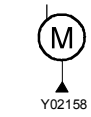
ASF 123S: Actuators with spring return and positioner

For controllers with continuous output (0...10 V). For the operation of air dampers, frost-protection dampers and smoke-shut-off dampers, for example. In the event of a power failure or when a safety device is activated, it returns to the original position.
Two-piece housing of cast light metal containing the motor, electronic control unit, return spring, gearbox and positioner. Electronic, torque-based cut-out by means of stops on either the actuator or the air damper; the direction of rotation can be reversed by fitting the unit the other way round. Included in delivery: clamp-on lever, fixing bracket as anti-torsion device, Allen key for making manual adjustments and winding up the spring, position indicator and two screws. Power cable is 0,9 metres long, 4× 0,75 mm², and fixed to the housing.

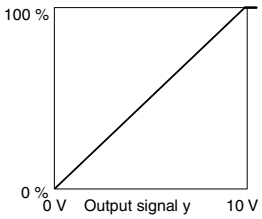
Type	Running time for 90° Motor	Running time for 90° Spring return	Torque	Holding Torque	Voltage	Weight
	sec	sec	Nm	Nm		kg
ASF 123S F122	90	15	18	18	24 V~ / 24…48 V=	2



Positioner:

Control voltage	0...10 V, R_i = 100 kΩ	Permanently set at:	
Positional feedback signal	0...10 V (0...100%)	Starting point U_0	0 V
Max. load	> 10 kΩ	Control span ΔU	10 V
		Switching range X_{sh}	0,2 V

Power supply	24 V~ ± 20%, 50...60 Hz	Degree of protection	IP 42 as per EN 60529
	24…48 V= ± 20%	see Fitting Instructions [1]	IP 54
Power consumption	5,4 W 7,5 VA		
		Protection class	III as per IEC 60730
Angle of rotation	max. 95°		
		Wiring diagram	A05780
Permissible ambient temp.	–32...55 °C	Dimension drawing	M05768
Permissible ambient humidity	< 95 %rh	Fitting instructions	MV 505422



Accessories

0370997 001 Lever adaptor for changing the rotary movement into stroke; MV 505430
0370998 001 Lever adaptor for changing the rotary movement into stroke; with plate for fixing to wall or plinth; MV 505431

[1] Degree of protection IP 54, see positional information on MV 505422

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 torques 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.
The angle of rotation can, between 0° and 90°, 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 ø8...25 mm and □6...8 mm.
Using the Allen key supplied, the drive can be turned to, and locked in, any position (see MV 505422). 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 123S F122	90	Operating	5,4	7,5
		Standstill	2,4	3,3

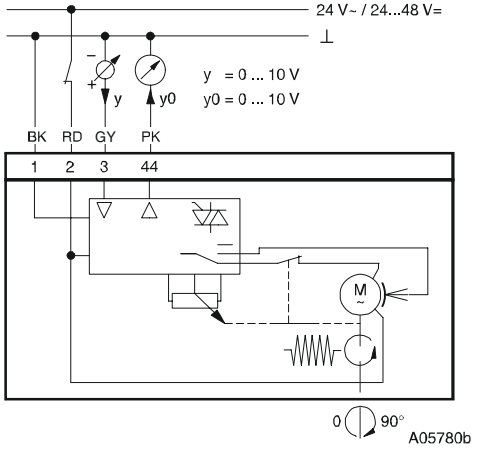
CE conformity

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

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

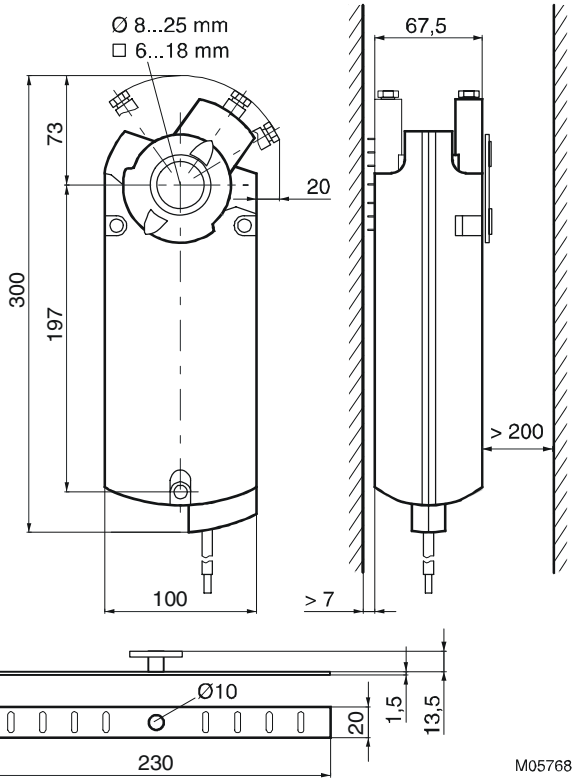
Low-voltage directive 2006/95/EC
EN 60730-1
EN 60730-2-14
Over-voltage category III
Degree of pollution II

Wiring diagram



Direction 0°…90° when y is rising
Direction of rotation of the safety function is chosen by fitting the unit accordingly

Dimension drawing



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N.B.: A comma between cardinal numbers denotes a decimal point

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