

## ASM 124: Actuators

For controllers with switched output, for 2-point or 3-point control. For the operation of air dampers, cut-off dampers and multi-louvre dampers.

Two-piece housing of fire-retardant plastic, black lower part, yellow upper part. Synchronous motor with electronics for control and switch-off, magnetic clutch and maintenance-free gearbox. Electronic recognition of end position and motor switch-off using gear sensor technology in the device. Self-centering spindle adaptor for fitting to the damper spindle. Gearbox can be de-coupled in order to position the damper or to make manual adjustments. Power cable is 1,2 metres long,  $3 \times 0,75 \text{ mm}^2$ , fixed to the housing. Fixing bracket, which functions as an anti-torsion device, has two metal screws. Suitable for fitting in any position. M5 thread holes for fitting to fixing bracket.



T09656



Y07551

Type <sup>3)</sup>	Torque Nm	Holding torque Nm	Running time <sup>1)</sup> for 90° s	Power	Weight kg
<b>ASM 124 F120</b>	18	18	120	230 V~	1,2
<b>ASM 124 F122</b>	18	18	120	24 V~	1,2

Power supply	230 V~ 24 V~	$\pm 15\%$ , 50...60 Hz $\pm 20\%$ , 50...60 Hz	Degree of protection	IP 54 as per EN 60529
			Protection class	24 V III as per IEC 60730 230 V II as per IEC 60730
Power consumption			Noise while running	< 30 dB(A)
ASM 124 F120	2,9 W	5,6 VA	Response time	200 ms
ASM 124 F122	2,3 W	2,4 VA		
Angle of rotation	90° <sup>1)</sup>		Wiring diagram	
Damper spindle	$\varnothing 10...20 \text{ mm}$ $\square 10...16 \text{ mm}$		2-point 24 V	<a href="#">A10210</a>
Damper spindle (hardness)	max. 300 HV		2-point 230 V	<a href="#">A10402</a>
			3-Punkt	<a href="#">A09713</a>
Permissible ambient temp.	-20...55 °C		Dimension drawing	<a href="#">M05671</a>
Permissible ambient humidity	< 95 %rh without condensation		Fitting instructions	MV 505792
			Declaration on materials	MD 51.025

### Accessories

<b>0361977 001</b>	Assembly kit for MH32 / MH42 control valve; MV 505477
<b>0370059 000*</b>	Clamp-on lever for shafts of $d=8-18 \text{ mm}$
<b>0370990 001*</b>	Auxiliary change-over contacts <sup>2)</sup> , single, MV 505446
<b>0370990 002*</b>	Auxiliary change-over contacts <sup>2)</sup> , double, MV 505446
<b>0370992 001*</b>	Potentiometer, 2000 $\Omega$ , 1 W, MV 505446
<b>0370992 002*</b>	Potentiometer, 130 $\Omega$ , 1 W, MV 505446
<b>0372200 001</b>	Fixing bracket; MV 505676
<b>0372201 001</b>	Spindle extension with coupling; MV 505676
<b>0372202 001</b>	Lever and tape; MV 505676
<b>0372203 001</b>	Connecting piece for contact unit; 0370990; MV 505676
<b>0372204 001</b>	Spindle for clamp-on lever 0370059; MV 505676

<sup>1)</sup> Dimension drawing or wiring diagram are available under the same number

- 1) Maximum angle of rotation: 95° (without stops)  
 2) Fully variable from 0...90°; max. loading 5 (2) A, 24...230V  
 3) Version with halogen-free cable available on request

### Operation

By connecting the power supply to either cable 2a or cable 2b, the final control element can be moved into any desired position.

Direction of rotation for 3-point control (as viewed from the actuator towards the spindle adaptor)  
 – the spindle adaptor rotates in a clockwise direction if power is connected to the brown wire (2a)  
 – the spindle adaptor rotates in an anti-clockwise direction if connected to the black wire (2b).

Direction of rotation for 2-point control, 24V (as viewed from the drive towards the spindle adaptor):  
 the black wire (2b) is always live:

- the spindle adaptor rotates clockwise, with voltage on the brown wire (2a).
- the spindle adaptor rotates counter-clockwise, with no voltage on the brown wire (2a).

Direction of rotation for 2-point control, 230V (as viewed from the drive towards the spindle adaptor):  
 The brown wire (2a) is always live:

- the spindle adaptor rotates counter-clockwise, with voltage on the black wire (2b).
- the spindle adaptor rotates clockwise, with no voltage on the black wire (2b).

In the end positions, the electronic end position detector responds (motor switch-off). In case of an overload, a magnetic clutch protects the gearbox. The effective end position is determined by the damper stop guide or by a rotation-angle limiter, or when the maximum rotation angle of 95° is reached.

Manual adjustment by turning the spindle adaptor after decoupling the gears (button on housing cover).

For 3-point control, the direction of rotation can be changed by swapping the connections over.

### Engineering and fitting notes

The concept for the synchronous motor and the electronics guarantees that several air dampers can be run in parallel with different torque levels. The drive can be mounted in any position, can be inserted directly onto the damper shaft and is fixed using the self-centering clamp.

Caution! The housing must not be opened.

The following accessories can be fitted to each actuator: one set of single auxiliary contacts or one set of double auxiliary contacts or one potentiometer. By re-positioning a disc under the coupling piece, the angle of rotation can be limited between 0 and 90° in steps of 5°. The coupling piece is suitable for damper spindles of Ø 10...20 mm and □ 10...16 mm.

**Installation in the open air.** We recommend that the equipment is given additional protection against weather influences if installed outside of the building.

### Additional technical data

The upper section of the housing, with the lid, manual adjustment knob and the cap button, contains the synchronous motor with the capacitor and the electronic control and switch-off units. The lower section of the housing contains the maintenance-free gears, the magnetic clutch and the spindle adaptor. To reverse the direction of rotation with 3-point control, the brown and the black wires must be transposed.

Auxiliary change-over contacts

Switch rating: max. 230V a.c.; min. current 20 mA at 20V

Switch rating: max. 4...30V d.c.; min. current 1...100 mA

Power consumption:

Type	Running time s	Condition	active power P	apparent power S
			W	VA
ASM 124 F120	120	Operating	2,9	5,6
		Standstill	0,5	5,1
ASM 124 F122	120	Operating	2,3	2,4
		Standstill	0,03	0,4

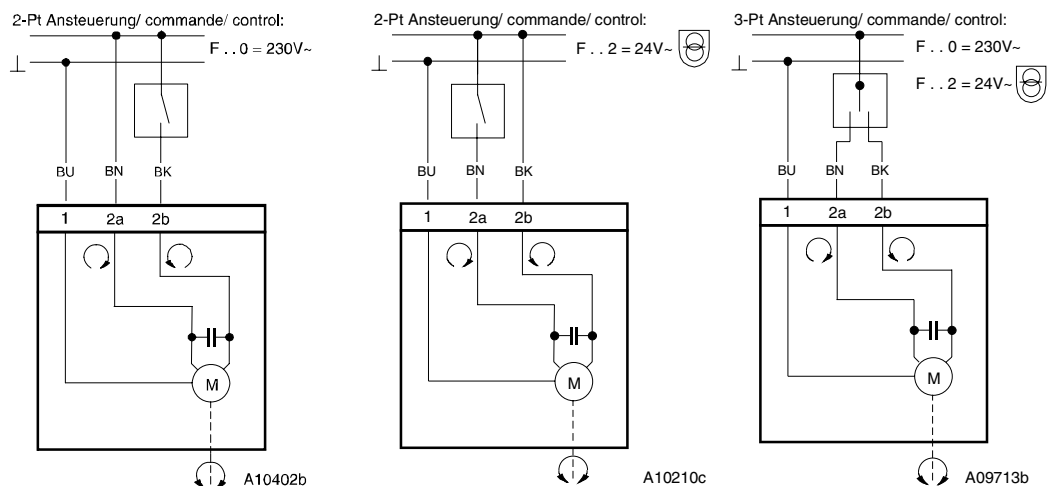
### CE conformity

EMC directive 2004/108/EC  
EN 61000-6-1  
EN 61000-6-2  
EN 61000-6-3  
EN 61000-6-4

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

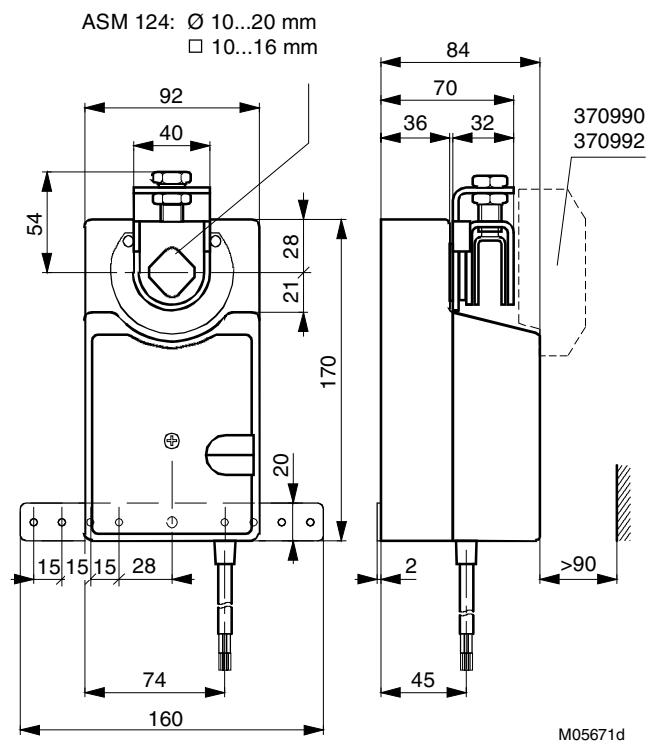
Low-voltage directive 2006/95/EC  
EN 60730-1  
EN 60730-2-14  
Over-voltage category III  
Degree of pollution II

### Wiring diagram

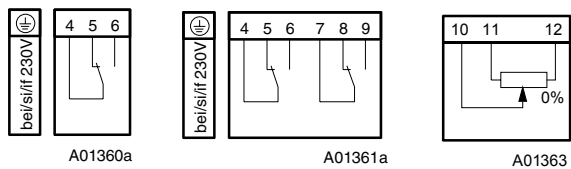


Direction of operation 1:  
2a closed, 2b open  
Direction of operation 2:  
2b closed, 2a open

**Dimension drawing**



**Accessories**



Only one potentiometer or one auxiliary contact can be fitted per drive.

