



5-year warranty



Technical data

Electrical data	Nominal voltage	AC/DC 24 V
	Nominal voltage frequency	50/60 Hz
	Power consumption in operation	32 VA
	Power consumption in rest position	5 W, 8.5 VA, End stop 47 VA, 2 A slow blow fuse *
	Power consumption for wire sizing	40 VA
	Connection supply	2 Leads 0.9 m, 18 AWG 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 @ 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	25 s / 90°
	Running time fail-safe	<15 s
	Sound power level, motor	70 dB(A)
	Sound power level, fail-safe	73 dB(A)
	Position indication	Mechanical
Safety data	Power source UL	Class 2 Supply
	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.
	Quality Standard	ISO 9001, RoHS (EU-Directive 2011/65/EU)
	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	0...50°C [32...122°F]
	Storage temperature	-40...80°C [-40...176°F]
	Servicing	maintenance-free

Technical data

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 FSAF_A actuators draw higher peak current when driving against any type of stop. After 10 seconds current drops to the lower holding level. If used, this requires the value of a local fuse or breaker to be increased to avoid nuisance opening or tripping. A 2 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 AC 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 3 actuators run current, a 4 A breaker or plug fuse is insufficient. A 6 A slow blow would be required.

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	IND-AFB
	Shaft clamp reversible, for central mounting, for damper shafts $\varnothing 12.7$ / 19.0 / 25.4 mm	K7-2
	Ball joint suitable for damper crank arm KH8	KG8
	Actuator arm, for 3/4" shafts, clamping range $\varnothing 10...22$ mm, Slot width 8.2 mm	KH-AFB
	Wrench 8 mm and 10 mm	SH8 TOOL-06
	Mounting bracket for AF..	ZG-100
	Mounting bracket for AF / NF	ZG-101
	Weather shield 330x203x152 mm [13x8x6"] (LxWxH)	ZG-102
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-100
	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-150
	Weather shield 438x222x140 mm [17-1/4x8-3/4x5-1/2"] (LxWxH), NEMA 4X, with mounting brackets	ZS-260
	Mounting kit for AF..	ZS-300
		ZG-AFA108
		ZG-AFA
		ZG-DC1
		ZG-DC2

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.

Electrical installation

Wiring diagrams



