



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Nominal voltage range	AC 19.2...28.8 V / DC 21.6...28.8 V
	Power consumption in operation	6.5 W 6 W, 9.5 VA
	Power consumption in rest position	3 W, 5 VA
	Power consumption for wire sizing	10 VA
	Auxiliary switch	2x SPDT, 1x 10% / 1x 11...90%
	Connection auxiliary switch	Cable 1 m, 18 AWG appliance cable with 1/2" NPT conduit connector
	Electrical connection	7838]
	Overload Protection	electronic throughout 0...95° rotation
	Electrical Protection	actuators are double insulated
Functional data	Torque motor	20 Nm @ 121°C for 30 min
	Position feedback U note	Max. 0.5 mA
	Direction of motion motor	selectable by ccw/cw mounting
	Direction of motion fail-safe	reversible with cw/ccw mounting
	Manual override	5 mm hex crank (3/16" Allen), supplied
	Angle of rotation	95°
	Angle of rotation note	adjustable with mechanical end stop, 35...95°
	Running time motor	75 s / 90°
	Running time motor note	@ 121°C
	Running time fail-safe	<20 s
	Sound power level, motor	40 dB(A)
	Sound power level, fail-safe	62 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	Degree of protection IEC/EN	IP54
	Degree of protection NEMA/UL	NEMA 2
	Housing	UL Enclosure Type 2
	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.
	Quality Standard	ISO 9001

Technical data

Safety data	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	-30...50°C [-22...122°F]	
Storage temperature	-40...80°C [-40...176°F]	
Servicing	maintenance-free	
Weight	Weight	2.4 kg
Materials	Housing material	Galvanized steel and plastic housing
	Gears	Steel, permanently lubricated

Accessories

Electrical accessories	Description	Type
Thermoelectric tripping device, Duct inside temperature 165°F	BAE165 US	
Auxiliary switch 2x SPDT	S2A-F US	
Positioner for wall mounting	SGA24	
Mechanical accessories	Description	Type
Anti-rotation bracket, for AF / NF	AF-P	
End stop indicator	IND-AFB	
Shaft clamp reversible, for central mounting, for damper shafts ø12.7 / 19.0 / 25.4 mm	K7-2	
Ball joint suitable for damper crank arm KH8	KG8	
Actuator arm, for 3/4" shafts, clamping range ø10...22 mm, Slot width 8.2 mm	KH-AFB	
Wrench 8 mm and 10 mm	SH8	
Mounting bracket for AF..	TOOL-06	
Mounting bracket	ZG-100	
for AF / NF	ZG-101	
Mounting bracket	ZG-118	
for AF / NF		
Mounting kit for linkage operation for flat and side installation	ZG-AFB	
Mounting kit for foot mount installation	ZG-AFB118	
	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



APPLICATION NOTES

Meets cULus requirements without the need of an electrical ground connection.

Provide overload protection and disconnect as required.

Actuators may also be powered by DC 24 V.

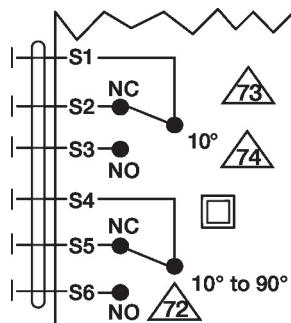
Actuators may be powered in parallel. Power consumption must be observed.

S4 makes to S6 when actuator is powered open.

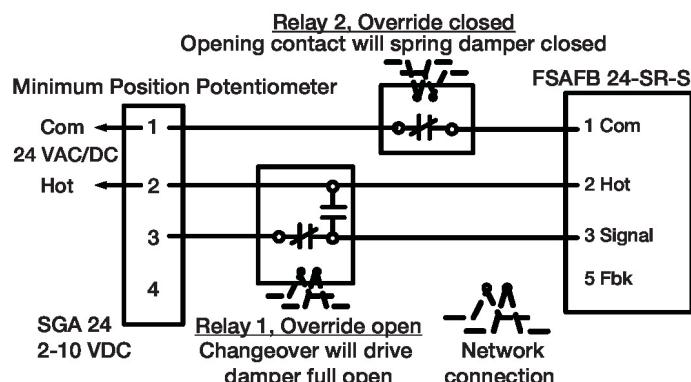
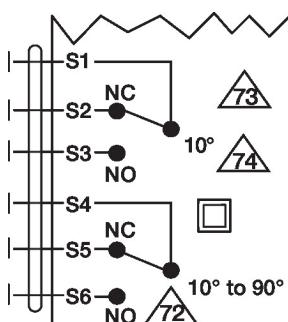
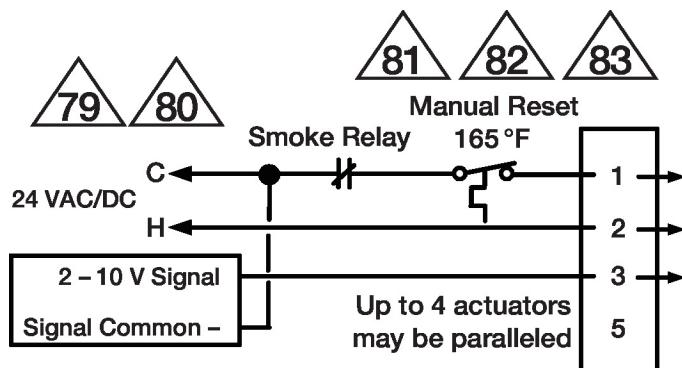
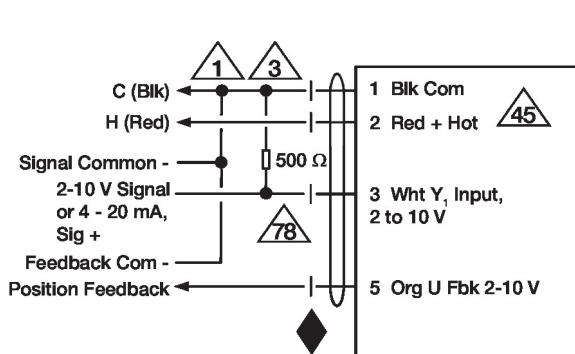
Auxiliary switches are for end position indication or interlock control.

Electrical installation

- 74 Double insulated.
- 78 500 ohm load resistor for 4-20 mA. Only one resistor for multiple actuators.
- 79 Primary/secondary operation/wiring of mechanically paralleled ("piggyback") Fire and Smoke actuators will not function.
- 80 Actuators may be electrically paralleled on different damper sections that are not mechanically connected to one another.
- 81 Smoke relay and primary heat responsive sensor may be located in hot wire.
- 82 Only one smoke signal and/or thermal sensor may be employed for all paralleled actuators.
- 83 Any wire 5 feedback could be used to indicate position or to drive actuators that are not mechanically paralleled. That is, they are on other dampers.



Wiring diagrams



Dimensions

K7-2 (supplied)

∅ 1/2" Centered
(Default)

3/4" Centered
(Field Selectable)

1.05" Centered
(Field Selectable)

