

# Fire and Smoke Spring Return Actuator FSNF24(-S) US

- Meet requirement of UL555(S) when tested as an assembly with suitable dampers
- Torque: 7.9Nm @ 177°C(350°F) for 30 minutes
- Running time: 15s
- Control: Open/Close



## Technical data

|                            |                        |  |   |
|----------------------------|------------------------|--|---|
| <b>Electrical data</b>     | Nominal voltage        | AC 24V 50/60Hz, DC 24V*                |   |
|                            | Nominal voltage range  | AC 19.2...28.8V, DC 24...36V*          |   |
|                            | Power consumption      | 24VA @ running / 6.5VA @ holding       |   |
|                            | For transformer sizing | 40VA                                   |   |
|                            | Fusing                 | 0.125A slow blow                       |   |
|                            | Connection             | -Motor<br>-Auxiliary Switch            | 1m, 18ga, 2 colour coded leads<br>1m, 18ga, 6 appliance leads<br>1/2" conduit connector |
| <b>Functional data</b>     | Torque                 | 7.9Nm (0°C to 177°C) @ nominal voltage |   |
|                            | Direction of rotation  | Selectable by CW/CCW installation      |   |
|                            | Angle of rotation      | Max. 95°                               |   |
|                            | Auxiliary switch       | -FSNF24-S                              | 2 SPDT, 7(2.5)A @ AC 125/250V □ fixed at 5°↖, 85°↙                                      |
|                            | Running time           | -Motor<br>-Spring Return               | <15s at rated voltage and torque<br><15s  |
|                            | Position indicator     |  | Mechanical  |
| <b>Safety</b>              | Protection class       | Class 2 supply                         |   |
|                            | Degree of protection   | IP30 / NEMA type 1                     |   |
|                            | Mode of operation      | Type 1.AA.B                            |   |
|                            | Agency listed          | UL873 and CAN / CSA C22.2 No.24-93     |   |
|                            | Ambient temperature    | -Normal Duty<br>-Safety Duty           | 0...+50°C<br>3 Open/Close cycles after 1/2hr @177°C                                     |
|                            | Storage temperature    |  | -40...+80°C   |
|                            | Humidity test          |  | 5...95% RH, non-condensing  |
| Maintenance                |                        | Maintenance-free                       |   |
| <b>Dimensions / weight</b> | Dimensions (L x M x H) |  | 259 x 98 x 78mm   |
|                            | Shaft diameter         |  | 12.7...20mm (10...20mm optional)  |
|                            | Weight                 | -FSNF24<br>-FSNF24-S                   | Approx. 2.6kg<br>Approx. 2.85kg   |
|                            | Safety note            |  | AC 24V: Connect via safety isolating transformer, class 2 supply                        |
|                            |                        |  |   |

\* DC 24V is not UL listed; filtered and regulated DC 24V power supplies is needed.

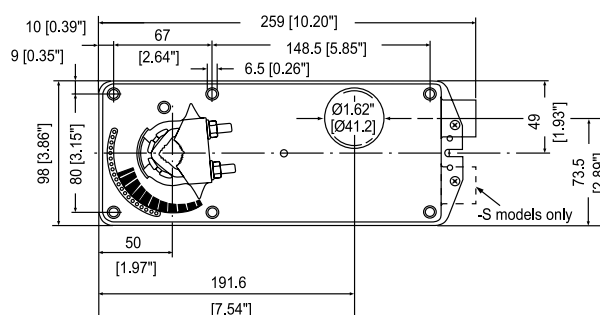
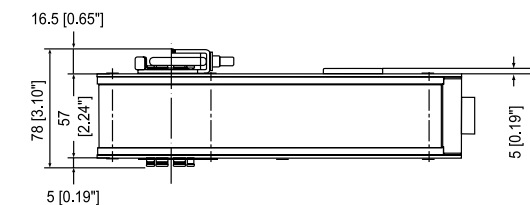
## Dimensions [mm/inches]

### Shaft Size

**Standard:**  
12.7 to 26mm  
[1/2" to 1.05"]

**Optional\***  
10 to 20mm  
[3/8" to 3/4"]

\*with K4 US clamp



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- Running time: 15s
- Control: Open/Close



| Technical data         |   |  |                 |                                  |                   |   |
|------------------------|---|--|-----------------|----------------------------------|-------------------|---|
| <b>Electrical data</b> | Nominal voltage                                       | AC 230V 50/60Hz  |                 |                                  |                   |   |
|                        | Nominal voltage range                                 | AC 207...253V  |                 |                                  |                   |   |
|                        | Power consumption                                     | 23VA @ running / 9VA @ holding   |                 |                                  |                   |   |
|                        | For transformer sizing                                | 0.25VA   |                 |                                  |                   |   |
|                        | Connection  | <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px 5px;">-Motor</td> <td style="padding: 2px 5px;">1m, 18ga, 3 colour coded leads</td> </tr> <tr> <td style="padding: 2px 5px;">-Auxiliary Switch</td> <td style="padding: 2px 5px;">1m, 18ga, 6 appliance leads<br/>1/2" conduit connector</td> </tr> </table> | -Motor          | 1m, 18ga, 3 colour coded leads   | -Auxiliary Switch | 1m, 18ga, 6 appliance leads<br>1/2" conduit connector |
| -Motor                 | 1m, 18ga, 3 colour coded leads                        |  |                 |                                  |                   |   |
| -Auxiliary Switch      | 1m, 18ga, 6 appliance leads<br>1/2" conduit connector |  |                 |                                  |                   |   |
| <b>Functional data</b> | Torque  | 7.9Nm (0°C to 177°C) @ nominal voltage   |                 |                                  |                   |   |
|                        | Direction of rotation                                 | Selectable by CW/CCW installation  |                 |                                  |                   |   |
|                        | Angle of rotation                                     | Max. 95°   |                 |                                  |                   |   |
|                        | Auxiliary switch                                      | -FSNF230-S<br>2 SPDT, 7(2.5)A @ AC 125/250V □<br>fixed at 5°↙, 85°↘  |                 |                                  |                   |   |
|                        | Running time  | <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px 5px;">-Motor</td> <td style="padding: 2px 5px;">&lt;15s at rated voltage and torque</td> </tr> <tr> <td style="padding: 2px 5px;">-Spring Return</td> <td style="padding: 2px 5px;">&lt;15s</td> </tr> </table>  | -Motor          | <15s at rated voltage and torque | -Spring Return    | <15s  |
|                        | -Motor  | <15s at rated voltage and torque   |                 |                                  |                   |   |
| -Spring Return         | <15s  |  |                 |                                  |                   |   |
| Position indicator     | Mechanical  |  |                 |                                  |                   |   |
| <b>Safety</b>          | Protection class                                      | Grounded enclosure   |                 |                                  |                   |   |
|                        | Degree of protection                                  | IP30 / NEMA type 1   |                 |                                  |                   |   |
|                        | Mode of operation                                     | Type 1.AA.B  |                 |                                  |                   |   |
|                        | Agency listed   | UL873 and CAN / CSA C22.2 No.24-93   |                 |                                  |                   |   |
|                        | Ambient temperature                                   | -Normal Duty<br>0...+50°C  |                 |                                  |                   |   |
|                        | -Safety Duty  | 3 Open/Close cycles after 1/2hr @177°C   |                 |                                  |                   |   |
|                        | Storage temperature                                   | -40...+80°C  |                 |                                  |                   |   |
|                        | Humidity test   | 5...95% RH, non-condensing   |                 |                                  |                   |   |
|                        | Maintenance   | Maintenance-free   |                 |                                  |                   |   |
|                        | <b>Dimensions / weight</b>                            | Dimensions (L x M x H)   | 259 x 98 x 78mm |                                  |                   |   |
| Shaft diameter         |   | 12.7...20mm (10...20mm optional)   |                 |                                  |                   |   |
| Weight                 |   | <table style="width: 100%; border: none;"> <tr> <td style="padding: 2px 5px;">-FSNF230</td> <td style="padding: 2px 5px;">Approx. 3kg</td> </tr> <tr> <td style="padding: 2px 5px;">-FSNF230-S</td> <td style="padding: 2px 5px;">Approx. 3.25kg</td> </tr> </table>   | -FSNF230        | Approx. 3kg                      | -FSNF230-S        | Approx. 3.25kg  |
| -FSNF230               |   | Approx. 3kg  |                 |                                  |                   |   |
| -FSNF230-S             | Approx. 3.25kg  |  |                 |                                  |                   |   |

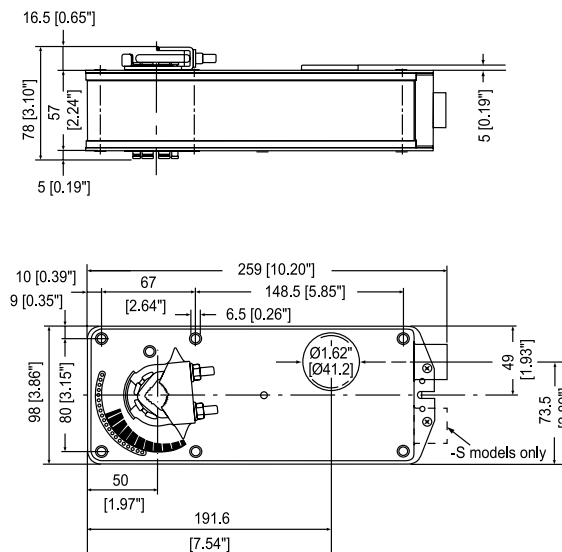
## Dimensions [mm/inches]

### Shaft Size

**Standard:**  
12.7 to 26mm  
[1/2" to 1.05"]

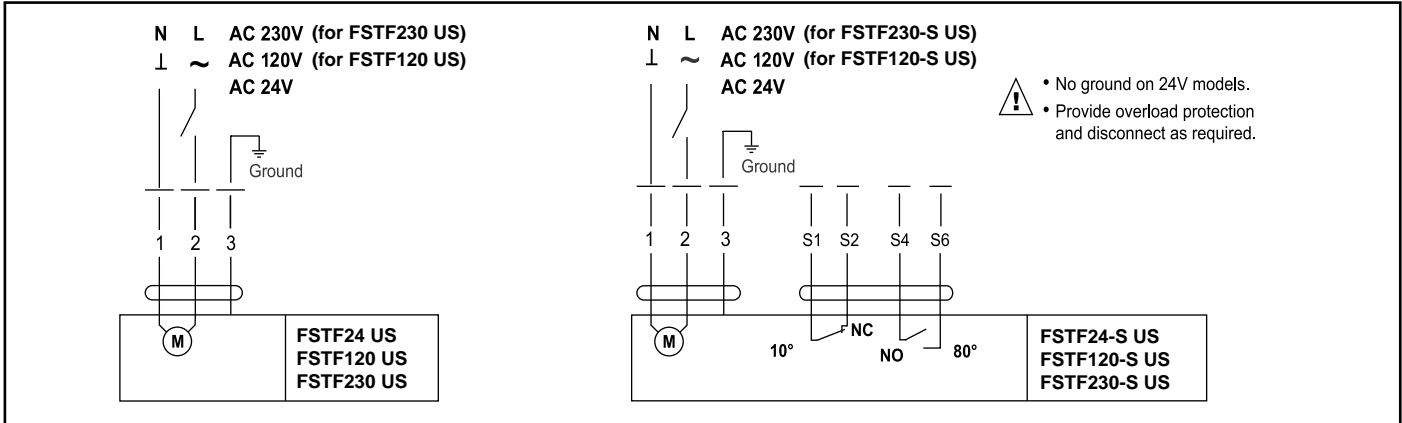
**Optional\***  
10 to 20mm  
[3/8" to 3/4"]

\*with K4 US clamp

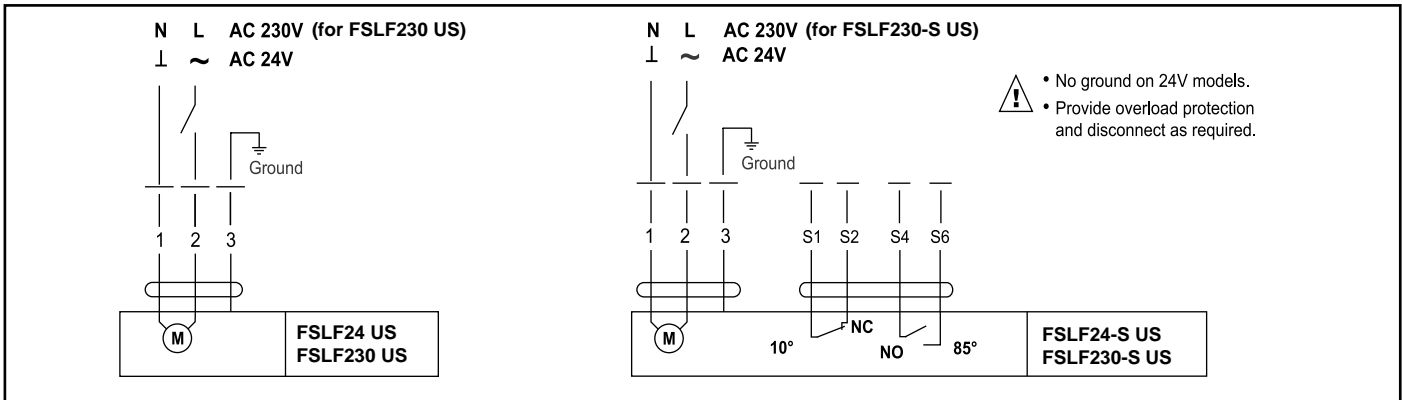


## Wiring diagram: FS.. Series Fail-Safe Open/Close Actuators

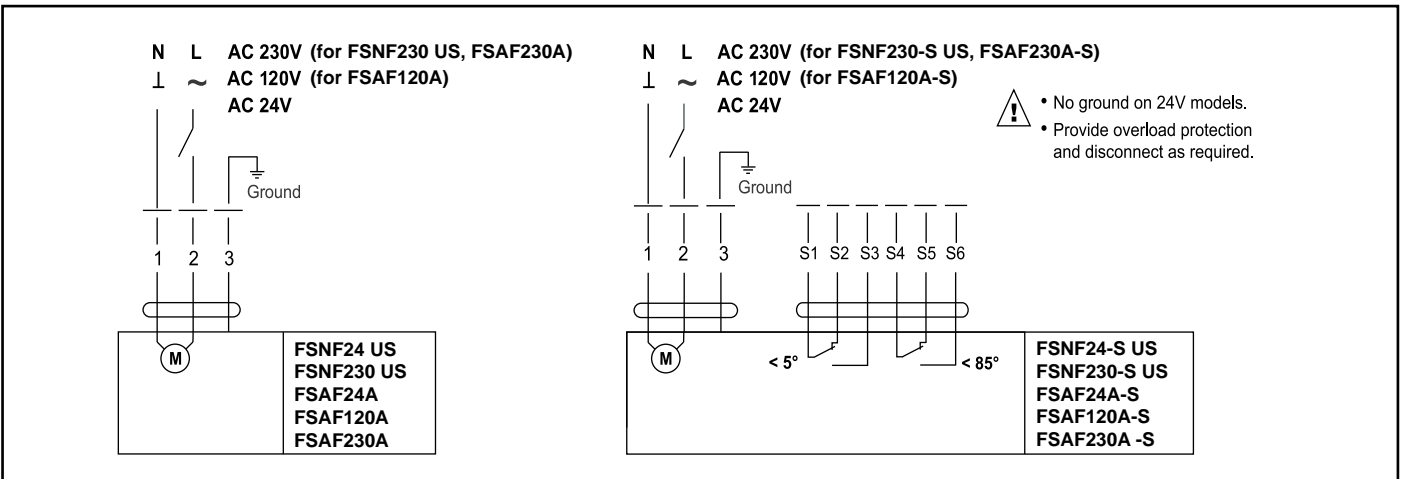
- Notes:**
- Parallel connection of several actuators is possible.
  - Power consumption must be observed.



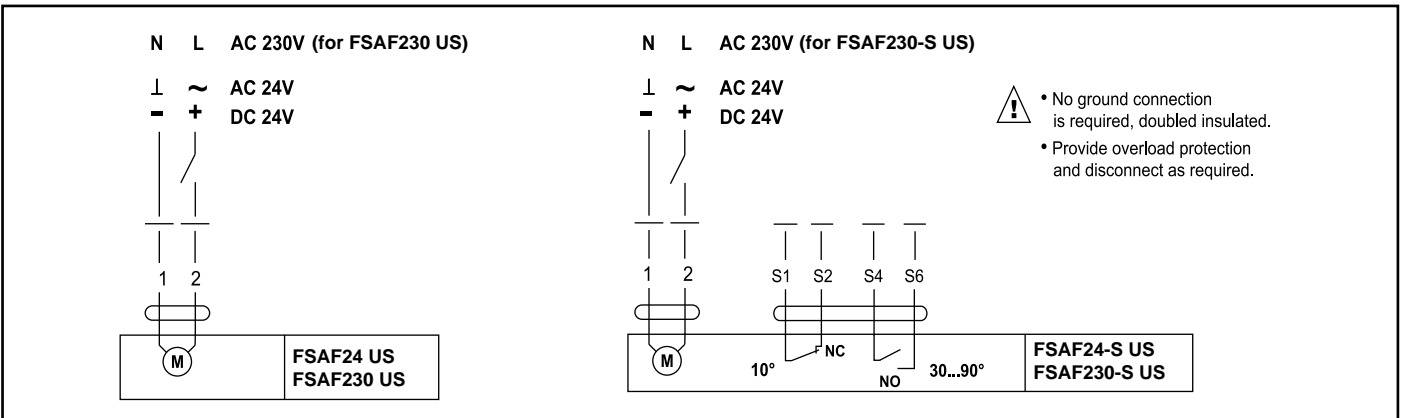
- ⚠
- No ground on 24V models.
  - Provide overload protection and disconnect as required.



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- ⚠
- No ground connection is required, doubled insulated.
  - Provide overload protection and disconnect as required.