

NACM...20 (S) SERIES

STANDARD DAMPER ACTUATOR MODULATING CONTROL



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NACM 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.

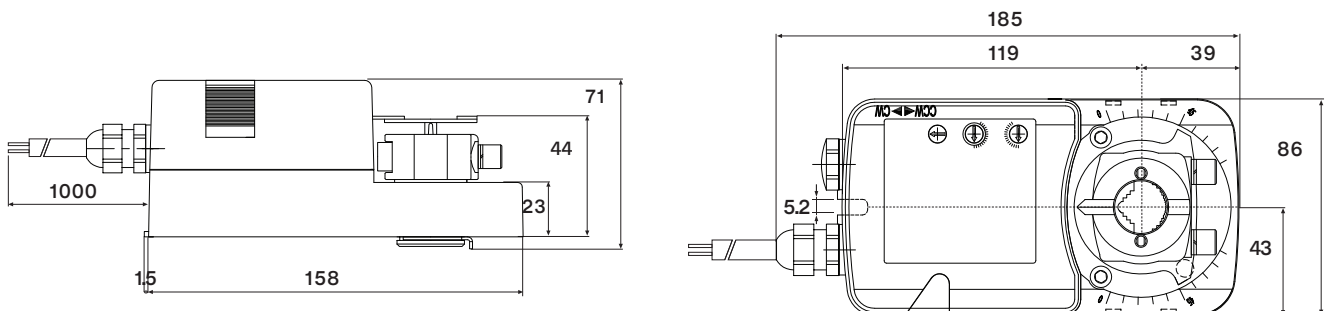
PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m²
- Power supply AC/DC 24V or AC 230 V
- Control modulating DC 0(2)...10 V & 0(4)...20 mA
- 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 adjustable 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
NACM 1.1-20	20 Nm	ACv/DC 24 V ± 10%	100...150 sec	-
NACM 1.1-20S	20 Nm	AC/DC 24 V ± 10%	100...150 sec	2 x SPDT (Adjustable)
NACM 2.2-20	20 Nm	AC 230 V ± 10%	100...150 sec	-
NACM 2.2-20S	20 Nm	AC 230 V ± 10%	100...150 sec	2 x SPDT (Adjustable)

DIMENSION (mm)



TECHNICAL SPECIFICATION

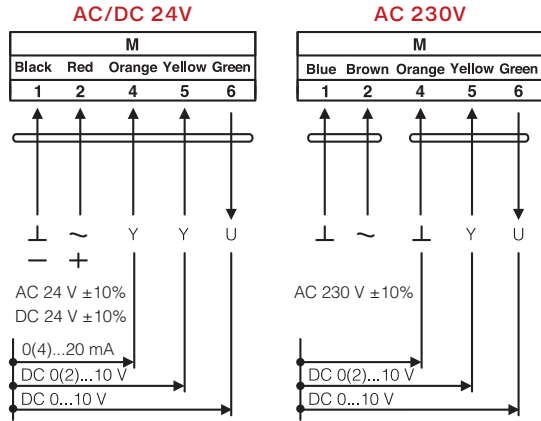
MODEL NUMBER	NACM 1.1-20 (S)	NACM 2.2-20 (S)
TORQUE	20 Nm	20 Nm
DAMPER SIZE	4.0 m ²	4.0 m ²
SHAFT DIMENSION	Ø 12...20 mm / □ 8.5...14 mm*	Ø 12...20 mm / □ 8.5...14 mm*
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL (INPUT)	DC 0(2)...10 V / 0(4)...20 mA	DC 0(2)...10 V
POSITION SIGNAL (OUTPUT)	DC 0...10 V	DC 0...10 V
POWER CONSUMPTION		
• OPERATING	4.0 W	1.0 W
• END POSITION	2.0 W	1.0 W
FOR WIRE SIZING	6.0 VA	4.0 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	1.2 Kg	1.2 Kg
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	45 dB	45 dB
IP PROTECTION	IP54	IP54
OPERATING TEMPERATURE	-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

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

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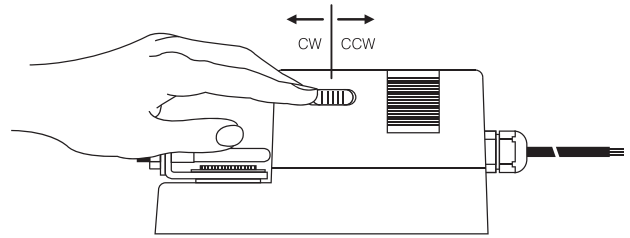
WIRING DIAGRAM NACM...20 (S) POWER SUPPLY AC/DC 24V OR AC 230V



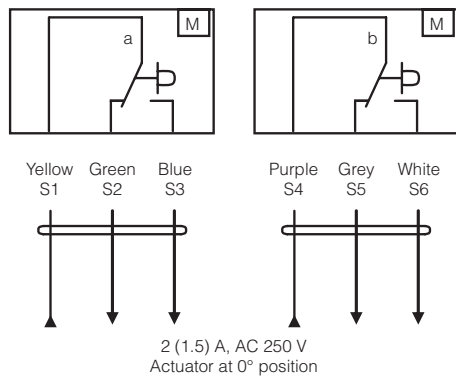
DIRECTION OF ROTATION NACM...20 (S)

Default factory setting: CW.

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



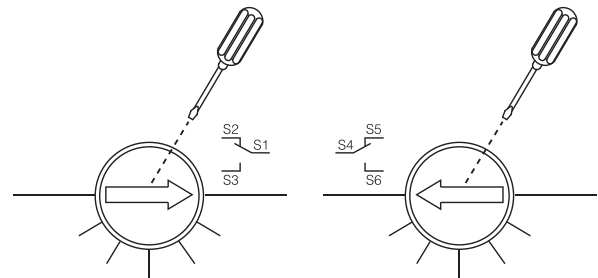
WIRING DIAGRAM NACM...20 (S) AUXILIARY SWITCHES



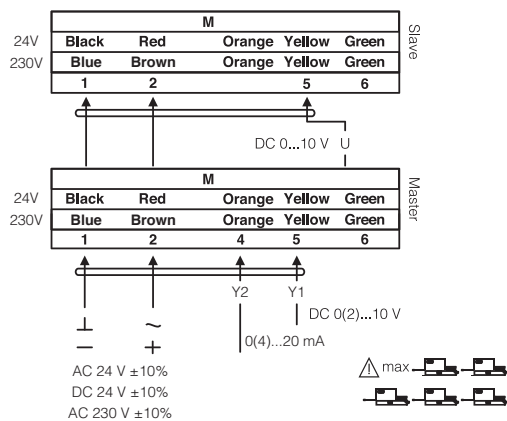
AUXILIARY SWITCH NACM...20 (S)

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

Both the auxiliary switches **(a)** and **(b)** can be optimally adjusted between 0°...90°.



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



REMARK

During parallel operation, the output signal (terminal 6, DC 0...10 V) of the master actuator must be connected to terminal 5 of the next slave actuator.

ADJUSTING CONTROL SIGNALS NACM...20 (S)

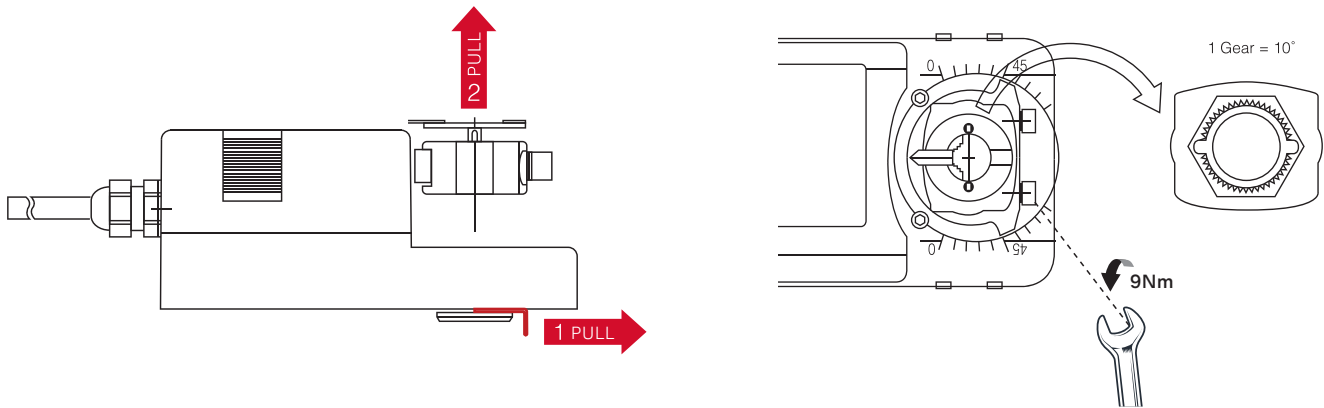
Control Signal 5 DC 0...10V
 Input Resistance Ri100k Ohm

Factory Default Setting

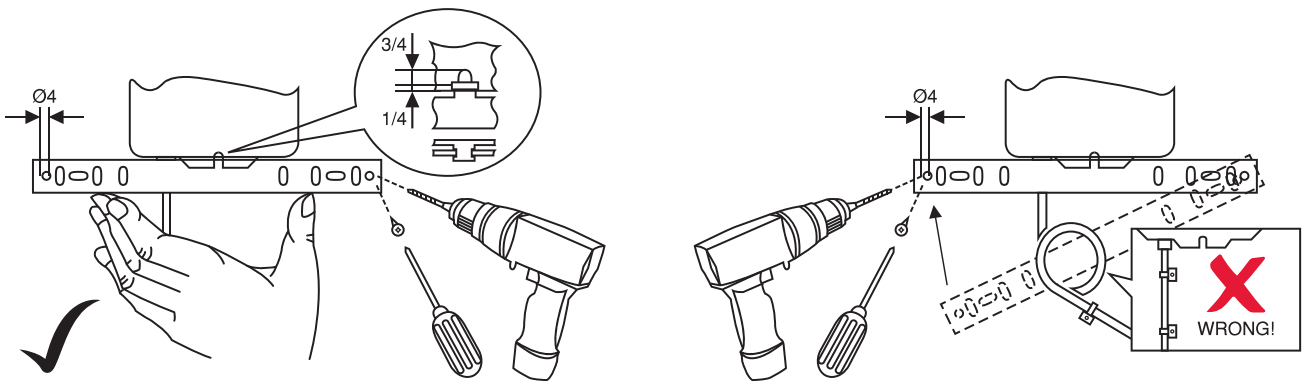
Control Signal 5 DC 2...10V
 Input Resistance Ri500k Ohm

On Request

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:
 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.