

NACA...02 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL



NACA...02 (S1) SERIES

NACA standard damper actuators are specially designed and produced for applications in the HVAC Systems. Our wide range of Nenutec standard damper actuators has been developed to operate and position air dampers of different sizes.

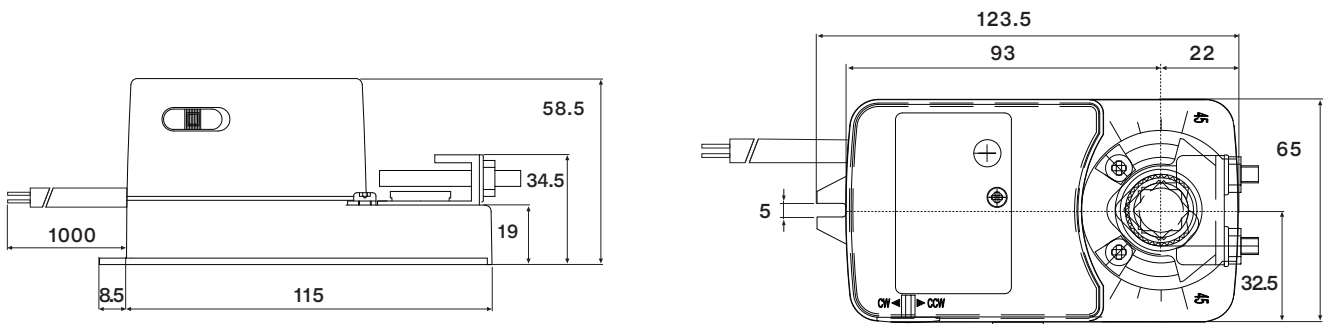
PRODUCT FEATURE

- Torque 2 Nm
- Damper size 0.4 m²
- Power supply AC/DC 24V or AC 230V
- Shaft dimensions - Ø 6...15 mm / □ 5...10 mm
- Minimum shaft length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 1 fixed SPDT auxiliary switch
- Manual over-ride push button when required

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NACA 1-02	2 Nm	AC/DC 24 V ± 10%	60...90 sec	-
NACA 1-02S1	2 Nm	AC/DC 24 V ± 10%	60...90 sec	1 x SPDT
NACA 2-02	2 Nm	AC 230 V ± 10%	60...90 sec	-
NACA 2-02S1	2 Nm	AC 230 V ± 10%	60...90 sec	1 x SPDT

DIMENSION (mm)



TECHNICAL SPECIFICATION

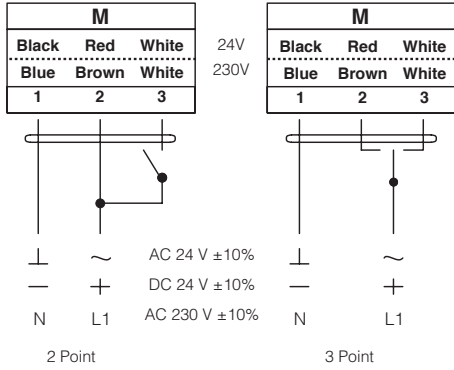
MODEL NUMBER	NACA 1-02 (S1)	NACA 2-02 (S1)
TORQUE	2 Nm	2 Nm
DAMPER SIZE	0.4 m ²	0.4 m ²
SHAFT DIMENSION	Ø 6...15 mm / □ 5...10 mm*	Ø 6...15 mm / □ 5...10 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2/3 point control	2/3 point control
POWER CONSUMPTION		
• OPERATING	2.0 W	2.0 W
• END POSITION	1.0 W	1.0 W
FOR WIRE SIZING	4.0 VA	4.0 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	0.55 Kg	0.55 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.

NACA...02 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

WIRING DIAGRAM NACA...02 (S1) POWER SUPPLY AC/DC 24V OR AC 230V

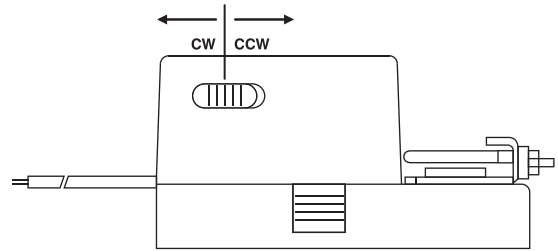


⚠ Connect via safety isolating transformer

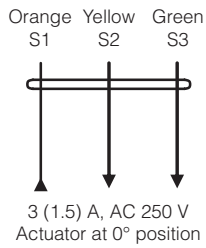
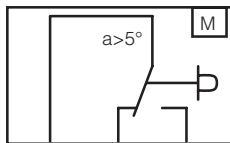
DIRECTION OF ROTATION NACA...02 (S1)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



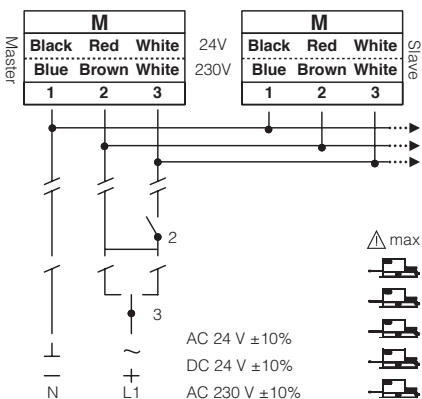
WIRING DIAGRAM NACA...02 (S1) AUXILIARY SWITCH



AUXILIARY SWITCH NACA...02 (S1)

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

WIRING DIAGRAM NACA...02 (S1) PARALLEL CONNECTION



REMARK

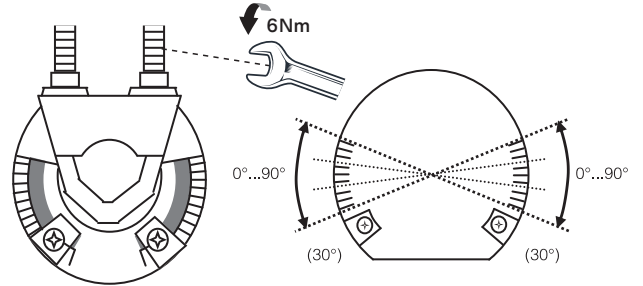
Parallel connection of NACA...02 (S1) actuators are limited to 5. Power consumption must be observed.

LIMITING ANGLE OF ROTATION NACA...02 (S1)

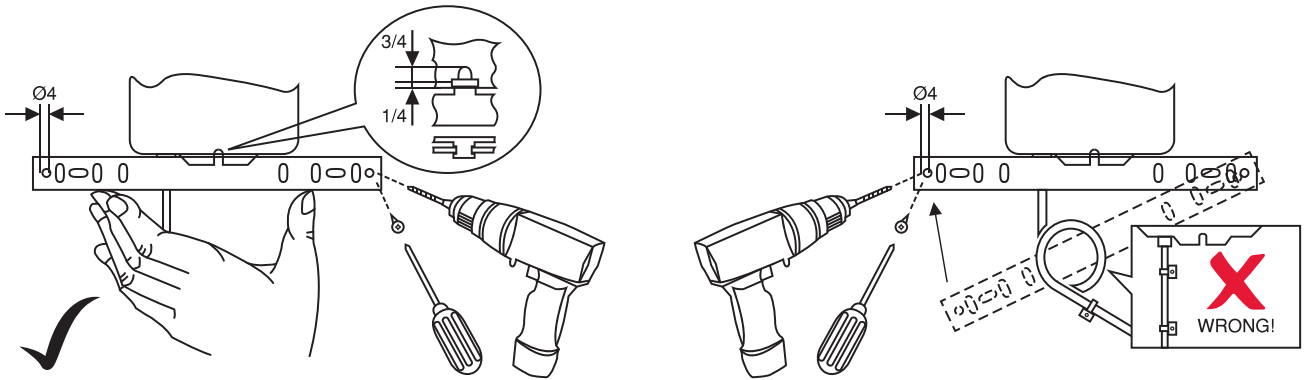
Adjustment of Mechanical Limiter

1. Loosen screw of mechanical limiter
2. Move limiter to appropriate position*
3. Tighten screw

*Working range of 90° can be reduced up to 30° from end position.



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.

NACA...05 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL



NACA...05 (S1) SERIES

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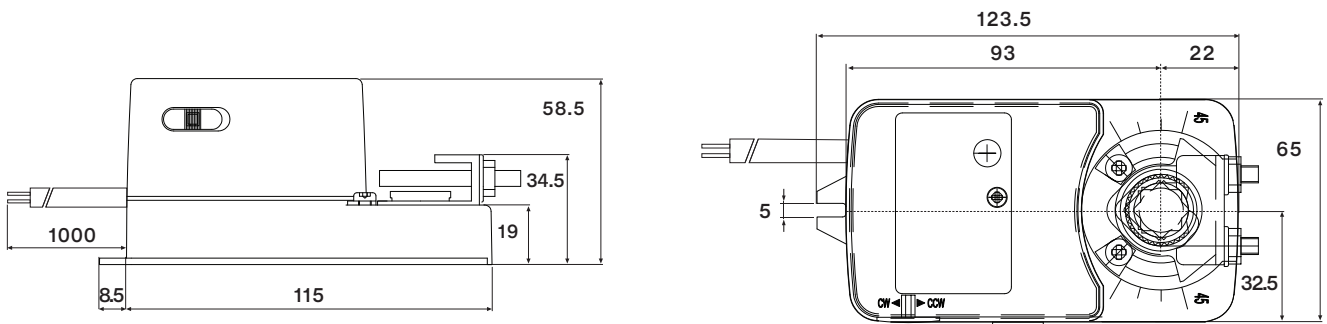
PRODUCT FEATURE

- Torque 5 Nm
- Damper size 1.0 m²
- Power supply AC/DC 24V or AC 230V
- Shaft dimensions - Ø 6...15 mm / □ 5...10 mm
- Minimum shaft length 40 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 1 fixed SPDT auxiliary switch
- Manual over-ride push button when required

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NACA 1-05	5 Nm	AC/DC 24 V ± 10%	60...90 sec	-
NACA 1-05S1	5 Nm	AC/DC 24 V ± 10%	60...90 sec	1 x SPDT
NACA 2-05	5 Nm	AC 230 V ± 10%	60...90 sec	-
NACA 2-05S1	5 Nm	AC 230 V ± 10%	60...90 sec	1 x SPDT

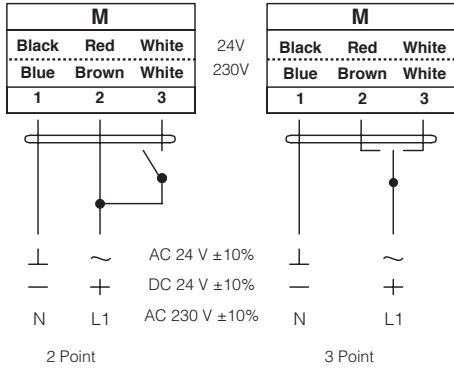
DIMENSION (mm)



NACA...05 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

WIRING DIAGRAM NACA...05 (S1) POWER SUPPLY AC/DC 24V OR AC 230V

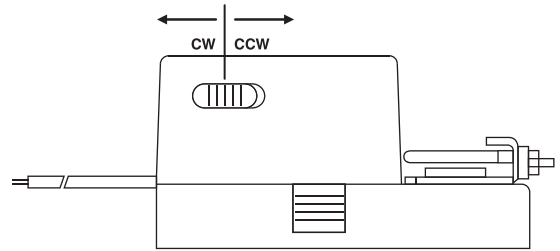


⚠ Connect via safety isolating transformer

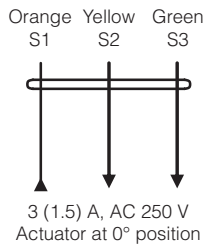
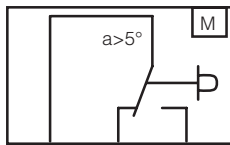
DIRECTION OF ROTATION NACA...05 (S1)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



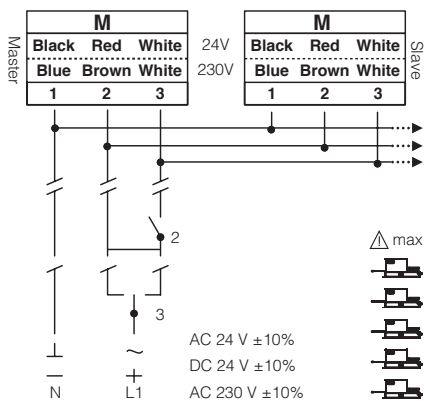
WIRING DIAGRAM NACA...05 (S1) AUXILIARY SWITCH



AUXILIARY SWITCH NACA...05 (S1)

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

WIRING DIAGRAM NACA...05 (S1) PARALLEL CONNECTION



REMARK

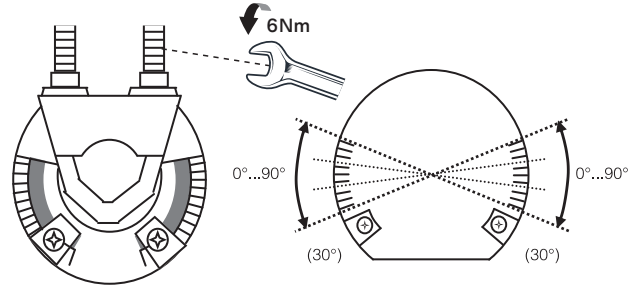
Parallel connection of NACA...05 (S1) actuators are limited to 5. Power consumption must be observed.

LIMITING ANGLE OF ROTATION NACA...05 (S1)

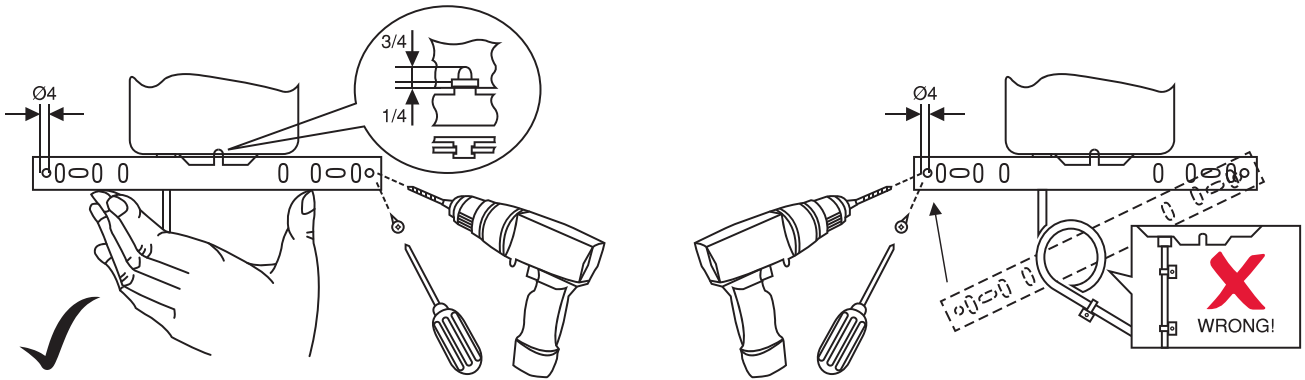
Adjustment of Mechanical Limiter

1. Loosen screw of mechanical limiter
2. Move limiter to appropriate position*
3. Tighten screw

*Working range of 90° can be reduced up to 30° from end position.



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.

NACA...10 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL



NACA...10 (S1) SERIES

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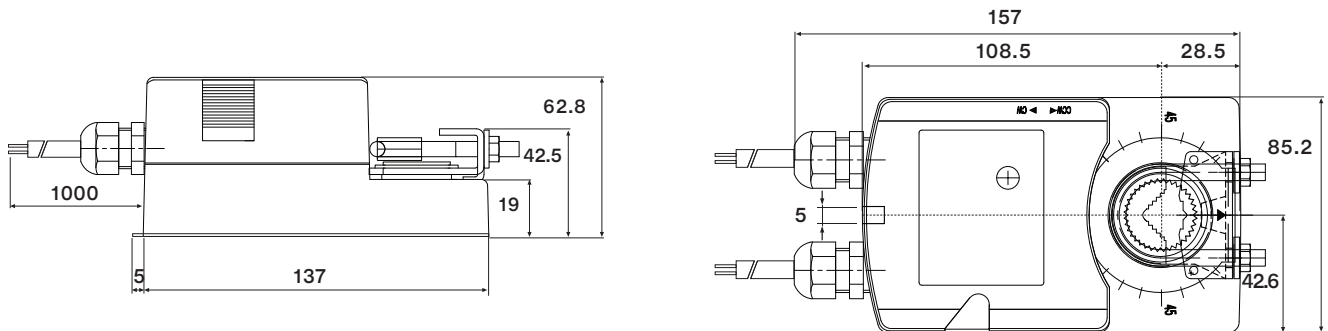
PRODUCT FEATURE

- Torque 10 Nm
- Damper size 2.0 m²
- Power supply AC/DC 24V or AC 230V
- Shaft dimensions - Ø 10...16 mm / □ 7...12 mm
- Minimum shaft length 45 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 1 fixed SPDT auxiliary switch
- Manual over-ride push button when required

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NACA 1-10	10 Nm	AC/DC 24 V ± 10%	70...100 sec	-
NACA 1-10S1	10 Nm	AC/DC 24 V ± 10%	70...100 sec	1 x SPDT
NACA 2-10	10 Nm	AC 230 V ± 10%	70...100 sec	-
NACA 2-10S1	10 Nm	AC 230 V ± 10%	70...100 sec	1 x SPDT

DIMENSION (mm)



TECHNICAL SPECIFICATION

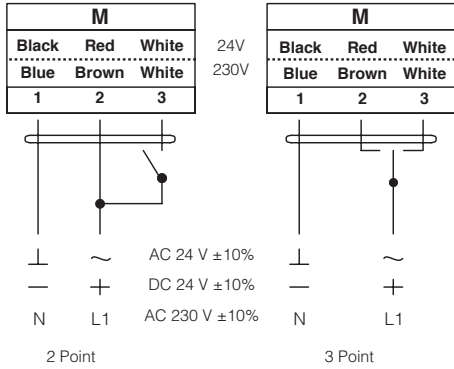
MODEL NUMBER	NACA 1-10 (S1)	NACA 2-10 (S1)
TORQUE	10 Nm	10 Nm
DAMPER SIZE	2.0 m ²	2.0 m ²
SHAFT DIMENSION	Ø 10...16 mm / □ 7...12 mm*	Ø 10...16 mm / □ 7...12 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2/3 point control	2/3 point control
POWER CONSUMPTION		
• OPERATING	1.5 W	1.5 W
• END POSITION	0.5 W	0.5 W
FOR WIRE SIZING	4.0 VA	4.0 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	1.0 Kg	1.0 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.

NACA...10 (S1) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

WIRING DIAGRAM NACA...10 (S1) POWER SUPPLY AC/DC 24V OR AC 230V

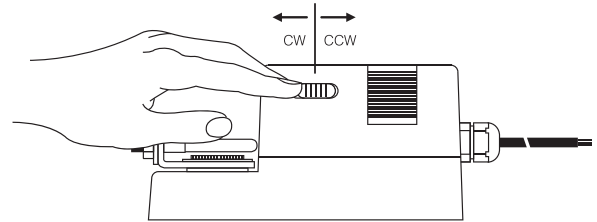


⚠ Connect via safety isolating transformer

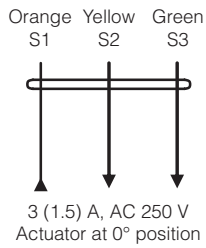
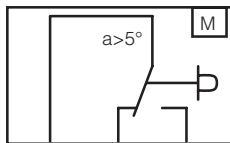
DIRECTION OF ROTATION NACA...10 (S1)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



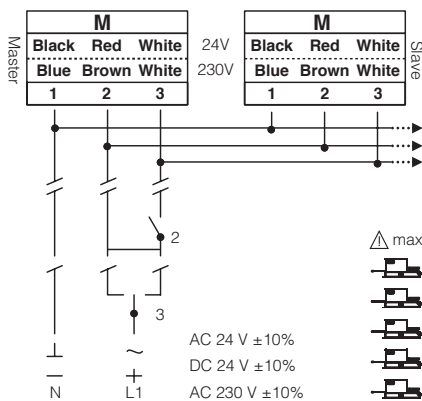
WIRING DIAGRAM NACA...10 (S1) AUXILIARY SWITCH



AUXILIARY SWITCH NACA...10 (S1)

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

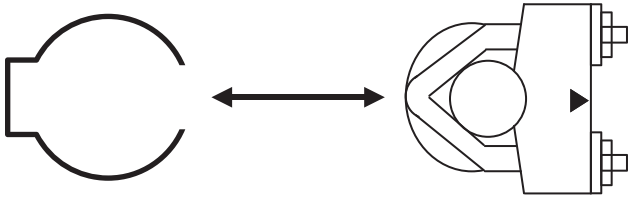
WIRING DIAGRAM NACA...10 (S1) PARALLEL CONNECTION



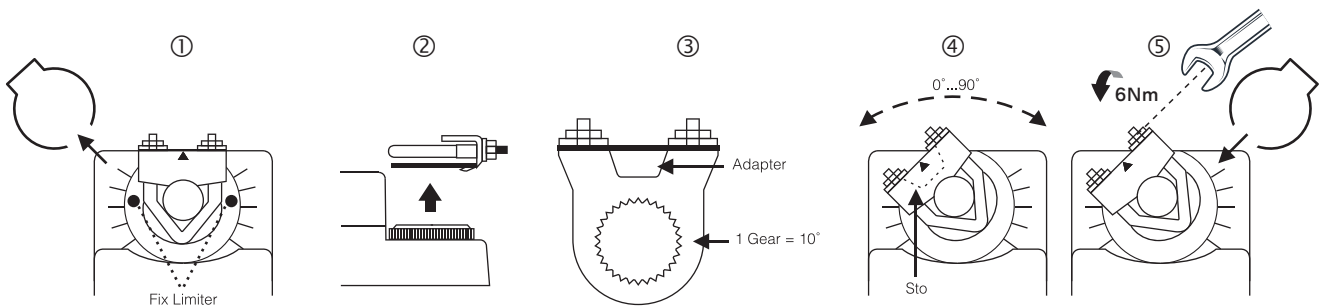
REMARK

Parallel connection of NACA...10 (S1) actuators are limited to 5. Power consumption must be observed.

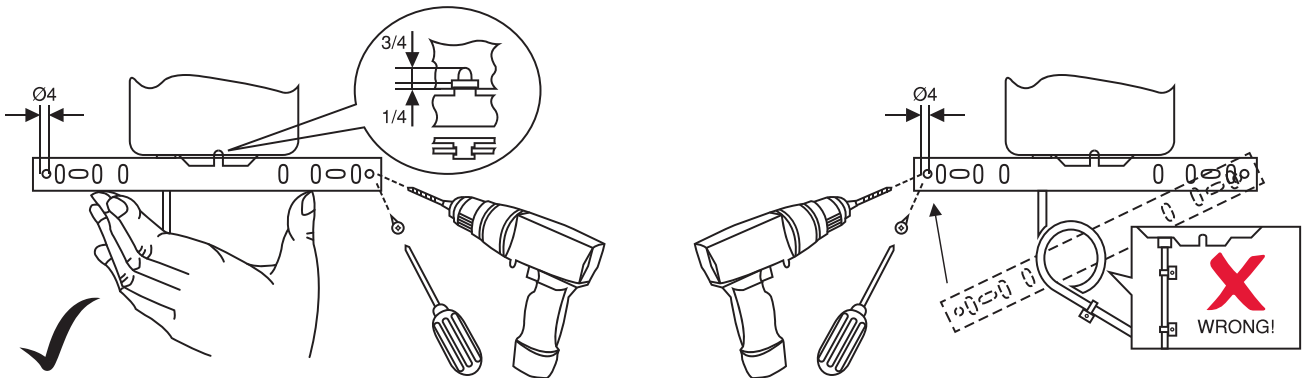
RELEASING THE ADAPTER NACA...10 (S1)



LIMITING ANGLE OF ROTATION NACA...10 (S1)



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. NENUTEQ shall not be liable for damages resulting from misapplication or misuse of its products.

NACA...20 (S) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL



NACA...20 (S) SERIES

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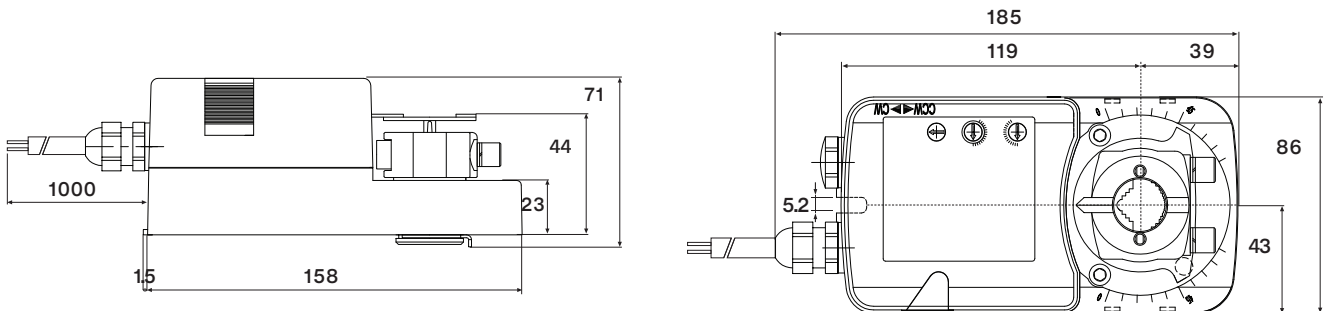
PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m²
- Power supply AC/DC 24V or AC 230V
- Shaft dimensions - Ø 12...20 mm / □ 8.5...14 mm
- Minimum shaft length 50 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride push button when required
- Mounting bracket required for valve body

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NACA 1-20	20 Nm	AC/DC 24 V ± 10%	100...150 sec	-
NACA 1-20S	20 Nm	AC/DC 24 V ± 10%	100...150 sec	2 x SPDT
NACA 2-20	20 Nm	AC 230 V ± 10%	100...150 sec	-
NACA 2-20S	20 Nm	AC 230 V ± 10%	100...150 sec	2 x SPDT

DIMENSION (mm)



TECHNICAL SPECIFICATION

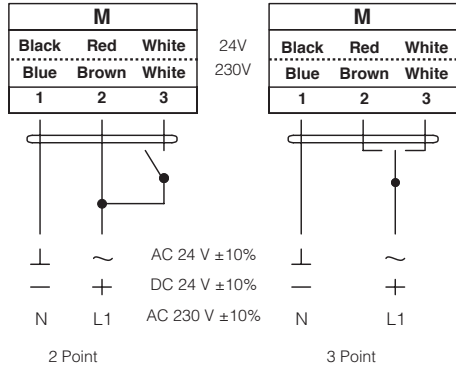
MODEL NUMBER	NACA 1-20 (S)	NACA 2-20 (S)
TORQUE	20 Nm	20 Nm
DAMPER SIZE	4.0 m ²	4.0 m ²
SHAFT DIMENSION	Ø 12...20 mm / □ 8.5...14 mm*	Ø 12...20 mm / □ 8.5...14 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2/3 point control	2/3 point control
POWER CONSUMPTION		
• OPERATING	3.0 W	3.0 W
• END POSITION	1.0 W	1.0 W
FOR WIRE SIZING	6.0 VA	6.0 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	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.

NACA...20 (S) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

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

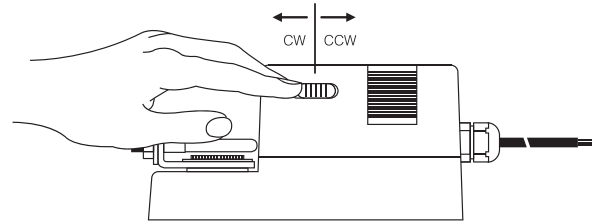


⚠ Connect via safety isolating transformer

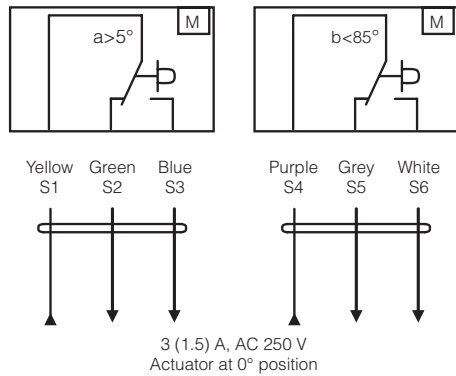
DIRECTION OF ROTATION NACA...20 (S)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



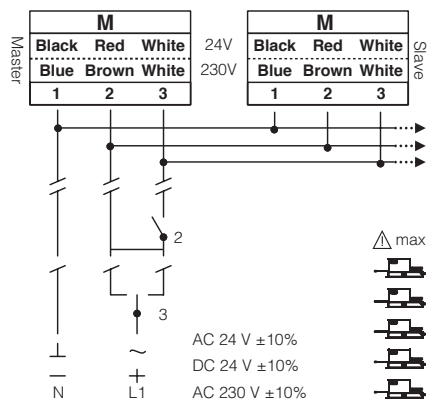
WIRING DIAGRAM NACA...20 (S) AUXILIARY SWITCH



AUXILIARY SWITCH NACA...20 (S)

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

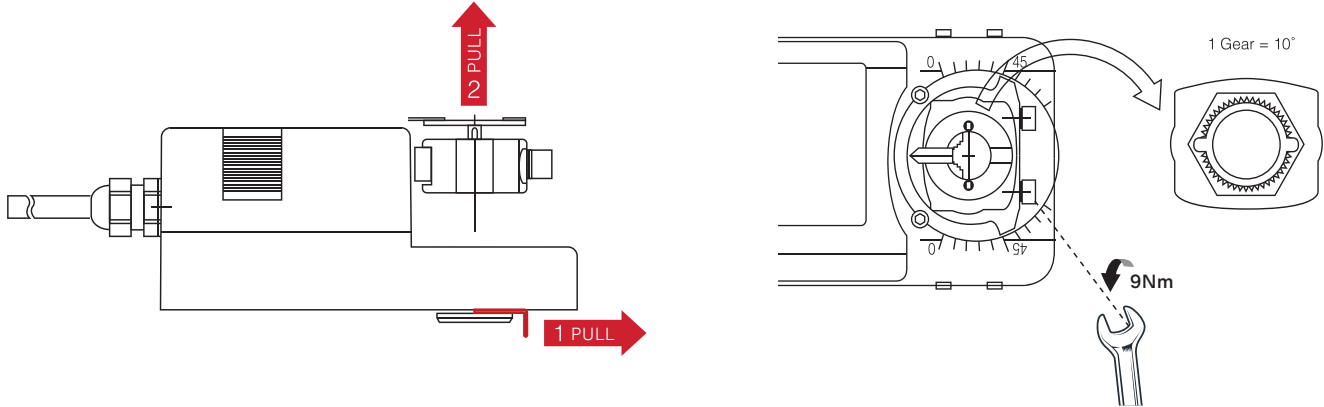
WIRING DIAGRAM NACA...20 (S) PARALLEL CONNECTION



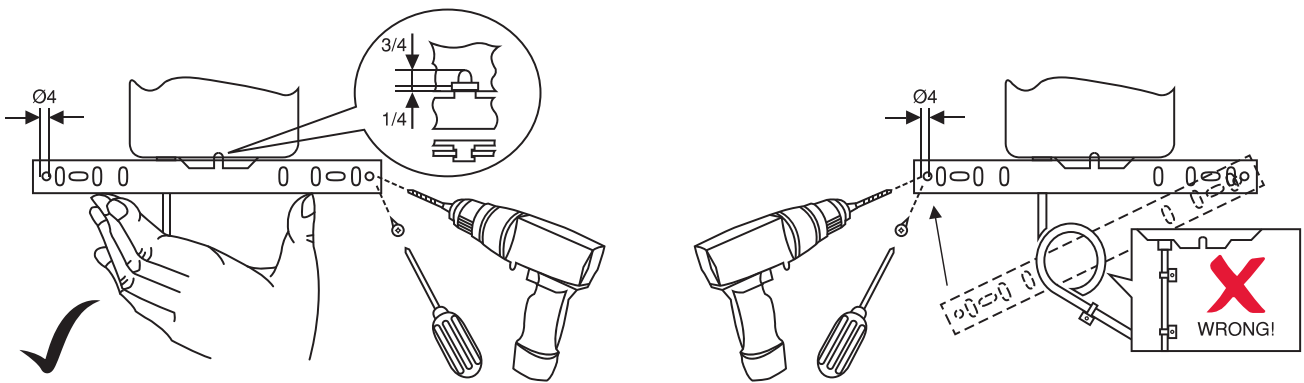
REMARK

Parallel connection of NACA...20 (S) actuators are limited to 5. Power consumption must be observed.

ANGLE OF ROTATION LIMITING



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.

NACA...40 (S) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

NACA...40 (S) SERIES

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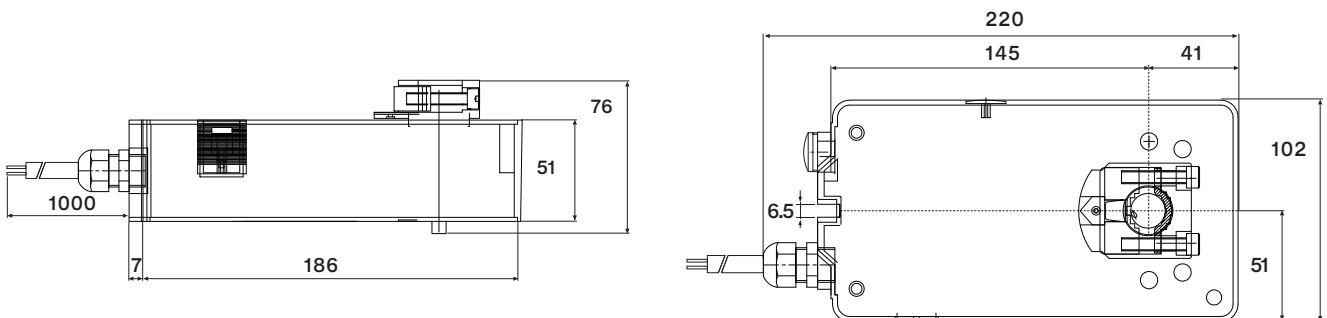
PRODUCT FEATURE

- Torque 40 Nm
- Damper size 7.0 m²
- Power supply AC/DC 24V or AC 230V
- Shaft dimensions - Ø 14...20 mm / □ 10...14 mm
- Minimum shaft length 80 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 2 fixed SPDT auxiliary switches
- Manual over-ride push button when required
- Mounting bracket required for valve body

MODEL SELECTION TABLE

MODEL / TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCH
NACA 1-40	40 Nm	AC/DC 24 V ± 10%	150...180 sec	-
NACA 1-40S	40 Nm	AC/DC 24 V ± 10%	150...180 sec	2 x SPDT
NACA 2-40	40 Nm	AC 230 V ± 10%	150...180 sec	-
NACA 2-40S	40 Nm	AC 230 V ± 10%	150...180 sec	2 x SPDT

DIMENSION (mm)



TECHNICAL SPECIFICATION

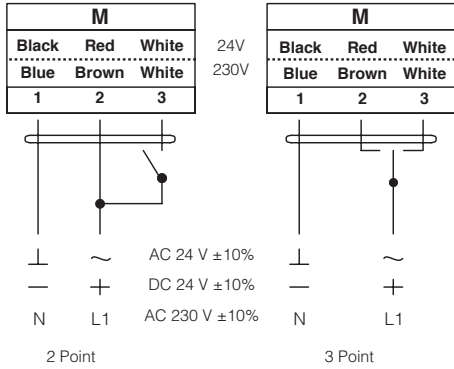
MODEL NUMBER	NACA 1-40 (S)	NACA 2-40 (S)
TORQUE	40 Nm	40 Nm
DAMPER SIZE	7.0 m ²	7.0 m ²
SHAFT DIMENSION	Ø 14...20 mm / □ 10...14 mm*	Ø 14...20 mm / □ 10...14 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2/3 point control	2/3 point control
POWER CONSUMPTION		
• OPERATING	2.5 W	2.5 W
• END POSITION	1.0 W	1.0 W
FOR WIRE SIZING	5.0 VA	5.0 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	2.0 Kg	2.0 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.

NACA...40 (S) SERIES

STANDARD DAMPER ACTUATOR 2/3 POINT CONTROL

WIRING DIAGRAM NACA...40 (S) POWER SUPPLY AC/DC 24V OR AC 230V

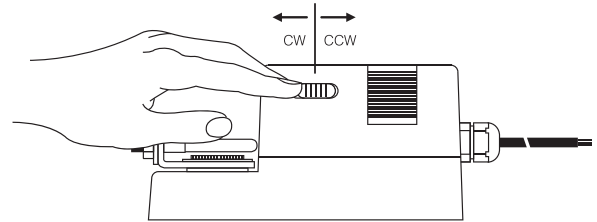


⚠ Connect via safety isolating transformer

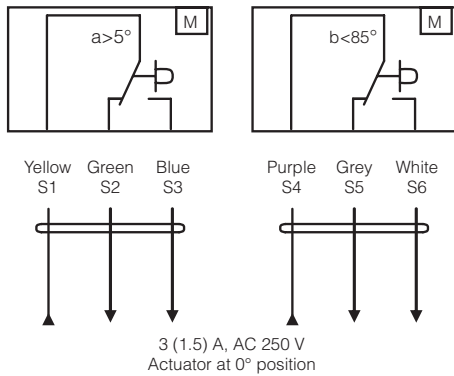
DIRECTION OF ROTATION NACA...40 (S)

Default factory setting: CW.

Direction of rotation can be changed by toggling between CW/CCW switch on the actuator's housing.



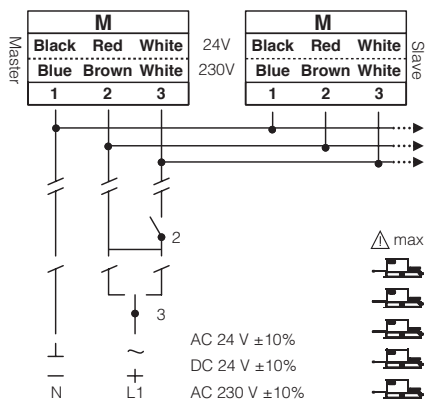
WIRING DIAGRAM NACA...40 (S) AUXILIARY SWITCH



AUXILIARY SWITCH NACA...40 (S)

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

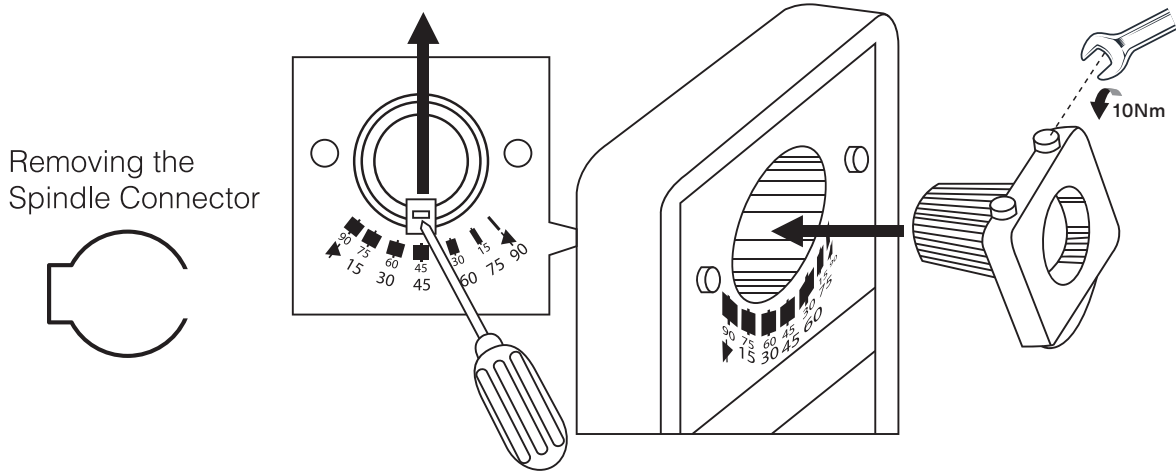
WIRING DIAGRAM NACA...40 (S) PARALLEL CONNECTION



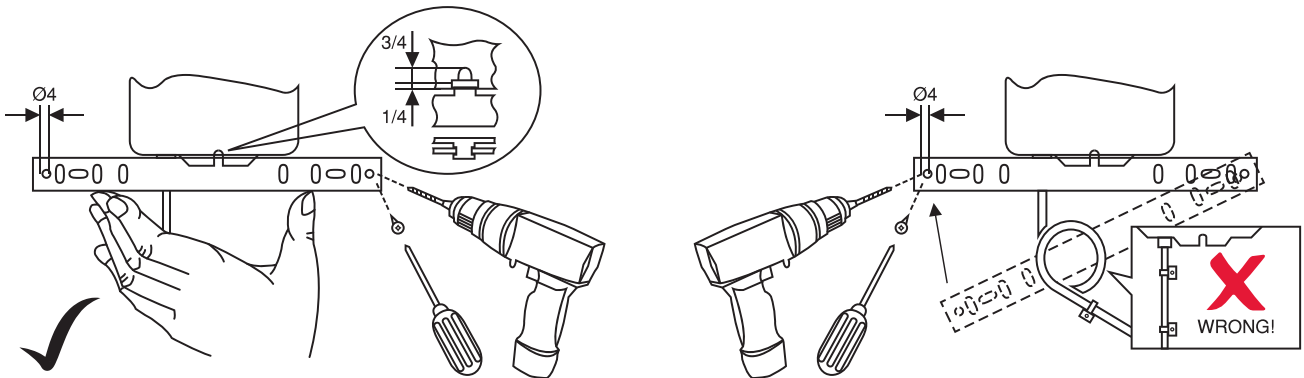
REMARK

Parallel connection of NACA...40 (S) actuators are limited to 5. Power consumption must be observed.

ADJUSTING THE LIMITS FOR ROTATION



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.