

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, 13300 N
 - AMV 20, 23, 30, 33450 N
- Speed:
 - AMV 10, 13 14 s/mm
 - AMV 20, 23 15 s/mm
 - AMV 30, 333 s/mm
- Max. medium temperature:
 - AMV 10, 13 130 °C (150 °C*)
 - AMV 20, 23, 30, 33 150 °C
- End-position signals
*with High temperature adapter (065Z7547)

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 10/13, 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 |
| High temperature adapter for AME 10, 13 up to 150°C | 065Z7547 |

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 | Vac | 24, 230; +10 ... -15% | | | | | |
| Power consumption | VA | 2 | 7 | 2 | 7 | 7 | 12 |
| Frequency | Hz | 50 /60 | | | | | |
| 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 |
| Control input | | 3-point | | | | | |
| Closing force | N | 300 | | 450 | | | |
| Max. stroke | mm | 7 | | 10 | | | |
| Speed | s/mm | 14 | | 15 | | 3 | |
| Max. medium temperature | | 130 | | 150 | | | |
| Ambient temperature | °C | 0 ... 55 | | | | | |
| Storage and transport temperature | | -40 ... 70 | | | | | |
| Ambient humidity | | 5-95 % r.h., non-condensing | | | | | |
| 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 | | | | | |

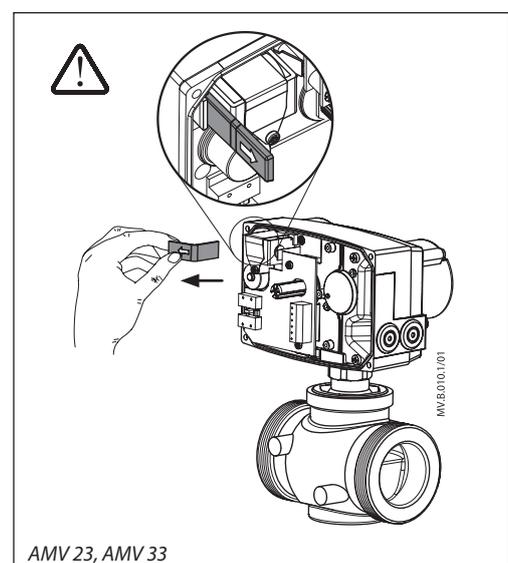
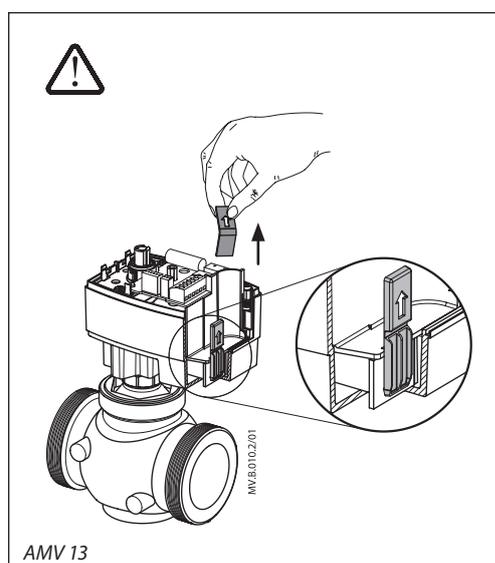
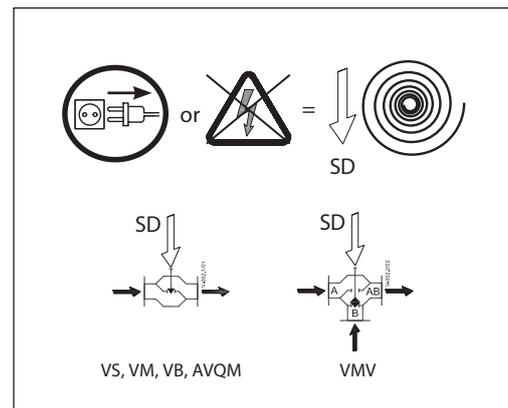
Safety function

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

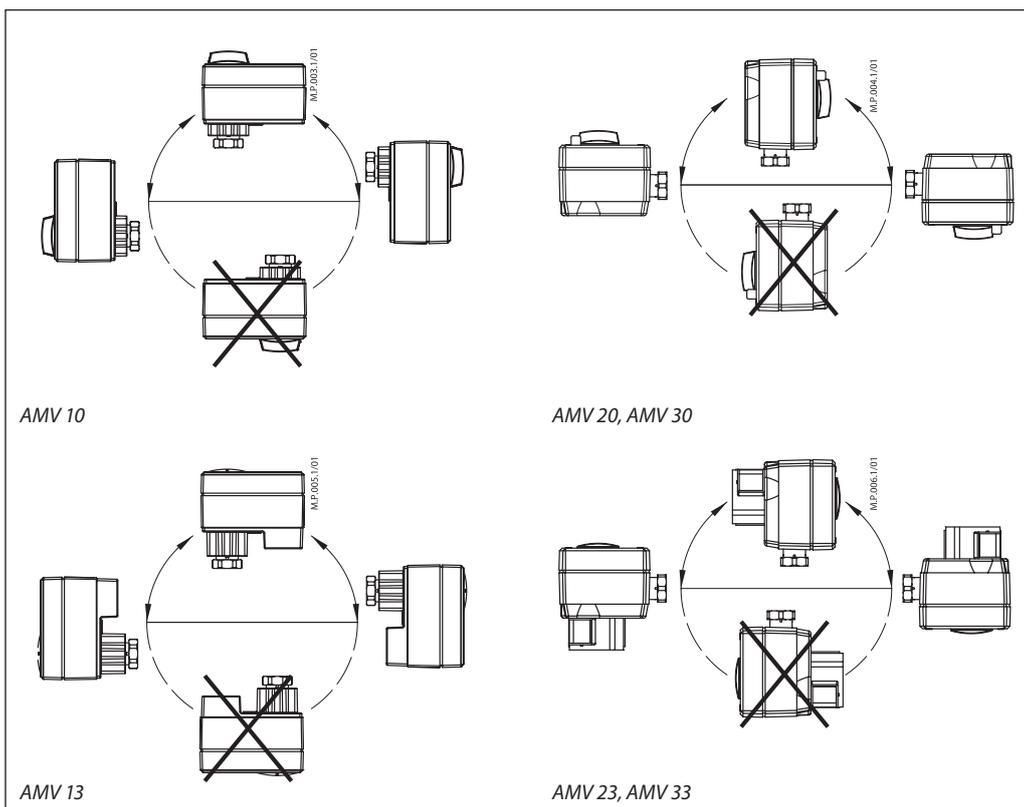
The safety function will fully open or close the valve by power failure, depending upon the chosen safety action (SD = safety down). Valve selection will also affect the safety action. The safety function unit is factory fitted to the rear of the actuator.

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

¹⁾ 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

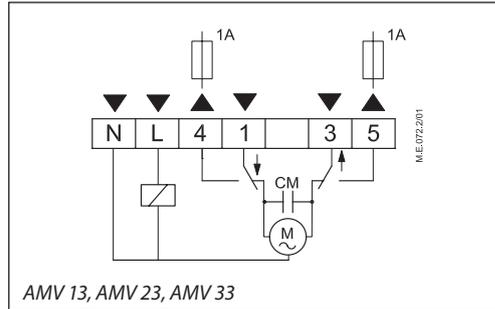
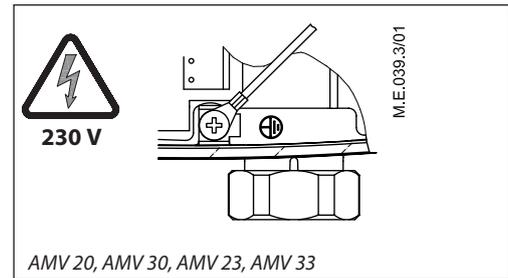
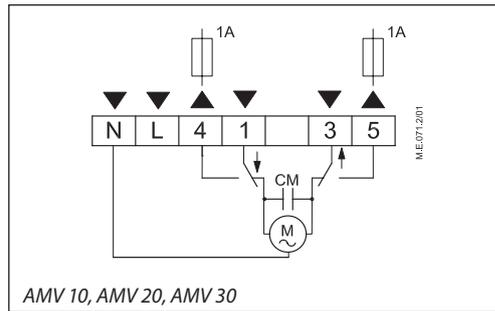
Important: It is strongly recommended that the mechanical installation is completed before the electrical installation.

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.

Wiring

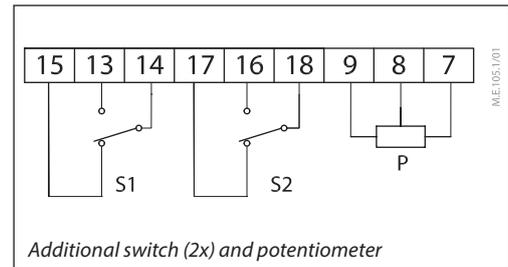
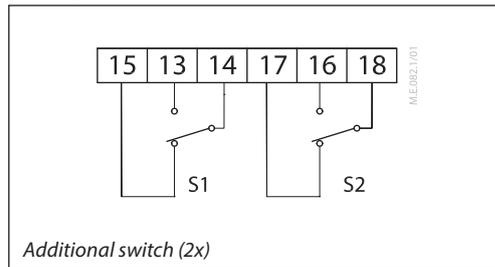


230 Vac version:
Do not touch anything on the PCB!
Do not remove the cover before the power supply is fully switched off.



| | | |
|------|------------|--------------|
| N | 0 V | Neutral |
| L | 24/230 Vac | Power supply |
| 1 | 24/230 Vac | Input |
| 3 | | |
| 4, 5 | | Output |

Wiring - accessories



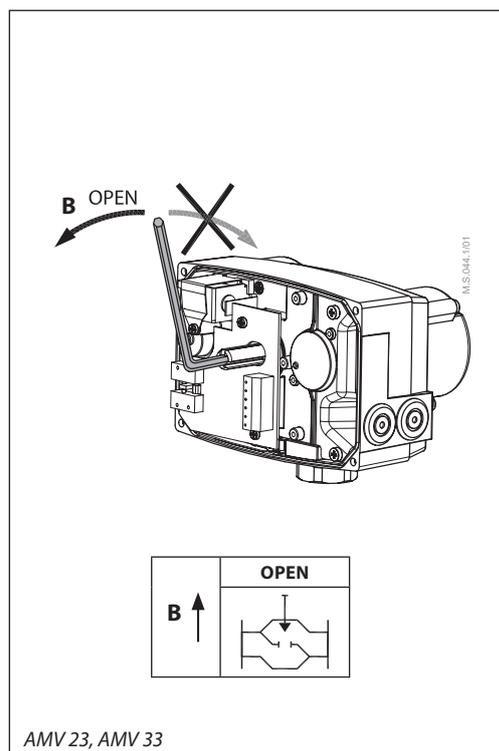
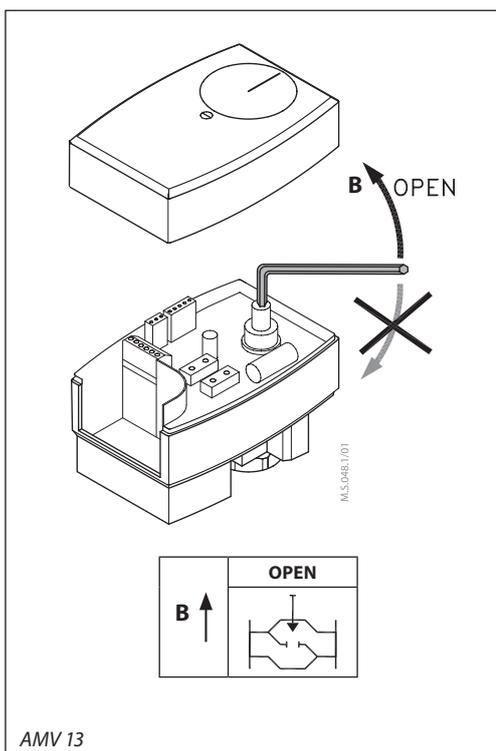
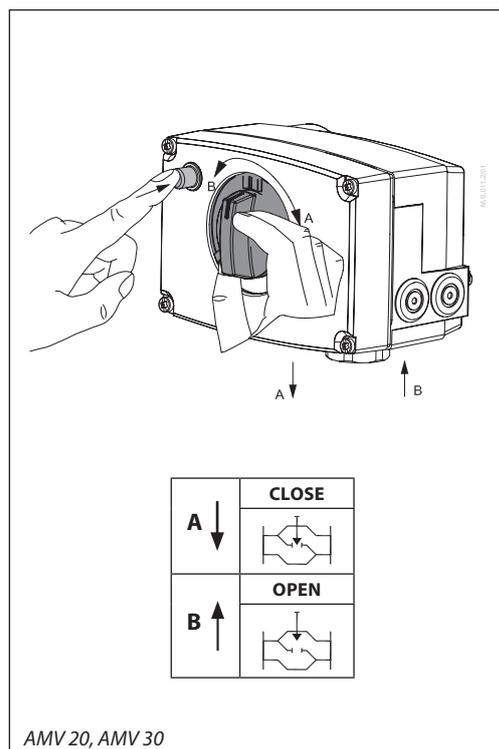
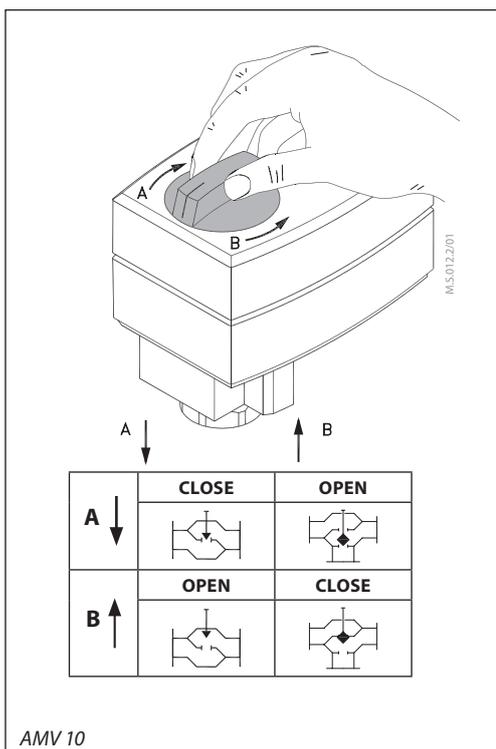
Commissioning

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

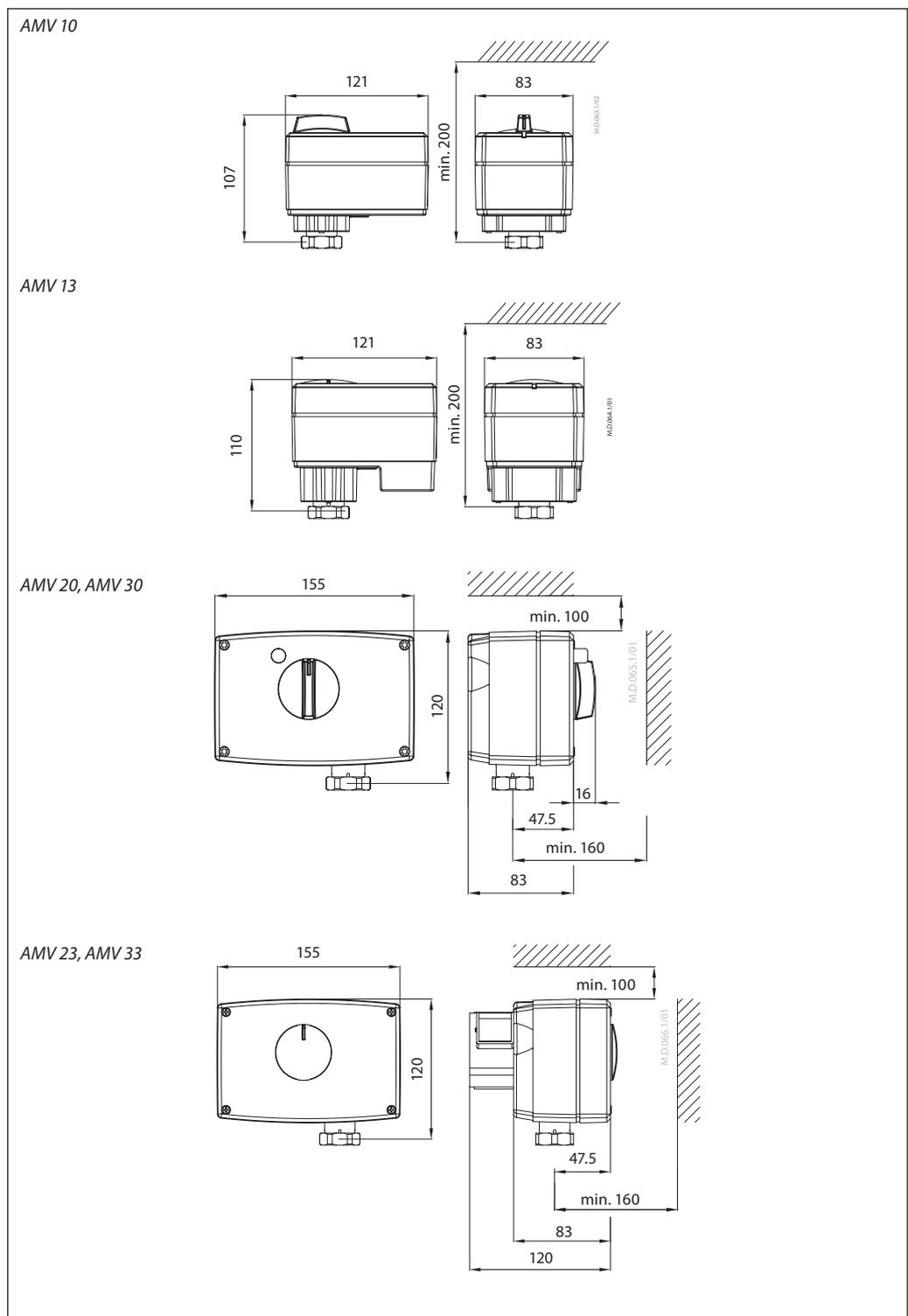
- Turn on the power.
- Set the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

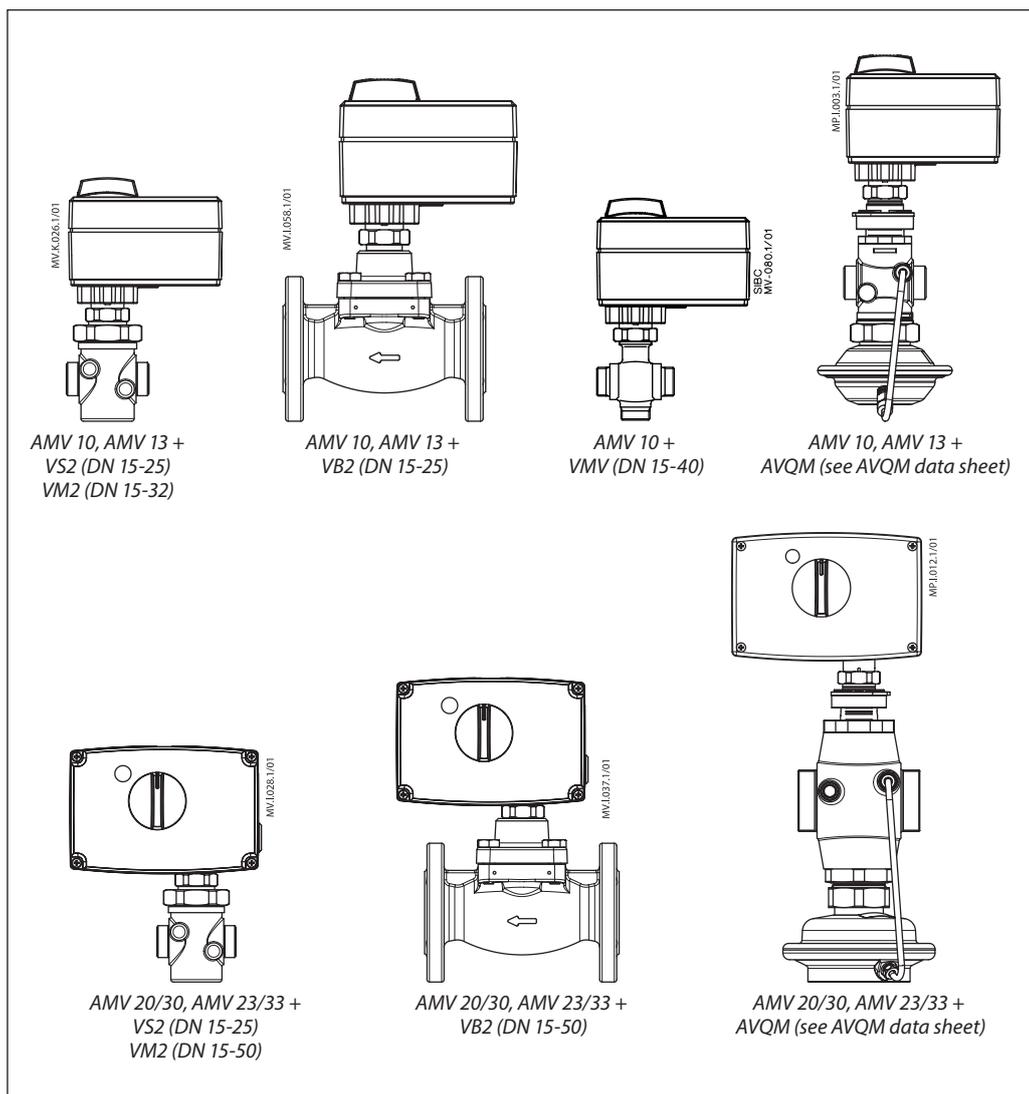
Manual Override



Dimensions



Actuator - valve combinations





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