be provided with Belimo FSTF, FSLF, FSNF, or FSAF series actuators. All substitutions must be approved before submission of bid. Damper and actuator shall have UL555S Listing for 250°F and/or 350°F. Actuator shall have been tested to UL2043 per requirements of IMC 602.2 and NEC 300.22 (c). Where position indication is required -S models with auxiliary switches shall be provided.

Accessories

Electrical accessories	Description	Type
	Thermoelectric tripping device, Duct inside temperature 165°F	BAE165 US
Mechanical accessories	Description	Type
	TFB(X) crankarm with 5/16" slot.	KH-TF US
	TFB(X) crankarm with 1/4" slot.	KH-TF-1 US
	Anti-rotation bracket TF/NKQ/AM/NM/LM.	TF-P
	Wrench 0.32 in and 0.39 in [8 mm and 10 mm]	TOOL-06
	Angle of rotation limiter, with end stop	ZDB-TF
	TFB(X) crankarm adaptor kit (T bracket included).	ZG-TF2
	Mounting kit for TFB(X)	ZG-TF3
	TFB(X) crankarm adaptor kit (includes ZG-113).	ZG-TF112
	Weather shield 13x8x6" [330x203x152 mm] (LxWxH)	ZS-100
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-150

Electrical installation

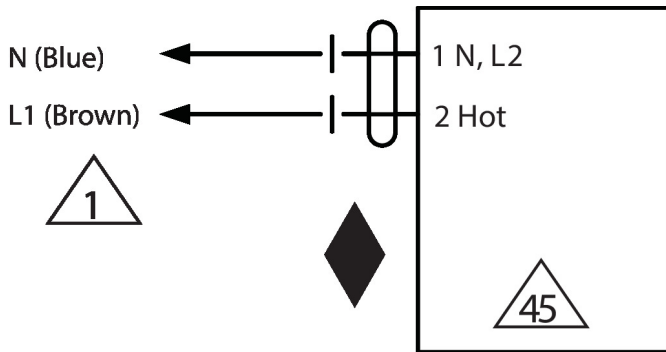
- Provide overload protection and disconnect as required.
- Actuators may be powered in parallel. Power consumption must be observed.
- Ground present on some models.
- Meets cULus requirements without the need of an electrical ground connection.



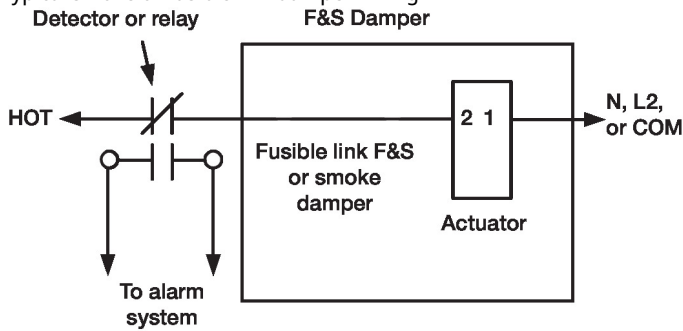
Typical containment damper control wiring

**Wiring diagrams**

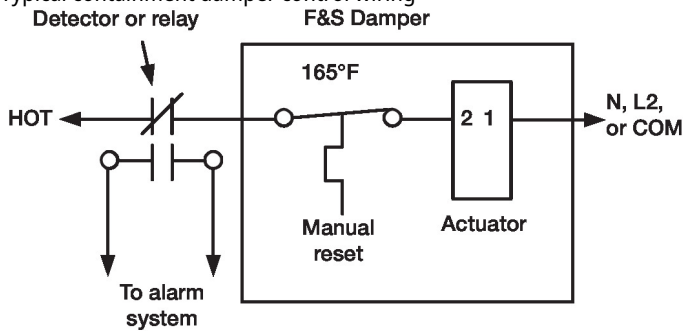
AC 230 V



Typical smoke or fusible link damper wiring



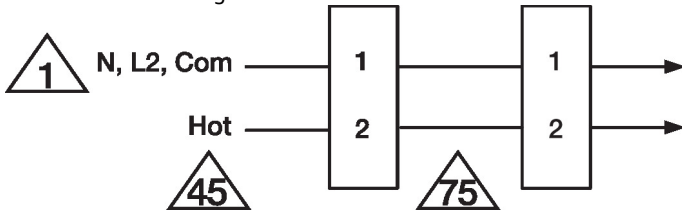
Typical containment damper control wiring



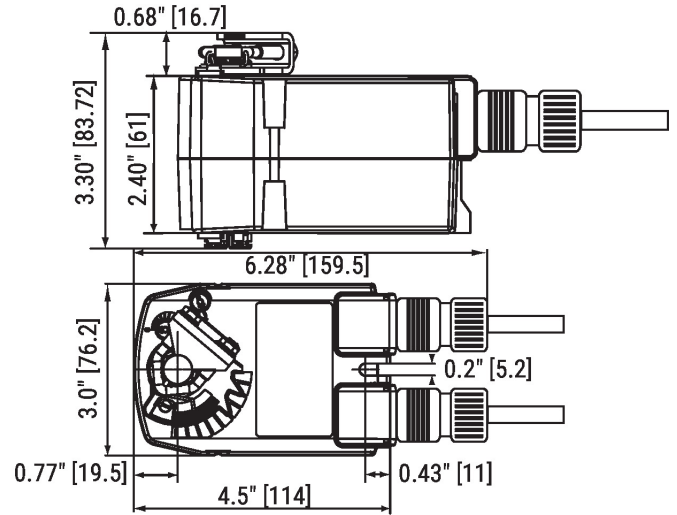
Electrical installation

Wiring diagrams

Parallel Actuator Wiring



Dimensions



- Standard:
- ∅ 1/4" to 1/2"
  - 1/4" to 5/16"