ASF 113S: Damper actuator with spring return and positioner



ASF113SF122

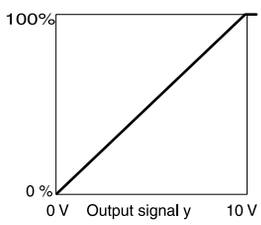
How energy efficiency is improved

Overload protection and end stop detection for efficient usage of energy

Features

- For controllers with a continuous output (0...10 V)
- For operating air dampers, shut-off dampers, butterfly valves and multi-leaf dampers
- Self-centring spindle adapter
- Manual adjustment using hexagon socket, including locking of gear unit
- Maintenance-free
- Suitable for all fitting positions





Technical data

Power supply		
	Power supply 24 V~	±20%, 50...60 Hz
	Power supply 24...48 V=	±20%
	Power consumption	3.5 W, 5.0 VA
Parameters		
	Running time for 90° motor	90 s
	Running time for 90° spring	15 s
	Torque	7 Nm
	Holding torque	7 Nm
	Angle of rotation	Max. 95°
Positioner	Control signal	0...10 V, R_i = 100 kΩ
	Positional feedback signal	0...10 V (0...100%)
	Admissible load	> 10 kΩ
	Switching range X_{sh}	0.2 V
Setting range	Starting point U_0	0 V
	Control span ΔU	10 V
Ambient conditions		
	Admissible ambient temperature	–32...55 °C
	Admissible ambient humidity	< 95% rh
Construction		
	Weight	1.3 kg
	Housing	Cast aluminium
	Power cable	0.9 m, 4 × 0.75 mm²
Standards and directives		
	Type of protection	IP 54 (EN 60529), suspended IP 42 (EN 60529), not suspended
	Protection class	III (IEC 60730)
	Degree of contamination	II
	Over-voltage categories	III
	Low-voltage directive 2006/95/EC	EN 60730-1, EN 60730-2-14
	EMC directive 2004/108/EC	EN 61000-6-2, EN 61000-6-3

Overview of types

Type	Properties
ASF113SF122	Damper actuator with spring return and positioner

Accessories

Type	Description
0372245001	Lever adaptor for converting rotation into stroke
0372245002	Lever adaptor for converting rotation into stroke, with carrier plate for mounting on wall or plinth
0510240001	Assembly kit for VKR/BKR ball valves as spare part and as accessory for rotary actuators ASF 112, 113 from index B

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Description of operation

The built-in positioner controls the positioning motor depending on the controller's output signal y. When the positioning signal is increasing, the coupling piece turns to the 90° position (scale on actuator) until the power-dependent cut-off. In the two end positions (limit stop of damper or limit stop due to angle-of-rotation limit, max. angle of rotation of 95° reached) or in the case of an overload, the torque-dependent cut-off is activated (no limit switches). If the power is cut off or is switched off by a safety device at connection 2 (cable = red), the motor releases the gear unit so that the spring turns the coupling piece back to the 0° position. The direction of rotation for the safety function is determined by how the actuator is mounted on the damper spindle. A signal converter is required for the reverse direction of operation.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.
All related product documents must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

The electronic concept enables the parallel operation of multiple air dampers with different torques. However, it must be ensured that the operating voltage is within the required tolerance range. The actuators must not be mechanically connected. The actuator can be fitted in any position and can be plugged directly onto the damper spindle and fixed by means of the self-centring clamping lever.
No auxiliary switches or potentiometers can be installed subsequently.
The angle of rotation can be limited to between 0° and 90° in 5° stages.

Beware of injury
When the housing is opened, there is a risk of injury due to the return spring.
►The housing must not be opened.

Outdoor installation

We recommend protecting the devices from the weather if they are installed outside buildings.

Additional version information

The two-part section of the housing must not be opened. It contains the brushless DC motor, the electronic control unit and the positioner, the maintenance-free gear unit with the anti-blocking function and the return spring. This coupling piece is suitable for Ø 6.4...20.5 mm and □ 6.4...13 mm damper spindles.
The actuator can be turned and locked into any position using the hex spanner supplied (see MV 505820). The gear unit is released again by unlocking it mechanically or by connecting the operating voltage.

Power consumption

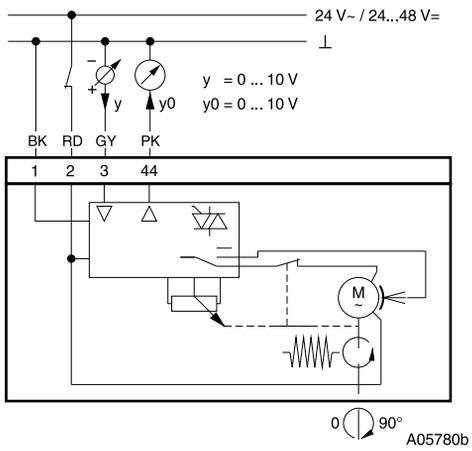
Type	Running time s	Status	Active power P W	Apparent power S VA
ASF 113S F122	90	Operating standstill	2.5 2.25	3.5 3.15

Disposal

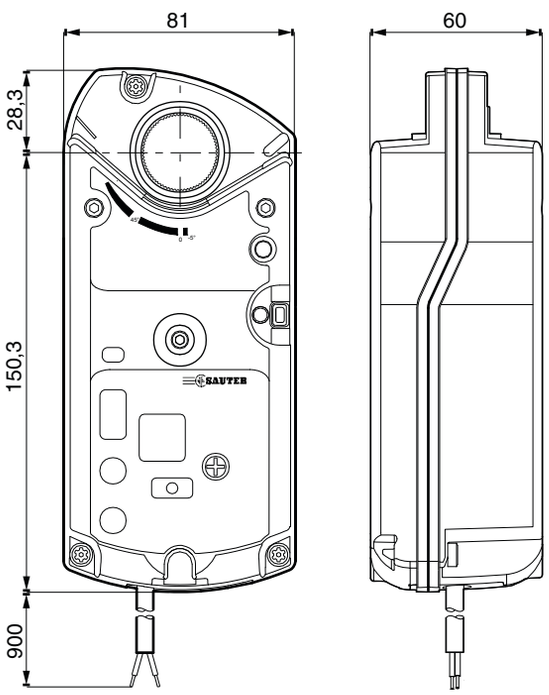
When disposing of the product, observe the currently applicable local laws.
More information on materials can be found in the Declaration on materials and the environment for this product.

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Connection diagram



Dimension drawing



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