

SAFA – FIRE & SMOKE DAMPER ACTUATOR

20 Nm | 2-POINT CONTROL | SPRING RETURN



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

SAFA...20S (T) SERIES

SAFA series Spring Return damper actuators are designed specifically for fire and smoke application. During normal operation, the actuator positions a damper according to the control signal. In the event of fire emergency, the spring return drives back actuator to its original position when there is power outage or thermal sensor is tripped.

- Torque: 20 Nm
- Damper size 4.0 m²
- Power supply 24 V_{AC/DC} and 230 V_{AC}
- Shaft dimensions – form fit 12 mm square
- Adapter supplied for from fit 8 or 10 mm square
- Selectable direction of rotation
- Actuator with 1 m connection cable.
- 2 Fixed auxiliary switches (SPDT)
- Manual override by crank handle when required
- Thermal sensor option available
- Anti-rotation bracket provided for stability

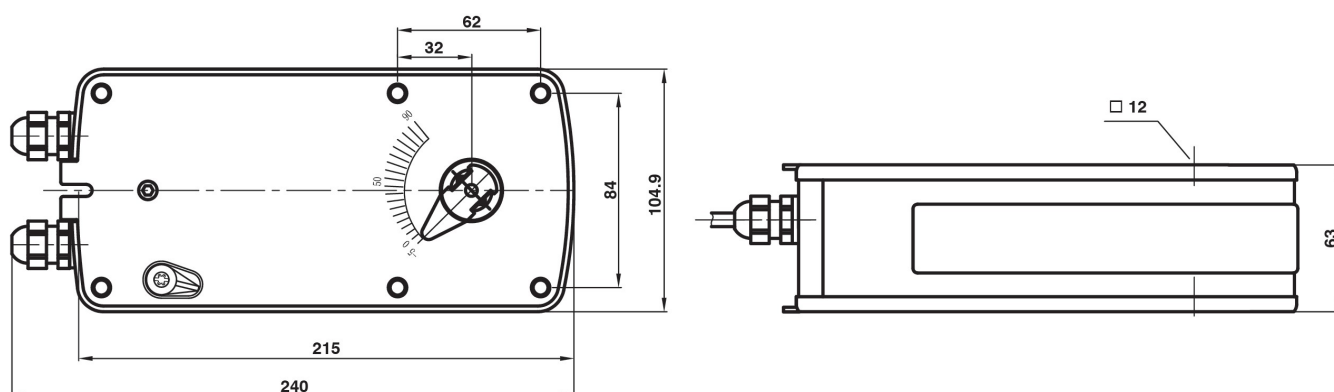
MODEL SELECTION TABLE

| Model/type | Torque motor / spring return | Power supply | Running time | Auxiliary switches | Thermoelectrical tripping device |
|-------------|---------------------------------|-----------------------------|-----------------------------------|-----------------------|-------------------------------------|
| SAFA 1-20S | 20 Nm | 24 V _{AC/DC} ± 10% | 110...140 s (spring return <30 s) | 2 x SPDT (Fixed) | - |
| SAFA 1-20ST | 20 Nm | 24 V _{AC/DC} ± 10% | 110...140 s (spring return <30 s) | 2 x SPDT (fixed) | Yes |
| SAFA 2-20S | 20 Nm | 230 V _{AC} ± 10% | 110...140 s (spring return <30 s) | 2 x SPDT (fixed) | - |
| SAFA 2-20ST | 20 Nm | 230 V _{AC} ± 10% | 110...140 s (spring return <30 s) | 2 x SPDT (fixed) | Yes |

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ACTUATOR DIMENSIONS [mm]



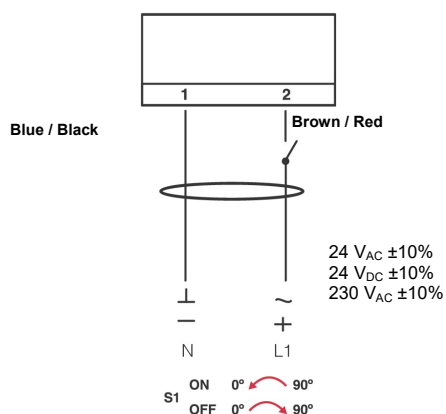
TECHNICAL SPECIFICATION

| | SAFA 1-20S (T) | SAFA 2-20S (T) |
|---------------------------------------|----------------------------------|----------------------------------|
| Torque | 20 Nm | 20 Nm |
| Damper size | 4.0 m ² | 4.0 m ² |
| Shaft dimensions | Form fit 12 mm square | Form fit 12 mm square |
| Control signal | 2 point control | 2 point control |
| Power supply | 24 V _{AC/DC} ± 10% | 230 V _{AC} ± 10% |
| Frequency | 50...60 Hz | 50...60 Hz |
| Power consumption | | |
| • In operation | 12.0 W | 12.0 W |
| • End position | 2.4 W | 2.4 W |
| Rated power | 12.0 VA | 12.0 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 limitation) | 90° (95° mechanical limitation) |
| Trigger temperature of thermal sensor | > 72°C | > 72°C |
| Weight | 2.7 kg | 2.8 kg |
| Durability | 60,000 rotations | 60,000 rotations |
| Sound level | 40 dB | 40 dB |
| IP protection class | IP54 | IP54 |
| Working temperature range | -20°C...50°C as per IEC 721-3-3 | -20°C...50°C as per IEC 721-3-3 |
| Storage temperature | -30°C...+60°C / IEC 721-3-2 | -30°C...+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 |
| Principle of operation | Type 1 (acc. to EN 60730-1) | Type 1 (acc. to EN 60730-1) |
| Electromagnetic compatibility | CE, UL 873 & ISO 9000 EN / EEC | CE, UL 873 & ISO 9000 EN / EEC |

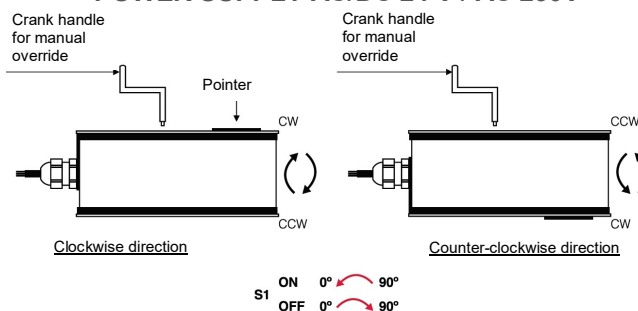
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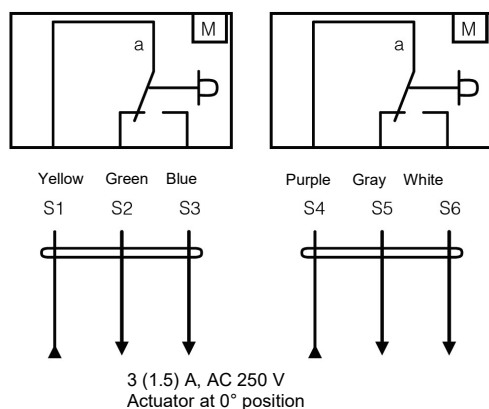
WIRING DIAGRAM SAFA...20S (T) POWER SUPPLY AC/DC 24 V / AC 230V



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

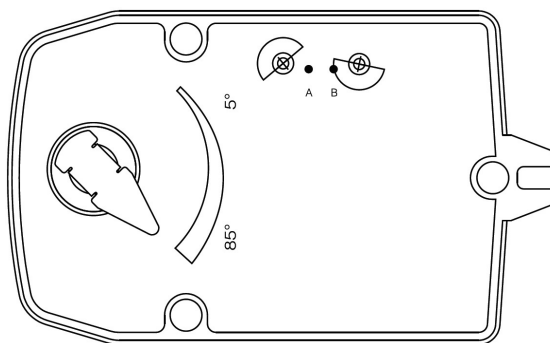


WIRING DIAGRAM SAFA...20S (T) AUXILIARY SWITCHES



AUXILIARY SWITCHES SAFA...20S (T)

Auxiliary are fixed at 5° for switch **a** and 85° for switch **b**. Auxiliary switches are non adjustable.



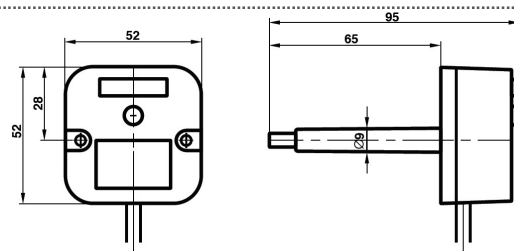
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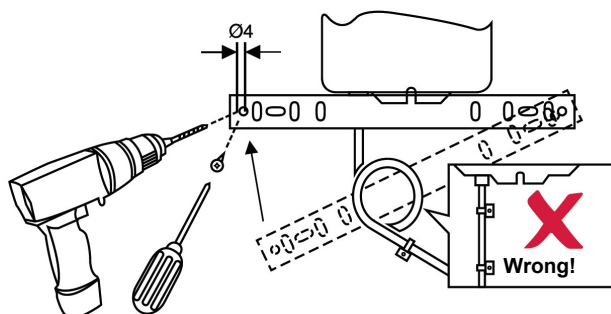
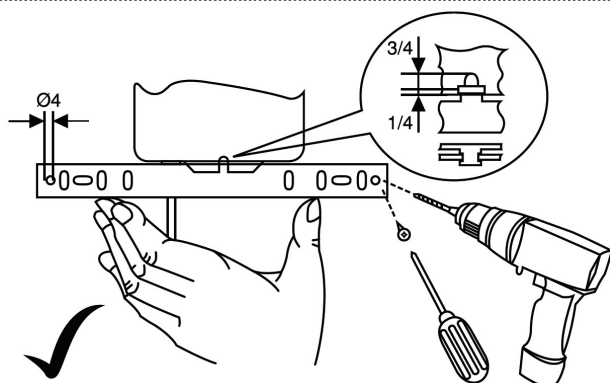
■ NTS72 thermal sensor

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

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



■ Installation instruction



⚠ IMPORTANT REMARKS

This actuator includes electrical and electronic components and may not be disposed as household garbage. Please consider the local valid legislation.



24 V_{ADC}: Connect via safety isolating transformer.

230 V_{AC}: 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.)

Consult NENUTEC representatives for specific requirements and material selections for your intended application.

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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.

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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