



5-year warranty



Technical data

Electrical data	Nominal voltage	AC 230 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 207...253 V
	Power consumption in operation	27 VA
	Power consumption in rest position	5 W, 9 VA (60 Hz 6.5 VA), End stop 55 VA, 0.25 A slow blow fuse *
	Connection supply	3 Leads 0.9 m, 18 AWG with 1/2" NPT conduit connector
	Electrical connection	7838]
	Overload Protection	electronic throughout 0...95° rotation
	Electrical Protection	grounded housing, 230 V
Functional data	Torque motor	8 Nm @ 177°C for 30 min
	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	15 s / 90°
	Running time motor note	between 0...177°C, <15 s at rated voltage and torque
	Running time fail-safe	<15 s
	Sound power level, motor	45 dB(A)
	Sound power level, fail-safe	62 dB(A)
Safety data	Position indication	Mechanical
	Degree of protection IEC/EN	IP40
	Degree of protection NEMA/UL	NEMA 1
	Housing	UL Enclosure Type 1
	Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, Listed to UL 2043 - suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC. NYC Department of Buildings MEA 197-07-M. California State Fire Marshal Listing 3210-1593:101.
	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

Technical data

Safety data	Ambient temperature	0...50°C [32...122°F]
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free
Weight	Weight	3.1 kg
Materials	Housing material	Galvanized steel
	Gears	Steel, permanently lubricated

Safety notes



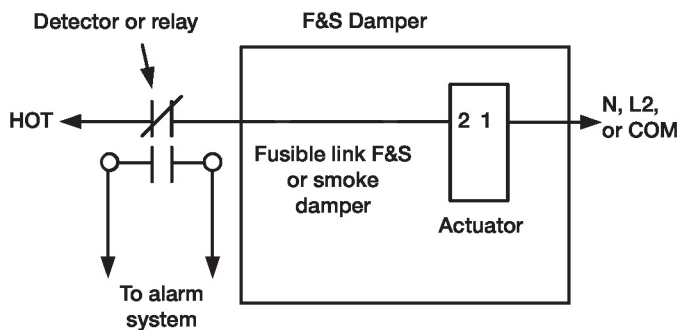
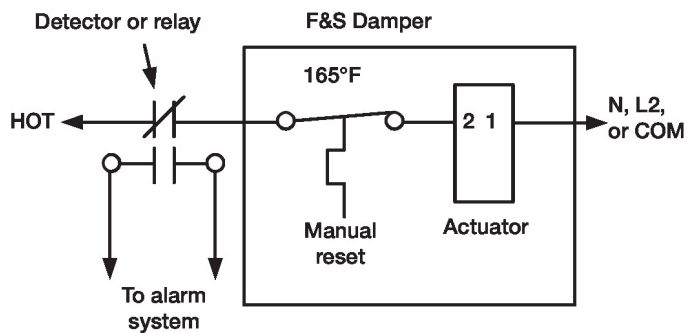
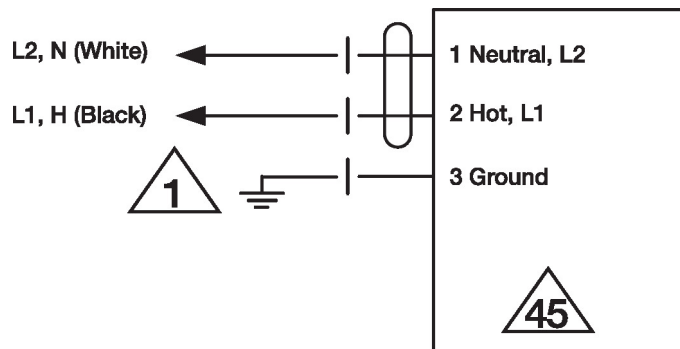
- * Neither UL nor Belimo require local over-current protection. The FSNF actuators draw higher peak current when driving against any type of stop. If used, this requires the value of a local fuse or breaker to be increased to avoid nuisance opening or tripping. A 2.5 A slow blow should be used for AC 24 V. A 0.5 A slow blow should be used for AC 120 V. A 0.25 A slow blow should be used for 230 V and a 0.3 A slow blow for AC 208 V. Transformers: Note that while a 24 V 100 VA transformer would handle 2 actuators, a 4 A breaker or plug fuse is insufficient. A 5 A slow blow would be required.
- Belimo Fire & Smoke actuators have passed the AMCA 520 and UL 555S Long Term Holding test. No special cycling is required during prolonged periods when actuator is driven open and held there. Periodic testing of dampers and actuators per local codes and NFPA 80 and NFPA 105 are required.
- The actuator contains no components which the user can replace or repair. A 1/2" threaded connector is standard. FSNFxx-FC models have a 3/8" Flex Connector. Other than the connector, these actuators are identical to the conduit connector version.

Accessories

Electrical accessories	Description	Type
	Thermoelectric tripping device, Duct inside temperature 165°F	BAE165 US
	Auxiliary switch 2x SPDT	S2A-F US
Mechanical accessories	Description	Type
	Anti-rotation bracket, for AF / NF	AF-P
	End stop indicator for AF / NF	IND-AF2
	Shaft clamp for AF..	K4-1 US
	Actuator arm, clamping range ø10...20 mm	KH-AF
		KH-AF-1 US
		SH8
		ZDB-AF2 US
	Mounting bracket for AF..	ZG-100
	Mounting bracket for AF / NF	ZG-101
	Crank arm adapter kit	ZG-AF US
	Incl. mounting hardware	ZG-AF108
		ZG-DC1
		ZG-DC2
	Weather shield 330x203x152 mm [13x8x6"] (LxWxH)	ZS-100
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-150
	Explosion proof housing 406x254x164 mm [16x10x6.435"] (LxWxH), UL and CSA, Class I, Zone 1&2, Groups B, C, D, (NEMA 7), Class III, Hazardous (classified) Locations	ZS-260
	Weather shield 438x222x140 mm [17-1/4x8-3/4x5-1/2"] (LxWxH), NEMA 4X, with mounting brackets	ZS-300

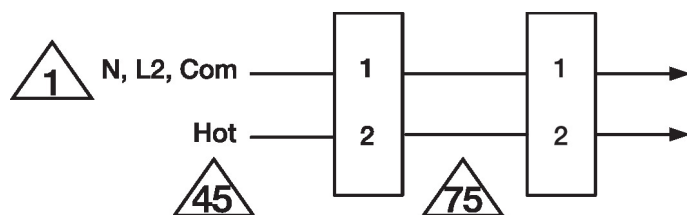
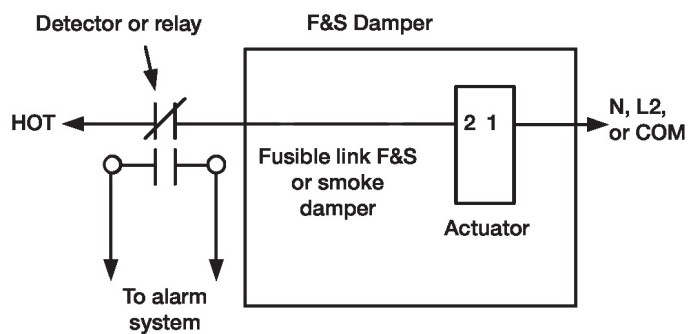
Electrical installation
✂ INSTALLATION NOTES

- ⚠ Provide overload protection and disconnect as required.
- ⚠ Actuators may be powered in parallel. Power consumption must be observed.
- ⚠ Ground present on some models.

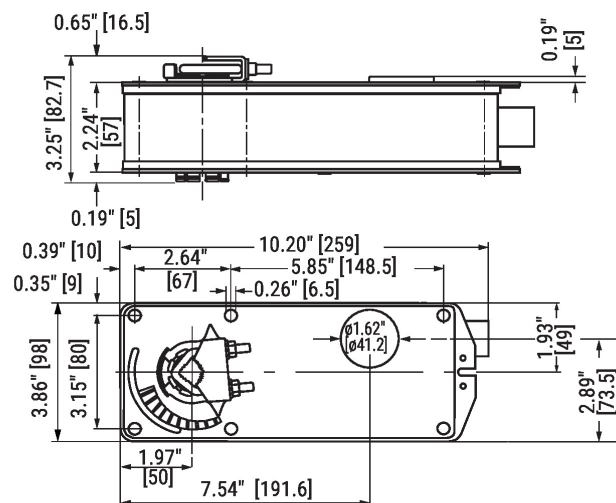

Wiring diagrams


Electrical installation

Wiring diagrams



Dimensions



Standard:
1/2" to 1.05"

Optional*
3/8" to 3/4"

*with K4 US clamp