

# NECM...10 (S1) SERIES

ELECTRONIC RETURN DAMPER ACTUATOR MODULATING CONTROL

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NECM series actuators with Electronic Return® (ER) function are designed and produced for extended functionalities in HVAC systems: air handling equipment, fan coils and laboratory applications. Electronic Return® (ER) is able to manage short voltage interruptions for max. 10 seconds.



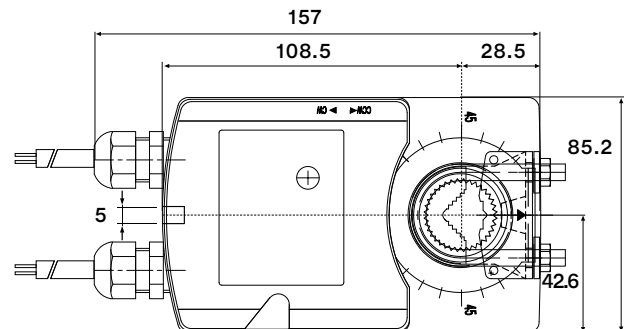
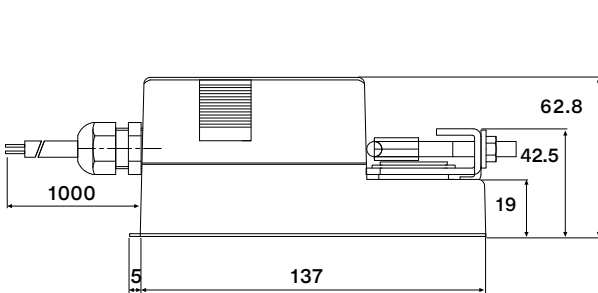
## PRODUCT FEATURE

- Torque 10 Nm
- Damper size 2.0 m<sup>2</sup>
- Power supply AC/DC 24V
- Control modulating DC 0(2)...10 V / 0(4)...20 mA
- Shaft dimensions - Ø 10...20 mm / □ 5...14 mm
- Minimum shaft length 45 mm
- Adjustable angle of rotation
- Selectable direction of rotation of reversing actuator
- Optional 1 adjustable SPDT auxiliary switch
- Manual over-ride push button when required

## MODEL SELECTION TABLE

MODEL /TYPE	TORQUE	POWER SUPPLY	RUNNING	RETURN	AUXILIARY SWITCH
NECM 1.1-10	10 Nm	AC/DC 24V ± 10%	60...90 sec	35 sec	-
NECM 1.1-10S1	10 Nm	AC/DC 24V ± 10%	60...90 sec	35 sec	1 x SPDT (Adjustable)

## DIMENSION (mm)



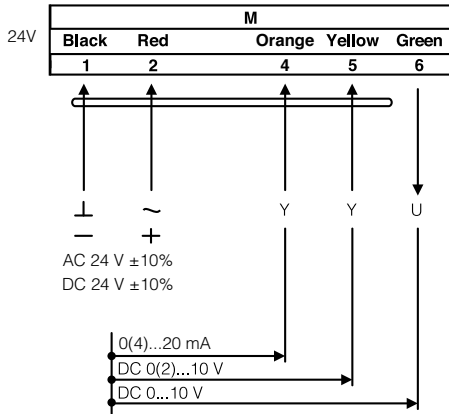
## TECHNICAL SPECIFICATION

<b>MODEL NUMBER</b>	NECM 1.1 (S1)
<b>TORQUE</b>	10 Nm
<b>DAMPER SIZE</b>	2.0 m <sup>2</sup>
<b>SHAFT DIMENSION</b>	Ø 10...20 mm / □ 5...14 mm
<b>POWER SUPPLY</b>	AC/DC 24 V ± 10%
<b>FREQUENCY</b>	50...60 Hz
<b>CONTROL SIGNAL (INPUT)</b>	DC 0(2)...10 V, 0(4)...20 mA
<b>POSITION SIGNAL (OUTPUT)</b>	DC 0...10 V
<b>POWER CONSUMPTION</b>	
• OPERATING	7.2 W
• END POSITION	1.2 W
<b>FOR WIRE SIZING</b>	6.5 VA
<b>ELECTRICAL CONNECTION</b>	1 m Cable
<b>AUXILIARY SWITCH RATING</b>	2 (1.5) A / AC 250 V
<b>PROTECTION CLASS</b>	Class III ⚡
<b>ANGLE OF ROTATION</b>	90° (95° mechanical)
<b>WEIGHT</b>	< 1.0 Kg
<b>LIFE CYCLE</b>	60,000 Rotation
<b>SOUND LEVEL</b>	40 dB
<b>IP PROTECTION</b>	IP54
<b>OPERATING TEMPERATURE</b>	-20°...50° as per IEC 721-3-3
<b>NON-OPERATING TEMPERATURE</b>	-30°...+60° C / IEC 721-3-2
<b>AMBIENT HUMIDITY</b>	5%...95% rH non condensing / EN
<b>MAINTENANCE</b>	Maintenance Free
<b>MODE OF OPERATION</b>	Type I / EN 60730-1
<b>EMC</b>	CE & ISO 9000 EN / EEC

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## ELECTRONIC RETURN DAMPER ACTUATOR MODULATING CONTROL

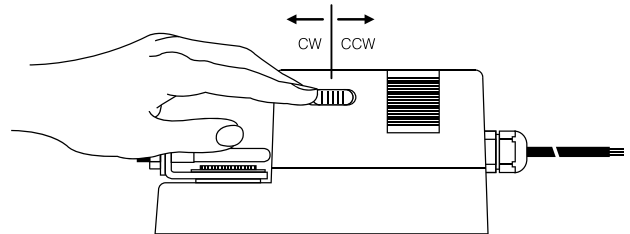
### WIRING DIAGRAM NECM...10 (S1) POWER SUPPLY AC/DC 24V



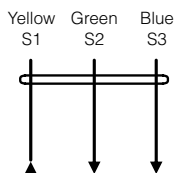
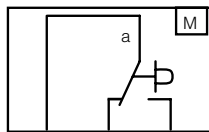
### DIRECTION OF ROTATION NECM...10 (S1)

Default factory setting: CW.

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



### WIRING DIAGRAM NECM...10 (S1) AUXILIARY SWITCH

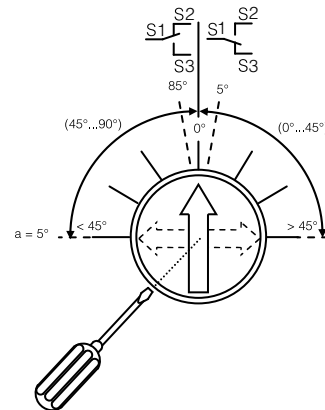


2 (1.5) A, AC 250 V  
Actuator at 0° position

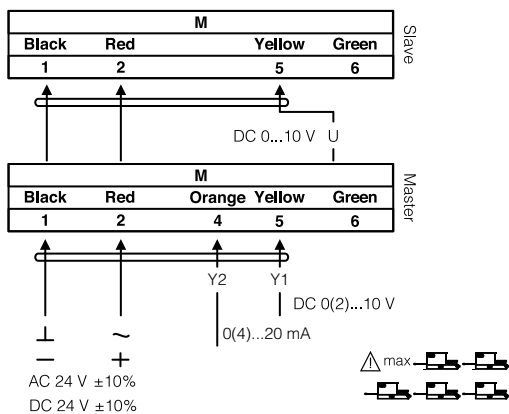
### AUXILIARY SWITCH NECM...10 (S1)

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

Auxiliary switch (a) can be optimally adjusted between 0°...90°.



### WIRING DIAGRAM NECM...10 (S1) 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.

Parallel connection can only be connected by DC voltage.

## RELEASING THE ADAPTER NECM...10 (S1)

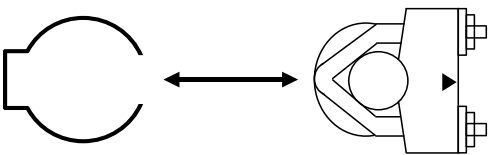
Control Signal 5      DC 0...10V  
 Input Resistance      Ri100k Ohm

### Factory Default Setting

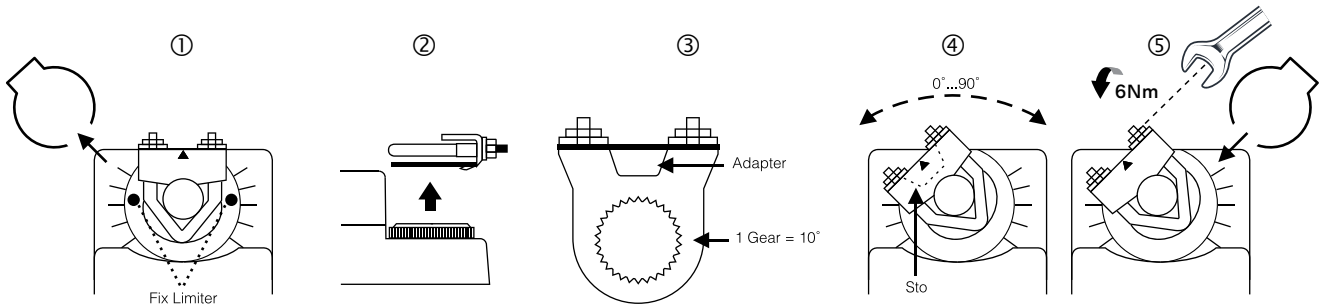
Control Signal 5      DC 2...10V  
 Input Resistance      Ri500k Ohm

### On Request

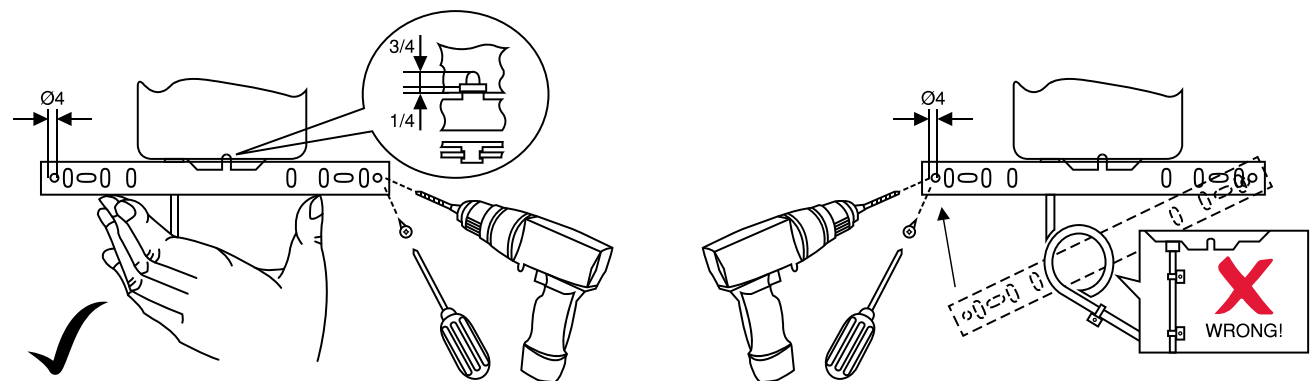
## RELEASING THE ADAPTER NECM...10 (S1)



## LIMITING ANGLE OF ROTATION NECM...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. NENUTEC shall not be liable for damages resulting from misapplication or misuse of its products.