

Data sheet

# Actuators for three point control with stroke limitation (SL)

## AMV 20 SL, AMV 30 SL

### AMV 23 SL - with EN 14597 certified safety function

Description



The actuators for 3-point controls with or without safety function are suitable to be used with VS2, VM2, VB2 and AVQM valves.

The safety function on AMV 23 SL is activated automatically in case of power failure or if the power supply is switched off by the safety thermostat. This function provides safety shut off on power failure.

In addition to basic function such as manual control and position indication, the actuators are also equipped with force sensitive switch-off to ensure that actuators and valves are not exposed to overload. This function automatically ensures the self-adjustment of the end positions on the valve.

Actuators are also equipped with stroke limitation that can limit flow in valves. Limitation of stroke is designed with switch that can be set in any desirable position (stroke limit from 0 to 100%).

**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 13.
- Low weight and robust.

**Main data:**

- Nominal voltage:
  - 24 Vac and 230 Vac (AMV 20 SL, AMV 23 SL)
  - 230 Vac (AMV 30 SL)
- Control input signal: 3 point
- Force: 450 N
- Speed:
  - AMV 20 SL, AMV 23 SL ..... 15 s/mm
  - AMV 30 SL ..... 3 s/mm
- Max. medium temperature: 150 °C
- Safety function: EN 14597
- Stroke limitation (SL)

Ordering

Type	Supply voltage	Code No.
AMV 20 SL	230 V~	082G3035
AMV 20 SL	24 V~	082G3036
AMV 30 SL	230 V~	082G3055

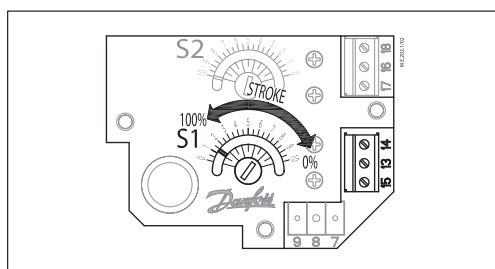
Spring return function - EN 14597 approval

Type	Supply voltage	Code No.
AMV 23 SL	230 V~	082G3037
AMV 23 SL	24 V~	082G3038

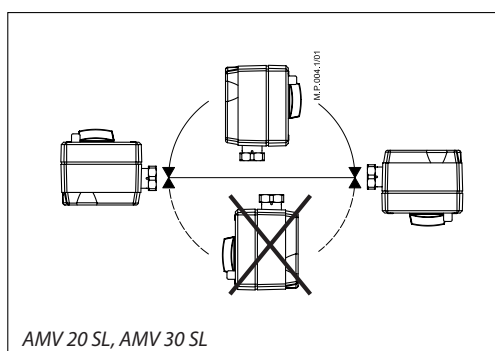
Technical data

Type		AMV 20 SL	AMV 23 SL	AMV 30 SL
Power supply	Vac	24~, 230~; +10 to -15 %		230~; +10 to -15 %
Power consumption	VA	2.15	7	7
Frequency	Hz	50/60		
Safety function		-	yes	-
Control input		3-point		
Closing force	N	450		
Spindle travel	mm	10		
Spindle speed	s/mm	15		3
Max. medium temperature inside the pipe	°C	150		
Ambient temperature		0 ... 55		
Storage and transport temperature		-40 ... 70		
Ambient humidity		5-95 % r.h., non-condensing		
Protection Class		I (230 V); III (24 V)		
Grade of enclosure		IP 54		
Weight	kg	1.4	1.45	1.4
- 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		

Stroke limitation



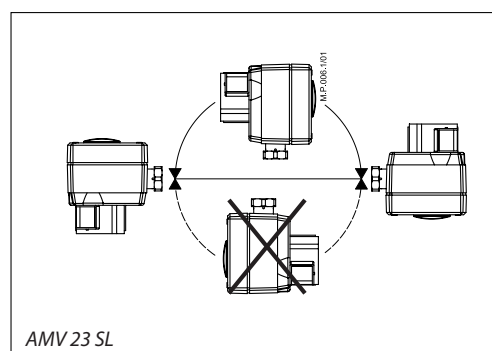
Installation



**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**

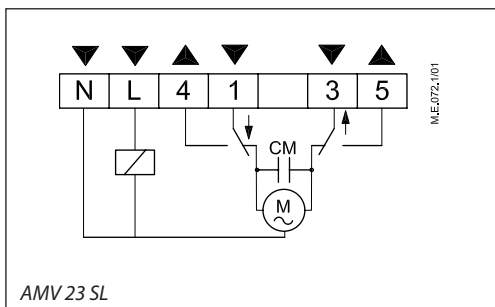
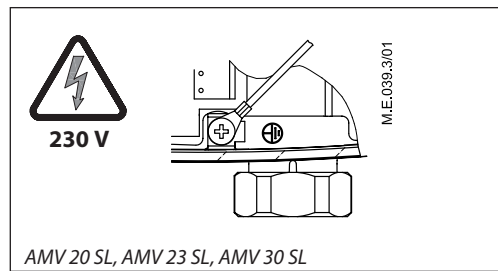
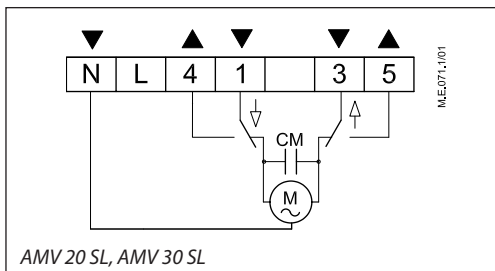
**Important:** It is strongly recommended that the mechanical installation is completed before the electrical installation.

**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**

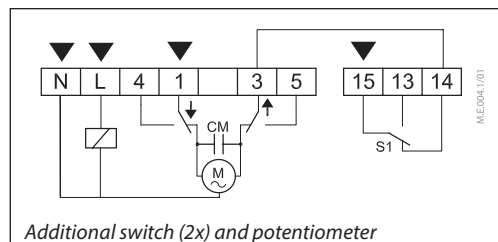
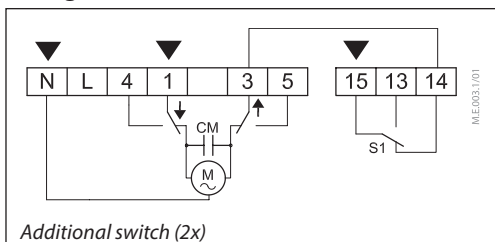
The actuator must be dismantled and the elements sorted into various material groups before disposal.

Wiring



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

Wiring - accessories



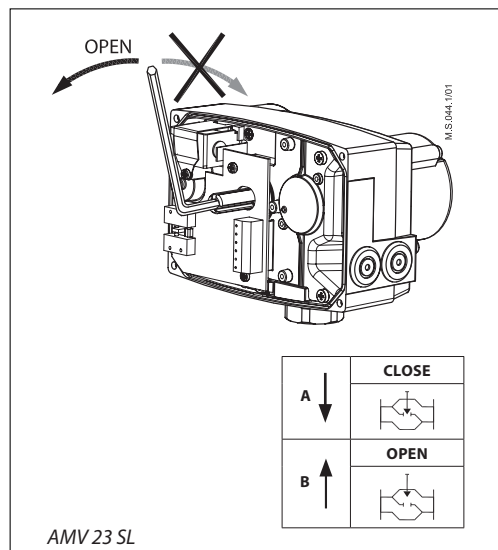
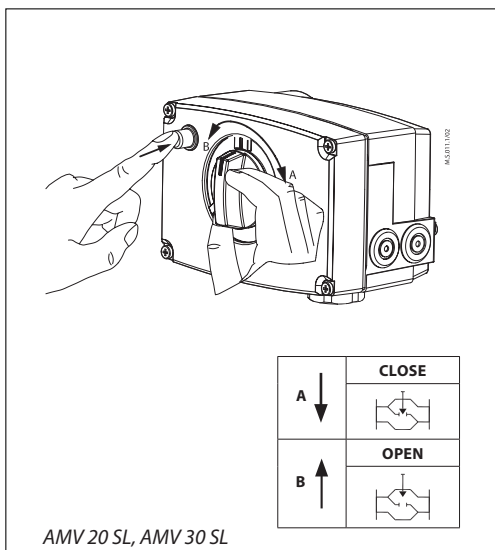
Commissioning

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

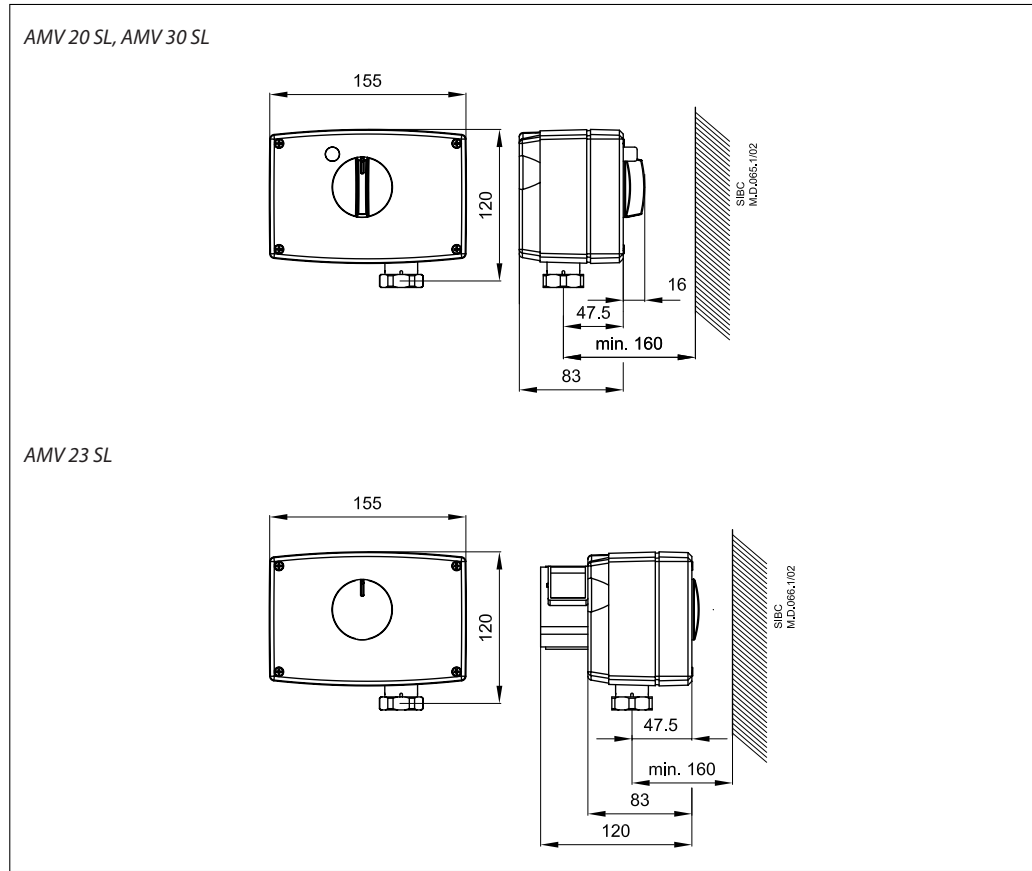
- Turn on the power.
- Set the appropriate control signal and check that the valve stem direction is correct for the application.

The unit is now fully commissioned.

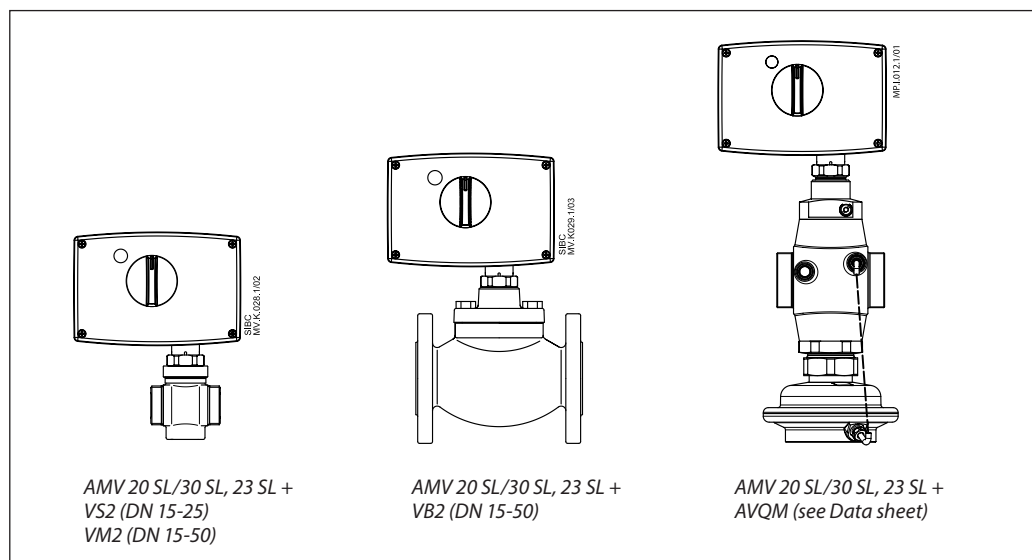
Manual override



Dimensions



Actuator - valve combinations



Danfoss A/S

Heating Segment • heating.danfoss.com • +45 7488 2222 • E-Mail: heating@danfoss.com

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequent changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and all Danfoss logotypes are trademarks of Danfoss A/S. All rights reserved.