# Actuators
# AVD | AVDS | AVDR | AVDRS | AVDU | AVDUS | AVDY | AVDM

## Presentation




AVD actuators are intended for position control of rotary mixing and ball valves. They are distinguished by robust construction and quiet operation. Innovative accessories provide a quick installation and removal, mostly without any tools. Turning direction, auxiliary switch activation and manual operations are indicated by means of LED lights.

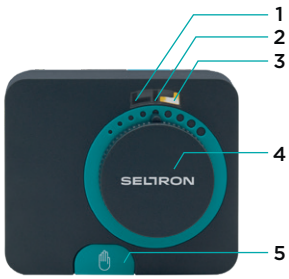
### Typical application

- For controlling mixing valves in heating or cooling systems.
- Switchover between heating and cooling.
- Switchover between heating and domestic hot water heating.
- Switchover between various heat sources.
- Various other central heating devices.

### Features

- Fits rotary mixing valves or ball valves complying with ISO 5211.
- The actuators feature four different installation positions on the valve.
- Resistant to mixing valve blockages.
- The installation and removal can be mostly completed without any tools.
- Adjustable auxiliary switch for activating the circulation pump in any actuator position.
- Operation indication with LED lights.
- An easy replacement of the power cord if damaged.
- A permanent clutch features a switchover between the automatic and manual operation modes. During a switchover, the actuator is switched off electrically.
- Option of adjusting the turning direction and operation functions, without interference with the actuator interior.
- Option of an adjustable auxiliary switch for activating the circulation pump in any actuator position.

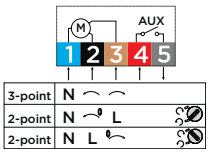
## Description of settings buttons

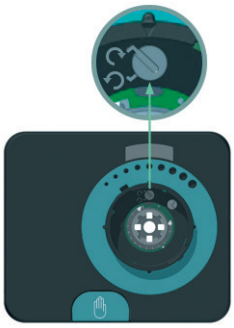



1 – LED display – rotating the valve to left
2 – LED display – AUX switch is ON
3 – LED display – rotating the valve to right
4 – Button
5 – Manual operation clutch

| Typical application | AVD | AVDS | AVDR | AVDRS | AVDU | AVDUS | AVDY | AVDM |
|---|---|---|---|---|---|---|---|---|
| For controlling mixing valves in heating or cooling systems | ● | ● | — | — | ● | ● | ● | ● |
| Switchover between heating and cooling | ● | ● | ● | ● | ● | ● | ● | ● |
| Switchover between heating and domestic hot water heating | ● | ● | ● | ● | ● | ● | ● | ● |
| Switchover between various heat sources | ● | ● | ● | ● | ● | ● | ● | ● |
| Various other central heating devices | ● | ● | ● | ● | ● | ● | ● | ● |
| **Torque** | | | | | | | | |
| 5 Nm | ● | ● | ● | ● | ● | ● | — | ● |
| 10 Nm | ● | ● | ● | ● | ● | ● | ● | ● |
| 15 Nm | ● | ● | ● | ● | ● | ● | ● | ● |
| **Operation mode** | | | | | | | | |
| Two-point | — | — | ● | ● | ● | ● | — | — |
| Three-point | ● | ● | — | — | ● | ● | — | — |
| Proportional 0(2)÷10 V or 0(4)÷20 mA | — | — | — | — | — | — | ● | — |
| PWM control signal | — | — | — | — | — | — | ● | — |
| ModBus | — | — | — | — | — | — | — | ● |
| **Pump ON switch** | | | | | | | | |
| Adjustable auxiliary switch for activating the circulation pump in any actuator position | — | ● | — | ● | — | ● | — | — |
| **Possible running speeds** | | | | | | | | |
| 15 s/90 ° | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | — | — |
| 30 s/90 ° | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | *(5 Nm) | — | — |
| 60 s/90 ° | ● | ● | ● | ● | ● | ● | ● | ● |
| 120 s/90 ° | ● | ● | ● | ● | ● | ● | ● | ● |
| 240 s/90 ° | ● | ● | ● | ● | ● | ● | — | — |
| 480 s/90 ° | ● | ● | ● | ● | ● | ● | — | — |
| **Power supply** | | | | | | | | |
| 230 V~, 50 Hz | ● | ● | ● | ● | ● | ● | — | — |
| 24 V~, 50 Hz | ● | ● | ● | ● | ● | ● | ● | ● |
| 24 V= | — | — | — | — | — | — | ● | ● |
| **Operation display** | | | | | | | | |
| Display of valve turning direction with LED lights | ● | ● | ● | ● | ● | ● | ● | ● |
| Valve position indication on the scale | ● | ● | ● | ● | ● | ● | ● | ● |
| Indication of the auxiliary (AUX) switch activation | — | ● | — | ● | — | — | — | — |
| Resistant to mixing valve blockages | ● | ● | ● | ● | ● | ● | ● | ● |
| **Installation** | | | | | | | | |
| Can be installed on rotation or ball valves complying with ISO 5211 | ● | ● | ● | ● | ● | ● | ● | ● |
| The installation and disassembly are screwless | ● | ● | ● | ● | ● | ● | ● | ● |
| The actuators feature four different installation positions | ● | ● | ● | ● | ● | ● | ● | ● |
| Connection cable fitted with a connector | ● | ● | ● | ● | ● | ● | ● | ● |
| Turning direction adjustment and operation functions, without interference with the actuator interior | ● | ● | ● | ● | ● | ● | ● | ● |
| A permanent clutch features a switchover between the automatic and manual operation modes. During a switchover, the actuator is switched off electrically | ● | ● | ● | ● | ● | ● | ● | ● |

## Outlined functions



### Universal 2- or 3-point operation

The universal actuator version provides a 2- or 3-point operation. Based on the electrical connection the actuator provides a 2- or 3-point control.



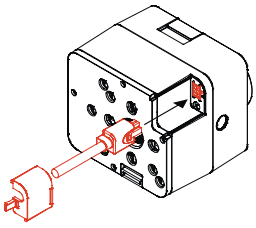

### Manual mode clutch

Manual mode clutch of the AVD actuator can be activated by pressing the ✋ key. An activated clutch is indicated with a dimmed direction indication LED.



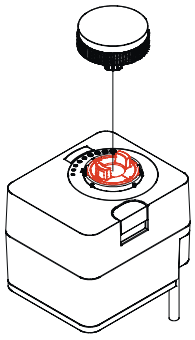

### Quick installation

Innovative accessories and the installation system provide a quick installation and removal of the AVD actuator to/from the ball valve, mostly without any tools.



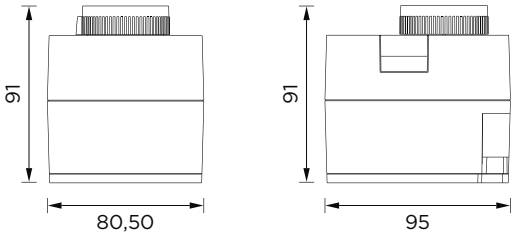
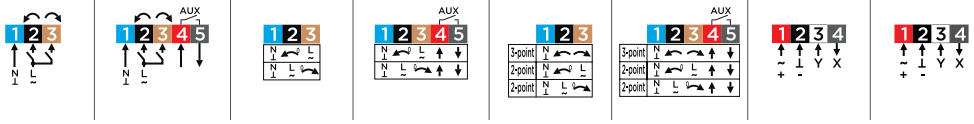
### Plug-in connector

The AVD actuator with an integrated outlet in the housing for connector connection of the power cord. That provides a simple cable replacement in case of damage.



### AUX switch

The AVD actuator features an extra switch for switching on loads up to 5 A, 230 V~. In order to configure an auxiliary switch, simply remove the manual turning button. The activation/deactivation point can be configured in any actuator position.

| Technical specifications | AVD | AVDS | AVDR | AVDRS | AVDU | AVDUS | AVDY | AVDM |
|---|---|---|---|---|---|---|---|---|
| Connection voltage | 230 V~ or 24 V~ | | | | | | | 24 V~ or 24 V⎓ |
| Own consumption | 2,5÷5 W | | | | | | | |
| Auxiliary pump OFF switch | — | 250 V~, 3 A | — | 250 V~, 3 A | — | 250 V~, 3 A | — | — |
| Degree of protection | IP 42 | | | | | | | |
| Safety class | II for 230 V~ power supply, III for 24 V~/V= power supply | | | | | | | |
| Applied standards | EN 60730-1, EN 60730-2-14 | | | | | | | |
| Housing material | PC – dark grey | | | | | | | |
| Standard cable length | 2 m | | | | | | | |
| Operating temperature | 0÷50 °C | | | | | | | |
| Storage temperature | -20÷75 °C | | | | | | | |
| Product weight | 390÷860 g | | | | | | | |
| No. of pieces in the packaging unit | 24 pcs | | | | | | | |
| Dimensions |  | | | | | | | |
| Electrical connection |  | | | | | | | |

| Item | Order code | Description |
|---|---|---|
|  | 1AVD0532M210-030 | Actuator SELTRON AVD05, 3-point, 5 Nm, 2 min, 230 V~ |
| | 1AVD0512M210-030 | Actuator SELTRON AVD05, universal 2- and 3-point, 5 Nm, 2 min, 230 V~ |
| | 1AVD05Y2M210-030 | Actuator SELTRON AVD05Y, proportional, 5 Nm, 2 min, 24 V~/= |
| | 1AVD15C2M210-030 | Actuator SELTRON AVD15, 3-point, with an auxiliary switch, 15 Nm, 2 min, 230 V~ |
| | 1AVD15A2M210-030 | Actuator SELTRON AVD15, universal 2- and 3-point, with an auxiliary switch, 15 Nm, 2 min, 230 V~ |
| **Accessories** | | |
| | 1AVDMSA+NN0 | Seltron, Acaso, Brv, Esbe Type F & G & MG, Hora, Imit, Imp, Ivar, Paw old type, Somatherm, Valvex Controlmix, Wip (5 Nm) |
| | 1AVDMSB+NN0 | Seltron, Acaso, Brv, Esbe Type F & G & MG, Hora, Imit, Imp, Ivar, Paw old type, Somatherm, Valvex Controlmix, Wip (10 Nm+) |
| | 1AVDMSC+NN0 | Afriso ARV series, Danfoss HFE series, Esbe 3F & 4F & T series |
| | 1AVDMSD+NN0 | Meibes new valve, Brv |
| | 1AVDMSE+NN0 | Landis & Gyr, Siemens – type VBI, type VBF |
| | 1AVDMSF+NN0 | Meibes old valve, Wita |
| | 1AVDMSG+NN0 | Esbe VRG series |
| | 1AVDMSH+NN0 | Brv 1060 & 1050 series, Herz MV3P & MV4P series, Womix MIX M |
| | 1AVDMSI+NN0 | Honeywell V544.., V543.. |
| | 1AVDMSJ+NN0 | Paw K32, K33, K34 |
| | 1AVDMSK+NN0 | Danfoss HRB, HRE |
| | 1AVDMSL+NN0 | Vexve AMV Series, ABV Series |
| | 1AVDMSN+NN0 | HANSA valve |
| | 1AVDMSP+NN0 | CENTRA DR/ZR valve |
| | 1AVDMST+NN0 | Ball valve ISO 5211, flange F03, axis L/R 9 mm |
| | 1AVDMSU+NN0 | Ball valve ISO 5211, flange F04, axis L/R 9 mm |
| | 1AVDMSV+NN0 | Ball valve ISO 5211, flange F04, axis L/R 11 mm |
| | 1AVDMSW+NN0 | Ball valve ISO 5211, flange F05, axis L/R 11 mm |

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