

GB Product Data Sheet

AVF234S: 2000N Actuator with analog SUT positioner and spring return

Areas of use

For use with two or three-way. For controllers with continuous output (0...10 V or 4...20 mA) or switching output (2-point or 3-point control). For applications where a fail-safe function is required.

How energy efficiency is improved

Automatic adaptation to valve, precision control and high energy efficiency with minimal operating noise.

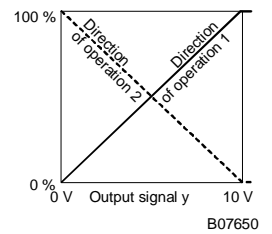
Features

- Actuator with spring return action and pushing force of at least 2000 N with actuator extending or retracting spindle versions.
- Stepping motor with SUT (Superior Universal Technology) electronic control unit and electronic load-dependent cut-off
- Automatic detection of control signal applied (continuous or switching), indicated by two LEDs
- The type of characteristic (linear, quadratic or equal-percentage) can be set on the actuator
- Automatically adapts to valve stroke between 8 and 49 mm; captive even in the event of a power failure
- Direction of travel can be selected via screw terminals when making electrical connection or remotely
- Coding switches for selecting the characteristic and the running time (2, 4 or 6 s/mm)
- Lever for external manual adjustment, with motor cut-off, and for triggering a re-initialisation
- Easy assembly with valve; spindle is connected automatically when control voltage is applied
- The availability of numerous adaptors enables the actuator to be fitted to third-party valves



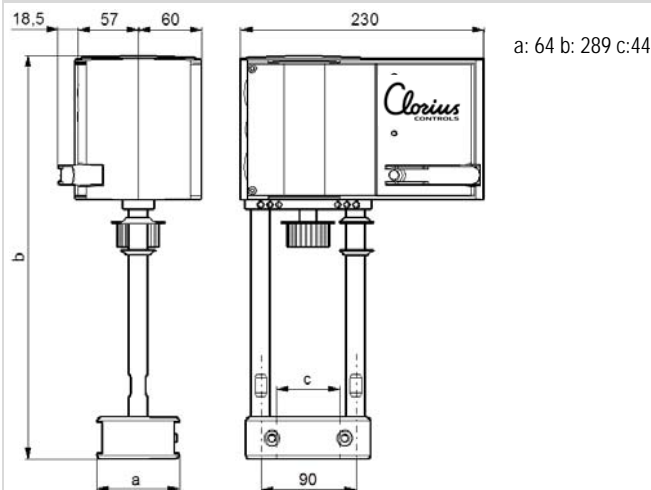
Technical description

- Power supply 230 V with modules or direct connection for 24 V~ or 24 V=; continuous activation also permissible at 230 V
- Two-part housing made of fire-retardant yellow plastic and seals to IP66
- Maintenance-free gearbox of sintered steel, gearbox plate of steel
- Patented actuator–valve coupling
- Spring assembly in stainless steel. Mounting column made of stainless steel; mounting bracket (for fitting the valve) of cast light alloy
- Electrical connections (max. 2.5 mm²) with screw terminals
- Three pre-scored cable inlets for M20x1.5 (2x) and M16x1.5
- Installation position: vertically upright to horizontal, but not upside down



| Type | Positioning time (s/mm) | Nominal stroke (mm) |
|---|-------------------------|---------------------|
| AVF234SK008 Actuator spindle normally retracted AVF234SK009 Actuator spindle normally extended | 2 / 4 / 6 | 49 |

Dimension drawing



Technical data

| Type | Run time s/mm | Stroke mm | Pushing force N | Power supply ¹⁾ | Weight kg |
|---------------------------------------|------------------|--------------|-----------------------|-------------------------------|--------------|
| AVF 234S K008 AVF 234S K009 | 2 / 4 / 6 | 14...49 | 2000 | 24 V~/= | 5.6 |

| | | | | |
|----------------------------------|---|---------------------------------|------------------|--|
| Positioner: ¹⁾ | | | | |
| Control signal 1 | 0...10 V, R _i > 100 kΩ | Starting point U ₀ | 0 or 10 V | |
| Control signal 2 | 4...20 mA, R _i = 50 Ω | Control span ΔU | 10 V | |
| Position feedback signal | 0...10 V, load > 2.5 kΩ (Optional: 4-20mA) | Switching range X _{Sh} | 300 mV | |
| Power supply | 24 V~ ± 20%, 50...60 Hz | Degree of protection | IP 66 (EN 60529) | |
| | 24 V= ± 15% | Protection class | III (IEC 60730) | |
| with accessories | 230 V~ ± 15% | Response time for 3-point | 200 ms | |
| Power consumption | 10 W 18 VA ²⁾ | Manual and wiring diagram | 99.70.02.02 | |
| Stroke | 8...49 mm | Dimension drawing | M10356 | |
| Number of spring returns | >40.000 | Fitting instructions | 99.70.02 | |
| Spring return time ³⁾ | 15...30s | Material declaration | MD 51.377 | |
| Max. temperature of medium | 130 °C ⁴⁾ | | | |
| Permitted ambient temperature | -10...55 °C | | | |
| Permitted ambient humidity | < 95% rh without condensation | | | |

- 1) Also for 2-point or 3-point depending on the connection for 24 V~
- 2) Design the transformers for this value, otherwise functional faults may occur.
- 3) The return time corresponds to a stroke of 14 to 40mm and does not depend on the set run time
- 4) If the temperature of the medium is higher (from 130 °C to 240 °C), an adaptor is required (see accessories)

CE conformity

EMC Directive 2004/108/EC
EN 61000-6-2 ¹⁾
EN 61000-6-4

Low-Voltage Directive 2006/95/EC
EN 60730-1
EN 60730-2-14
Over-voltage category III
Degree of pollution III

Accessories

| Type | Description |
|------------------|---|
| 1-0152285 | Temperature adaptor for media temperature > 130 °C ... 240 °C |
| 1-0152287 | Potentiometer 1000 Ω , 1 W, 24 V; installation as per MV 505894 |
| 1-0152289 | Auxiliary change-over contacts (2 pcs. each) 12...250 V Infinitely variable, min. 100 mA and 12 V, additional load 6(2) A, MV 505866 |
| 1-0152281 | 230V Module, plug-in type , for 2-/3-point and continuous activation, additional power 2 VA 230 V ± 15% power supply, MV 505901 |
| 1-0152282 | 115 V Module, plug in type , 100V ±15%, supply voltage |
| 1-0152627 | 4-20mA Position feedback signal , for 24VAC/DC, output load resistor max. 600 ohm |
| 1-0152666 | Adjustable valve adaptor Clorius Controls valves DN15-150 for AVM/AVF234 |
| | Cable gland M20×1.5 |
| | Cable gland M16×1.5 |

Clorius
CONTROLS