

A44 W0S...W2S: Motorised actuator with positioner

How energy efficiency is improved

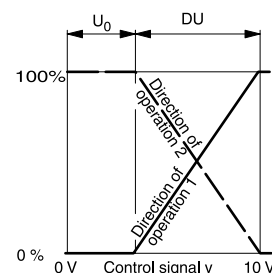
Electric cut-off in end position to save energy

Features

- Actuation of control units such as air dampers, gates, butterfly valves, etc. for controllers with continuous output (0...10 V or 0...20 mA)
- Synchronous motor with limit switch and integrated positioner
- Maintenance-free gear unit
- Moves the control unit to any intermediate position
- Direction of operation can be selected with switch
- Cable gland M20 × 1.5
- Crank for manual adjustment



A44W*SF001



Technical data

Power supply

Power supply	24 V~, ±20%, 50...60 Hz
Power consumption when idle	3 VA
Power consumption with 60 Hz	A44WS02, A44W1S → 13.4 W A44W2S → 7.8 W at standstill → 3 VA

Parameters

Positioner	Control signal 0...10 V	$R_i = 30 \text{ k}\Omega$
	Control signal 0...20 mA	$R_i = 50 \text{ k}\Omega$
	Positional feedback 0...10 V	Permissible load $\geq 2.5 \text{ k}\Omega$
	Positional feedback 0...620 mV	Permissible load $\geq 100 \text{ k}\Omega$
	Starting point U_0	0.4...9.1 V
	Control span ΔU	1...10 V
	Switching range X_{sh}	4% of ΔU
	Angle of rotation ¹⁾	30°...320° (90° nominal)

Ambient conditions

Admissible ambient temperature	-5...50 °C
Admissible ambient humidity	5...95% rh
Storage and transport temperature	-30...70 °C

Construction

Housing material	Light-metal alloy, cover made of fire-retardant plastic
Screw terminals	For wire of up to 1.5 mm ²

Standards and directives

Type of protection ²⁾	IP 43 (EN 60529)
EMC directive 2004/108/EC	EN 61000-6-1/EN 61000-6-3 EN 61000-6-4

¹⁾ Angle of rotation of end shaft is 90° (factory set). Changing the arrangement to 180° is possible by reversing the cogs and readjusting the limit switches. Refer to fitting instruction MV 505228

²⁾ Type of protection IP 43 only in conjunction with M20 × 1.5 cable gland. Type of protection IP 55 is attained with steel or aluminium cover (accessory) and M20 × 1.5 cable gland.



Overview of types

i Admissible damper surface area: the recommended admissible damper area applies to equal-sided, smooth-running air dampers

Type	Torque (Nm)	Holding torque (Nm)	Running time for 90° (s)	Admissible damper surface area (m ²)	Power consumption (W)	Weight (kg)
A44W0SF001	25	22	30	8	12.2	2.7
A44W1SF001	30	30	60	10	12.2	2.7
A44W2SF001	30	30	120	10	6.8	2.4

Accessories

Type	Description
0188614000	Fixing bracket for wall mounting
0274605000	Angled ball joint for clamping lever with M10 nut
0294967000	Pivot pin for clamping lever
0370479000	Steel hood + manual adjuster, hammer enamel finish RAL 1020
0370486000	Clamping lever, complete (including square hub)
0370493000	2 auxiliary contacts Min. load: 100 mA, 24 V~
0370628000	Adaptor plate including 4 M6 countersunk screws for replacing A33 W. with A44 W.
0370638000	Straight ball joint for clamping lever with nut (M10)
0371290001	Cover, black, made of die-cast aluminium with display window, rubber seal, position indicator and scale, type of protection IP 55
0372460001	Cable screw fitting (plastic M20 × 1,5) incl. locking nut and seal

Description of operation

The built-in positioner controls the positioning motor depending on the controller's output signal y . Direction of operation 1 and 2 can be selected with switch S2. Direction of operation 2 (as delivered ex works): The end shaft rotates in the anti-clockwise direction (viewing the control unit from the actuator). Starting point U_0 and control span ΔU are adjustable. The reversible synchronous motor is switched off in the end positions by the limit switches, and the self-locking is then ensured by an integrated magnetic brake. When the crank handle is used, the neutral wire of the motor is interrupted by means of a switch.

Priority switching: The control unit to be activated can be moved to any chosen intermediate position by closing the electrical circuit using terminals 1-5 or 1-6. The end shaft rotates in the anti-clockwise direction (viewing the control unit from the actuator) when the power is applied to terminal 6.

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

Engineering and fitting notes

The angle of rotation is changed from 90° to 180° by reversing the two cogs and readjusting the limit switches. The end contacts and auxiliary change-over contacts are adjusted centrally on the switch tower, which has a direct mechanical connection to the end shaft (fitting instructions MV 505228). The max. internal equipment for the actuator is: 2 change-over limit switches (standard) and 2 auxiliary change-over contacts. The connection terminals for the auxiliary functions are located directly on the corresponding limit switches and auxiliary switches (max. 1.5 mm²), and the earthing terminal is on the steel coverplate. The actuator is fixed via 4 M6 holes on the end shaft side. The motorised actuator can be fitted in any position.

Outdoor installation

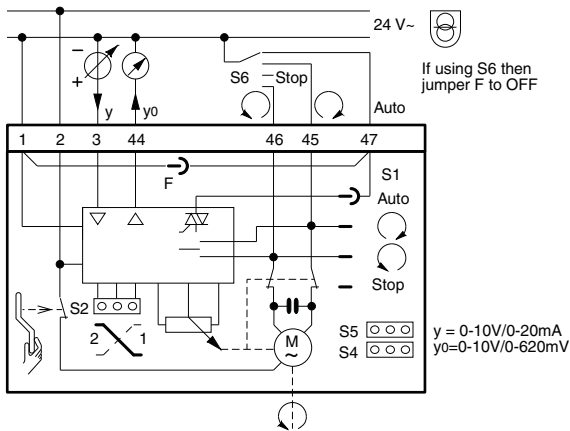
The devices must also be protected from the weather if they are installed outside the building.

Disposal

When disposing of the product, observe the currently applicable local laws.

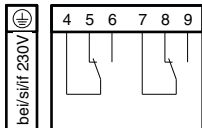
More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagram

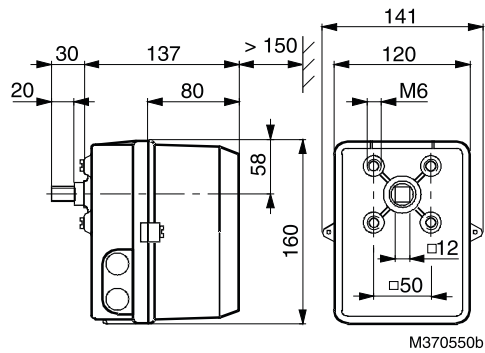


Accessories

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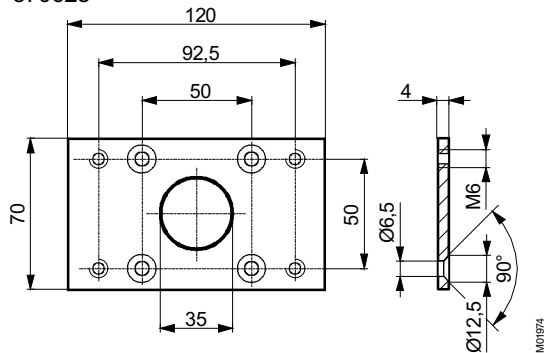


Dimension drawing

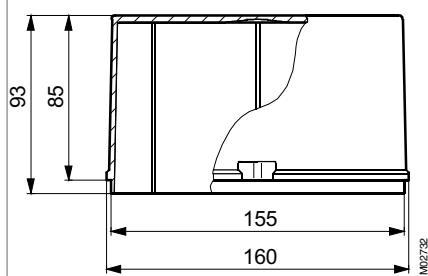


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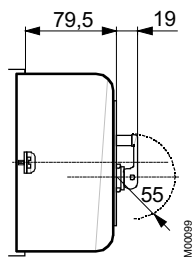
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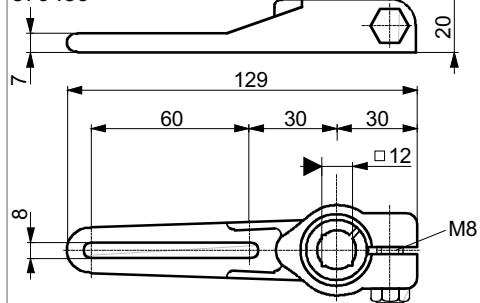
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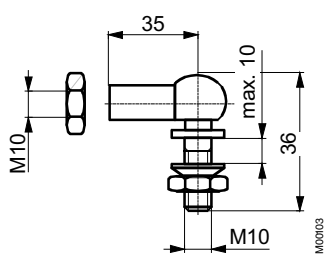
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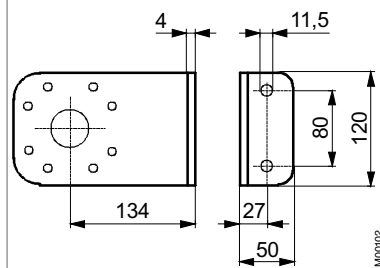
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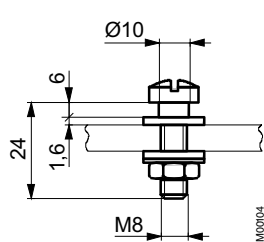
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