

Spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings

- Torque 20Nm
- Nominal voltage AC 24...240V / DC 24...125V
- Control: Open-close



Type overview

Electrical data	Nominal voltage	AC 24...240V, 50/60Hz / DC 24...125V	
	Nominal voltage range	AC 19.2...264V / DC 21.6...137.5V	
	Power consumption	In operation 7W @ nominal torque At rest 3.5W For wire sizing 18VA	
	Connection	Cable 1m, 2 x 0.75mm ²	
Functional data	Torque	Motor Min. 20Nm @ nominal voltage Spring return Min. 20Nm	
	Direction of rotation	Can be selected by mounting L / R	
	Manual override	With hand crank and interlocking switch	
	Angle of rotation	Max. 95°↔, can be limited with adjustable mechanical end stop	
	Running time	Motor ≤75s (0...10Nm) Spring return 20s @ -20...50°C / max. 60s @ -30°C	
	Sound power level	Motor ≤45dB(A) Spring return ≤62dB(A)	
	Service life	Min. 60,000 emergency positions	
	Position indication	Mechanical	
	Safety	Protection class	II Totally insulated <input type="checkbox"/>
		Degree of protection	IP54 NEMA2, UL Enclosure Type 2
EMC		CE according to 2004/108/EC	
Low-voltage directive		CE according to 2006/95/EC	
Certification		Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14 cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02	
Mode of operation		Type 1.AA	
Rated impulse voltage		4kV	
Control pollution degree		3	
Ambient temperature		-30...+50°C	
Non-operating temperature		-40...+80°C	
Ambient humidity	95% r.h., non-condensating		
Maintenance	Maintenance-free		
Dimensions / Weight	Dimensions	See «Dimensions»	
	Weight	Approx. 2.3kg	

Dimensions [mm]

Dimensional drawings

Variant 1a:

3/4"-spindle clamp (with insertion part) EU Standard

Damper spindle	Length			
	≥85	10...22	10	14...25.4
	≥15			

Variant 1b:

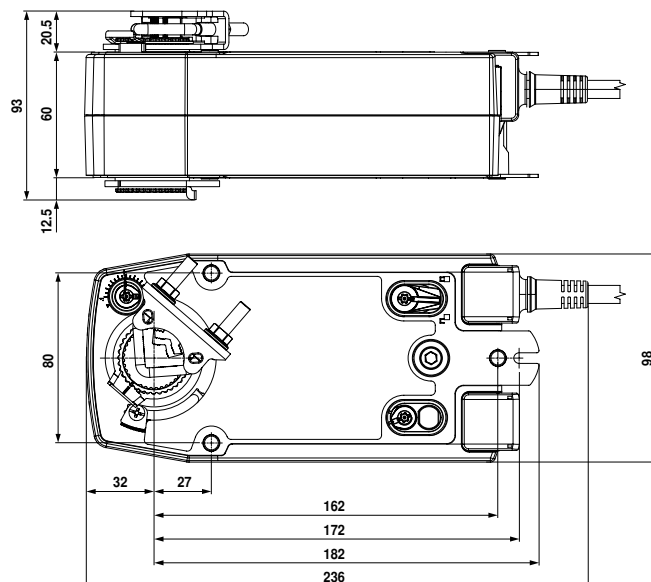
1"-spindle clamp (without insertion part) EU Standard

Damper spindle	Length		
	≥85	19...25.4 (26.7)	12...18
	≥15		

Variant 2:

3/4"-spindle clamp (optional via configuration)

Damper spindle	Length		
	≥85	10...19	14...20
	≥15		



Mechanical Fail-Safe Damper Actuator SFA-S2



Spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings

- Torque 20Nm
- Nominal voltage AC 24...240V / DC 24...125V
- Control: Open-close
- Two integrated auxiliary switches



Technical data

Electrical data	Nominal voltage	AC 24...240V, 50/60Hz / DC 24...125V		
	Nominal voltage range	AC 19.2...264V / DC 21.6...137.5V		
	Power consumption	In operation	7W @ nominal torque	
		At rest	3.5W	
	For wire sizing	18VA		
Auxiliary switch	2 x SPDT, 1 x 10% / 1 x 11...90%			
Connection	Motor	Cable 1m, 2 x 0.75mm ²		
	Auxiliary switch	Cable 1m, 6 x 0.75mm ²		
Functional data	Torque	Motor	Min. 20Nm @ nominal voltage	
		Spring return	Min. 20Nm	
	Direction of rotation	Can be selected by mounting L / R		
	Manual override	With hand crank and interlocking switch		
	Angle of rotation	Max. 95°↔, can be limited with adjustable mechanical end stop		
	Running time	Motor	≤75s (0...20Nm)	
		Spring return	20s @ -20...50°C / max. 60s @ -30°C	
	Sound power level	Motor	≤45dB(A)	
		Spring return	≤62dB(A)	
	Service life	Min. 60,000 emergency positions		
	Position indication	Mechanical		
	Safety	Protection class	II Totally insulated <input type="checkbox"/>	
Degree of protection		IP54		
		NEMA2, UL Enclosure Type 2		
EMC		CE according to 2004/108/EC		
Low-voltage directive		CE according to 2006/95/EC		
Certification		Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14		
		cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02		
Mode of operation		Type 1.AA.B		
Rated impulse voltage		Actuator	4kV	
		Auxiliary switch	2.5kV	
Control pollution degree		3		
Ambient temperature		-30...+50°C		
Non-operating temperature	-40...+80°C			
Ambient humidity	95% r.h., non-condensating			
Maintenance	Maintenance-free			
Dimensions / Weight	Dimensions	See «Dimensions»		
	Weight	Approx. 2.4kg		

Dimensions [mm]

Dimensional drawings

Variant 1a:
3/4"-spindle clamp (with insertion part) EU Standard

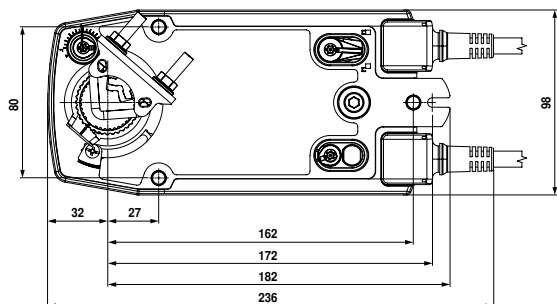
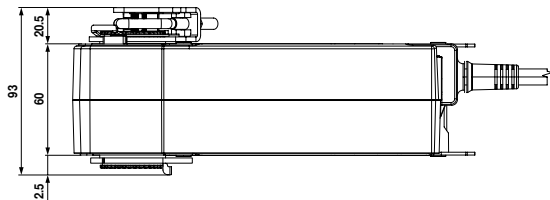
Damper spindle	Length			
	≥85	10...22	10	14...25.4
	≥15			

Variant 1b:
1"-spindle clamp (without insertion part) EU Standard

Damper spindle	Length		
	≥85	19...25.4 (26.7)	12...18
	≥15		

Variant 2:
1/4"-spindle clamp (optional via configuration)

Damper spindle	Length		
	≥85	10...19	14...20
	≥15		



Modulating spring return actuator with emergency function for adjusting air dampers in ventilation and air conditioning systems in buildings

- Torque 20Nm
- Nominal voltage AC/DC 24V
- Control: modulating DC (0)2...10V
- Position feedback DC 2...10V



Technical data

Electrical data	Nominal voltage	AC 24V, 50/60Hz / DC 24V	
	Nominal voltage range	AC 19.2...28.8V / DC 21.6...28.8V	
	Power consumption	In operation 5W @ nominal torque At rest 3W For wire sizing 7VA	
	Connection	Cable 1m, 4 x 0.75mm ²	
Functional data	Torque	Motor Min. 20Nm @ nominal voltage Spring return Min. 20Nm	
	Control	Control signal Y DC (0) 2...10V, input impedance 100kΩ Operating range DC 2...10V	
	Position feedback (measuring voltage U)	DC 2...10V, max. 0.5mA	
	Position accuracy	±5%	
	Direction of rotation	Motor Reversible with switch ↻ / ↻ Spring return Can be selected by mounting L / R	
	Manual override	With hand crank and interlocking switch	
	Angle of rotation	Max. 95°↔, can be limited with adjustable mechanical end stop	
	Running time	Motor ≤150s (0...20Nm) Spring return ≤20s @ -20...50°C / max. 60s @ -30°C	
	Sound power level	Motor ≤40dB(A) @ 150s running time Spring return ≤62dB(A)	
	Service life	Min. 60,000 emergency positions	
	Position indication	Mechanical	
	Safety	Protection class	III Extra low voltage UL Class 2 Supply
		Degree of protection	IP54 NEMA2, UL Enclosure Type 2
		EMC	CE according to 2004/108/EC
		Certification	Certified to IEC/EN 60730-1 and IEC/EN 60730-2-14 cULus according to UL 60730-1A and UL 60730-2-14 and CAN/CSA E60730-1:02
Mode of operation		Type 1.AA	
Rated impulse voltage		0.8kV	
Control pollution degree		3	
Ambient temperature		-30...+50°C	
Non-operating temperature		-40...+80°C	
Ambient humidity		95% r.h., non-condensating	
Maintenance	Maintenance-free		
Dimensions / Weight	Dimensions	See «Dimensions»	
	Weight	Approx. 2.3kg	

Dimensions [mm]

Dimensional drawings

Variant 1a:

3/4"-spindle clamp (with insertion part) EU Standard

Damper spindle	Length	⊙ I	■ I	◆ I
	≥85	10...22	10	14...25.4
	≥15			

Variant 1b:

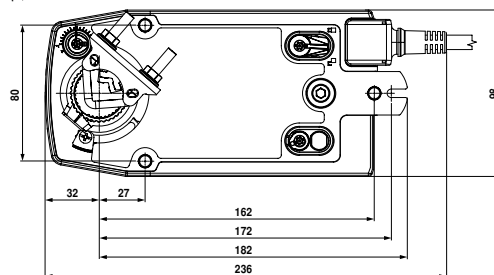
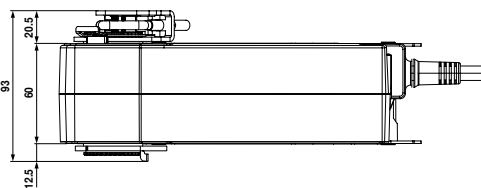
1"-spindle clamp (without insertion part) EU Standard

Damper spindle	Length	⊙ I	■ I
	≥85	19...25.4 (26.7)	12...18
	≥15		

Variant 2:

3/4"-spindle clamp (optional via configuration)

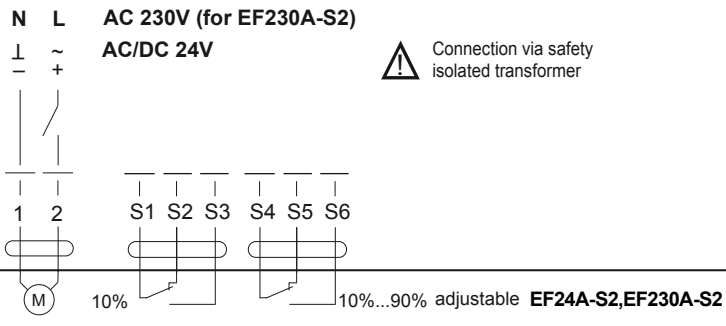
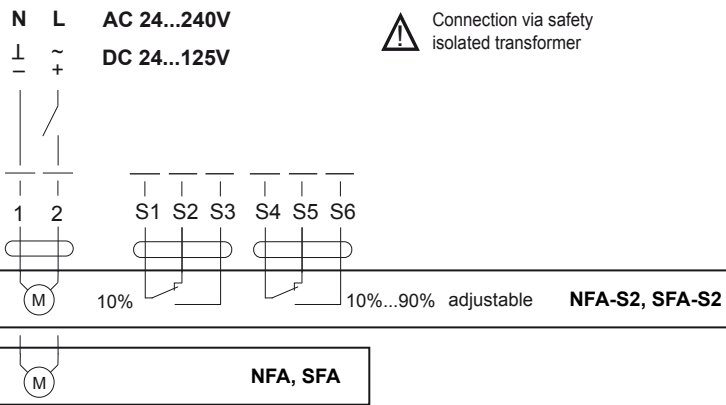
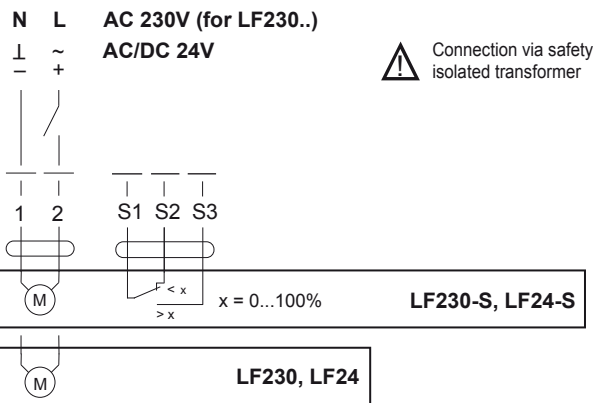
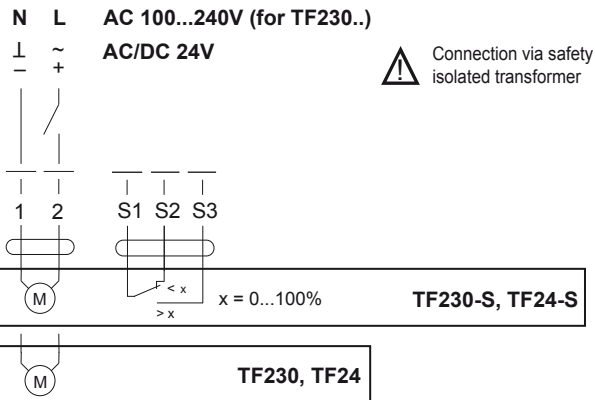
Damper spindle	Length	⊙ I	◆ I
	≥85	10...19	14...20
	≥15		



Wiring diagrams: Open/Close actuators

Notes:

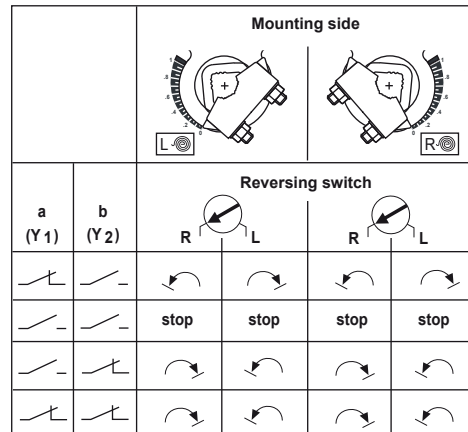
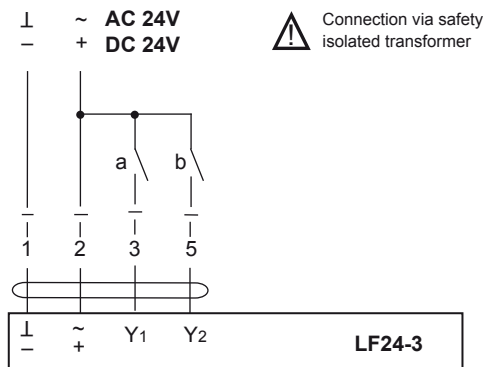
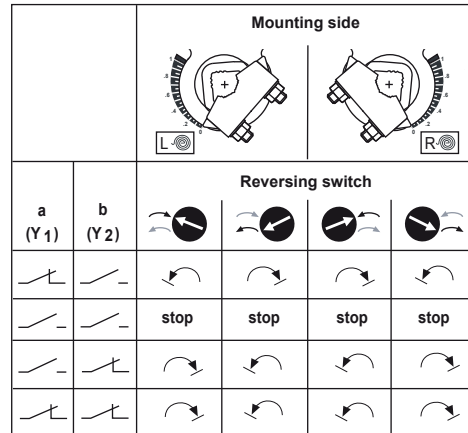
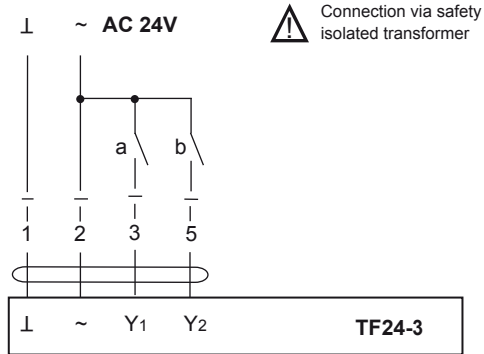
- Parallel connection of several actuators is possible.
- Power consumption must be observed.



Wiring diagrams: 3-point actuators

Notes:

- Connection via safety isolating transformer.
- Parallel connection of several actuators is possible.
- Power consumption must be observed.



Wiring diagrams: modulating actuators

Notes:

- Connection via safety isolating transformer.
- Parallel connection of several actuators is possible.
- Power consumption must be observed.

