

NAFA SERIES SPRING RETURN DAMPER ACTUATOR


2 Point Spring Return Control
20 Nm


NENUTE[®] C

INNOVATIVE MEMBER OF SWIS⁺TEC

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DAMPER ACTUATOR MODEL CHART

MODEL	 NACA	 NACM	 NECA	 NECM	 NASA	 NASM	 NAFA	 SAFA	 SASA	 NSVA
VOLTAGE 230VAC ~ 24VAC/DC	●	●	●	●	●	●	●	●	●	24 VAC
TORQUE (NM)	2 ; 5 ; 10 ; 20 ; 40	2 ; 5 ; 10 ; 20 ; 40	5 ; 10 ; 20	5 ; 10 ; 20	10 ; 20	10 ; 20	3 ; 5 ; 8 ; 20	3 ; 5 ; 8 ; 20	10 ; 15	5
CONTROL	2/3 pts	Modulating	2 pts	Modulating	2/3 pts	Modulating	2 pts SR	2 pts SR	3 pts	Modulating
SPECIAL TYPE										
ELECTRONIC RETURN			●	●						
FAST RUNNING					●	●			●	
SPRING RETURN							●			
FIRE & SMOKE SPRING RETURN								●		
SMOKE SAFETY								●	●	
NETWORKING										●

TYPE DESIGNATION

TYPE	ACTUATOR	DESIGNATION	CONTROL	VOLTAGE	DOT	INPUT SIGNAL	HYPHENATED	TOUQE	AUXILIARY SWITCH
N	A	C	M	1	.	1	-	1 0	S1

TYPE	N = Standard Actuator
	S = Fire & Smoke
ACTUATOR	A = Standard Actuator
	E = Electronic Return
DESIGNATION	C = Standard Actuator
	S = Fast Running Actuator
	F = Spring Back Actuator
CONTROL	A = 2/3 Points
	M = Modulating
VOLTAGE	1 = 24 VAC/VDC
	2 = 230 VAC
	3 = 110/120 VAC
	4 = 48 VAC

INPUT SIGNAL (NOT APPLICABLE FOR 2/3 POINTS)	1 = 0(2)...10 VDC and 0(4)...20 mA	
	2 = 0(2)...10 VDC only	
	3 = 0...135 Ω only	
	4 = 4...20 mA only	
TORQUE	02 = 2 Nm	03 = 3 Nm
	05 = 5 Nm	08 = 8 Nm
	10 = 10 Nm	15 = 15 Nm
	20 = 20 Nm	40 = 40 Nm
AUXILIARY SWITCH / FEEDBACK POTENTIOMETER	None = No Auxiliary or Feedback Potentiometers	
	S1 = 1 x Auxiliary Switch	
	S = 2 x Auxiliary Switches	
	P1 = 1000Ω	
	P2 = 10000Ω	
	P3 = 140Ω	

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NAFA...20S (T) SERIES

NAFA series Spring Return actuators are developed for general air damper application, rotary valve and other devices which require a fail-safe function. During normal operation, the actuator motorized the device. In the event of power outage, the actuator springs back to its original position.



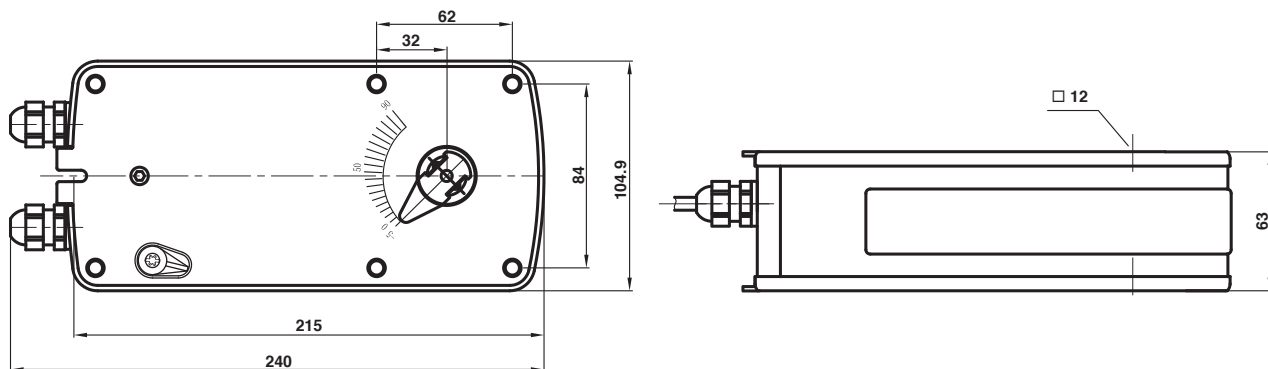
PRODUCT FEATURE

- Torque 20 Nm
- Damper size 4.0 m²
- Power supply AC/DC 24V and AC 230 V
- Shaft dimensions - Form fit 12 mm square
- Selectable direction of rotation
- Actuator with 1 m cable connection
- 2 Fixed auxiliary switches (SPDT)
- Manual Over-ride by crank handle when required
- Thermal sensor option available

MODEL SELECTION TABLE

MODEL/ TYPE	TORQUE	POWER SUPPLY	RUNNING TIME	AUXILIARY SWITCHES
NAFA 1-20	20 Nm	AC/DC 24 V ± 10%	110...140 sec (Spring Back <30 sec)	-
NAFA 1-20S	20 Nm	AC/DC 24 V ± 10%	110...140 sec (Spring Back <30 sec)	2 x SPDT (Fixed & Adjustable)
NAFA 2-20	20 Nm	AC 230 V ± 10%	110...140 sec (Spring Back <30 sec)	-
NAFA 2-20S	20 Nm	AC 230 V ± 10%	110...140 sec (Spring Back <30 sec)	2 x SPDT (Fixed & Adjustable)

DIMENSION (mm)



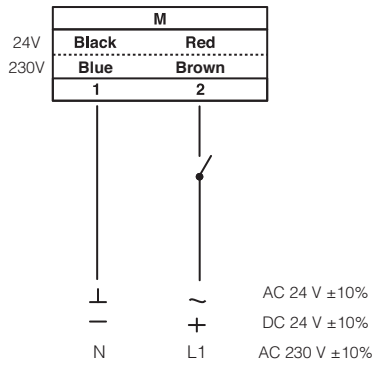
TECHNICAL SPECIFICATION

MODEL NUMBER	NAFA 1-20S (T)	NAFA 2-20S (T)
TORQUE	20 Nm	20 Nm
DAMPER SIZE	4.0 m ²	4.0 m ²
SHAFT DIMENSION	Ø 10...20 mm / □ 7...14 mm	Ø 10...20 mm / □ 7...14 mm
POWER SUPPLY	AC/DC 24 V ± 10%	AC 230 V ± 10%
FREQUENCY	50...60 Hz	50...60 Hz
CONTROL SIGNAL	2 point control	2 point control
POWER CONSUMPTION		
● OPERATING	7.0 W	8.0 W
● END POSITION	2.0 W	5.5 W
FOR WIRE SIZING	8.0 VA	8.0 VA
ELECTRICAL CONNECTION	1 m Cable	1 m Cable
AUXILIARY SWITCHES RATING	3 (1.5) A, AC 250 V	3 (1.5) A, AC 250 V
PROTECTION CLASS	Class III ⚡	Class II ⚡
ANGLE OF ROTATION	90° (95° mechanical)	90° (95° mechanical)
THERMAL TEMPERATURE TRIP	> 72°C	> 72°C
WEIGHT	TBC	TBC
LIFE CYCLE	60,000 Rotation	60,000 Rotation
SOUND LEVEL	40 dB	40 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 / EEC	CE / EEC

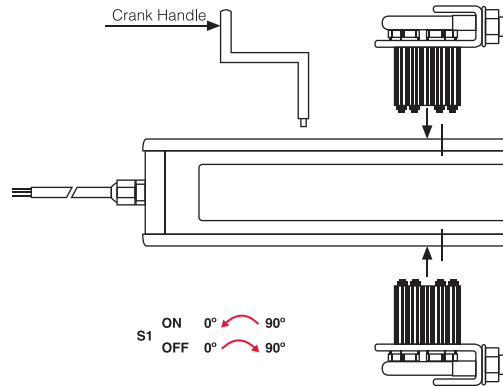
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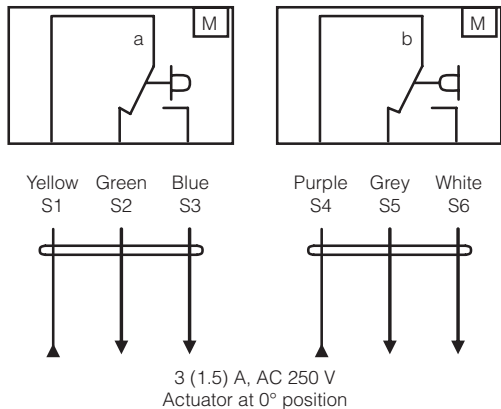
WIRING DIAGRAM NAFA...20S (T) POWER SUPPLY AC/DC 24 V / AC 230V



DIRECTION OF ROTATION NAFA...20S (T)



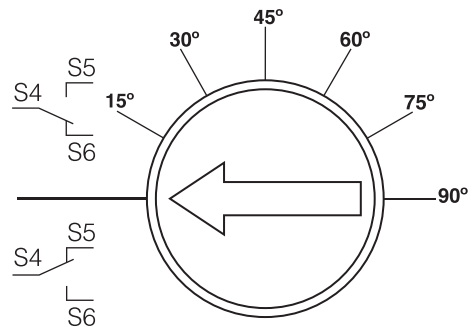
WIRING DIAGRAM NAFA...20S (T) AUXILIARY SWITCHES



AUXILIARY SWITCH NAFA...20S (T)

Switch **a** factory-set at 5°.

The auxiliary switch can be optimally adjusted between 0°...90°.

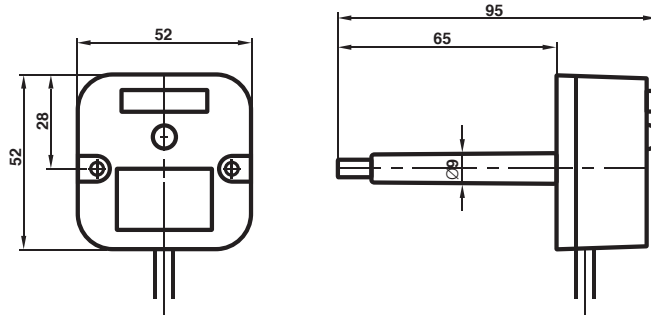


Switch **a** factory set at 5°
Switch **b** adjustable 0° ...90°

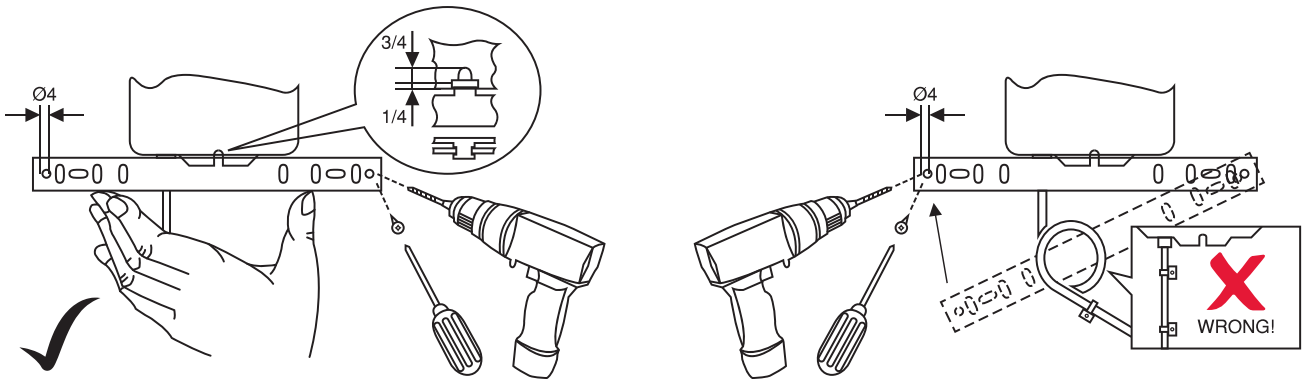
THERMAL SENSOR NTS72

Thermal Sensor NTS 72 consist of both Ambient (TS1) and Duct sensor (TS2).

- TS1 will trip open when the ambient temperature rise above 72°.
- TS2 will trip open when the duct temperature rise above 72°.





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.