

# SONDER REGULACIÓN

THE ENERGY CONTROL

Rotary Damper Actuator  
 2 Point and 3 Point Control  
 32 Nm



- SONDER is proud to offer the 32 Nm damper actuator of the NACA... 32 (S) Series designed specifically application into the HVAC market.
- SONDER 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

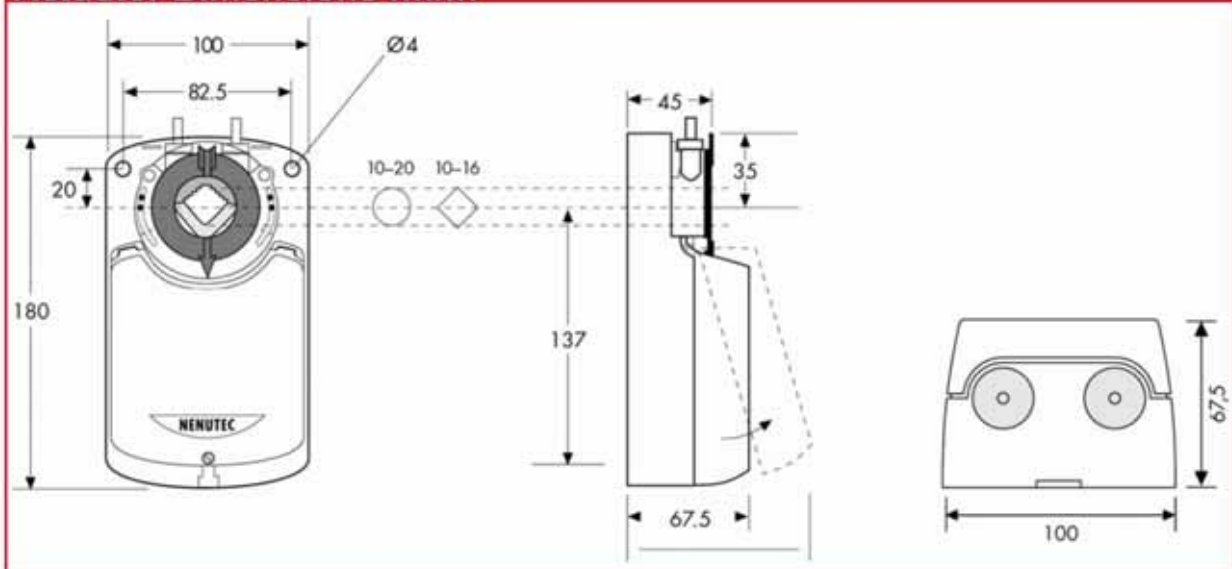
## Product Features

- 2 points and 3 points control
- Universal Spindle Clamp for easy direct mounting
- Shaft dimension Ø10...20 mm /10...16 mm square
- Anti-rotation bracket provided for stability
- Manual over ride by push button when required
- Adjustable angle of rotation
- Selectable direction of rotation
- Parallel connection up to 5 actuators
- 2 adjustable SPDT auxiliary switches when requested
- Power saving at end stops
- Actuators available with 1m cable on request
- Customised version available, on request

## Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switches	Model/Type
32 Nm	140...160 sec	AC/DC 24V	No	NACA 1-32
			2 x SPDT	NACA 1-32S
32Nm	140...160 sec	AC 230V ±10%	No	NACA 2-32
			2 x SPDT	NACA 2-32S

## Actuator Dimensions (mm)



## Technical Specification

	NACA 1-32 (S)	NACA 2-32 (S)
Torque	32 Nm	32 Nm
Damper Size	6 m <sup>2</sup>	6 m <sup>2</sup>
Power Supply	AC/DC 24 V	AC 230V
Frequency	50...60Hz	50...60Hz
Power Consumption		
-Operating	3.9 W	4.8 W
-At the end stops	0.4 W	1.2 W
For wire sizing	6.5 VA	6.5 VA
Auxiliary Switches Rating (Amp and Voltage)	3 A / 230 V (for 24 V and 230 V)	3 A / 230 V (for 24 V and 230 V)
Protection Class	II (for 24 V and 230 V)	II (for 24 V and 230 V)
Controls Signal	2 Point and 3 Point	2 Point and 3 Point
Angle of Rotation	90° (93° mechanical)	90° (93° mechanical)
Angle of Limiting	5°...85° in 5° step	5°...85° in 5° step
Weight	1.2 Kg	1.2 Kg
Life Cycle	60,000 rotation	60,000 rotation
Sound Level	Below 45 dB	Below 45 dB
IP Protection	IP 44 or IP55 cable glands	IP 44 or IP55 cable glands
Ambient Temperature	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
Ambient Humidity	5...95% RH	5...95% RH
Inventory Temperature	+70° as per 721-3-2	+70° as per 721-3-2
Maintenance	Maintenance free	Maintenance free
Certification	CE and ISO 9000 EN... Requirements	CE and ISO 9000 EN... Requirements

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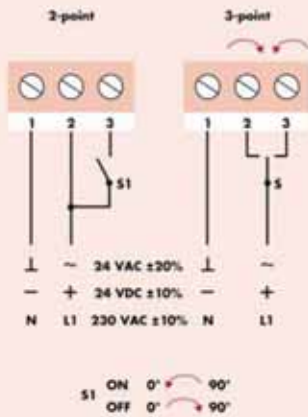
THE ENERGY CONTROL

Rotary Damper Actuator

2 Point and 3 Point Control

32 Nm

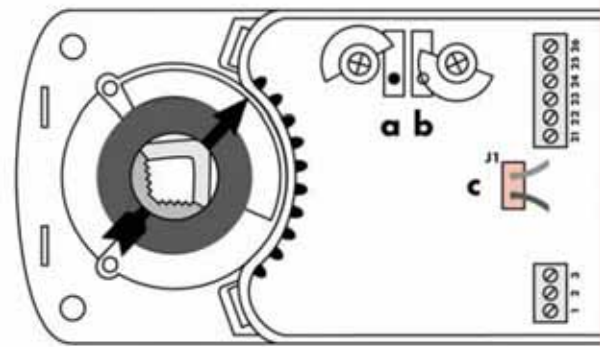
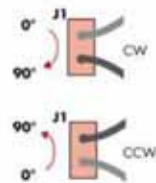
## Wiring diagram



## Changing direction of rotation

The direction of rotation can be changed by reversing plug **c**

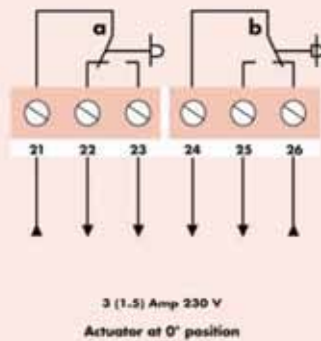
Factory setting



Cable Yellow

Cable Blue

## Auxiliary switches (5)

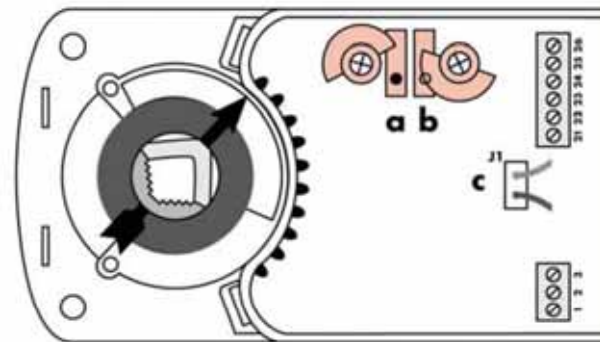


## Auxiliary switch adjustment

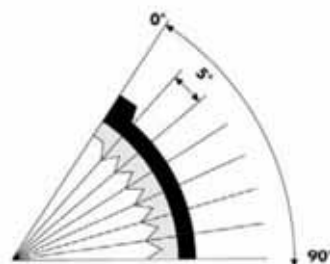
Factory setting

Switch **a** at 10°  
 Switch **b** at 80°

The switching position can be manually changed to any required position by turning the ratchet.



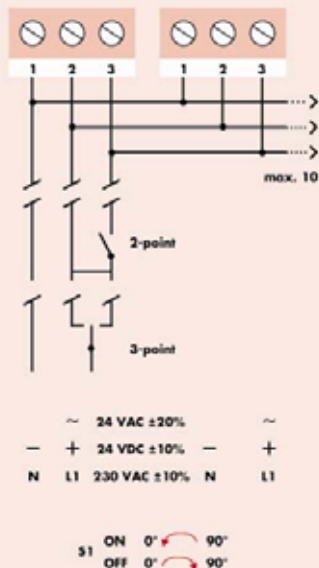
## Angle-of-rotation limiting



## Releasing the adapter



## Parallel connection



## Parallel Connection

Parallel Connection 2 Point and 3 Point control can be applicable up to 10 actuators

## Important Remark

The SONDER NACA/NACM..32(S) actuator series can be equipped with a variety of SONDER products. Characterized Ball Valves NVCB...Series, Butterfly valves series and Globe valve series Consult SONDER representative or factory for specific requirements and material selection for your intended application.

*Nos puede encontrar en:*

Nuestra web:  
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[comercial@sonder-regulacion.com](mailto:comercial@sonder-regulacion.com)

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*The Energy Control*

# SONDER REGULACIÓN

THE ENERGY CONTROL

Rotary Damper Actuator  
Modulating Control  
32 Nm



- SONDER is proud to offer the 32 Nm damper actuator of the NACM... 32 (S) Series designed specifically application into the HVAC market.
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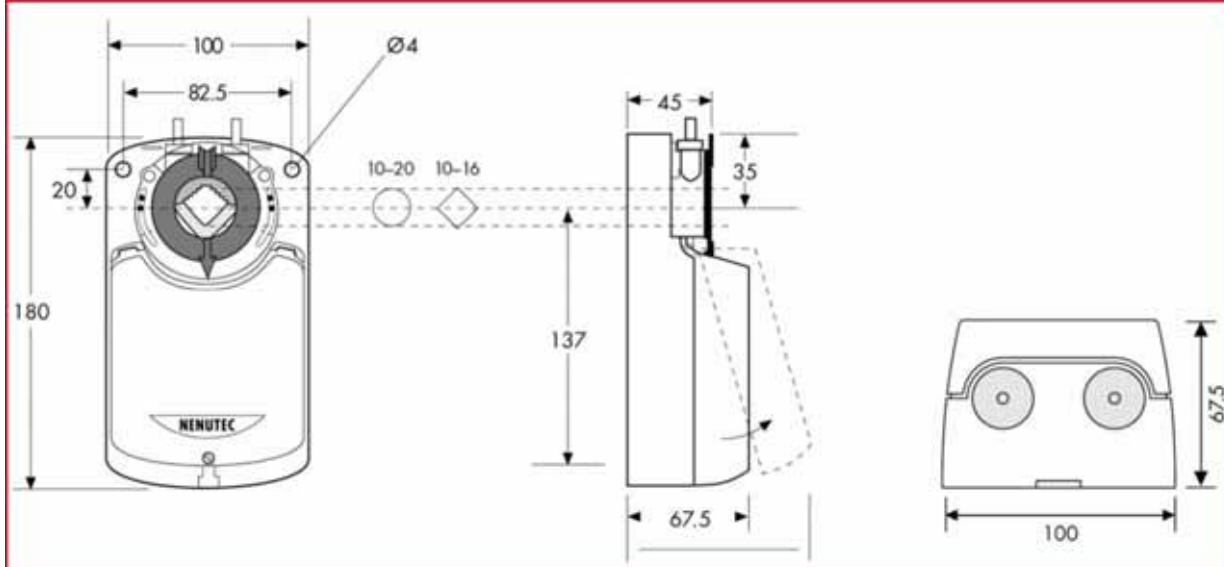
## Product Features

- 0(2)...10VDC and 0(4)...20 mA control
- Universal Spindle Clamp for easy direct mounting
- Shaft dimension Ø10...20 mm /10...16 mm square
- Anti-rotation bracket provided for stability
- Manual over ride by push button when required
- Adjustable angle of rotation
- Selectable direction of rotation
- Parallel connection up to 10 actuators
- 2 adjustable SPDT auxiliary switches when requested
- Power saving at end stops
- Actuators available with 1m cable on request
- Customised version available, on request

## Model Selection Table

Torque	Running Time	Power Supply	Auxiliary Switches	Model/Type
32 Nm	140... 160 sec	AC/DC 24V	No	NACM 1.1-32
			2 x SPDT	NACM 1.1-32S
32 Nm	140... 160 sec	AC 230V ±10%	No	NACM 2.2-32
			2 x SPDT	NACM 2.2-32S

## Actuator Dimensions (mm)



## Technical Specification

	NACM 1.1-32 (S)	NACM 2.2-32 (S)
Torque	32 Nm	32 Nm
Damper Size	6 m <sup>2</sup>	6 m <sup>2</sup>
Power Supply	AC/DC 24 V	AC 230V
Frequency	50...60Hz	50...60Hz
Power Consumption		
-Operating	4.0 W	4.8 W
-At the end stops	0.7 W	1.2 W
For wire sizing	6.5 VA	6.5 VA
Auxiliary Switches Rating (Amp and Voltage)	3 A / 230 V (for 24 V and 230 V)	3 A / 230 V (for 24 V and 230 V)
Protection Class	II (for 24 V and 230 V)	II (for 24 V and 230 V)
Controls Signal Y1	0(2)...10 VDC	0(2)...10 VDC
Controls Signal Y2	0(4)...20 mA	
Controls Signal U	0(2)...10 VDC	0(2)...10 VDC
Angle of Rotation	90° (93° mechanical)	90° (93° mechanical)
Angle of Limiting	5°...85° in 5° step	5°...85° in 5° step
Weight	1.2 Kg	1.2 Kg
Life Cycle	60,000 rotation	60,000 rotation
Sound Level	Below 45 dB	Below 45 dB
IP Protection	IP 44 or IP55 cable glands	IP 44 or IP55 cable glands
Ambient Temperature	-20°...50° as per IEC 721-3-3	-20°...50° as per IEC 721-3-3
Ambient Humidity	5...95% RH	5...95% RH
Inventory Temperature	+70° as per 721-3-2	+70° as per 721-3-2
Maintenance	Maintenance free	Maintenance free
Certification	CE and ISO 9000 EN... Requirements	CE and ISO 9000 EN... Requirements

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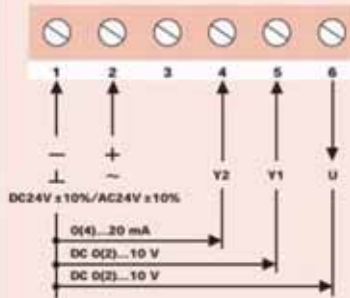
THE ENERGY CONTROL

Rotary Damper Actuator

Modulating Control

32 Nm

## Wiring diagram NACM1.1...(S) Power supply AC/DC 24 V



## Adjusting the controls signals NACM 1.1...(S)

Control signal Y1	DC 0(2)...10 V
Input resistance	Ri 100 k $\Omega$
Control signal Y2	0(4)...20 mA
Input resistance	Ri 500 $\Omega$
Position signal U	DC 0(2)...10 V
Load resistance	> 50 k $\Omega$

The control signal can be changed to DC 2...10 V and 4...20 mA by moving microswitch 1 to the ON position.

## Microswitch d

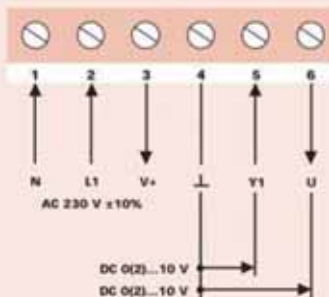
DC 0...10 V  
0...20 mA



DC 2...10 V  
4...20 mA

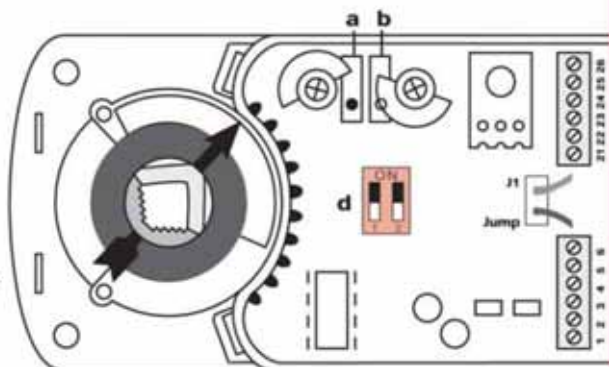
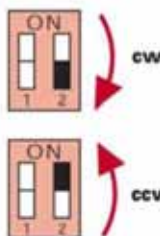


## Wiring diagram NACM2.2...(S) Power supply AC 230 V



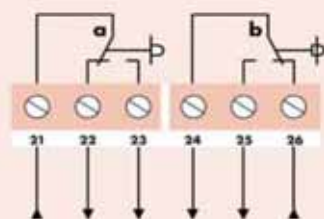
## Changing direction of rotation NACM...S

### Microswitch d



Jumper J1 must never be reversed otherwise the motor will not function correctly.

## Auxiliary switches (S)

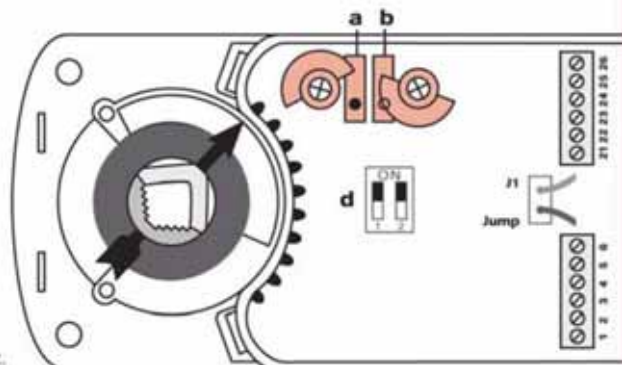


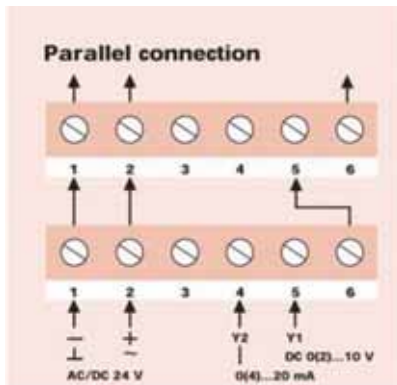
3 (1.5) Amp 230 V  
Actuator at 0° position

## Auxiliary switch adjustment NACM...S

Factory setting  
Switch a at 10°  
Switch b at 80°

The switching position can be manually changed to any required position by turning the ratchet.



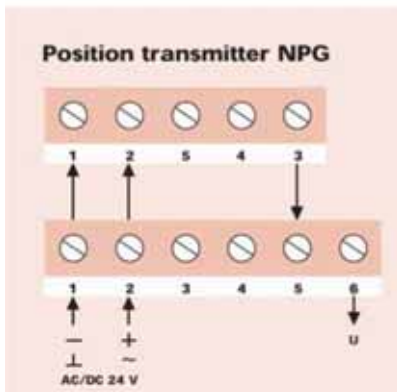


### Parallel Connection

When NACM...(S) actuators are to be operated in parallel The output signal  $U = 0(2) \dots 10$  VDC (Terminal 6) of the Master Actuator must be connected to Terminal 5 of the Slave actuator in a chain.

### Notes:

Up to 10 actuators can be operated in parallel



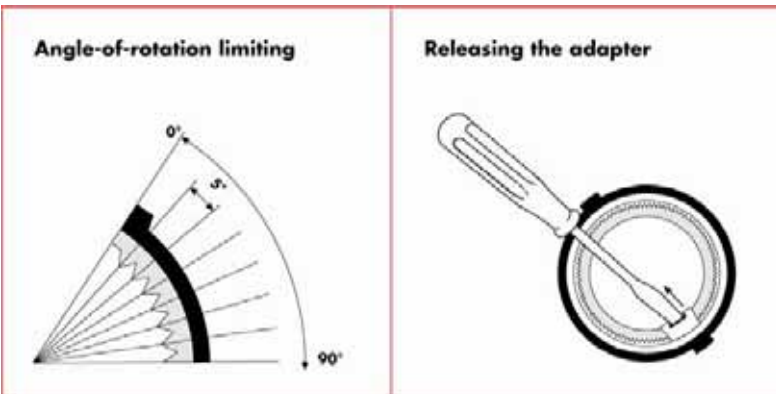
NACM 1.1...(S) actuators can also be controlled by Means of a SONDER position transmitter NPG... With a control signal of  $0 \dots 10$  VDC

### Notes:

Up to 10 actuators can be operated in parallel

### Important Remark

SONDER NACA/NACM actuator series can be equipped with a variety of SONDER products, Characterized Ball Valves NVCB...series, butterfly valves and Globe Valves. Contact SONDER representatives or factory for the specific requirements and material selection for your intended application



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