

## Rotary Damper Actuator 2 Points and 3 Points Control and Feedback Potentiometer



■ NENUTEC is proud to offer the 02 and 05 Nm damper actuators of the NACA...02/05 (S1) Nm Series designed specifically applications into the HVAC market, or light Industrial market and telecommunication module.

■ NENUTEC high quality damper actuators have been designed for use with air damper, butterfly valve, characterized ball valve and globe valve with the use of special adapter.

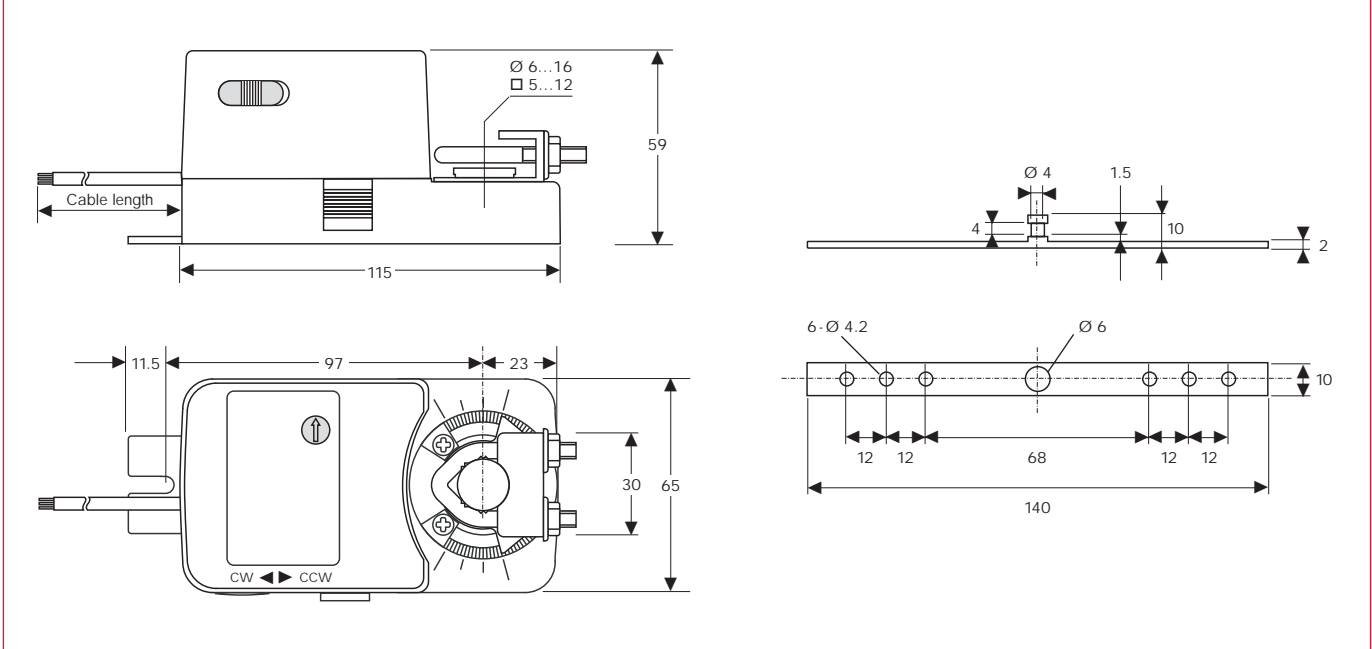
### Product Features

- For air control dampers up to approx. 1 m<sup>2</sup>
- Torque 2 Nm or 5 Nm
- Nominal voltage AC/DC 24 V / AC 230 V
- 2 points and 3 points control
- Universal adapter for easy direct mounting
- Shaft dimension Ø 6...16 mm / 5...12 mm □ square
- 40 mm minimum shaft length
- Anti-rotation bracket provided for stability
- Manual over ride by push button when required
- Selectable direction of rotation CW/CCW
- Adjustable angle of rotation, mechanical end stops
- 1 adjustable SPDT auxiliary switches when requested
- Actuators available with 1 m cable connection
- Customised version available, on request

### Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switches	Model/Type
2 Nm	60...90 sec	AC/DC 24 V ±10%	No	NACA 1-02
			1 x SPDT	NACA 1-02S1
2 Nm	60...90 sec	AC 230 V ±10%	No	NACA 2-02
			1 x SPDT	NACA 2-02S1
5 Nm	70...100 sec	AC/DC 24 V ±10%	No	NACA 1-05
			1 x SPDT	NACA 1-05S1
5 Nm	70...100 sec	AC 230 V ±10%	No	NACA 2-05
			1 x SPDT	NACA 2-05S1
				Feedback signal
2 Nm	60...90 sec	AC/DC 24 V ±10%	10000 Ohm	NACA 1-02P2
2 Nm	60...90 sec	AC 230 V ±10%	10000 Ohm	NACA 2-02P2
5 Nm	70...100 sec	AC/DC 24 V ±10%	10000 Ohm	NACA 1-05P2
5 Nm	70...100 sec	AC 230 V ±10%	10000 Ohm	NACA 2-05P2

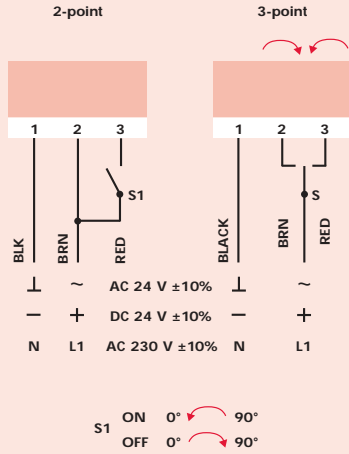
### Actuator Dimensions (mm)



### Technical Specification

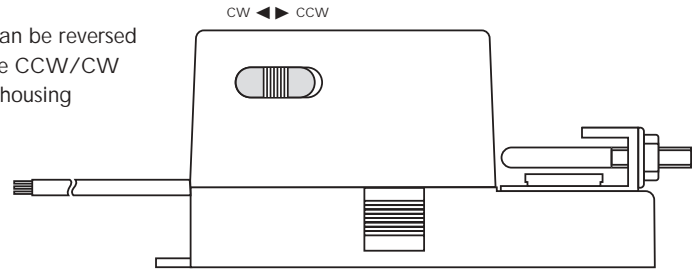
	NACA1...(S1) (P2)	NACA1...(S1) (P2)
Torque	2 Nm / 5 Nm	2 Nm / 5 Nm
Damper Size	0.5 m <sup>2</sup> / 1.0 m <sup>2</sup>	0.5 m <sup>2</sup> / 1.0 m <sup>2</sup>
Power Supply	AC/DC 24 V	AC 230 V
Frequency	50-60 Hz	50-60 Hz
Power Consumption		
- Operating	2.0 W	2.0 W
- At the end stops	2.0 W	2.0 W
For wire sizing	4.0 VA	12.0 VA
Auxiliary switch rating	3(1.5) A / AC 250 V	3(1.5) A / AC 250 V
Protection class	II	II
Control Signals	2 point and 3 point	2 point and 3 point
Feedback signal	10000 Ohm	10000 Ohm
Angle of Rotation	90° (95° mechanical)	90° (95° mechanical)
Angle Limiting	Mechanical end stops	Mechanical end stops
Weight approx.	0.5 kg	0.5 kg
Life Cycle	60,000 rotation	60,000 rotation
Sound Level	Max. 40 dB(A)	Max. 40 dB(A)
IP Protection	IP54	IP54
Ambient Temperature	-20°...+50°C / IEC 721-3-3	-20°...+50°C / IEC 721-3-3
Inventory Temperature	-30°...+60°C / IEC 721-3-2	-30°...+60°C / IEC 721-3-2
Ambient Humidity	5...95% rH non condensing	5...95% rH non condensing
Maintenance	maintenance free	maintenance free
Impact	Typ I / EN 60730-1	Typ I / EN 60730-1
Standardize	89/336/CE	89/336/CE

### Wiring diagram NACA...02/05



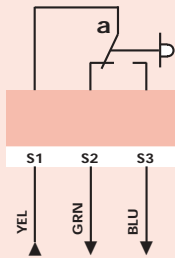
### Changing direction of rotation

The rotation can be reversed by pushing the CCW/CW switch on the housing of actuator.



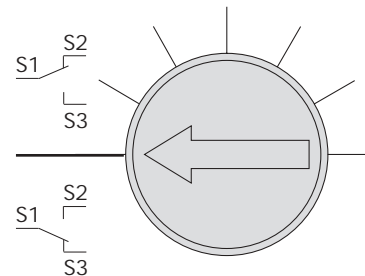
⚠ AC/DC 24 V: Connect via safety isolating transformer.  
AC 230 V: To isolate from the main power supply, the system must incorporate a device which disconnects the phase conductors (with at least a 3 mm contact gap).

### Auxiliary switches (S1)



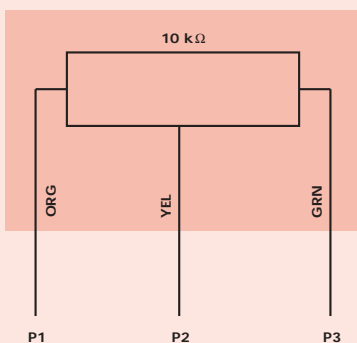
3 (1.5) Amp AC 250 V  
Actuator at 0° position

### Auxiliary switch adjustment NACA...05(S1)



Built-in Microswitch Adjustment (for N...S1).  
Move the screw of the microswitch.

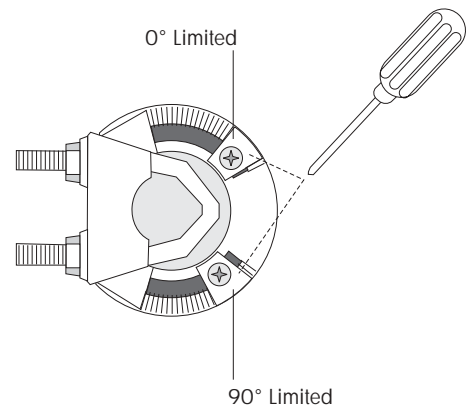
### Potentiometer (P2)



### Angle-of-rotation limiting

Mechanical Limited Adjustment

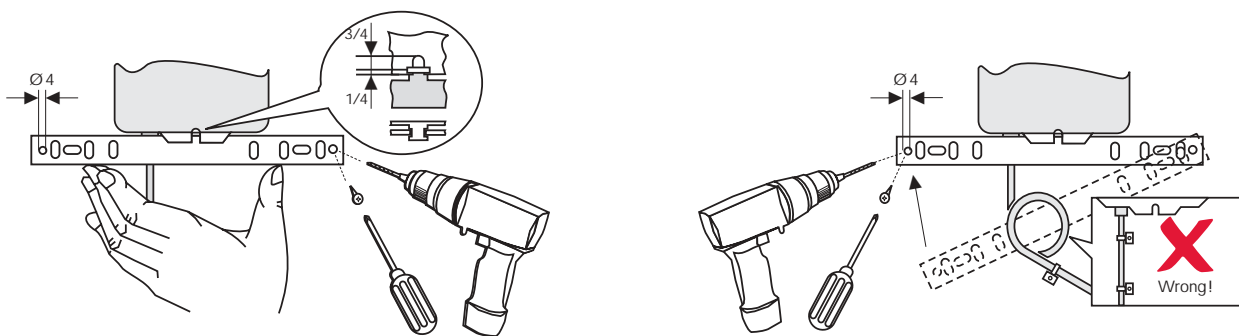
1. Loosen 2 screws of the mechanical limited.
2. Move the limited to the appropriate position.
3. Tighten on the 2 screws.



### OEM - customized version

TELIMA/NENUTEC offer you as well actuators in a customized version on request in your own brandname. Please contact us for further more detail information.

### Installation / Mounting



### Important Remark

The NENUTEC NACA/NACM...(S1)(P2) actuator series can be equipped with a variety of NENUTEC products, Characterized two-three-way Ball Valves the NVCB... series. NPG-1 position transmitter accessories.

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

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