

Data sheet

# Actuators for three point control

AMV 10, AMV 20, AMV 30

AMV 13, AMV 23, AMV 33 - with DIN EN 14597 certified safety function (spring down)

Description



Actuators with safety function (AMV 13, AMV 23 or AMV 33) and actuators without safety function (AMV 10, AMV 20 or AMV 30) are mainly used with VS, VM, VB, AVQM and VMV (only with AMV 10) valves.

Safety version is activated automatically in case of power failure or if the power supply is switched off by the safety thermostat. Actuators automatically adapt stroke to valve end positions which reduces commissioning time.

Actuators have some special features:

- The advanced design incorporates load related 'switch-off' to ensure that actuators and valves are not exposed to overload.
- Digital feedback end position indication signal for valve end position is available by terminal 4 or 5.
- Robust design and low weight.
- DIN EN 14597 certified safety function

**Main data:**

- Nominal voltage:
  - 24 Vac, 50 Hz/60 Hz
  - 230 Vac, 50 Hz/60 Hz
- Control input signal: 3 point
- Force:
  - AMV 10, 13 .....300 N
  - AMV 20, 23, 30, 33 .....450 N
- Speed:
  - AMV 10, 13 ..... 14 s/mm
  - AMV 20, 23 ..... 15 s/mm
  - AMV 30, 33 .....3 s/mm
- Max. medium temperature:
  - AMV 10, 13 ..... 130 °C
  - AMV 20, 23, 30, 33 ..... 150 °C
- End-position signals

Ordering

**Actuators**

Type	Supply voltage	Code No.
AMV 10	230 V~	082G3001
AMV 10	24 V~	082G3002
AMV 20	230 V~	082G3007
AMV 20	24 V~	082G3008
AMV 30	230 V~	082G3011
AMV 30	24 V~	082G3012

**Accessories for AMV 20/23, AMV 30/33**

Type	Code No.
Additional switch (2x)	082G3201
Additional switch (2x) and potentiometer (10 kΩ)	082G3202
Additional switch (2x) and potentiometer (1 kΩ)	082G3203

**Actuators with safety function - EN 14597**

Type	Supply voltage	Code No.
AMV 13	230 V~	082G3003
AMV 13	24 V~	082G3004
AMV 23	230 V~	082G3009
AMV 23	24 V~	082G3010
AMV 33	230 V~	082G3013
AMV 33	24 V~	082G3014

Technical data

Type		AMV 10	AMV 13	AMV 20	AMV 23	AMV 30	AMV 33
Power supply	V	24, 230ac; +10 ... -15%					
Power consumption	VA	2	7	2	7	7	12
Frequency	Hz	50 /60					
Control input		3-point					
Spring return function		-	yes	-	yes	-	yes
Number of spring return activations		-	30,000	-	30,000	-	30,000
Safety function runtime	7 mm stroke	s	8.5	-	-	-	-
	10 mm stroke		-		8		8
Closing force	N	300		450			
Max. stroke	mm	7		10			
Speed	s/mm	14		15		3	
Max. medium temperature	°C	130		150			
Ambient temperature		0 ... 55					
Ambient humidity		5-95 % r.h., non-condensing					
Storage and transport temperature		-40 ... 70					
Protection Class		II		I (230 V); III (24 V)			
Grade of enclosure		IP 54					
Weight	kg	0.6	0.8	1.4	1.45	1.4	1.45
CE - marking in accordance with standards		Low Voltage Directive (LVD) 2014/35/EU: EN 60730-1, EN 60730-2-14 Electromagnetic Compatibility Directive (EMC) 2014/30/EU: EN 61000-6-2, EN 61000-6-3					

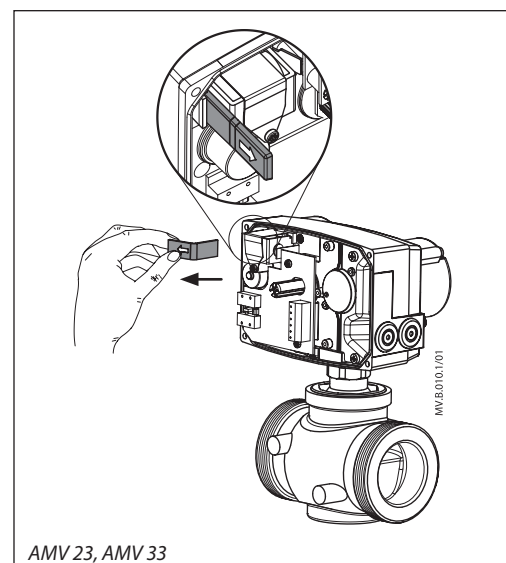
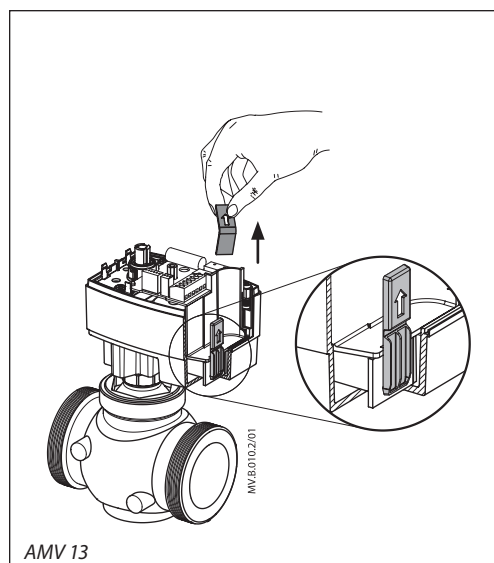
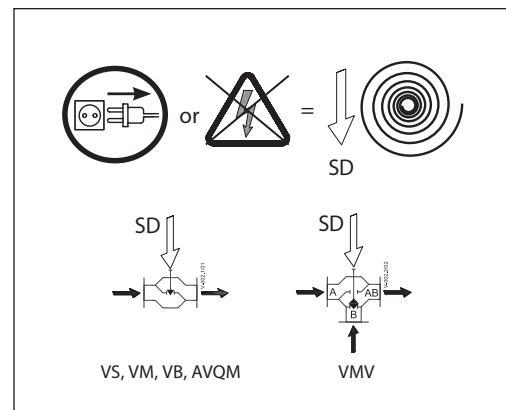
Safety function

The safety function will fully open or close the valve by power failure, depending upon the chosen safety action (SD = safety down). Valve selection will also affect the safety action. The safety function unit is factory fitted to the rear of the actuator.

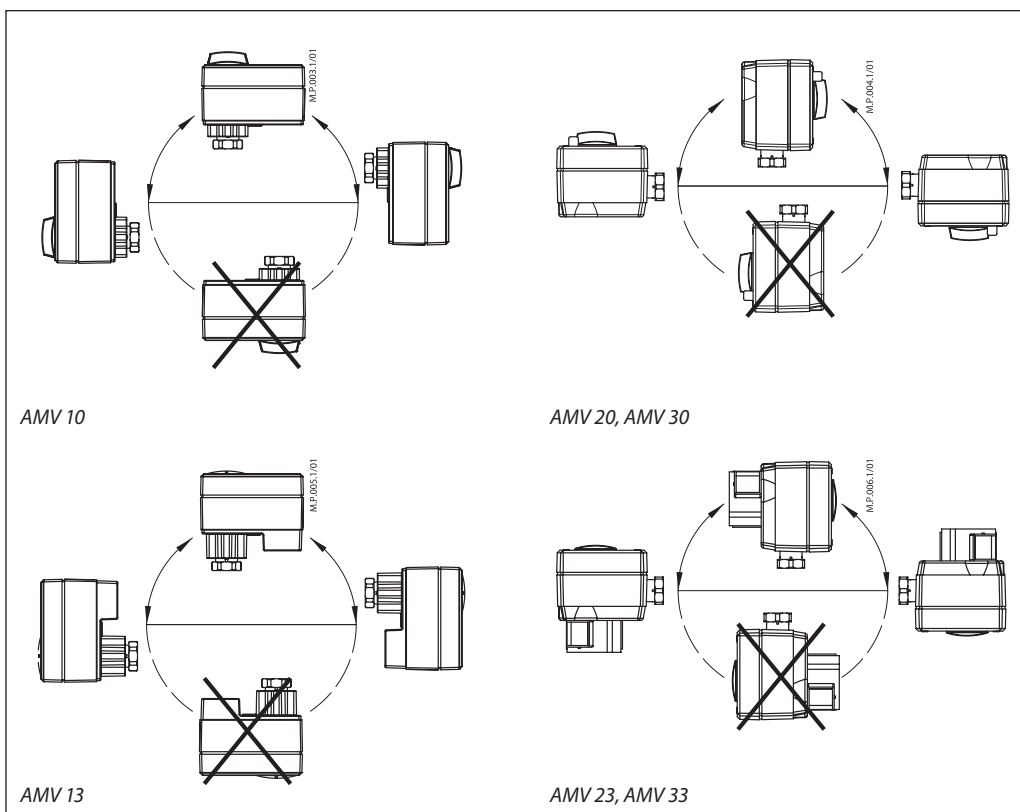
Valve type	Safety action selection will	
	Close port A-AB	Open port A-AB
VS	SD <sup>1)</sup>	-
VM (DN 15-50)	SD <sup>1)</sup>	-
VB (DN 15-50)	SD <sup>1)</sup>	-
AVQM (DN 15-50)	SD <sup>1)</sup>	-
VMV	-	SD

**Note:** Do not use safety activations for ON/OFF regulation.

<sup>1)</sup> in compliance with DIN EN 14597



Installation



**Mechanical**

The actuator should be mounted with the valve stem in either horizontal position or pointing upwards.

The actuator is fixed to the valve body by means of a mounting ring, which requires no tools for mounting. The ring should be tightened by hand.

**Electrical**

**Important:** It is strongly recommended that the mechanical installation is completed before the electrical installation.

**Note:** Two cable entries are provided for M 16x1,5 cable glands. One entry is provided with a rubber grommet. Note that in order to maintain the enclosure's IP rating, appropriate cable glands must be used.

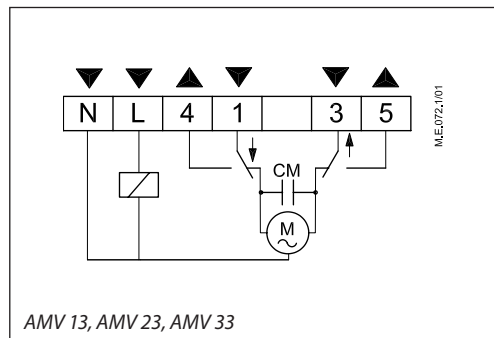
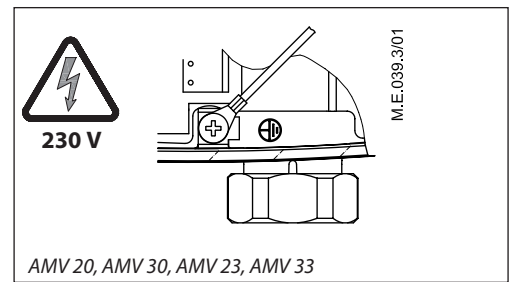
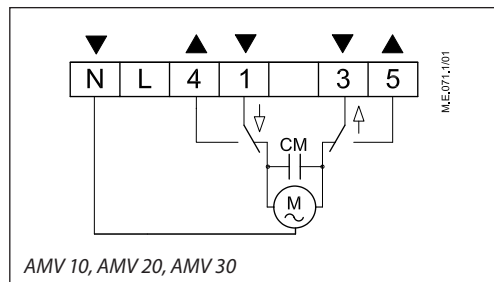
**Disposal**

The actuator must be dismantled and the elements sorted into various material groups before disposal.

**Wiring**

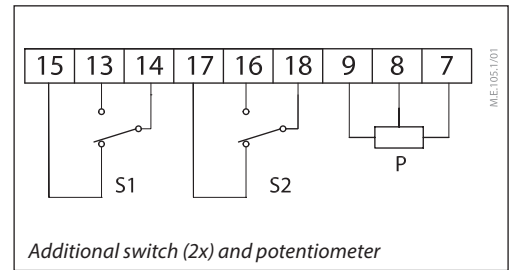
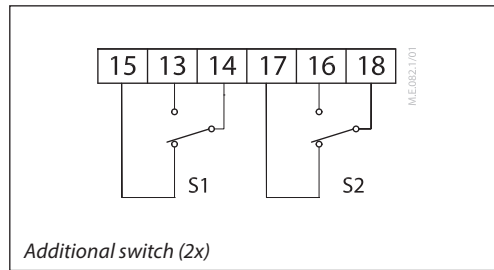


**230 Vac version:**  
Do not touch anything on the PCB!  
Do not remove the cover before the power supply is fully switched off.



N	0 V	Neutral						
L	24/230 Vac	Power supply						
1	24/230 Vac	Input						
3								
4, 5	<table border="0"> <tr> <td>1</td> <td>↔</td> <td>4</td> </tr> <tr> <td>3</td> <td>↔</td> <td>5</td> </tr> </table>	1	↔	4	3	↔	5	Output
1	↔	4						
3	↔	5						

**Wiring - accessories**



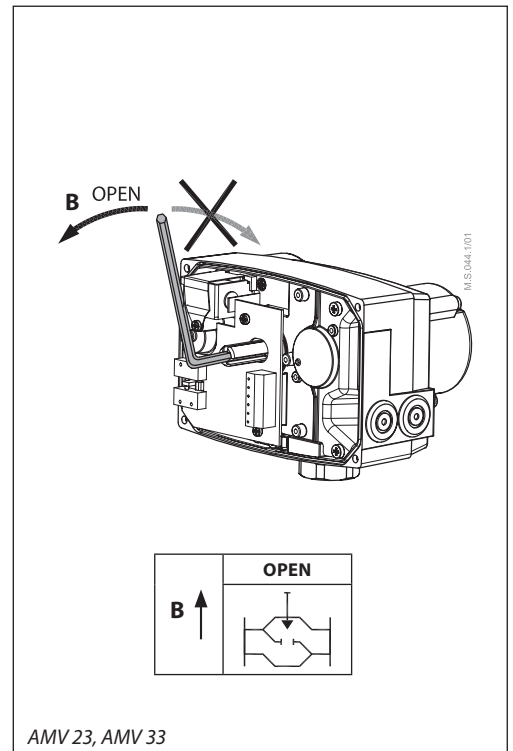
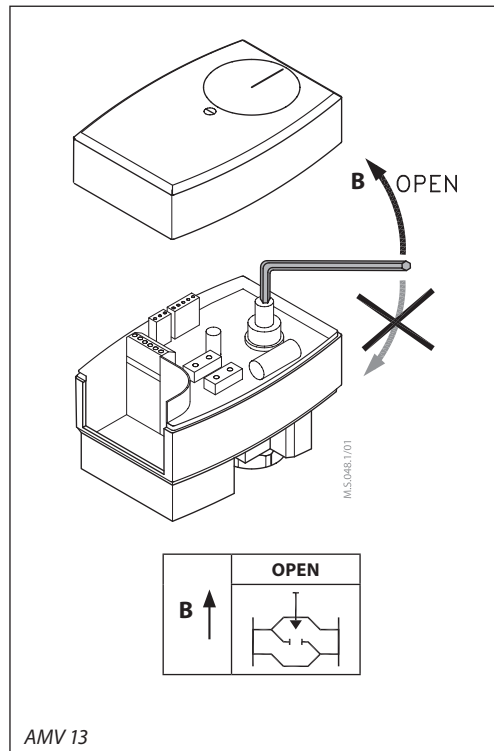
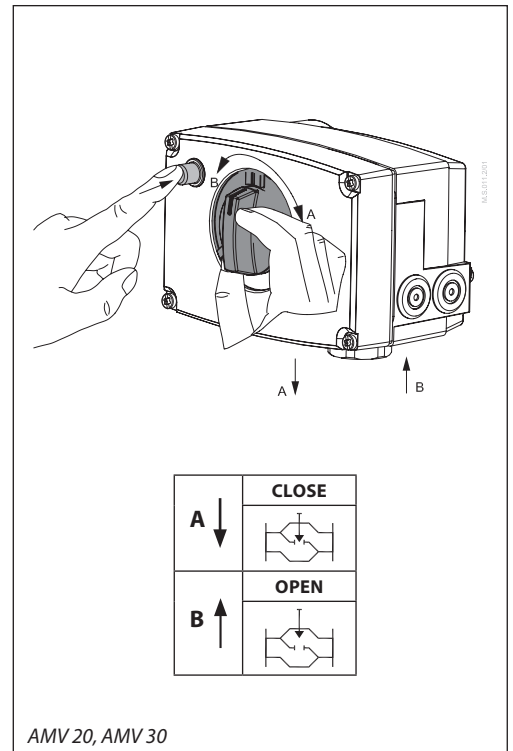
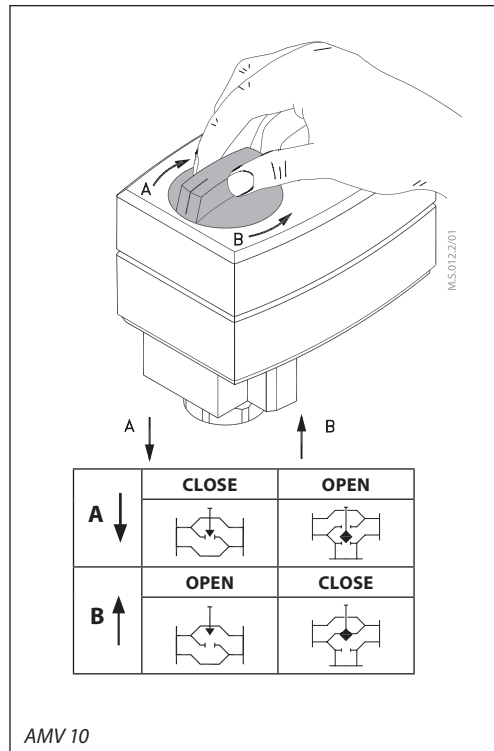
**Commissioning**

Complete the mechanical and electrical installation and perform the necessary checks and tests:

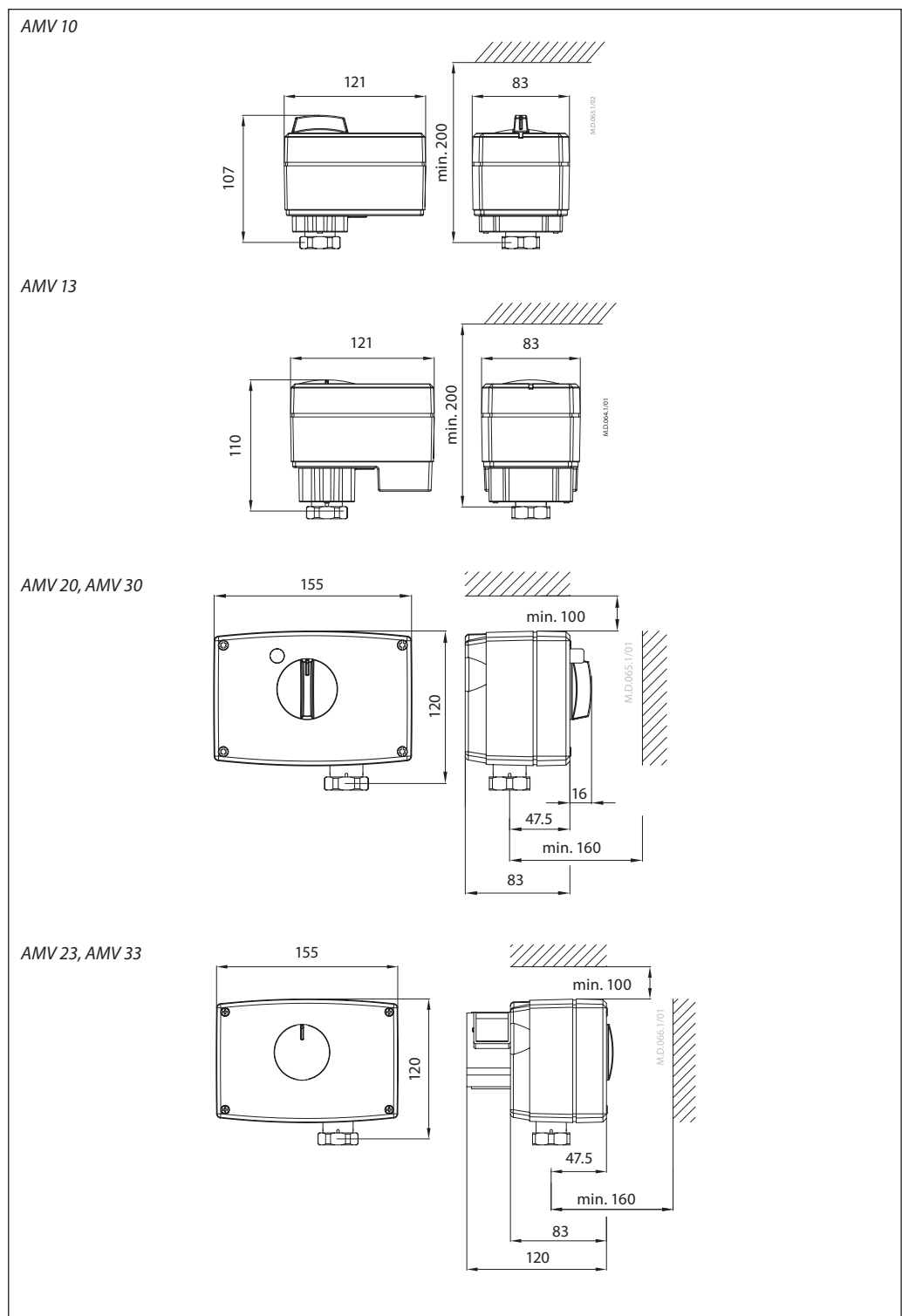
- Turn on the power.
- Set the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

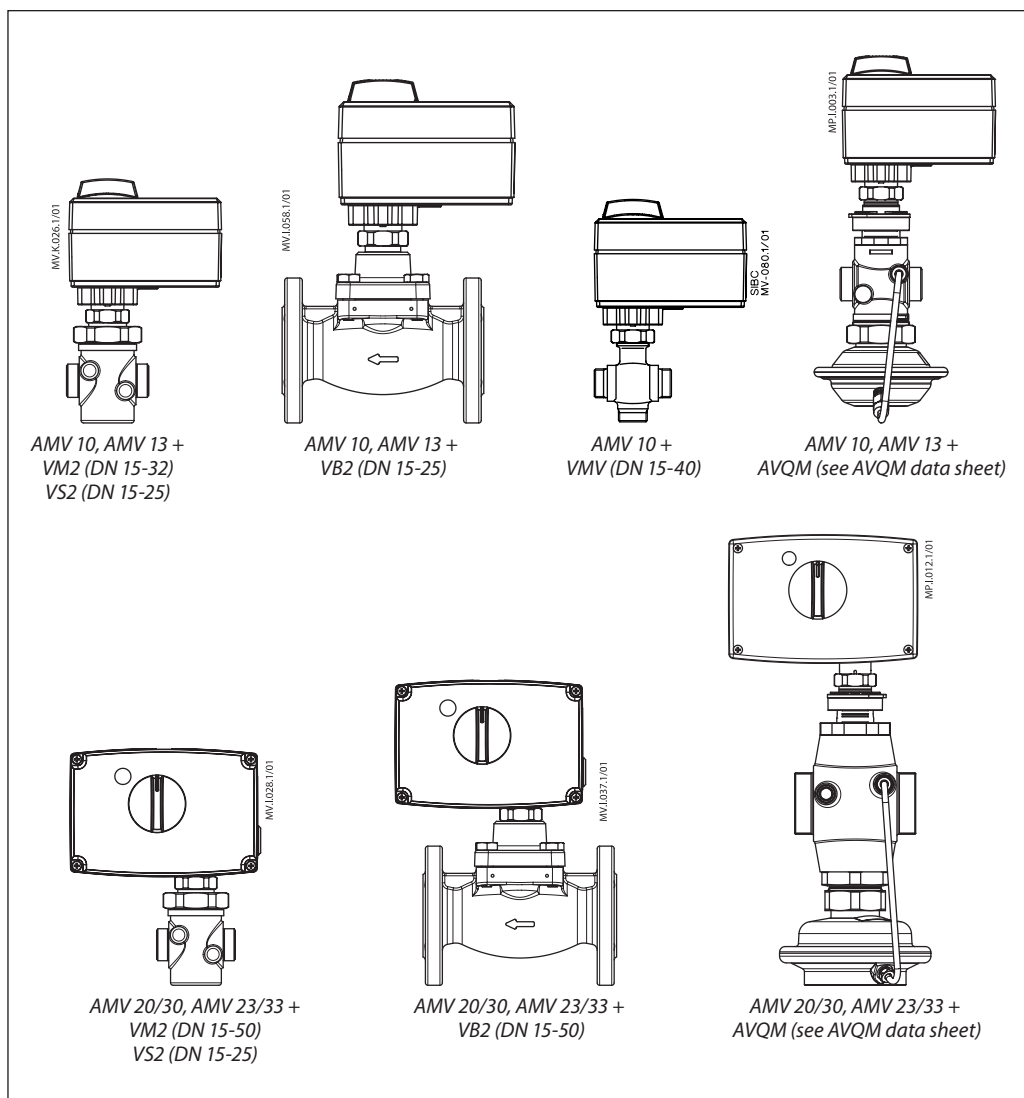
Manual Override



Dimensions



Actuator - valve combinations





**Danfoss A/S**

Heating Segment • [heating.danfoss.com](http://heating.danfoss.com) • +45 7488 2222 • E-Mail: [heating@danfoss.com](mailto:heating@danfoss.com)

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