

ASF 113S: Actuator with spring return and positioner

How energy efficiency is improved

Overload protection and end stop detection for efficient energy use.

Areas of application

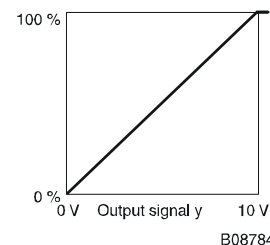
For controllers with continuous output (0 - 10 V). For actuation of air, shut-off and restrictor dampers and louvres.

Features

- 7 Nm torque and holding torque
- 24 V~; 24 - 48 V =
- 90 sec. running time for 90°
- Protection class IP54, vertical
- Self-centring axle adaptor
- Manual adjustment with hexagon socket, including locking gears
- Non-wearing, brushless motor
- Maintenance-free

Technical description

- Robust all-metal housing
- Suitable for all installation positions
- Connecting cable 0.9 m long, 4x 0.75 mm²
- Change direction of rotation simply by turning the drive



Type	Running time for 90°		Torque Nm	Holding Torque Nm	Power	Weight Kg
	Motor sec	Spring sec				
ASF 113S F122	90	15	7	7	24 V~ / 24...48 V=	1,3

Positioner		Permanently set at	
Control voltage	0...10 V, R _i = 100 kΩ	Starting point U ₀	0 V
Positional feedback signal	0...10 V (0...100%)	Control span ΔU	10 V
Permissible load	> 10 kΩ	Switching range X _{sh}	0,2 V
Power supply	24 V~ ± 20%, 50...60 Hz 24...48 V= ± 20%	Degree of protection see fitting instructions	IP 42 as per EN 60529 IP 54
Power consumption	2,5 W 3,5 VA	Protection class	III as per IEC 60730
Angle of rotation	max. 95°	Wiring diagram	A05780
Permissible ambient temp.	-32...55 °C	Dimension drawing	M09970
Permissible ambient humidity	< 95 %rh	Fitting instructions	MV 505820

Accessories

- 0372245 001** Lever adaptor for changing the rotary movement into stroke; MV 505824
- 0372245 002** Lever adaptor for changing the rotary movement into stroke;
with plate for fixing to wall or plinth; MV 505825
- 0510240 001** Mounting kit for ball valves VKR/BKR for damper drives ASF 112 and 113 from
index B, MV P100002479

Operation

The in-built positioner controls the servo-motor in relation to the controller's output signal *y*. As the output signal rises, the coupling piece turns towards 90° (scale on drive) until the force-dependent cut-out facility operates. In the two end positions (on reaching either the damper stop, the stop of the angle limiter or the maximum angle of 95°) or in the event of an overload, the torque-dependent cut-out comes into operation (no limit switches). In the event of a power failure, or when the power is switched off by a safety device at terminal 2 (red wire), the motor releases the gears, and the coupling piece is turned back by the spring to the 0° position.

The direction of rotation for the safety function is chosen by fitting the actuator onto the damper spindle accordingly. A signal converter is required for the opposite direction of operation.

Engineering and fitting notes

The use of electronics allows several dampers with different torque levels to be run in parallel. It is essential that the operating voltage lies within the prescribed tolerances. The drives must not be mechanically coupled. The drive, which can be fitted in any position, is fitted directly onto the damper shaft and fixed using the self-centring clamp.

The subsequent fitting of auxiliary switches or potentiometers is not possible.

Between 0° and 90°, the angle of rotation can be limited in steps of 5°.

N.B.: The housing must not be opened, since the return spring may cause injury.

Fitting outdoors. If the devices are fitted outdoors, we recommend that additional measures be taken to protect them against the effects of the weather.

Additional technical data

The two-part housing (which should not be opened) contains: the brushless d.c. motor; the electronic control unit; the positioner; the maintenance-free, non-jamming gears; and the return spring. The coupling piece is suitable for damper spindles of $\varnothing 6,4...20,5$ mm, $\square 6,4...13$ mm.

Using the Allen key supplied, the drive can be turned to, and locked in, any position (see MV 505820).

The gears are freed again either by unlocking them mechanically or by applying the operating power.

Power consumption:

Type	Running time s	Condition	active power P W	apparent power S VA
ASF 113S F122	90	Operating	2,5	3,5
		Standstill	2,25	3,15

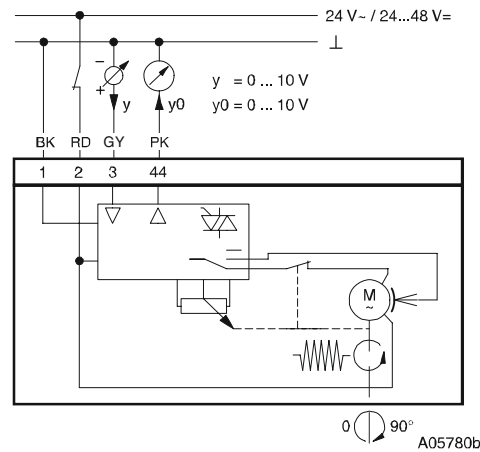
CE conformity

EMC directive 2004/108/EC
EN 61000-6-2
EN 61000-6-3

Machine directive 98/37/EEC (II B)
EN 1050

Low-voltage directive 2006/95/EC
EN 60730-1
EN 60730-2-14
Over-voltage category III
Degree of pollution II

Wiring diagram



Dimension drawing

