

## ASM 105, 115: Damper actuator

### How energy efficiency is improved

Time-dependent cut-off facility for efficient usage of energy

### Features

- For controllers with switching output (2- or 3-point)
- Self-centring spindle adapter
- Gear unit can be disengaged to position the damper and for manual adjustment
- Synchronous motor with electronic activation and cut-out
- Maintenance-free
- Suitable for all fitting positions



ASM105F122



### Technical data

#### Parameters

Angle of rotation	Max. 95°
Admissible damper shaft	Ø 8...16 mm, □ 6,5...12.5 mm
Admissible damper shaft (hardness)	Max. 300 HV
Operating noise	< 30 dB(A)
Response time	200 ms

#### Ambient conditions

Admissible ambient temperature <sup>1)</sup>	-20...65 °C
Admissible ambient humidity	5...85% rh, no condensation

#### Operation

Control	2-/3-point
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#### Construction

Weight	0.7 kg
Housing	Lower section black, upper section yellow
Housing material	Fire-retardant plastic
Power cable	1.2 m long, 3 × 0.75 mm <sup>2</sup>

#### Standards and directives

Type of protection	IP 54 (EN 60529)
Protection class 24 V	III (IEC 60730)
Protection class 230 V	II (IEC 60730)

CE conformity as per	EMC Directive 2004/108/EC	EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4
	Directive 2006/95/EC	EN 1050
	Low-voltage directive 2006/95/EC <sup>2)</sup>	EN 60730-1, EN 60730-2-14 Over-voltage category III Degree of contamination II

#### Overview of types

Type	Torque and holding torque	Running time for 90°	Power supply	Power consumption
ASM105F100	5 Nm	30 s	230 V~	2.4 W, 5.4 VA
ASM105F120	5 Nm	120 s	230 V~	2.0 W, 5.0 VA
ASM105F122	5 Nm	120 s	24 V~	1.6 W, 1.7 VA
ASM115F120	10 Nm	120 s	230 V~	2.0 W, 5.0 VA
ASM115F122	10 Nm	120 s	24 V~	1.6 W, 1.7 VA

#### Accessories

Type	Description
0361977002	Assembly materials for M3R/M4R, MH32F/MH42F with ASM 105, 115
0372145001	Auxiliary change-over contacts, single


<sup>1)</sup> Operating time approx. 80% up to 65 °C, 100% up to 55 °C

<sup>2)</sup> Only for ASM1\*5F1\*0



Type	Description
0372145002	Auxiliary change-over contacts, double
0372286001	Potentiometer, 130 $\Omega$
0372286002	Potentiometer, 1000 $\Omega$
0372286003	Potentiometer, 5000 $\Omega$
0372300001	Torsion protection, long (230 mm)
0372301001	Spindle adaptor for squared end hollow profile (x 15 mm), pack of 10 pcs.
0372320001	Hexagon key as visualisation for position indicator
0372459100	External switching, 230 V version for parallel operation with A*M 1*4 or drives with limit switch, incl. junction box
0372459102	External switching, 24 V version for parallel operation with A*M 1*4 or drives with limit switch, incl. junction box

 *Auxiliary change-over contacts: Infinitely variable 0...90°, admissible load 5(2) A, 24...230 V*

 *Potentiometers: Only one potentiometer or one set of auxiliary contacts can be fitted for each actuator*

### Description of operation

When voltage is applied to the cable, the control unit to be activated is moved to any desired position.

**Direction of rotation for 3-point control** (viewing the spindle adaptor from the actuator):

- The spindle adaptor turns in the clockwise direction, with the voltage on the brown cable.
- The spindle adaptor turns in the anti-clockwise direction, with the voltage on the black cable.

**Direction of rotation for 2-point control** (viewing the spindle adaptor from the actuator):

There is always voltage on the black cable.

- The spindle adaptor turns in the clockwise direction, with the voltage on the brown cable.
- The spindle adaptor turns in the anti-clockwise direction, with no voltage on the brown cable.

In the end positions (limit stop in air damper or maximum angle of rotation reached), or in the case of an overload, the magnetic coupling is activated. The positioning signal is switched off by the electronic cut-out after 3 minutes or 60 seconds (F100). The effective end position results from the limit stop of the damper or the angle-of-rotation limit, or by reaching the maximum angle of rotation of 95°.

The manual adjustment is performed by releasing the gear unit using the adjuster beside the connection cable and simultaneously adjusting the spindle adaptor.

With 3-point control, the direction of rotation is changed by swapping the connections.

### 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 regulations must also be adhered to. Changing or converting the product is not admissible.

### Engineering and fitting notes

The concept of the synchronous motor enables the electric parallel operation of multiple damper actuators. The actuator can be installed in any position (including a hanging position). It is plugged directly onto the damper spindle and clipped to the anti-torsion device. The self-centring spindle adaptor protects the damper spindle. The damper actuator can be detached from the damper spindle very easily without removing the anti-torsion device.

The angle of rotation can be limited to between 0° and 90° and continuously adjusted between 5° and 80°. The limit is fixed using a set screw directly on the actuator and the limit stop on the self-centring spindle adapter. The spindle adapter is suitable for  $\varnothing$  8...16 mm and  $\square$  6.5...12.7 mm damper spindles.

The maximum accessory equipment for an actuator is 1 auxiliary change-over contact or 1 potentiometer.

The auxiliary contact accessory is screwed onto the top cover of the actuator. To be able to make the mechanical connection, you first have to remove the indicator knob. A new indicator can be seen on the cover of the accessory.



#### 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.

### Additional technical data

The upper section of the housing with the cover and indicator knob contains the synchronous motor with capacitor.

The lower section of the housing contains the maintenance-free gear unit and the gear-release knob.  
 To reverse the direction of rotation for 3-point control, the brown and black cables must be swapped.  
 The actuators are protected against incorrect connection.

**Auxiliary change-over contacts**

Switch rating max. 230 V AC, current min. 20 mA at 20 V  
 Switch rating max. 4...30 V DC, current min. 1...100 mA

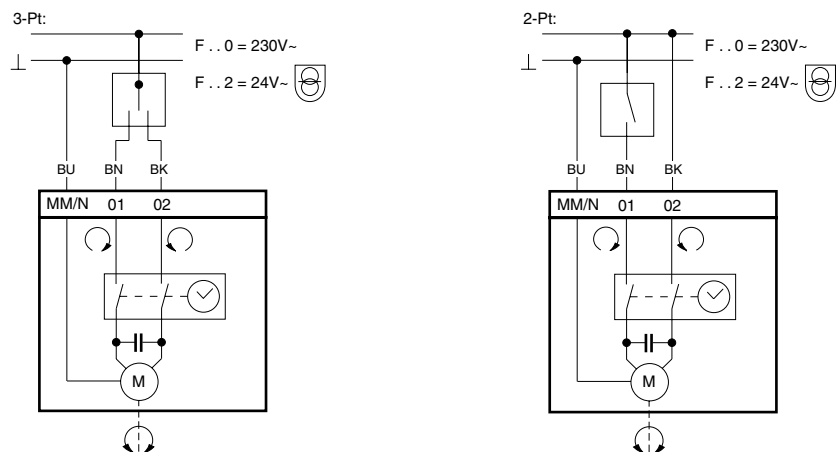
**Outdoor installation**

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

**Disposal**

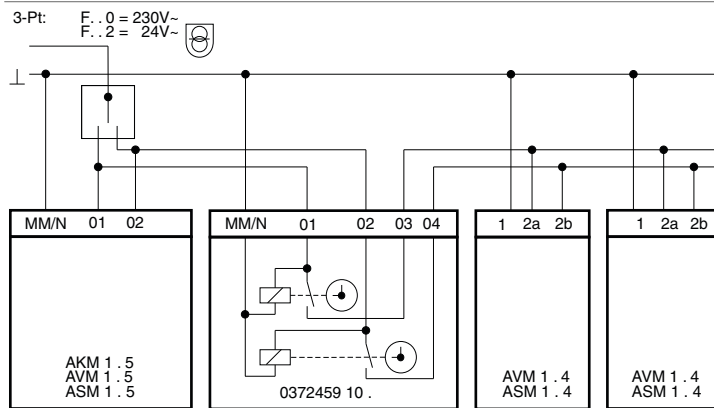
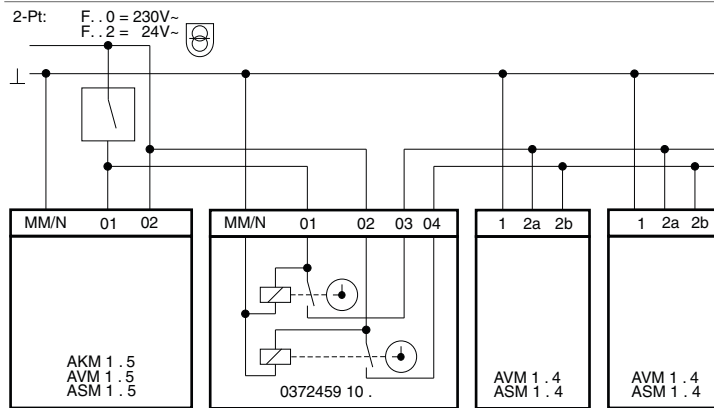
When disposing of the product, observe the currently applicable local laws.  
 More information on materials can be found in the Declaration on materials and the environment for this product.

**Connection diagram**



**Accessories**

<p>372145 001</p>	<p>372145 002</p>
<p>0372286</p>	<p>RD = red                  BN = brown                  BK = black                  GN = green                  GY = grey                  VT = violet</p>
<p>372459 10 .</p>	



Dimension drawing

