

# NAFA...03 (S) SERIES

SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL



## 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.

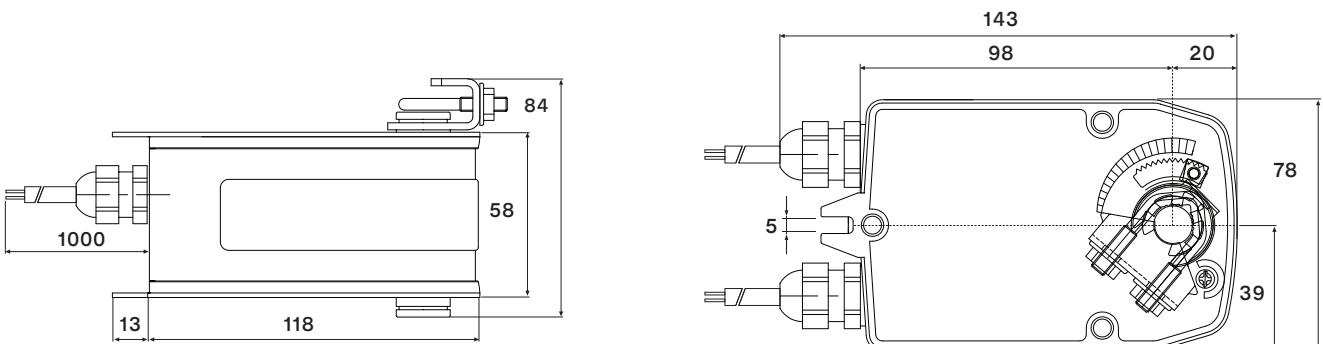
## PRODUCT FEATURE

- Torque 3 Nm
- Damper size 0.6 m<sup>2</sup>
- Power supply AC/DC 24V or AC 230 V
- Shaft dimensions - Ø 6...12 mm / □ 4.5...8 mm
- Minimum shaft length 85 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride by crank handle when required

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-03	3 Nm	AC/DC 24 V ± 10%	25...45 sec (Spring Back <15 sec)	-
NAFA 1-03S	3 Nm	AC/DC 24 V ± 10%	25...45 sec (Spring Back <15 sec)	2 x SPDT
NAFA 2-03	3 Nm	AC 230 V ± 10%	25...45 sec (Spring Back <15 sec)	-
NAFA 2-03S	3 Nm	AC 230 V ± 10%	25...45 sec (Spring Back <15 sec)	2 x SPDT

## DIMENSION (mm)



## TECHNICAL SPECIFICATION

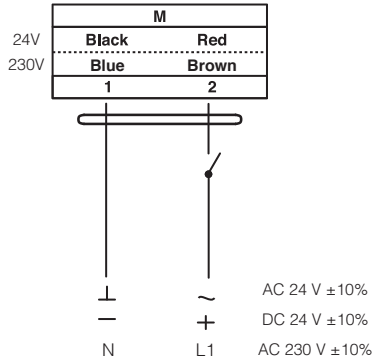
MODEL NUMBER	NAFA 1-03 (S)	NAFA 2-03 (S)
TORQUE	3 Nm	3 Nm
DAMPER SIZE	0.6 m <sup>2</sup>	0.6 m <sup>2</sup>
SHAFT DIMENSION	Ø 6...12 mm / □ 4.5...8 mm*	Ø 6...12 mm / □ 4.5...8 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
• OPERATING	5.0 W	5.0 W
• END POSITION	3.5 W	3.5 W
FOR WIRE SIZING	7.0 VA	7.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	1.2 Kg	1.2 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-30°...50° as per IEC 721-3-3	-30°...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

\*Note that shaft dimension has a tolerance offset of ± 0.2mm.

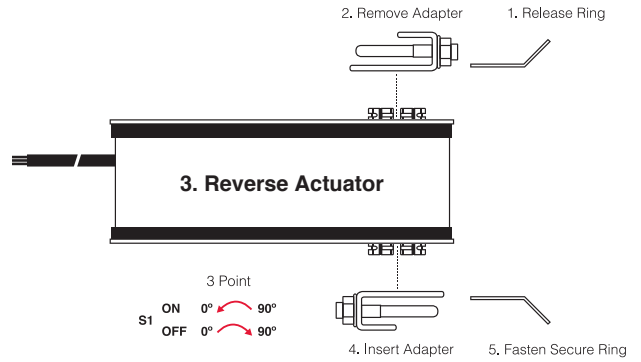
# NAFA...03 (S) SERIES

## SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

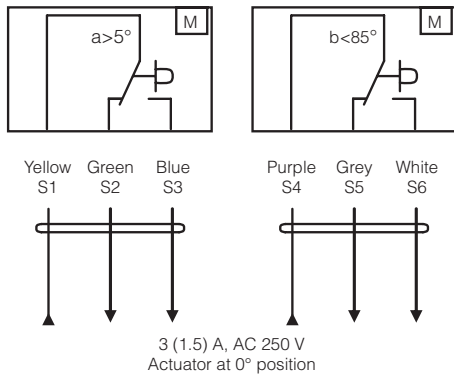
### WIRING DIAGRAM NAFA...03 (S) POWER SUPPLY AC/DC 24V OR AC 230V



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



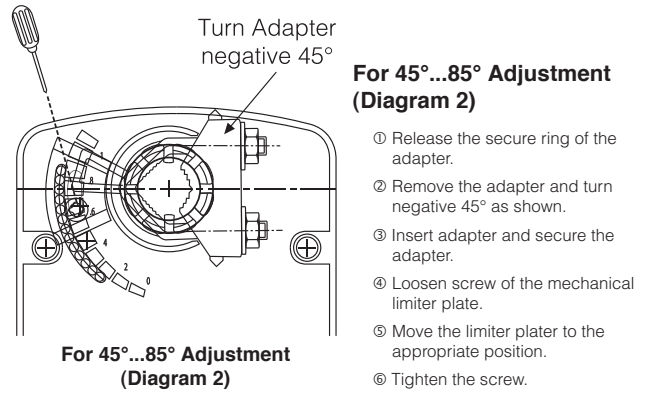
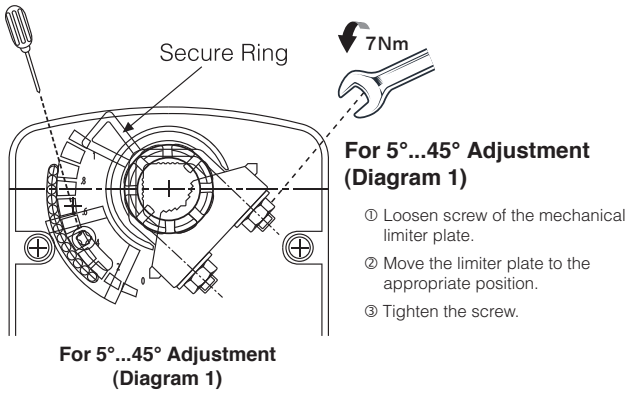
### WIRING DIAGRAM NAFA...03 (S) AUXILIARY SWITCH



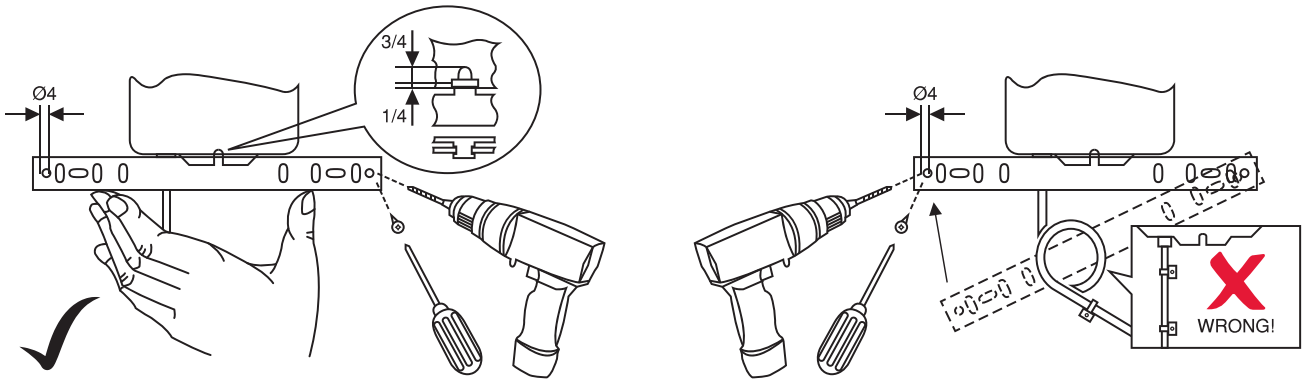
### AUXILIARY SWITCH NAFA...03 (S)

Auxiliary switch (a) factory-set at 5° and (b) at 85°.

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



## 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:  
AC 230 V:

Connect via safety isolating transformer.

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.

# NAFA...05 (S) SERIES

SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL



## NAFA...05 (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.

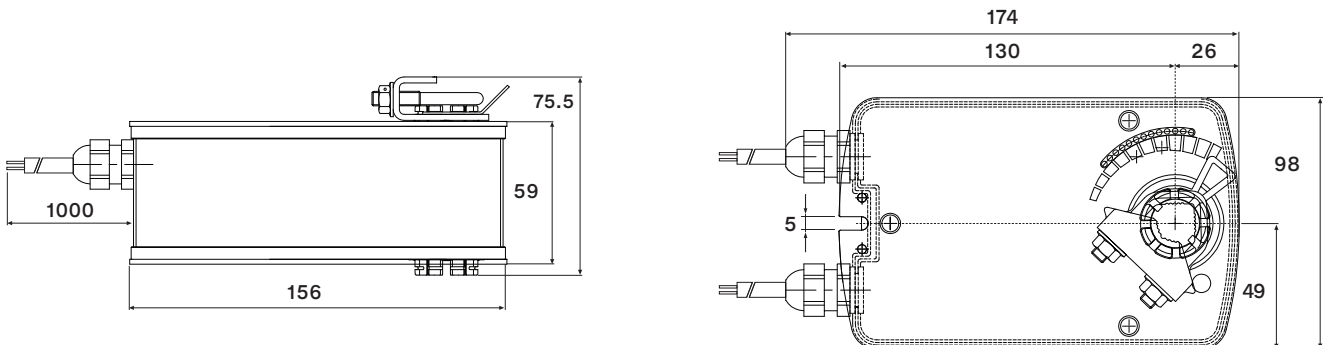
## PRODUCT FEATURE

- Torque 5 Nm
- Damper size 1.0 m<sup>2</sup>
- Power supply AC/DC 24V or AC 230 V
- Shaft dimensions - Ø 10...16 mm / □ 7...11 mm
- Minimum shaft length 85 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride by crank handle when required

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-05	5 Nm	AC/DC 24 V ± 10%	50...70 sec (Spring Back <25 sec)	-
NAFA 1-05S	5 Nm	AC/DC 24 V ± 10%	50...70 sec (Spring Back <25 sec)	2 x SPDT
NAFA 2-05	5 Nm	AC 230 V ± 10%	50...70 sec (Spring Back <25 sec)	-
NAFA 2-05S	5 Nm	AC 230 V ± 10%	50...70 sec (Spring Back <25 sec)	2 x SPDT

## DIMENSION (mm)



## TECHNICAL SPECIFICATION

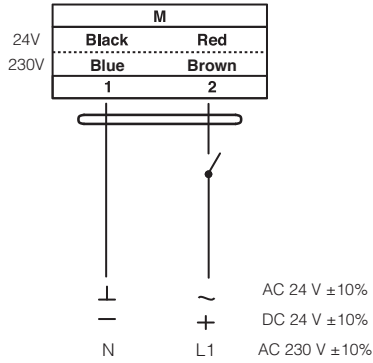
MODEL NUMBER	NAFA 1-05 (S)	NAFA 2-05 (S)
TORQUE	5 Nm	5 Nm
DAMPER SIZE	1.0 m <sup>2</sup>	1.0 m <sup>2</sup>
SHAFT DIMENSION	Ø 10...16 mm / □ 7...11 mm*	Ø 10...16 mm / □ 7...11 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
• OPERATING	5.0 W	5.0 W
• END POSITION	3.5 W	3.5 W
FOR WIRE SIZING	7.0 VA	7.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (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	1.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	< 45 dB	< 45 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-30°...50° as per IEC 721-3-3	-30°...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

\*Note that shaft dimension has a tolerance offset of ± 0.2mm.

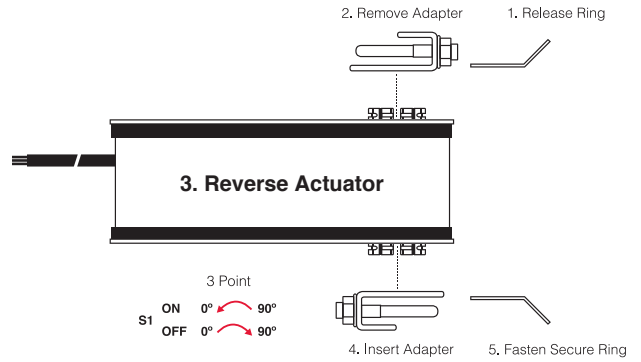
# NAFA...05 (S) SERIES

## SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

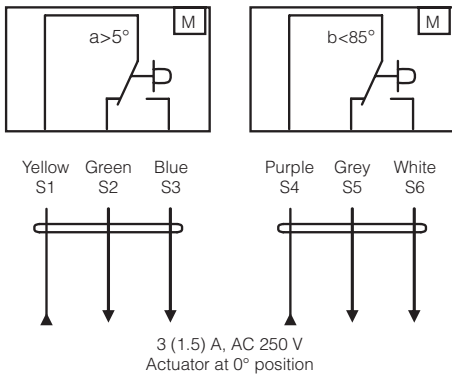
### WIRING DIAGRAM NAFA...05 (S) POWER SUPPLY AC/DC 24V OR AC 230V



### CHANGING DIRECTION OF ROTATION NAFA...05 (S)



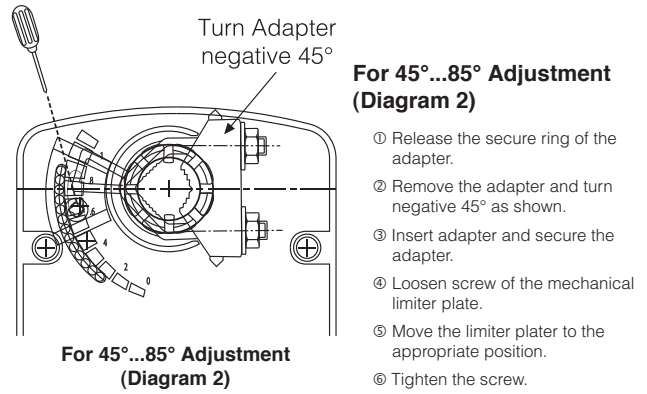
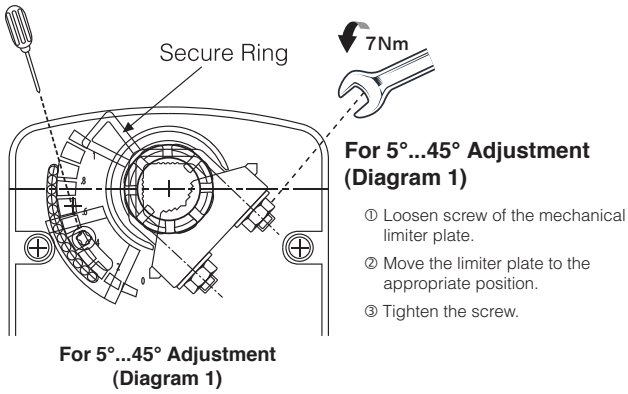
### WIRING DIAGRAM NAFA...05 (S) AUXILIARY SWITCH



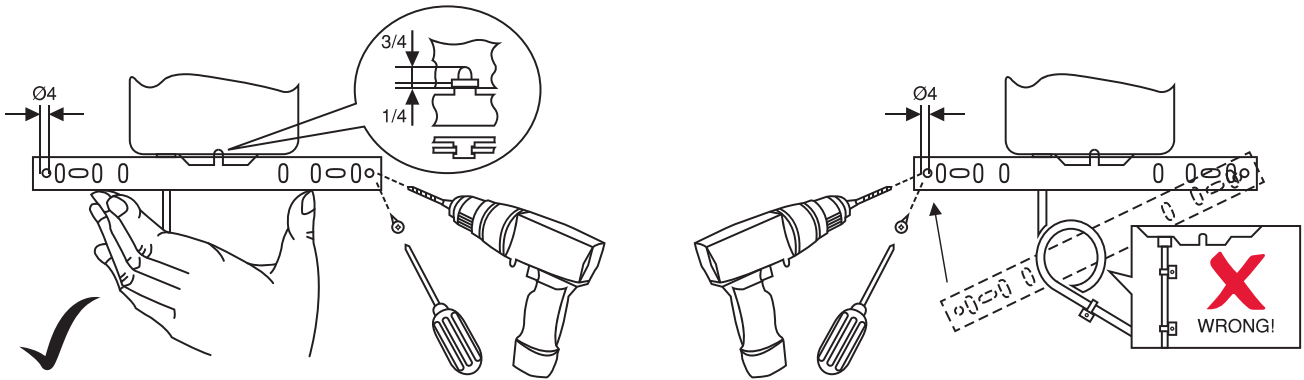
### AUXILIARY SWITCH NAFA...05 (S)

Auxiliary switch (a) factory-set at 5° and (b) at 85°.

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



## 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:  
AC 230 V:

Connect via safety isolating transformer.

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.



# NAFA...08 (S) SERIES

SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

## NAFA...08 (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.



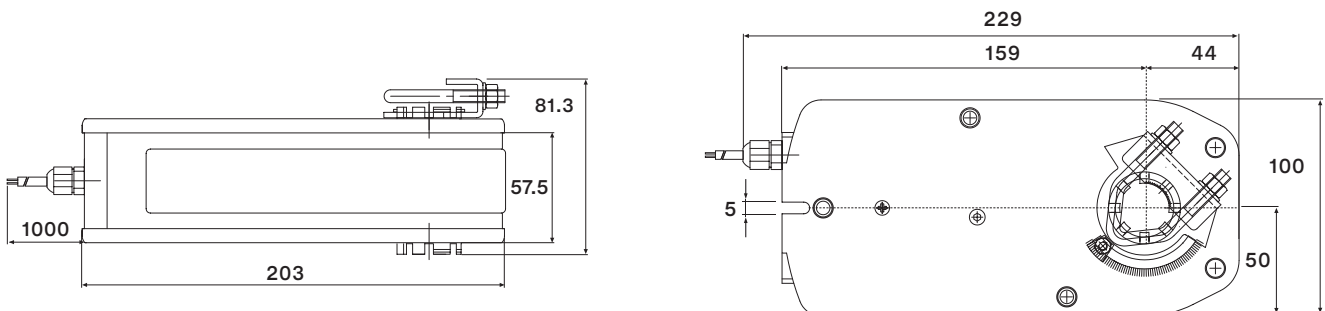
## PRODUCT FEATURE

- Torque 8 Nm
- Damper size 1.5 m<sup>2</sup>
- Power supply AC/DC 24V or AC 230 V
- Shaft dimensions - Ø 12...20 mm / □ 9...14 mm
- Minimum shaft length 85 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride by crank handle when required

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-08	8 Nm	AC/DC 24 V ± 10%	100...120 sec (Spring Back <25 sec)	-
NAFA 1-08S	8 Nm	AC/DC 24 V ± 10%	100...120 sec (Spring Back <25 sec)	2 x SPDT
NAFA 2-08	8 Nm	AC 230 V ± 10%	100...120 sec (Spring Back <25 sec)	-
NAFA 2-08S	8 Nm	AC 230 V ± 10%	100...120 sec (Spring Back <25 sec)	2 x SPDT

## DIMENSION (mm)



## TECHNICAL SPECIFICATION

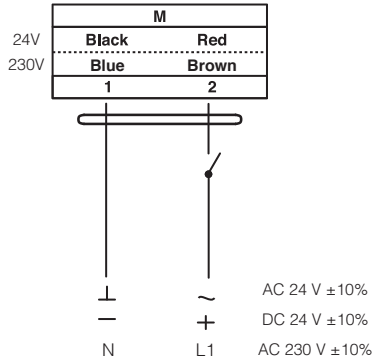
MODEL NUMBER	NAFA 1-08 (S)	NAFA 2-08 (S)
TORQUE	8 Nm	8 Nm
DAMPER SIZE	1.5 m <sup>2</sup>	1.5 m <sup>2</sup>
SHAFT DIMENSION	Ø 12...20 mm / □ 9...14 mm*	Ø 12...20 mm / □ 9...14 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
• OPERATING	5.0 W	5.0 W
• END POSITION	3.5 W	3.5 W
FOR WIRE SIZING	7.0 VA	7.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	-5...+90° (mechanical)	-5...+90° (mechanical)
WEIGHT	2.4 Kg	2.4 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	45 dB	45 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-30°...50° as per IEC 721-3-3	-30°...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

\*Note that shaft dimension has a tolerance offset of ± 0.2mm.

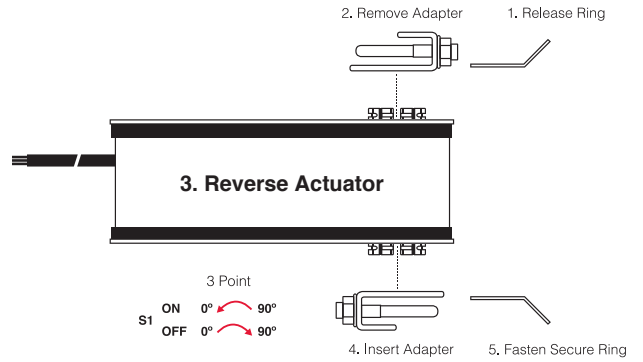
# NAFA...08 (S) SERIES

## SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

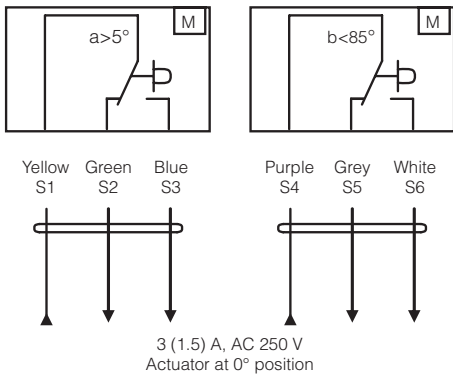
### WIRING DIAGRAM NAFA...08 (S) POWER SUPPLY AC/DC 24V OR AC 230V



### DIRECTION OF ROTATION NAFA...08 (S)



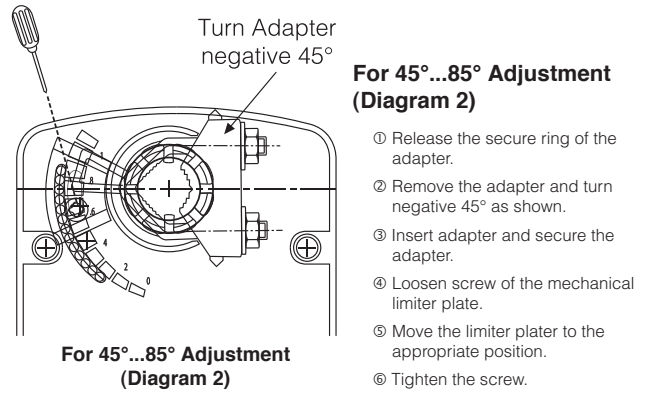
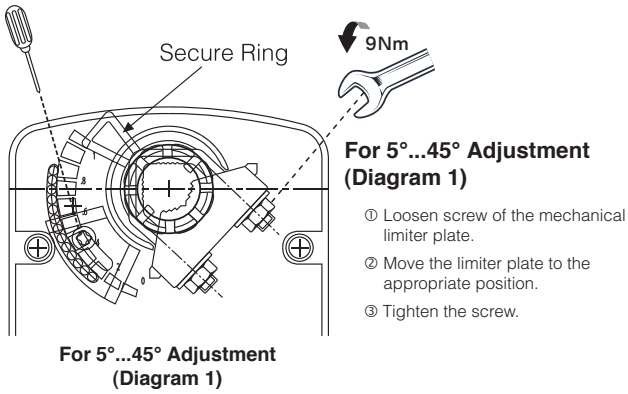
### WIRING DIAGRAM NAFA...08 (S) AUXILIARY SWITCHES



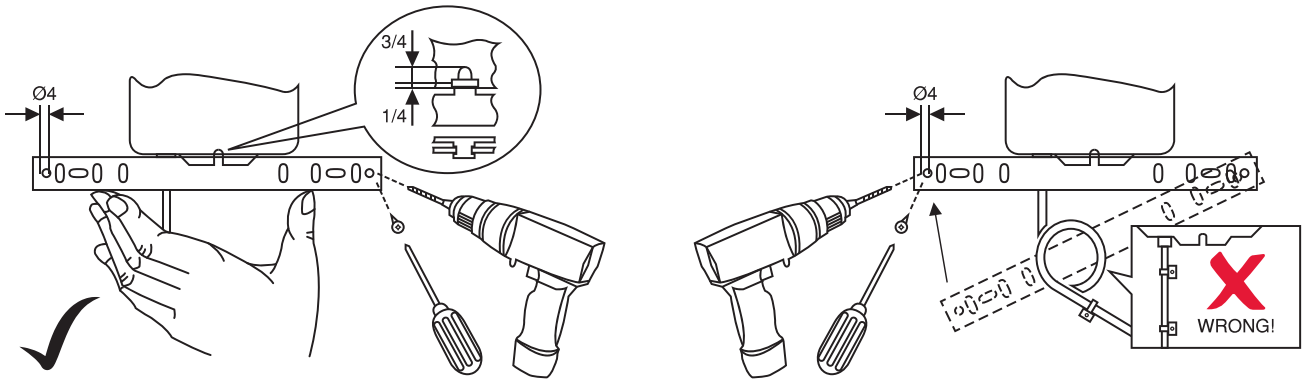
### AUXILIARY SWITCH NAFA...08(S)

Auxiliary switch (a) factory-set at 5° and (b) at 85°.

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



## 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:  
AC 230 V:

Connect via safety isolating transformer.

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.)

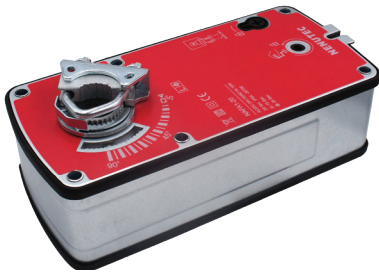
The performance specifications are nominal and conform to acceptable industry standards. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.

# NAFA...20 (S) SERIES

SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

## NAFA...20 (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.



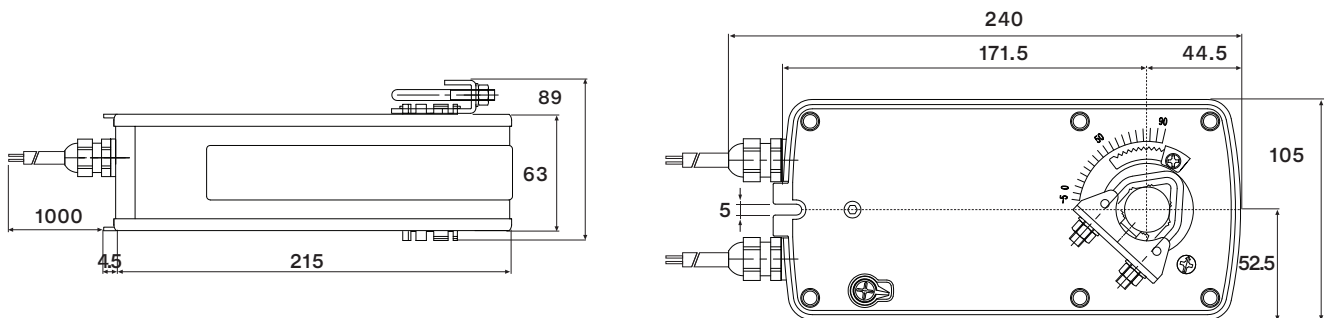
## PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m<sup>2</sup>
- Power supply AC/DC 24V or AC 230 V
- Shaft dimensions - Ø 12...20 mm / □ 9...14 mm
- Minimum shaft length 90 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride by crank handle when required

## MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NAFA 1-20	20 Nm	AC/DC 24 V ± 10%	50...70 sec (Spring Back <35 sec)	-
NAFA 1-20S	20 Nm	AC/DC 24 V ± 10%	50...70 sec (Spring Back <35 sec)	2 x SPDT
NAFA 2-20	20 Nm	AC 230 V ± 10%	50...70 sec (Spring Back <35 sec)	-
NAFA 2-20S	20 Nm	AC 230 V ± 10%	50...70 sec (Spring Back <35 sec)	2 x SPDT

## DIMENSION (mm)



## TECHNICAL SPECIFICATION

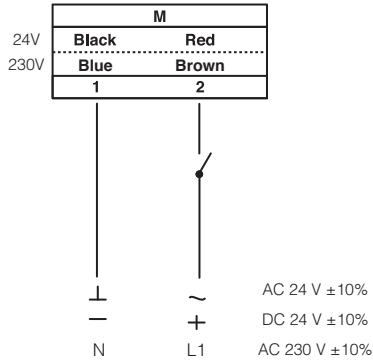
MODEL NUMBER	NAFA 1-20 (S)	NAFA 2-20 (S)
TORQUE	20 Nm	20 Nm
DAMPER SIZE	4.0 m <sup>2</sup>	4.0 m <sup>2</sup>
SHAFT DIMENSION	Ø 12...20 mm / 9...14 mm*	Ø 12...20 mm / 9...14 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
• OPERATING	12.0 W	12.0 W
• END POSITION	8.0 W	8.0 W
FOR WIRE SIZING	14.0 VA	14.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCH RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
WEIGHT	2.8 Kg	2.8 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	75 dB	75 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-30°...50° as per IEC 721-3-3	-30°...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

\*Note that shaft dimension has a tolerance offset of ± 0.2mm.

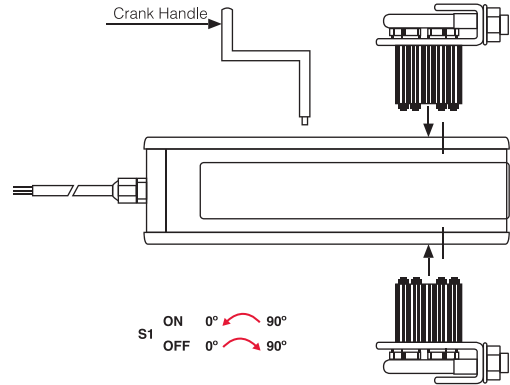
# NAFA...20 (S) SERIES

SPRING RETURN DAMPER ACTUATOR 2 POINT SPRING RETURN CONTROL

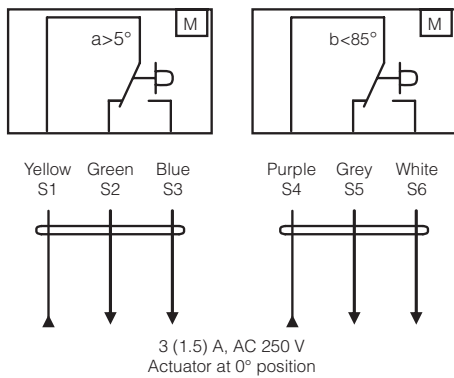
## WIRING DIAGRAM NAFA...20 (S) POWER SUPPLY AC/DC 24V OR AC 230V



## DIRECTION OF ROTATION NAFA...20 (S)



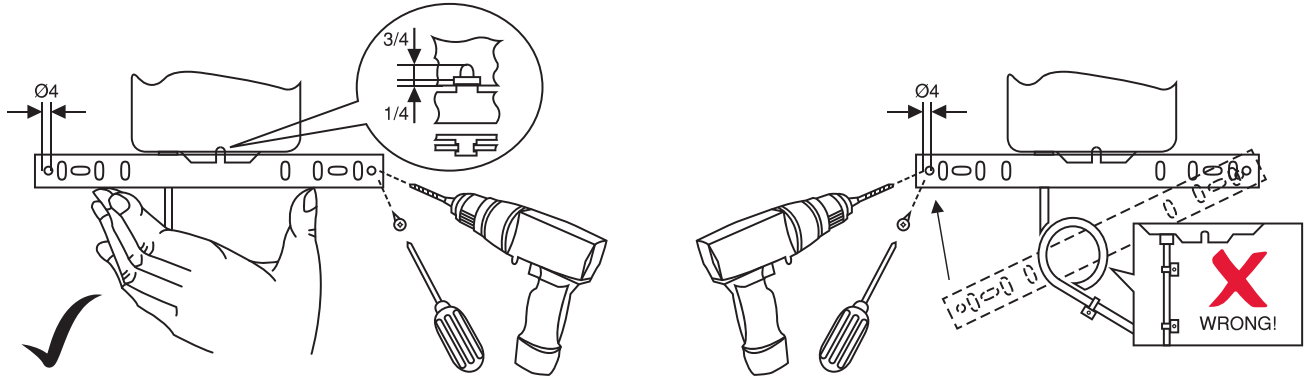
## WIRING DIAGRAM NAFA...20 (S) AUXILIARY SWITCHES



## AUXILIARY SWITCH NAFA...20(S)

Auxiliary switch **(a)** factory-set at 5° and **(b)** at 85°.

## 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:  
AC 230 V:

Connect via safety isolating transformer.

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.