



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	2 W2 W, 3 VA
	Power consumption in rest position	1.5 W, 2 VA
	Power consumption for wire sizing	5 VA
	Auxiliary switch	2x SPST, , 1x 10° / 1x 80°
	Connection supply	Cable 1 m, 2x 18 AWG appliance cable with 1/2" NPT conduit connector
	Connection auxiliary switch	Cable 1 m, 6x 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	2 Nm @ 121°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	75 s / 90°
	Running time motor note	@ 121°C
	Running time fail-safe	<25 s @ 0...50°C
	Sound power level, motor	45 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	IP42
	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
	UL 2043 Compliant	Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC

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<b>Safety data</b>	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
<b>Weight</b>	Weight	0.57 kg
<b>Materials</b>	Housing material	UL94-5VA

## Safety notes











- Screw a conduit fitting into the actuator's bushing. Jacket the actuator's input and output wiring with suitable flexible conduit. Properly terminate the conduit in a suitable junction box.
- Retrofit Safety Note
- Use of the FSTF for replacement of other makes of actuators is limited in damper area. The FSLF is preferred for direct coupled applications. The FSTF may be applied for linkage applications on dampers 1.5 sq.ft. and smaller at velocities under 2000 fpm.

## Accessories

<b>Electrical accessories</b>	<b>Description</b>	<b>Type</b>
	Thermoelectric tripping device, Duct inside temperature 165°F	BAE165 US
<b>Mechanical accessories</b>	<b>Description</b>	<b>Type</b>
	Position indicator for TF..	IND-TF
	Ball joint suitable for damper crank arm KH8	KG8 KH-TF US KH-TF-1 US TF-P
	Wrench 8 mm and 10 mm	TOOL-06
	Angle of rotation limiter, with end stop	ZDB-TF ZG-TF2 ZG-TF3
	Mounting kit for TF..	ZG-TF112
	Weather shield 330x203x152 mm [13x8x6"] (LxWxH)	ZS-100
	Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH)	ZS-150

## Electrical installation

-  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.
-  Double insulated.
-  Ground present on some models.
-  Meets cULus requirements without the need of an electrical ground connection.

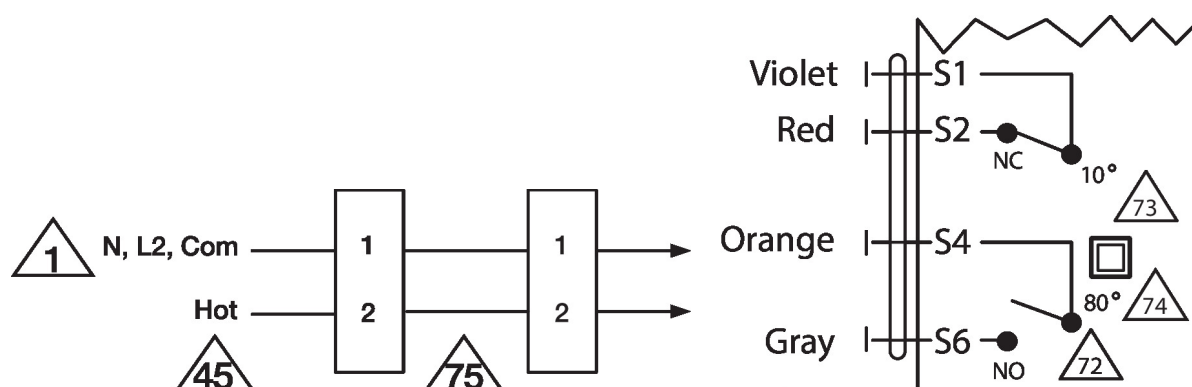
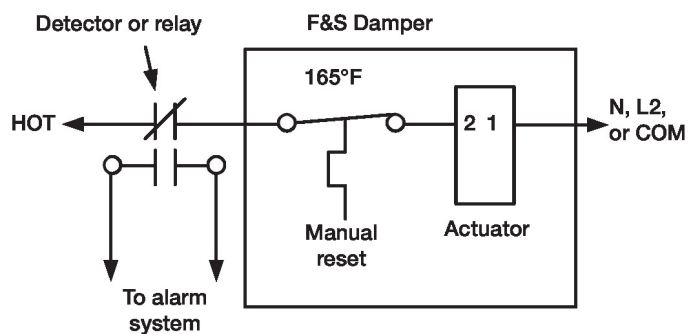
The diagram illustrates a two-stage pipeline. Stage 1 has two inputs: 'N, L2, Com' and 'Hot'. Stage 2 has two inputs: '1' and '2'. A data hazard of 45 is shown between the stages, and a value of 75 is shown at the output of Stage 2.

C (Blk) ← 1 Common

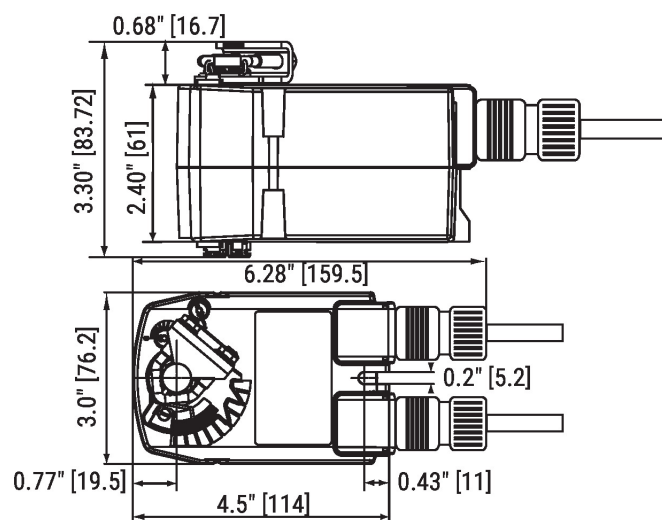
H (Red) ← 2 Hot

3 1

45



## Dimensions



Standard:

∅ 1/4" to 1/2"

□ 1/4" to 5/16"