

Actuators for fire and smoke shutters 10Nm Spring return actuators 2 points control



- Lufberg presents actuator designed specifically for fire and smoke applications.
- The actuator motorized the damper or other devices when power on and spring back to it original position when power is cut off or trip by the thermal sensor.

Advantages

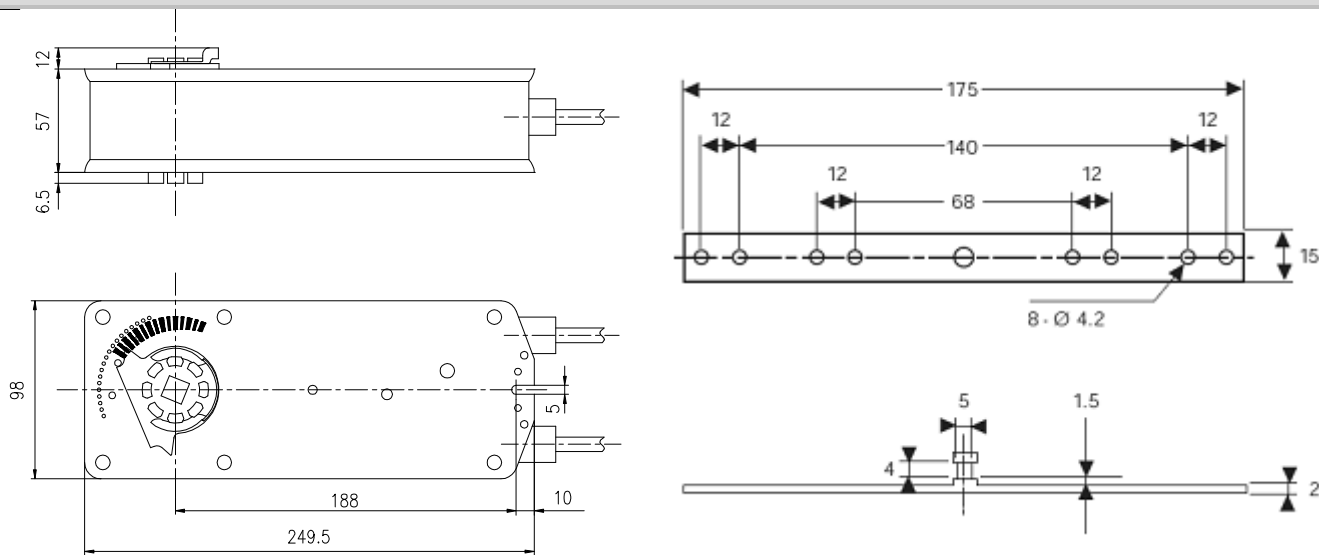
- 2 points on/off control
- Simply application by multi-purpose adapter for:
 - Square bars with dimensions 12 mm.
- Manual Over ride by crank handle when required
- Low level of noise in operation
- Anti-rotation bracket provided for stability
- Selectable direction of rotation by reversing actuator
- 2 SPDT Fixed auxiliary switches as standard
- Low energy intensity in the final position
- Thermal Sensor when requested
- Manual over ride by crank handle when required
- Equipped by cable 1m

Selection model table

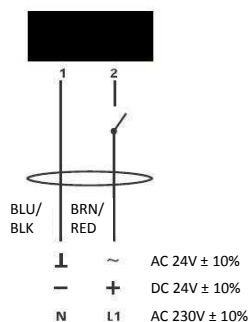
Torque	Runing time	Shutter 's area	Voltage	Auxiliary switches	Model
10 Nm	100 sec Spring return <25 sec	max 2m ²	24V AC/DC	2 SPDT*	FS10S24S
				2 SPDT* + thermosensor	FS10S24ST
			230V AC	2 SPDT*	FS10S220S
				2 SPDT* + thermosensor	FS10S220ST

*SPDT (Single-Pole Double-Throw) - monopolar group of switching contacts

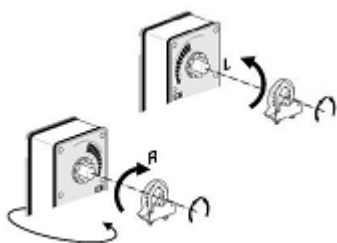
Dimensions and connecting dimension (mm)



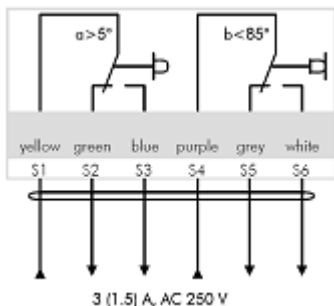
Wiring diagram



Change of direction of the rotation



Auxiliary switches



Auxiliary Switches are not adjustable.

Technical specification

Model	FS10S24..	FS10S220..
Torque	10Nm/10Nm	10Nm/10Nm
Shutter's area	2m ²	2m ²
Voltage	24V AC/DC	230V AC
Frequency	50/60 Hz	50/60 Hz
Required performance:		
- turning:	5 W	6,5 W
- extreme points:	2.5 W	2,5 W
Computation power	10.0 VA	10.0 VA
Turning angle	-5~90°	-5~90°
Adjustment of angle	5°~85° (5° step)	5°~85° (5° step)
Required voltage for auxiliary switches	3 (1.5)A/230V	3 (1.5)A/230V
Weight	2.7 kg	2.7 kg
Noise (at work), 1m	<45 dB(A)	<45 dB(A)
Control signal	2 points	2 points
Feedback signal	no	no
Connection cable	1 m	1 m
Level of protection	IP54	IP54
Protection class	III	II
Life cycles	60000 cycles	60000 cycles
Outside temperature	-30~+50 °C	-30~+50 °C
Suitable humidity	5~95%, Without condensation	5~95%, Without condensation
Standards	CE, ISO9000, GOST	CE, ISO9000, GOST
Assembling methods	Non specified	Non specified



- When torque calculated is necessary to consider the technical information from producer of the air shutter especially voltage, type and place of installation, technical requirements of flowing air.
- Actuator is allowed to be mounded and used with voltage condition only when all requirements mentioned in charter have met.
- Actuator Is allowed to used only with conditions met in the class of protection required by producer

Thermal Sensor

- Thermal Sensor 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.

