

AVF 124: Actuator with spring return

Improving energy efficiency

Electric cut-off to save energy

Features


- Activation of through and 3-way valves of the VUN/BUN, VUD/BUD and VUE/BUE series, DN 15 to DN 50. For controllers with a switching output (3-point control)
- Spring return facility moves the unit to the end position in the event of a power failure or when a limit controller is activated
- Stepping motor with electronic control unit and electronic, force-dependent cut-off
- Maintenance-free gear unit
- LED display/indicators
- Coding switch for changing the running time
- Electrical connections (max. 1.5 mm²) with screw terminals
- Cable inlet M20 × 1.5
- Fitting vertically upright to horizontal, not suspended

Technical data

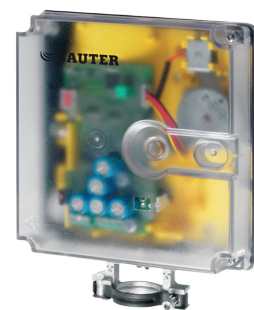
Power supply		
Power supply		230 V~, ±15%, 50...60 Hz
Power consumption		4 W, 7.6 VA
Parameters		
Running time of motor		60/120 s
Running time of spring		18 s ±10
Actuating power		500 N
Actuator stroke		0...8 mm
Response time		200 ms
Ambient conditions		
Admissible ambient temperature		5...60 °C
Temperature of medium		Max. 100 °C
Admissible ambient humidity		< 95% rh, no condensation
Construction		
Weight		2.4 kg
Housing		Lower section black, cover transparent
Housing material		Fire-retardant plastic
Materials for gearbox and fitting bracket		Pressure-cast zinc
Standards and directives		
Type of protection ¹⁾		IP 54 (EN 60529)
Protection class		II (IEC 60730)
EMC directive 2004/108/EC		EN 61000-6-1, EN 61000-6-2 EN 61000-6-3, EN 61000-6-4
Low-voltage directive 2006/95/EC		EN 60730-1, EN 60730-2-14
Over-voltage categories		III
Degree of contamination		3
Software		A (EN 60730)
Mode of operation		Type 1 AA (200ms, EN 60730)

Overview of types

Type	Reset function
AVF124F130	Actuator spindle retracted
AVF124F230	Actuator spindle extended

 AVF124F130: Valve normally closed (NC) with: VUD, BUD, VUE, BUE, VUN, BUN

¹⁾ Type of protection IP 54 only with cable gland



AVF124F130



AVF124F130



AVF124F230



☛ AVF124F230: Valve normally open (NO) with: VUD, BUD, VUE, BUE, VUN, BUN

Accessories

Type	Description
0370881001	Auxiliary change-over contacts, single
0370882001	Auxiliary change-over contacts, single, combined with pot. 2000 Ω, 1 W; 24 V
0370882006	Auxiliary change-over contacts, single, combined with pot. 1000 Ω auxiliary change-over contacts, 1 W; 24 V
0370883001	Potentiometer, 2000 Ω, 1 W; 24 V
0370883006	Potentiometer, 1000 Ω, 1 W; 24 V
0372249001	Adaptor required when media temperature > 100 °C (recommended for temperatures < 10 °C)
0372460001	Cable screw fitting (plastic M20 × 1,5) incl. locking nut and seal

☛ Auxiliary change-over contacts: Infinitely variable, admissible load 2(1) A, 12...250 V~, min. load 250 mA, 12 V~

Description of operation

When the device is restarted, or when it is started after the reset is triggered, there is a waiting time of 45 s until the reset function is available.

When voltage is applied to terminals 1-2a or 1-2b, the control unit to be activated is moved to any desired position by means of the coupling rod. The coupling rod moves out or the valve opens when voltage is applied to terminals 1 and 2a, and it moves in when the electrical circuit is closed via terminals 1 and 2b. In the end positions (limit stop in valve or maximum stroke reached) or in the case of an overload, the electronic motor cut-off is activated (no limit switches).

Direction of the stroke changed by transposing the connections.

If the supply voltage fails or is switched off, or if a monitoring contact at terminal 21 is activated, the holding magnet releases the gear unit and the preloaded spring moves the actuator to an end position, depending on the model of the actuator. The reset function is braked depending on the speed, so that no pressure surges can occur in the supply line.

The green LED indicator lights up as long as there is a command pulse on terminal 2a or 2b. When the limit stops are reached, the LED flashes at intervals of approx. 2.5 s.

During normal operation, the yellow LED indicator lights up continuously and goes out after the reset function has been triggered (no power at terminal 21). When there is power at terminal 21 again, the yellow LED flashes again for approx. 40 s. During this time, the reset function cannot be deactivated again, so that the actuator can definitely reach the end position.

Intended use

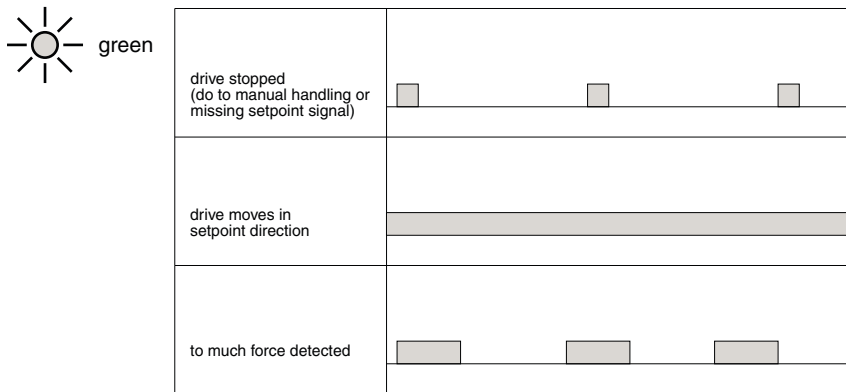
This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

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

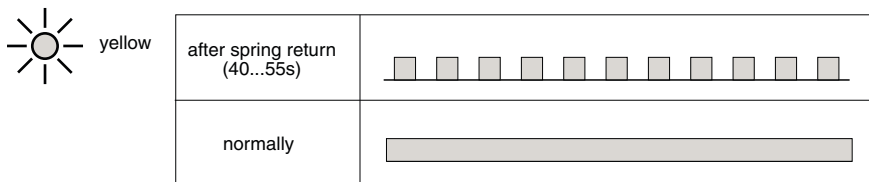
Coding switch

	S1	S2
120 s	OFF	ON
120 s	ON	ON
60 s	ON	OFF
60 s	OFF	OFF
Symbol	ON	ON

LED indicator: Operation



LED indicator: Safety function



Engineering and fitting notes

Condensate, dripping water, etc. must be prevented from entering the actuator along the valve spindle.

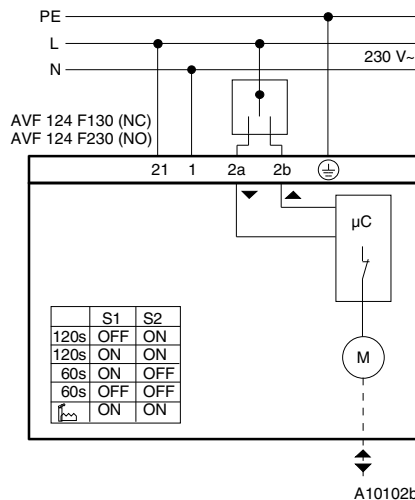
The actuator / valve is mounted by inserting and tightening screws without any additional adjustment. The device is delivered ex works in the open or middle position. With the “normally open” model, the spacer must be removed when the valve is mounted.

The concept of stepping motor and electronics enables parallel operation of multiple valve actuators. The maximum accessory equipment is 1 stroke indicator and 1 additional accessory of auxiliary contact, potentiometer or combination.

Outdoor installation

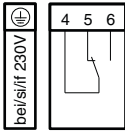
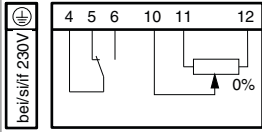
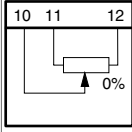
We recommend protecting the devices from the weather if they are installed outside buildings.

Connection diagram

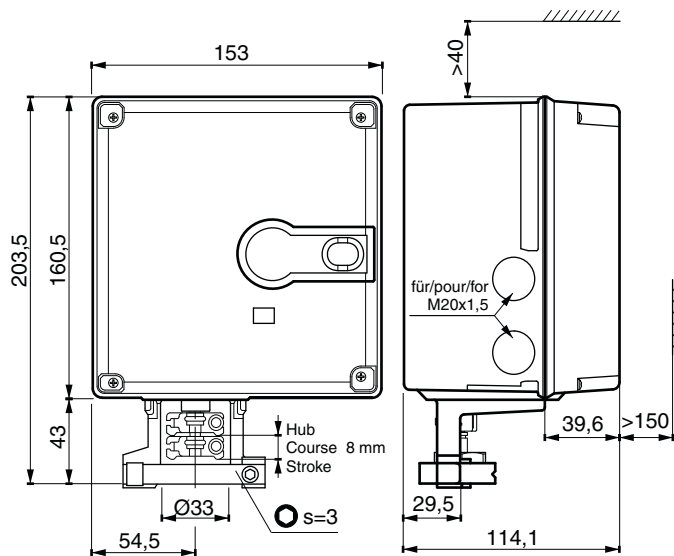


NC = without auxiliary energy closed (normally closed)
NO = without auxiliary energy open (normally open)

Accessories

<p>370881</p> 	<p>370882</p> 	<p>370883</p> 
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Dimension drawing



Accessories

