

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 m²
- Power supply 24 V_{AC/DC} and 230 V_{AC}
- 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

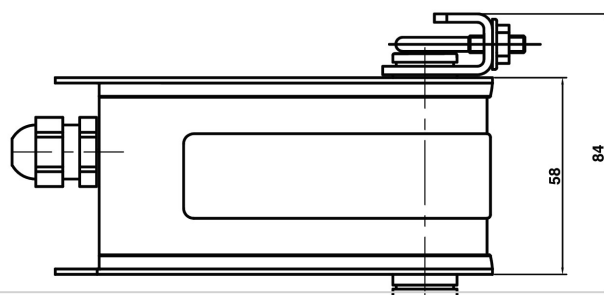
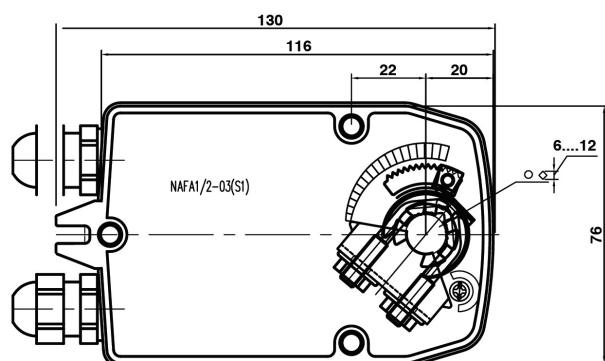
MODEL SELECTION TABLE

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

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ACTUATOR DIMENSIONS [mm]



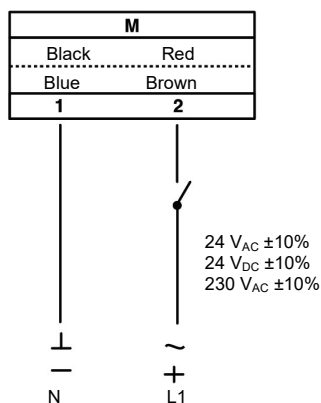
TECHNICAL SPECIFICATION

	NAFA 1-03 (S)	NAFA 2-03 (S)
Torque	3 Nm	3 Nm
Damper size	0.6 m ²	0.6 m ²
Shaft dimensions	Ø 10...16 mm / □ 7...11 mm	Ø 10...16 mm / □ 7...11 mm
Power supply	24 V _{AC/DC} ± 10%	230 V _{AC} ± 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 _{AC}	3 (1.5) A / 250 V _{AC}
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

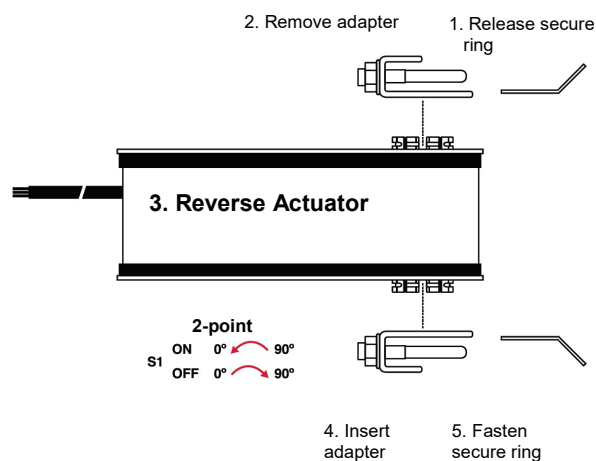
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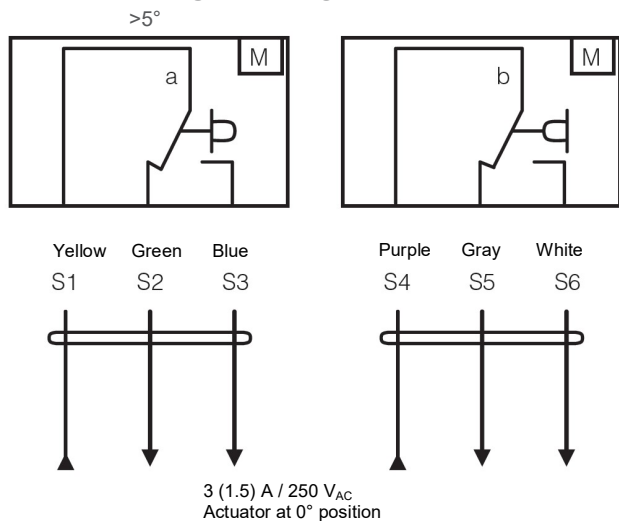
WIRING DIAGRAM NAFA...03 (S) POWER SUPPLY 24 V_{AC/DC} / 230 V_{AC}



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

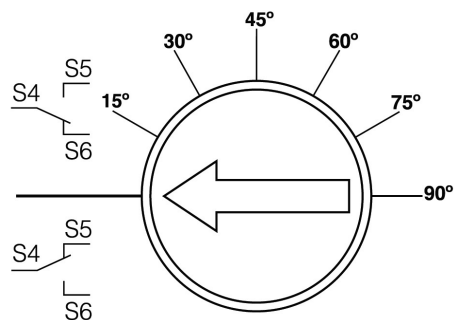


WIRING DIAGRAM NAFA... 03 (S) AUXILIARY SWITCH



AUXILIARY SWITCH NAFA... 03 (S)

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



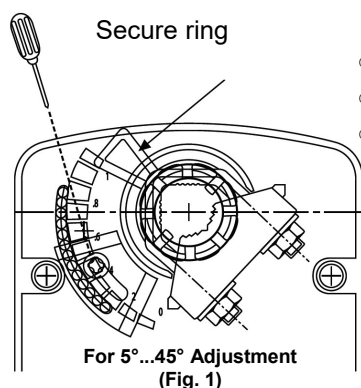
Switch **a** factory-set at 5°.

Switch **b** adjustable 0°...90°.

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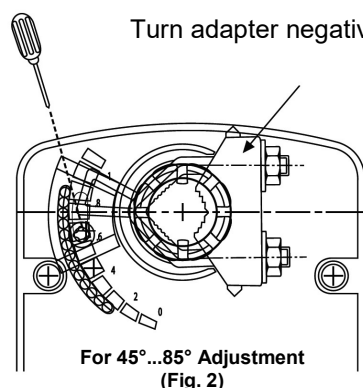
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Angle of rotation limiting 5°...85° adjustment



For 5°...45° Adjustment (Fig. 1)

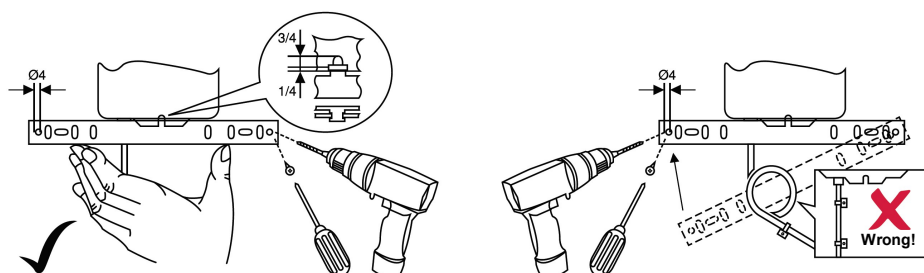
- ① Loosen screw of the mechanical limiter plate.
- ② Move the limiter plate to the appropriate position.
- ③ Tighten the screw.



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_{AC/DC}: Connect via safety isolating transformer.

230 V_{AC}: 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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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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