

NF/SF

Servomotor Belimo

K121-B 11/2015

PRODUCT PRESENTATION

The servomotor NF/SF is specially designed to control smoke evacuation dampers from a distance. When connected to the power supply the actuator moves the damper blade into its stand-by position (closed). When the power is interrupted, the internal armed spring returns the damper blade into its safety position. The position of the damper is remotely signalled by means of beginning and end of range switches (included)

LIST OF PARTS

	Description	Charasteristics	Quantity
1	Servomotor Belimo	SF24 SF230 NF24 NF230	1
2	Fixing screw motor	DIN 912 M6 x 80	1
3	Label 'KIT'	ETIK-D042	1

ELECTRICAL WIRING

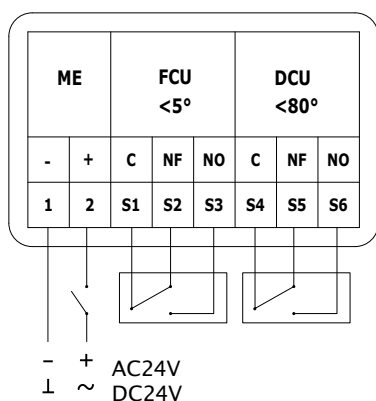


Fig. NF/SF

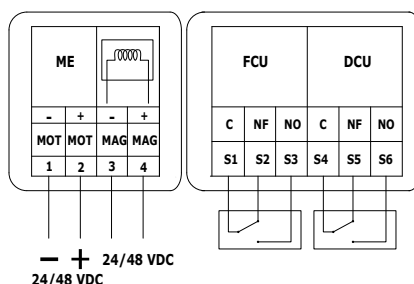


Fig. NF/SF with NF/SF-VD module

DETAILED CHARACTERISTICS

	NF24	SF24	NF230	SF230
Power supply	24 VAC ±20% or 24VDC +20% -10%	24VAC ±20% or 24 VDC +20% -10%	230VAC	230VAC
Frequency	50-60Hz		50-60Hz	
Drive torque motor	min. 10 Nm	min. 20 Nm	min. 10 Nm	min. 20 Nm
Torque spring return	min. 10 Nm	min. 20 Nm	min. 10 Nm	min. 20 Nm
Running time motor	≤ 75 sec		≤ 75 sec	
Running time spring return	≤ 20 sec / max. 60 sec		≤ 20 sec / max. 60 sec	
Power consumption rearmation	6W	5W	6W	6.5W
Power consumption in stand-by position	2.5W	2.5W	2.5W	3.5W
Power consumption for wire sizing	8.5VA	7.5VA	9.5VA	18VA
Weight	2,0 kg	2,3 kg	2,0 kg	2,3 kg
Position switches	1mA...3(0.5A),AC250V		1mA...3(0.5A),AC250V	
Switch points	10% fixed,1 adjustable 10...90%		10% fixed, 1 adjustable 10...90%	

	NF24	SF24	NF230	SF230
Rotation angle	95° (incl. 5° pretension spring)		95° (incl. 5° pretension spring)	
Direction of rotation	Depending on installation L/R		Depending on installation L/R	
Durability test	min. 10 000 safe positions		min. 10 000 safe positions	
Acoustic level	Motor max. 45dB (A); spring ≈62dB(A)		Motor max. 45dB (A); spring ≈62dB(A)	
Protection degree	IP 54		IP 54	
Working temperature	-30°C up to +50°C		-30°C up to +50°C	
Humidity test	EN 60730-1		EN 60730-1	
Maintenance	Maintenance free		Maintenance free	

APPLICATION ON SMOKE EVACUATION DAMPERS



OPERATION

Rearmation

• Manual rearmation:

1. Switch off the power supply
2. To rearm the damper manually, use enclosed handle and turn counter-clockwise (1)
3. To block the motor, push the blocking handle to the right (2)

Caution

- ⓘ Do not use a drill or screwing machine
- ⓘ Stop as soon as the motor is completely rearmed (end of range)

Motorized rearmation:

1. Switch off the power supply for at least 10 sec. (3 sec for VU120 with NF/SF-VD module).
2. Supply the actuator (respect the prescribed voltage) for at least 180 sec.
3. The rearmation stops automatically when the end of range is reached (damper closed)

Unlocking

• Manual unlocking:

- a. use enclosed handle -> turn 1/4 counter-clockwise
- b. push the blocking handle to the left

• Remote controlled unlocking:

by interrupting the power supply (for dampers with NF/SF-VD module: by sending an electrical impulse)

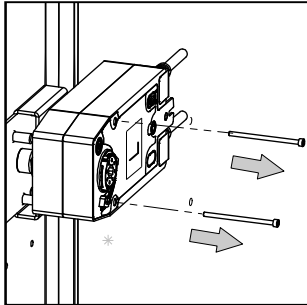
Caution

- ⓘ When the power supply is interrupted, the damper opens automatically
- ⓘ The mechanism may never be tested on its own, without being attached to the fire damper. Such a test might damage the mechanism or the operator might be injured.

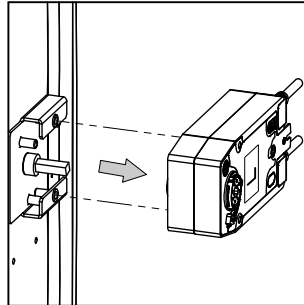


MOUNTING

Dismantling of the mechanism

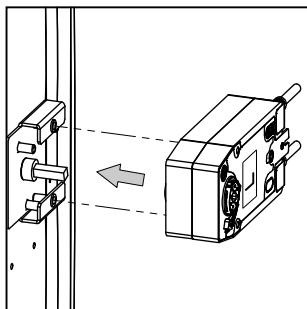


1. Unlock the motor by interrupting the power supply.
2. Loosen the fixing screws of the motor.

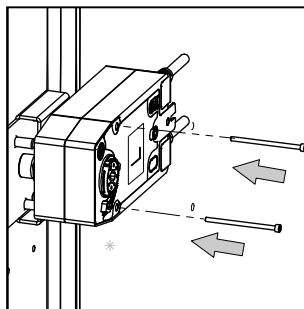


3. Remove the old motor.

Mounting of the mechanism



1. Release the motor using the blocking handle.
2. Place the motor with the L-side on top.



3. Fix the motor with screws, spring washer and lock washer.
4. Connect the motor according to the wiring diagram.
5. Test the functioning of the motor.
6. Apply the label 'KIT' to the motor.