ASM 105, 115: Damper actuator



ASM105F122



How energy efficiency is improved

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

Features

- For controllers with switching output (2- and 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

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[1)]	–20...65 °C
	Admissible ambient humidity	5...85% rh, no condensation
Function		
	Control	2-/3-point
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 mm²
Standards and directives		
	Type of protection	IP54 (EN 60529)
	Protection class 24 V	III (EN 60730)
	Protection class 230 V	II (EN 60730)
CE conformity according to	EMC Directive 2014/30/EU	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 2014/35/EU[2)]	EN 60730-1, EN 60730-2-14 Over-voltage category III Degree of contamination II

Overview of types

Type	Rotational 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, MH32R/F, MH42R with ASM 105, 115
0372145001	Auxiliary change-over contacts, single

1) *Operating time approx. 80% up to 65 °C, 100% up to 55 °C*
2) *Only for ASM1*5F1*0*

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Type	Description
0372145002	Auxiliary change-over contacts, double
0372286001	Potentiometer, 130 Ω
0372286002	Potentiometer, 1000 Ω
0372286003	Potentiometer, 5000 Ω
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 or actuators 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 adapter 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 Ø 8...16 mm and □ 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.

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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

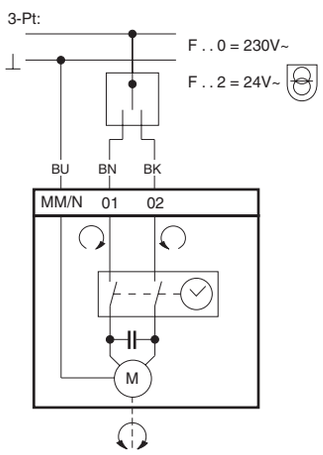
Outdoor installation

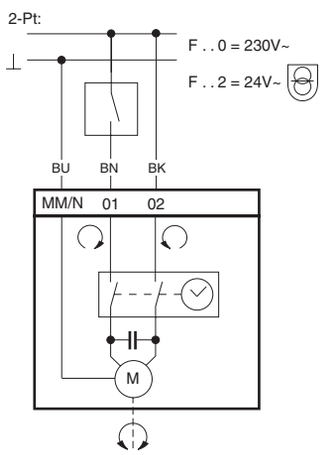
We recommend protecting the devices from the weather if they are installed outside buildings.

Disposal

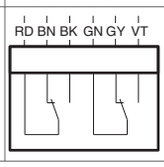
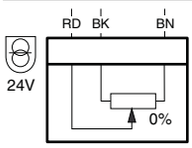
When disposing of the product, observe the currently applicable local laws.
More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagram



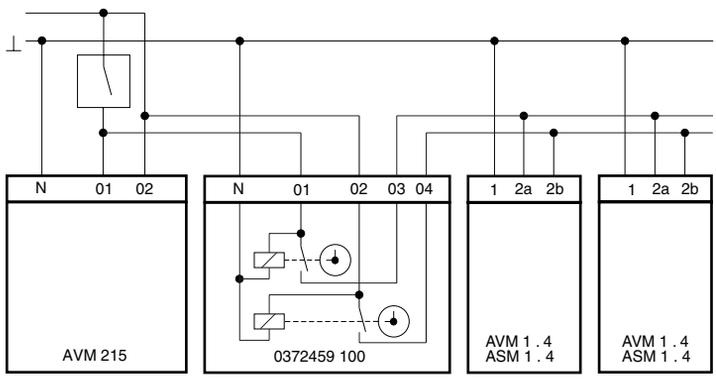


Accessories

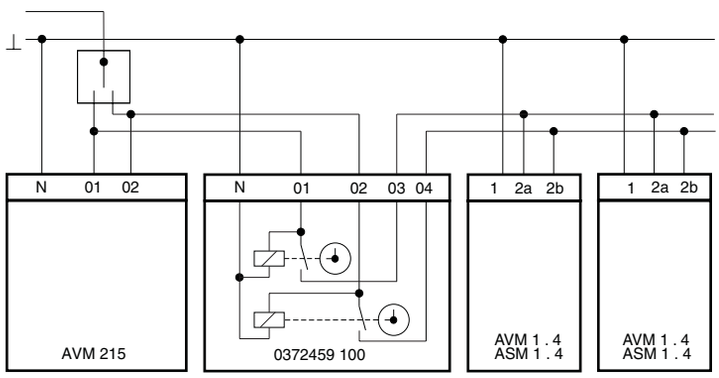
372145 001	372145 002
	
0372286	
	RD = red BN = brown BK = black GN = green GY = grey VT = violet
372459 10 .	

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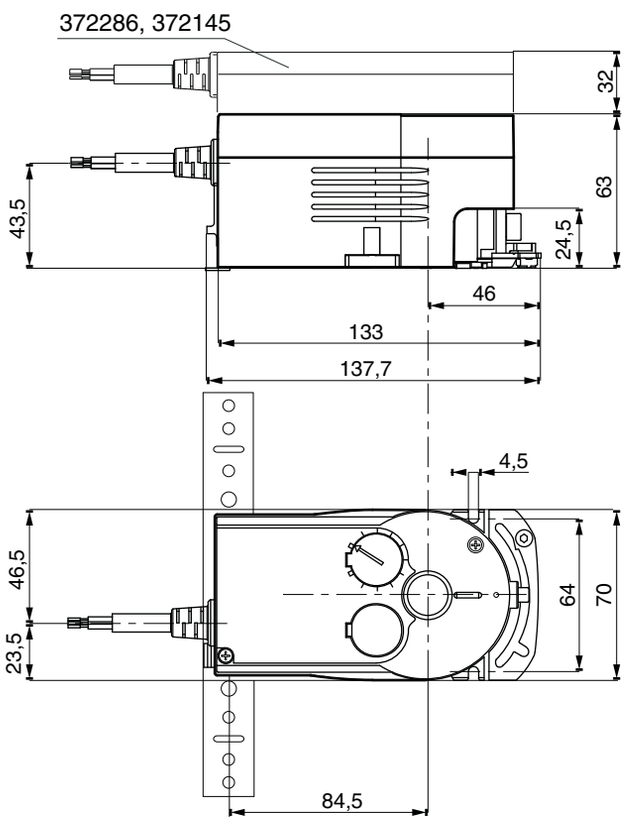
2-Pt: F. . 0 = 230V~



3-Pt: F. . 0 = 230V~



Dimension drawing



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