

ASM 124: Actuators

How energy efficiency is improved

Torque related cut-off for efficient energy use.

Areas of application

For controllers with a switching output (2-point or 3-point control). For actuation of air, shut-off and restrictor dampers and louvres.

Features

- 18 Nm torque and holding torque
- 230 V, 50/60 Hz or 24 V, 50/60 Hz
- 120 sec. running time for 90°
- Protection class IP54⁴⁾
- Operating noise < 30 db(A)
- Self-centring axle adaptor
- Gearbox that can be disengaged for positioning the damper and manual adjustment
- Synchronous motor with control and electronic cut-off
- Maintenance-free

Technical description

- Two-part housing made of self-extinguishing plastic, lower section black and upper section yellow
- Suitable for all installation positions
- Connecting cable 1.2 m long, 3x 0.75 mm²
- Direction of rotation can be changed by reversing connections



Y07551

Type ³⁾	Torque	Holding torque	Running time ¹⁾	Power	Weight
	Nm	Nm	for 90° s		kg
ASM 124 F120	18	18	120	230 V~	1,2
ASM 124 F122	18	18	120	24 V~	1,2
Power supply	230 V~ ± 15%, 50...60 Hz 24 V~ ± 20%, 50...60 Hz		Degree of protection ⁴⁾	IP 54 as per EN 60529	
Power consumption			Protection class	24 V III as per IEC 60730 230 V II as per IEC 60730	
ASM 124 F120	2,9 W	5,6 VA	Noise while running	< 30 dB(A)	
ASM 124 F122	2,3 W	2,4 VA	Response time	200 ms	
Angle of rotation	90° ¹⁾		Wiring diagram		
Damper spindle	Ø 10...20 mm □10...16 mm		2-point 24 V	A10210	
Damper spindle (hardness)	max. 300 HV		2-point 230 V	A10402	
			3-Punkt	A09713	
Permissible ambient temp.	-20...55 °C		Dimension drawing	M05671	
Permissible ambient humidity	< 85 %rh without condensation		Fitting instructions	MV 505792	
			Declaration on materials	MD 51.025	

Accessories

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

^{*)} 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
 4) See fitting instructions

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 W	apparent power S 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 2006/42/EC (II B)

EN 1050

Low-voltage directive 2006/95/EC

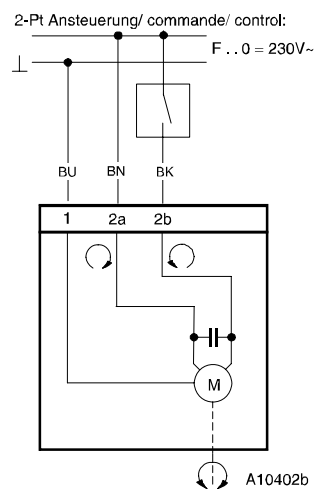
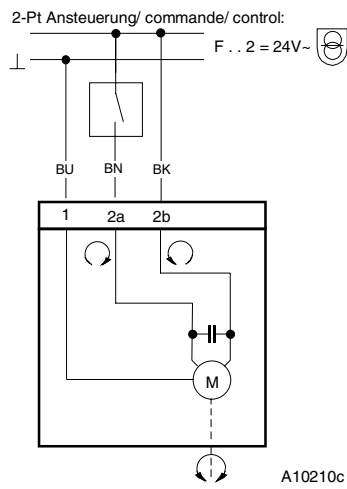
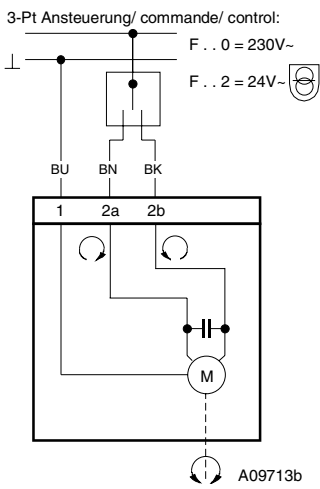
EN 60730-1

EN 60730-2-14

Over-voltage category III

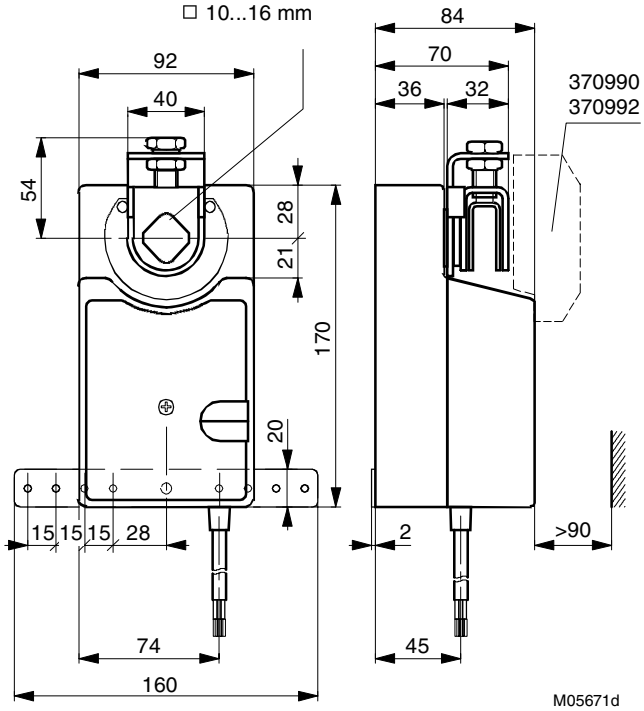
Degree of pollution II

Wiring diagram



Dimension drawing

ASM 124: Ø 10...20 mm
 □ 10...16 mm

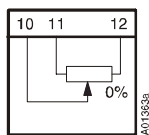
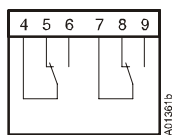
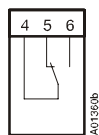


Accessories

370990/001

370990/002

370992/...



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

