

## NAFA – SPRING RETURN DAMPER ACTUATOR

3 Nm | 2-POINT CONTROL, SPRING RETURN



The appearance of the product may differ from the illustration. Technical specifications are subject to change.

### 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.

- Torque: 3 Nm
- Damper size 0.6 m<sup>2</sup>
- Power supply 24 V<sub>AC/DC</sub> and 230 V<sub>AC</sub>
- 2-point control
- Shaft dimensions – Ø 10...16 mm / square 7...11 mm
- Minimum shaft length 40 mm
- Adjustable angle of rotation
- Direction of rotation selectable by reversing actuator during installation
- Actuator with 1 m connection cable
- Optional 1 fixed and 1 adjustable SPDT auxiliary switches

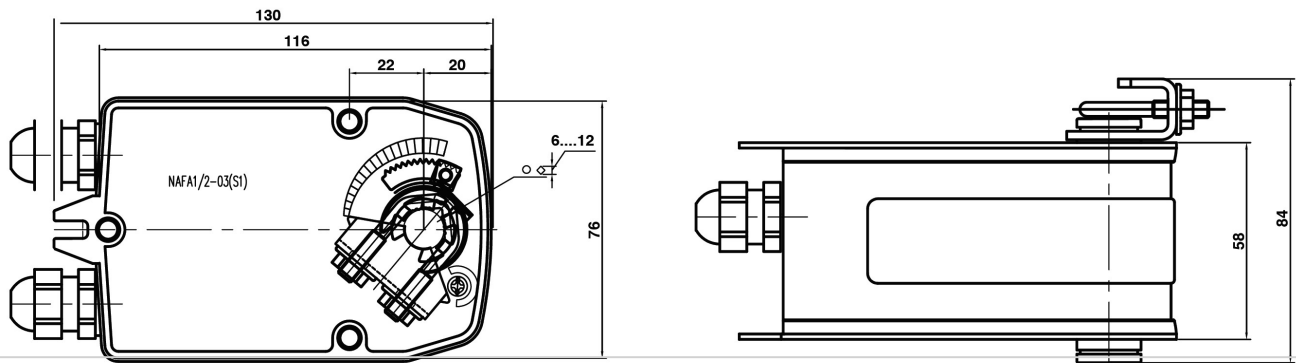
#### MODEL SELECTION TABLE

Model/type	Torque	Power supply	Running time	Auxiliary switches
NAFA 1-03	3 Nm	24 V <sub>AC/DC</sub> ± 10%	25...55 s (spring return <20 s)	-
NAFA 1-03S	3 Nm	24 V <sub>AC/DC</sub> ± 10%	25...55 s (spring return <20 s)	2 x SPDT (fixed + adjustable)
NAFA 2-03	3 Nm	230 V <sub>AC</sub> ± 10%	25...55 s (spring return <20 s)	-
NAFA 2-03S	3 Nm	230 V <sub>AC</sub> ± 10%	25...55 s (spring return <20 s)	2 x SPDT (fixed + adjustable)

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### ACTUATOR DIMENSIONS [mm]



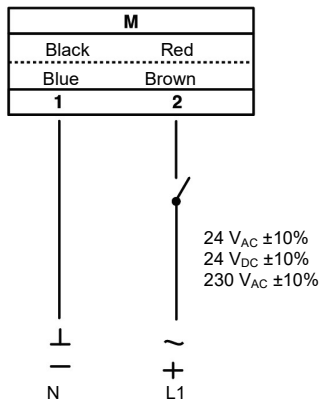
### TECHNICAL SPECIFICATION

	NAFA 1-03 (S)	NAFA 2-03 (S)
Torque	3 Nm	3 Nm
Damper size	0.6 m <sup>2</sup>	0.6 m <sup>2</sup>
Shaft dimensions	Ø 10...16 mm / □ 7...11 mm	Ø 10...16 mm / □ 7...11 mm
Power supply	24 V <sub>AC/DC</sub> ± 10%	230 V <sub>AC</sub> ± 10%
Frequency	50...60Hz	50...60Hz
Control signal	2-point control	2-point control
Power consumption		
• In operation	7.2 W	7.2 W
• End position	1.2 W	1.2 W
Rated power	10.0 VA	10.0 VA
Electrical connections	Cable 1 m	Cable 1 m
Auxiliary switch rating	3 (1.5) A / 250 V <sub>AC</sub>	3 (1.5) A / 250 V <sub>AC</sub>
Protection class	Class III ⚡	Class II ⚡
Angle of rotation	90° (95° mechanical limitation)	90° (95° mechanical limitation)
Weight	<1.8 kg	<1.9 kg
Durability	60,000 rotations	60,000 rotations
Sound level	40 dB	40 dB
IP protection class	IP54	IP54
Working temperature range	-20°C...50°C as per IEC 721-3-3	-20°C...50°C as per IEC 721-3-3
Storage temperature	-30°C...+60°C / IEC 721-3-2	-30°C...+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
Principle of operation	Type 1 (acc. to EN 60730-1)	Type 1 (acc. to EN 60730-1)
Electromagnetic compatibility	CE & ISO 9000 to EN / EEC	CE & ISO 9000 to EN / EEC

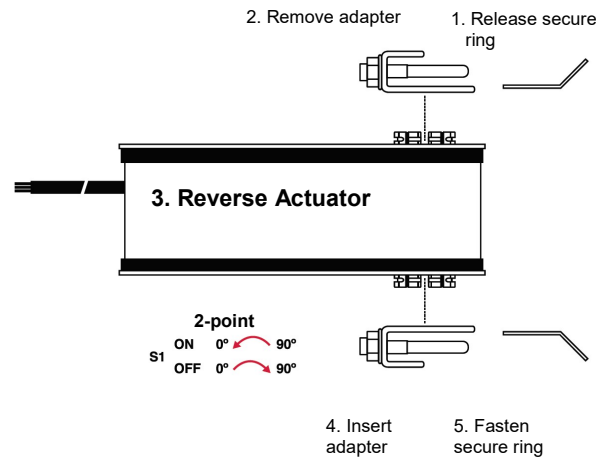
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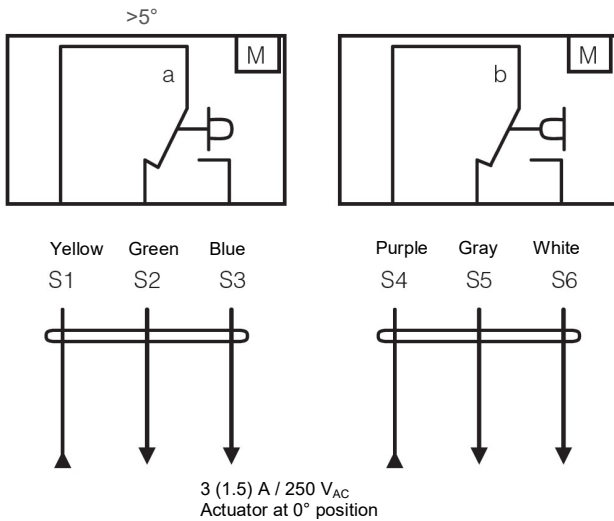
### WIRING DIAGRAM NAFA...03 (S) POWER SUPPLY 24 V<sub>AC/DC</sub> / 230 V<sub>AC</sub>



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

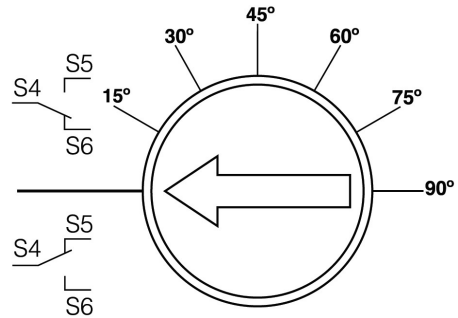


### WIRING DIAGRAM NAFA... 03 (S) AUXILIARY SWITCH



### AUXILIARY SWITCH NAFA... 03 (S)

Switch a factory-set at 5°. The auxiliary switch can be adjusted in the range 0°...90°.



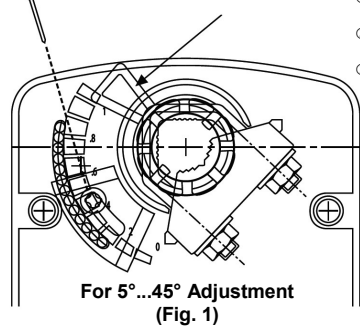
Switch a factory-set at 5°.  
Switch b adjustable 0°...90°.

## NAFA – SPRING RETURN DAMPER ACTUATOR

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### Angle of rotation limiting 5°...85° adjustment

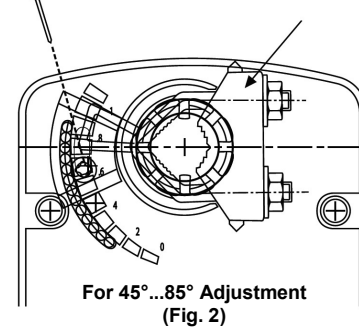
#### Secure ring



#### For 5°...45° Adjustment (Fig. 1)

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

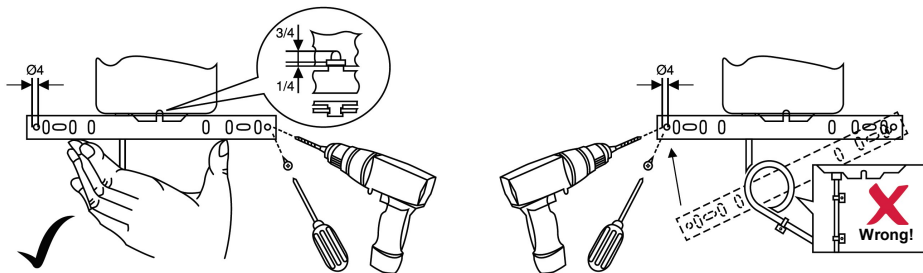
#### Turn adapter negative 45°



#### For 45°...85° Adjustment (Fig. 2)

- ① Release the secure ring of the adapter.
- ② Remove the adapter and turn it CCW 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 instruction



### ⚠ IMPORTANT REMARKS

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



24 V<sub>A0DC</sub>: Connect via safety isolating transformer.

230 V<sub>AC</sub>: 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.)

Consult NENUTEC representatives for specific requirements and material selections for your intended application.

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

### CUSTOMISED VERSION

NENUTEC offers you actuators in customised versions, e.g. with your own brand name, with colour-coordinated applications and with your particular demand on request.

For further information please contact us or our local representative.

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