

AVM 215: Valve actuator

How energy efficiency is improved

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

Features

- Actuation of 2- and 3-way valves
- For controllers with a switching (2-/3-point) output
- Synchronous motor with electronic control unit and cut-off
- Maintenance-free gear unit
- Gear unit can be disengaged in order to position the valve by hand with the provided hexagon key (load-free)
- Connection with valve spindle performed semi-automatically
- Fitting vertically upright to horizontal, not suspended



AVM215F120R



Technical data

Power supply		
	Power supply	230 V~ ±15%, 50...60 Hz
Parameters		
	Actuator stroke	8...20 mm
	Response time	200 ms
Ambient conditions		
	Ambient temperature	-10...55 °C
	Temperature of medium	Max. 100 °C
	Ambient humidity	5...85% rh, no condensation
Function		
	Control	2-/3-point
Construction		
	Weight	1 kg
	Housing	Lower section black, upper section yellow
	Housing material	Flame-retardant plastic
	Power cable	1.2 m long, 3 × 0.75 mm ²
Standards and directives		
	Type of protection	IP54 (EN 60529), horizontal
	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
	Low-Voltage Directive 2014/35/EU	EN 60730-1, EN 60730-2-14 Over-voltage category III Degree of contamination II
	Machinery Directive 2006/42/EC (according to Appendix II, 1B)	EN ISO 12100

Overview of types

Type	Actuating power	Voltage	Running time	Power consumption
AVM215F120R	400 N	230 V~	7.5 s/mm	3.2 W 7.0 VA

Accessories

Type	Description
0510390030	Mounting kit for 8 mm stroke
0510390031	Mounting kit for 20 mm stroke
0510480003	Dual auxiliary switch for 8 mm stroke
0510480004	Dual auxiliary switch for 20 mm stroke
0372320001	Hexagon key as visualisation for position indicator



Type	Description
0510390032	Adapter set for V6R/B6R
0510390033	Adapter set for non-SAUTER valve IMI Hydronics TA-Fusion DN 32...50
0510390034	Adapter set for non-SAUTER valve IMI Hydronics TA-Fusion DN 65...80
0510390035	Adapter set for non-SAUTER valve IMI Hydronics CV DN 15...50
0510390036	Adapter set for non-SAUTER valve IMI Hydronics KTM512 DN 15...50
0510390037	Adapter set for non-SAUTER valve IMI Hydronics KTM512 DN 65...100
0510390038	Adapter set for non-SAUTER valve Frese, stroke 20 mm DN 50...80
0510390039	Adapter set for non-SAUTER valve Danfoss VFS VEFS VL VF
0510390040	Adapter set for non-SAUTER valve Danfoss VRB VRG
0510390029	Adapter set for AVM215F***R, stroke 15 mm
0510390060	Adapter set for AVM 2*5 for Schneider V241/V341

 Auxiliary change-over contacts: infinitely variable 0...100%, admissible load 3(1.5) A, 24...230 V

 Accessory 0510390029 can also be used for SAUTER Valveco compact DN 40 and DN 50

Description of operation

The valve actuator is used to control valves and may only be used for this purpose. Depending on the type of connection (see connection diagram), the device can be used as a 2-point (OPEN/CLOSE) or 3-point actuator (OPEN/STOP/CLOSE) with an intermediate position. The manual adjustment is performed in the load-free state by releasing the gear unit (slide switch beside the connection cable) and simultaneously turning it with the hex key on the top part of the actuator. 20 mm stroke is achieved with four turns.

CAUTION!



Damage to device

► After manual adjustment, move the slide switch back to its original position so that the gear unit engages again.

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.

Connection as 2-point valve actuator

The 2-point actuation is performed via two cables and it controls the valve actuator to both end positions. The actuator is connected to the voltage via the blue cable [N] and the black cable [02].

The actuator spindle extends when the voltage is connected to the brown cable [01].

When the voltage on the brown cable is switched off, the actuator moves to the opposite end position. In the end positions (limit stop in valve or maximum stroke reached) or in the case of an overload, the magnetic coupling is activated (no limit switches). The electronic cut-out switches off the positioning signal after approx. three minutes.

Connection as 3-point valve actuator

The 3-point actuation is performed via three cables and controls the valve actuator to any selected position. The actuator is connected to the voltage via the blue cable [N] and the brown cable [01] or via the black cable [02].

The actuator spindle extends when the voltage is connected to the brown cable.

When the voltage on the brown cable is switched off, the actuator spindle remains in the current position.

The actuator spindle retracts when the voltage is connected to the black cable.

When the voltage on the black cable is switched off, the actuator spindle remains in the current position.

The direction of operation is changed by switching the brown and black cables.

In the end positions (limit stop in valve or maximum stroke reached) or in the case of an overload, the magnetic coupling is activated (no limit switches). The electronic cut-out switches off the positioning signal after approx. three minutes.

Additional technical data

The upper section of the housing with the cover, indicator knob and cover knob contains the stepping motor and the SUT electronics. The lower section of the housing contains the maintenance-free gear unit.

Power consumption

Type	Running time [s/mm]	State	Active power P [W]	Apparent power S [VA]
AVM215F120R	7.5	Operation	2.0	5.0

Engineering and fitting notes

Condensate, dripping water, etc. must be prevented from entering the actuator along the valve spindle. A hanging position (fitting upside down) is not admissible.

When connecting the electricity supply, ensure that the cross-section of the power cable is adapted to the power output and to the cable length. SAUTER recommends a supply cable cross-section of at least 0.75 mm².

The coupling of the valve spindle with the actuator spindle is performed semi-automatically using the manual adjuster. When dismantling, first the actuator and valve spindles are unlocked, then they are unscrewed. On delivery, the spindles are in the middle position.

The concept of synchronous motor and magnetic coupling enables parallel operation of multiple valve actuators of the same SUT type.

The coding switches are accessible via an opening with a black cover in the housing lid.

The dual auxiliary switch (accessory) is screwed onto the side of the device.



WARNING!

When the housing is opened there is a risk of serious injury through electric shock.

► Do not open the housing!



CAUTION!

Opening the housing can damage the device.

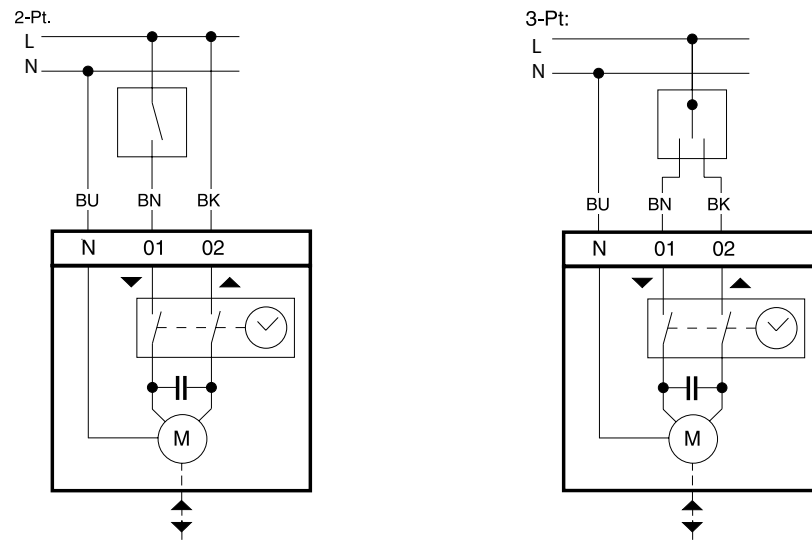
► Do not open the housing!

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.

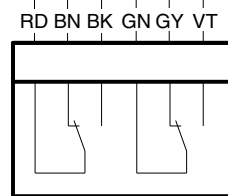
Connection diagram



Accessories

Dual auxiliary switch

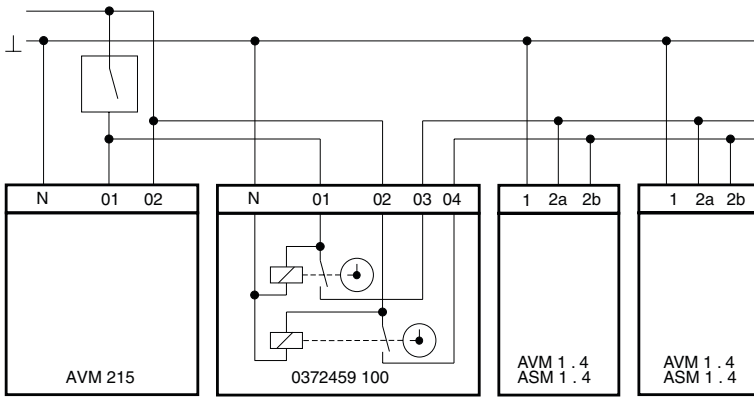
0510480003, 0510480004



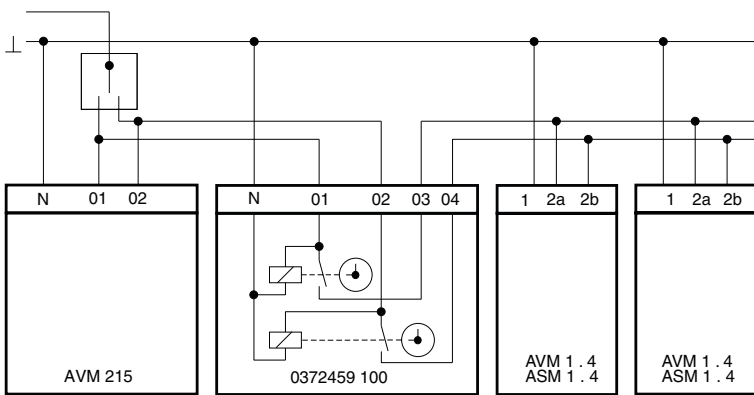
- RD = red
- BN = brown
- BK = black
- GN = green
- GY = grey
- VT = violet

Wiring plan

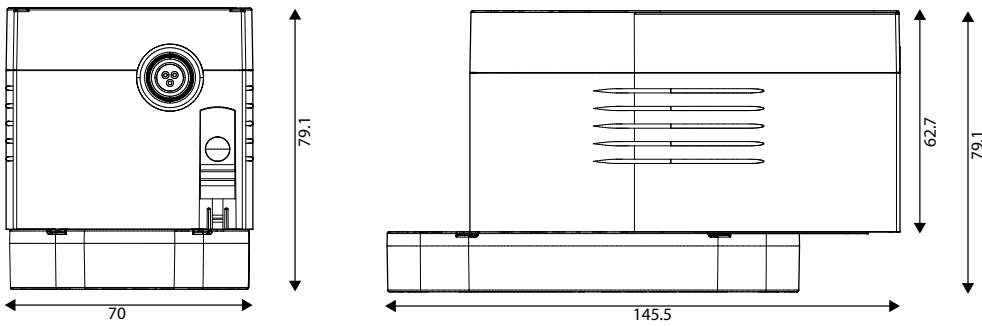
2-Pt: F..0 = 230V~



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



Dimension drawing



Fr. Sauter AG
 Im Surinam 55
 CH-4058 Basel
 Tel. +41 61 - 695 55 55
 www.sauter-controls.com