

NAFA SERIES SPRING RETURN DAMPER ACTUATOR


2 Point Spring Return Control
3 Nm


NENUTEC[®]

INNOVATIVE MEMBER OF SWISSTECH

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





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DAMPER ACTUATOR MODEL CHART

MODEL										
	NACA	NACM	NECA	NECM	NASA	NASM	NAFA	SAFA	SASA	NSVA
VOLTAGE 230VAC ~ 24VAC/DC	●	●	●	●	●	●	●	●	●	24 VAC
TORQUE (NM)	2 ; 5 ; 10 ; 20 ; 40	2 ; 5 ; 10 ; 20 ; 40	5 ; 10 ; 20	5 ; 10 ; 20	10 ; 20	10 ; 20	3 ; 5 ; 8 ; 20	3 ; 5 ; 8 ; 20	10 ; 15	5
CONTROL	2/3 pts	Modulating	2 pts	Modulating	2/3 pts	Modulating	2 pts SR	2 pts SR	3 pts	Modulating
SPECIAL TYPE										
ELECTRONIC RETURN			●	●						
FAST RUNNING					●	●			●	
SPRING RETURN							●			
FIRE & SMOKE SPRING RETURN								●		
SMOKE SAFETY								●	●	
NETWORKING										●

TYPE DESIGNATION

TYPE	ACTUATOR	DESIGNATION	CONTROL	VOLTAGE	DOT	INPUT SIGNAL	HYPHENATED	TOUQE	AUXILIARY SWITCH
N	A	C	M	1	.	1	-	1 0	S1

TYPE	N = Standard Actuator
	S = Fire & Smoke
ACTUATOR	A = Standard Actuator
	E = Electronic Return
DESIGNATION	C = Standard Actuator
	S = Fast Running Actuator
	F = Spring Back Actuator
CONTROL	A = 2/3 Points
	M = Modulating
VOLTAGE	1 = 24 VAC/VDC
	2 = 230 VAC
	3 = 110/120 VAC
	4 = 48 VAC

INPUT SIGNAL (NOT APPLICABLE FOR 2/3 POINTS)	1 = 0(2)...10 VDC and 0(4)...20 mA	
	2 = 0(2)...10 VDC only	
	3 = 0...135 Ω only	
	4 = 4...20 mA only	
TORQUE	02 = 2 Nm	03 = 3 Nm
	05 = 5 Nm	08 = 8 Nm
	10 = 10 Nm	15 = 15 Nm
	20 = 20 Nm	40 = 40 Nm
AUXILIARY SWITCH / FEEDBACK POTENTIOMETER	None = No Auxiliary or Feedback Potentiometers	
	S1 = 1 x Auxiliary Switch	
	S = 2 x Auxiliary Switches	
	P1 = 1000Ω	
	P2 = 10000Ω	
	P3 = 140Ω	

NAFA SERIES

SPRING RETURN DAMPER ACTUATOR

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NAFA...03 (S) SERIES

NAFA series Spring Return actuators are developed for general air damper application, rotary valve and other devices which require a fail-safe function. During normal operation, the actuator motorized the device. In the event of power outage, the actuator springs back to its original position.



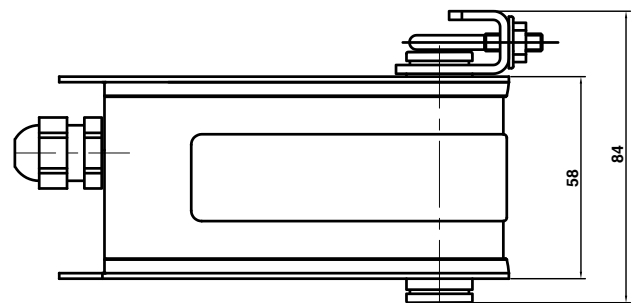
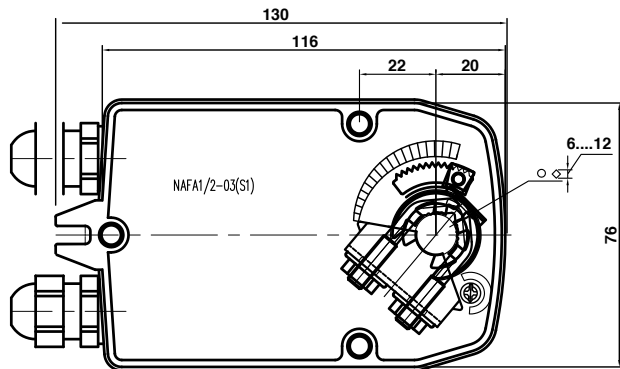
PRODUCT FEATURE

- Torque 3 Nm
- Damper size 0.6 m²
- Power supply AC/DC 24V and AC 230 V
- Shaft dimensions - Ø 10...16 mm / □ 7...11 mm
- Minimum Shaft Length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Actuator with 1 m cable connection
- Optional 1 Fixed and 1 Adjustable SPDT auxiliary switches

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-03	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	-
NAFA 1-03S	3 Nm	AC/DC 24 V ± 10%	25...55 sec (Spring Back <20 sec)	2 x SPDT (Fixed & Adjustable)
NAFA 2-03	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	-
NAFA 2-03S	3 Nm	AC 230 V ± 10%	25...55 sec (Spring Back <20 sec)	2 x SPDT (Fixed & Adjustable)

DIMENSION (mm)



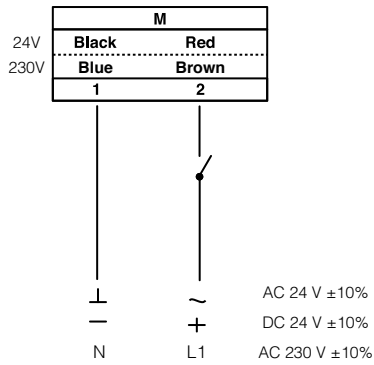
TECHNICAL SPECIFICATION

MODEL NUMBER	NAFA 1-03 (S)	NAFA 2-03 (S)
TORQUE	3 Nm	3 Nm
DAMPER SIZE	0.6 m ²	0.6 m ²
SHAFT DIMENSION	Ø 10...16 mm / □ 7...11 mm	Ø 10...16 mm / □ 7...11 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.2 W	7.2 W
● END POSITION	1.2 W	1.2 W
FOR WIRE SIZING	10.0 VA	10.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	2 (1.5) A, AC 250 V	2 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.8 Kg	1.9 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
NON-OPERATING TEMPERATURE	-30°...+60° C / IEC 721-3-2	-30°...+60° C / IEC 721-3-2
AMBIENT HUMIDITY	5%...95% rH non condensing / EN	5%...95% rH non condensing / EN
MAINTENANCE	Maintenance Free	Maintenance Free
MODE OF OPERATION	Type I / EN 60730-1	Type I / EN 60730-1
EMC	CE & ISO 9000 EN / EEC	CE & ISO 9000 EN / EEC

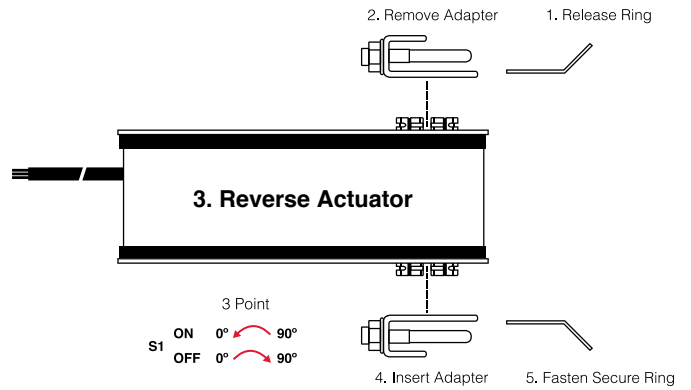
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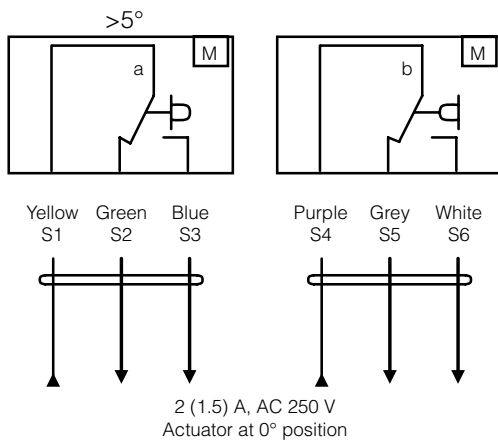
WIRING DIAGRAM NAFA...03 (S) POWER SUPPLY AC/DC 24 V / AC 230V



CHANGING DIRECTION OF ROTATION NAFA...03 (S)

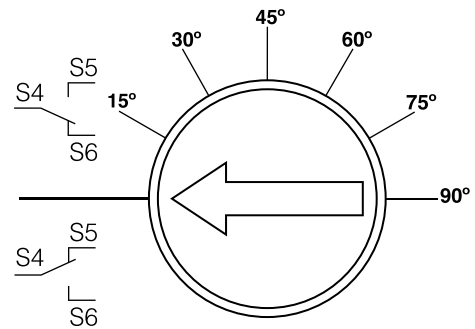


WIRING DIAGRAM NAFA...03 (S) AUXILIARY SWITCH



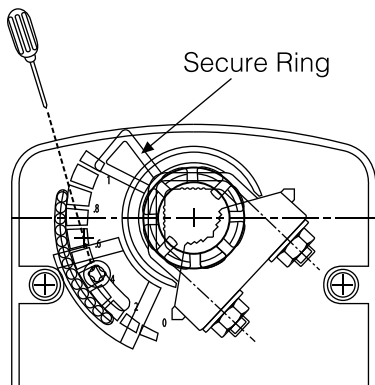
AUXILIARY SWITCH NAFA...03 (S)

Switch **a** factory-set at 5° .
The auxiliary switch can be optimally adjusted between $0^\circ \dots 90^\circ$.



Switch **a** factory set at 5°
Switch **b** adjustable $0^\circ \dots 90^\circ$

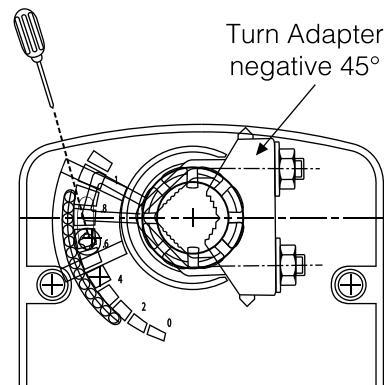
ANGLE OF ROTATING LIMITING 5°...85° ADJUSTMENT



For 5°...45° Adjustment
(Diagram 1)

For 5°...45° Adjustment (Diagram 1)

- ① Loosen screw of the mechanical limiter plate.
- ② Move the limiter plate to the appropriate position.
- ③ Tighten the screw.

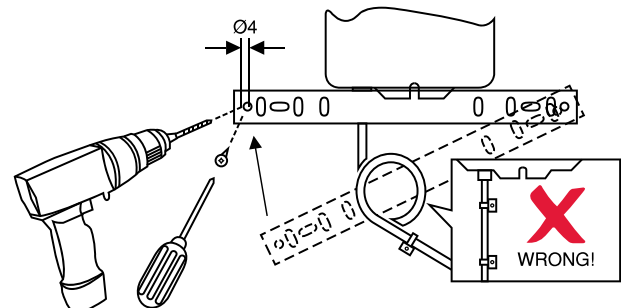
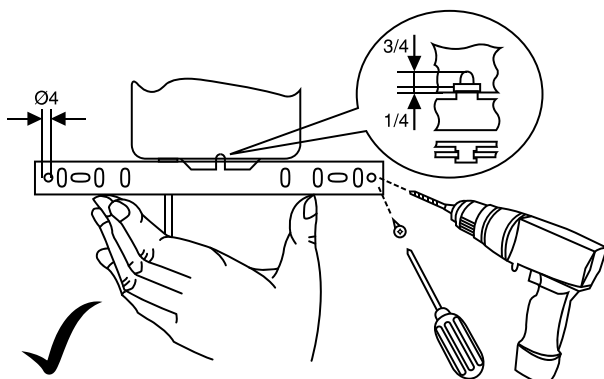


For 45°...85° Adjustment
(Diagram 2)

For 45°...85° Adjustment (Diagram 2)

- ① Release the secure ring of the adapter.
- ② Remove the adapter and turn negative 45° as shown.
- ③ Insert adapter and secure the adapter.
- ④ Loosen screw of the mechanical limiter plate.
- ⑤ Move the limiter plate to the appropriate position.
- ⑥ Tighten the screw.

INSTALLATION / MOUNTING INSTRUCTION



IMPORTANT REMARK

For special requirement, consult your local Nenutec's representative.



This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



AC / DC 24 V: Connect via safety isolating transformer.
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductor (with at least a 3mm contact gap.)

The performance specifications are nominal and conform to acceptable industry standards. Nenutec shall not be liable for damages resulting from misapplication or misuse of its products.