

## ELECTRONIC RETURN DAMPER ACTUATOR

20 Nm | MODULATING CONTROL



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

### NECM...20 (S) SERIES

NECM series actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in HVAC systems fan coil and laboratory applications.

Electronic Return® (ER) is able to manage short voltage interruptions for max. 4 seconds. In case of longer voltage interruption actuator will move the damper or valve to a predefined emergency position (EPS).

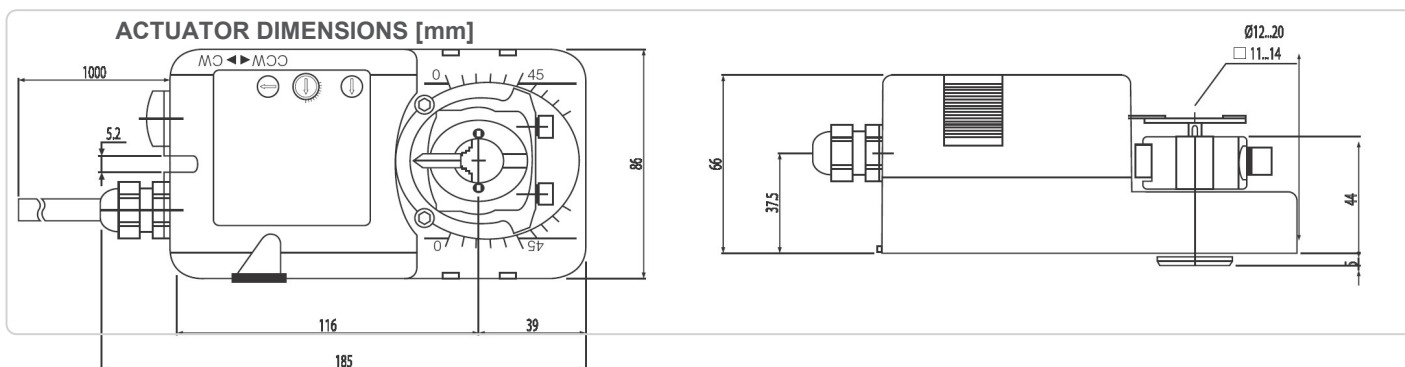
- Torque 20 Nm.
- For damper size ca. 4,0 m<sup>2</sup>.
- Power supply 24 V<sub>AC/DC</sub>
- Modulating control 0(2)...10 V<sub>DC</sub> and 0(4)...20 mA.
- Manual over-ride push button.
- Shaft dimension: Ø 12...20 mm / square 11...14 mm.
- Minimum shaft length 40 mm.
- Selectable direction of rotation by switch.
- Adjustable angle of rotation.
- Actuator available with 1 m connection cable.
- Optional 2 SPDT auxiliary switches.
- Customised versions and functions (on request).

#### MODEL SELECTION TABLE

Torque	Running time	Return time – safety function	Power supply	Auxiliary switches	Model/type
20 Nm	70...100 s	65 s	24 V <sub>AC/DC</sub> ± 10%	No	NECM 1.1-20
20 Nm	70...100 s	65 s	24 V <sub>AC/DC</sub> ± 10%	2 x SPDT (adjustable)	NECM 1.1-20S


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### TECHNICAL SPECIFICATION

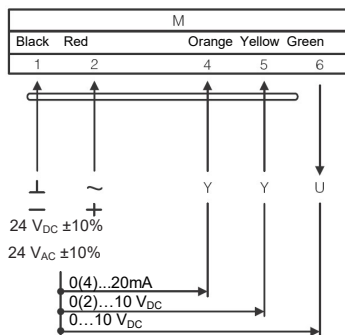
#### NECM 1.1-20 (S)

Torque	20 Nm
Damper size	4.0 m <sup>2</sup>
Shaft dimensions	Ø 12...20 mm / square 11...14 mm
Power supply	24 V <sub>AC/DC</sub> ± 10%
Frequency	50...60 Hz
Control signal (input)	0(2)...10 V <sub>DC</sub> , 0(4)...20 mA
Position signal (output)	0...10 V <sub>DC</sub>
Power consumption	
– Operating	7.2 W
– At end position	1.2 W
Rated power	8.0 VA
Protection class	III 
Auxiliary switches rating	3 (1.5) A/250 V <sub>AC</sub>
Electrical wiring	1 m Cable
Angle of rotation	90° (95° mechanical limitation)
Weight	1.2 kg
Durability	60,000 rotations
Sound level	40 dB
Protection degree	IP54
Working temperature range	-20°C...50°C as per IEC 721-3-3
Storage temperature	-30°C...+60°C / IEC 721-3-2
Humidity	5...95% rH (non condensing) / EN
Maintenance	Maintenance free
Principle of operation	Type 1 (acc. to EN 60730-1)
Electromagnetic compatibility	CE & ISO 9000 to EN / EEC

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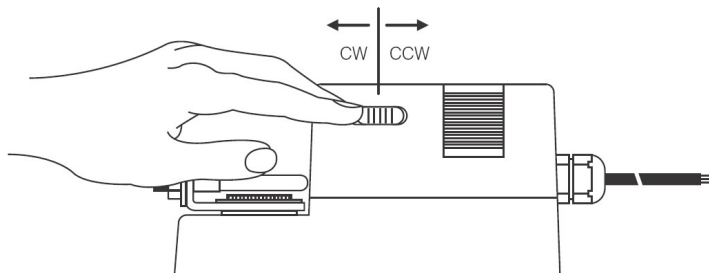
Wiring Diagram NECM...20 (S)  
Power supply 24 V<sub>AC</sub> / DC



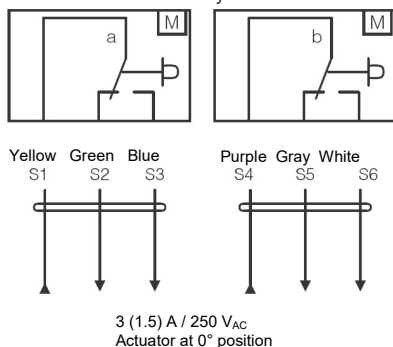
#### ■ Changing direction of rotation NECM ...20 (S)

Default factory setting.

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

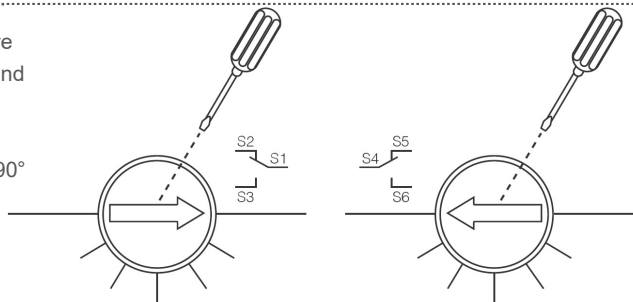


Wiring Diagram NECM...20 (S)  
Auxiliary switch

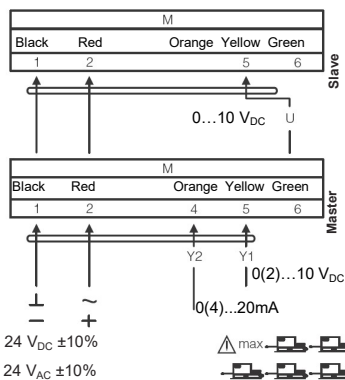


#### ■ Auxiliary switches NECM ...20 (S)

Auxiliary switch settings are by factory 5° for switch **a** and 85° for switch **b**. The auxiliary switches can be adjusted in the range 0°...90° as required.



Wiring Diagram NECM...20 (S)  
Parallel connection



#### ■ Note

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

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#### ■ Adjusting control signals NECM ...20 (S)

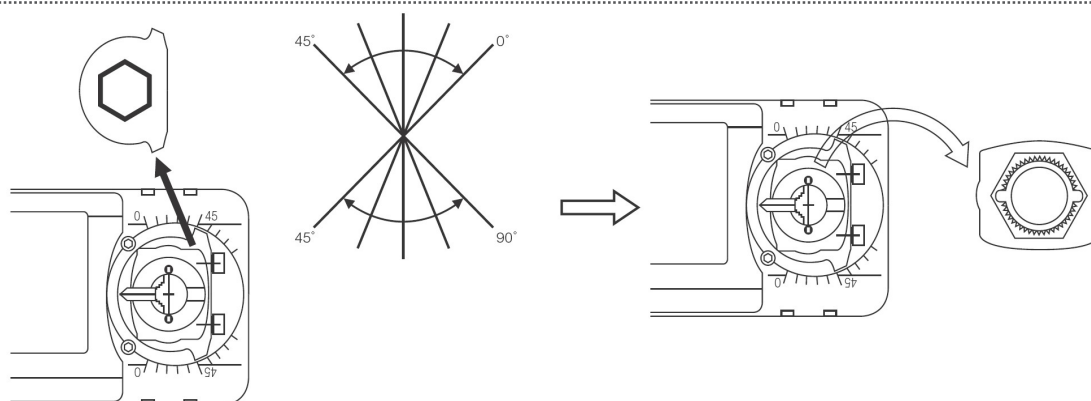
Control signal 5      0...10 V<sub>DC</sub>  
Input resistance      Ri = 100 kOhm

#### Factory default setting

Control signal 5      2...10 V<sub>DC</sub>  
Input resistance      Ri = 500 kOhm

#### On request

#### ■ Limiting angle rotation NECM ...20 (S)



#### ⚠ 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>AC/DC</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 3 mm contact gap.)

Consult NENUTEC representatives for specific requirements and material selections for your intended application. The entire content of this technical datasheet is protected by copyright. All rights are reserved ©.

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.



#### IMPORTANT REMARK

The NENUTEC NECM...(S) actuator series can be equipped with a variety of NENUTEC products characterized 2-way and 3-way ball valves of NVCB... series and NPG-1 position transmitter accessories.

Contact NENUTEC representatives or factory for the specific requirements and material selection for your intended application.

#### 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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