

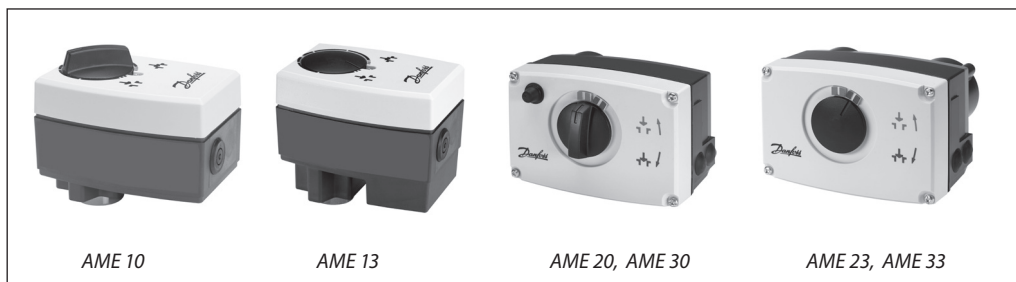
Data sheet

Modulating controlled actuators

AME 10, AME 20, AME 30

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

Description



The actuators with or without safety function are available for the modulating controllers with the control Y signal. The actuators can be used to provide safety shut off on power failure. They are used with VS2, VM2, VB2, VMV and AVQM valves.

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 overloading.

Main data:

- 24 V version
- Force:
 - AME 10, 13 300 N
 - AME 20, 23, 30, 33 450 N
- Speed:
 - AME 10, 13 14 s/mm
 - AME 20, 23 15 s/mm
 - AME 30, 33 3 s/mm
- Max. medium temperature:
 - AME 10, 13 130 °C
 - AME 20, 23, 30, 33 150 °C
- End-position signals

Note:

The use of AME actuators together with VS2 DN 15 is not recommendable. Linear characteristics as in VS2 DN 15 valves is not recommendable in DHW production.

Ordering

Actuators

Type	Supply voltage	Code No.
AME 10	24 V	082G3005
AME 20		082G3015
AME 30		082G3017

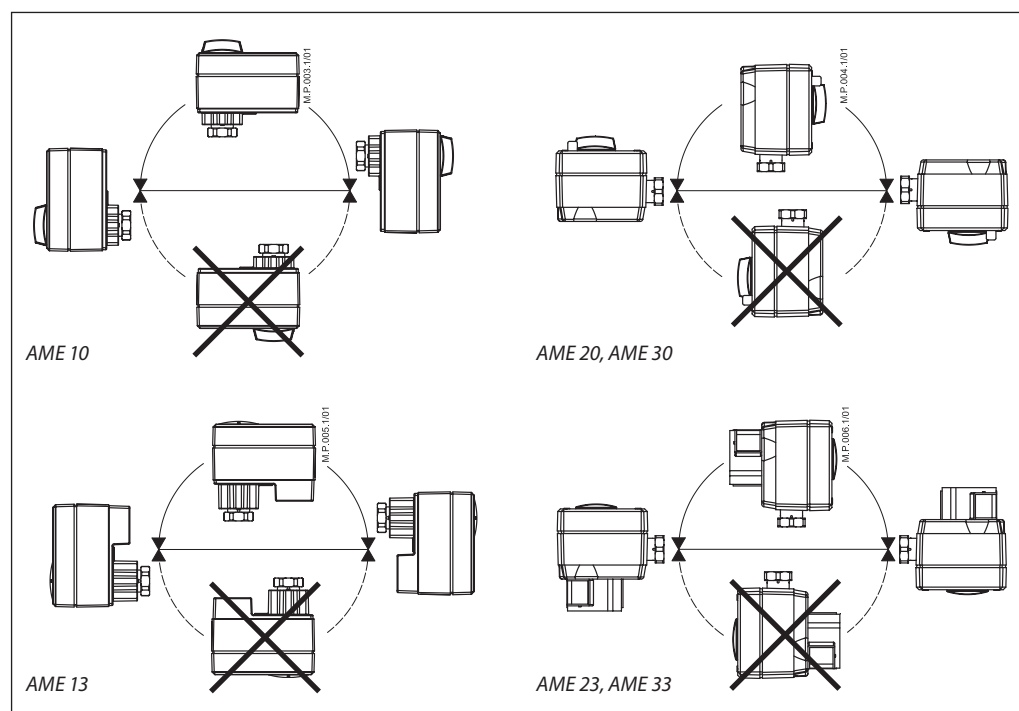
Actuators with safety function - EN 14597

Type	Supply voltage	Code No.
AME 13	24 V	082G3006
AME 23		082G3016
AME 33		082G3018

Technical data

Type		AME 10	AME 13	AME 20	AME 23	AME 30	AME 33
Power supply	V	24; +10 to -15 %; AC					
Power consumption	VA	4	9	4	9	9	14
Frequency	Hz	50/60					
Safety function		-	x	-	x	-	x
Control input Y	V	0-10 (2-10) Ri = 24 kΩ					
	mA	0-20 (4-20) Ri = 500 Ω					
Output signal X	V	0-10 (2-10)					
Closing force	N	300		450			
Max. stroke	mm	5		10			
Speed	s/mm	14		15		3	
Max. medium temperature		130		150			
Ambient temperature	°C	0 ... 55					
Storage and transport temperature		-40 ... 70					
Grade of enclosure		IP 54					
Weight	kg	0,6	0,8	1,45	1,5	1,45	1,5
CE - marking in accordance with standards		Low voltage directive (LVD) 2006/95/EC: EN 60730-1, EN 60730-2-14 EMC Directive 2004/108/EC: EN 61000-6-2, EN 61000-6-3					

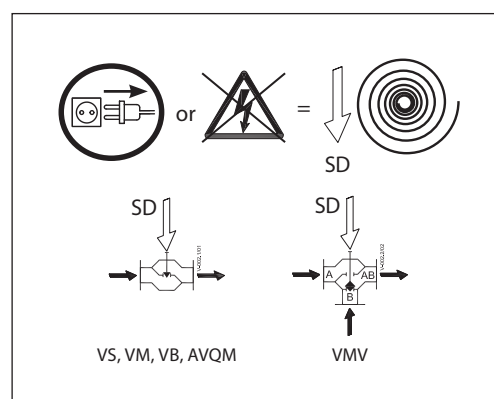
Installation



Safety function

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

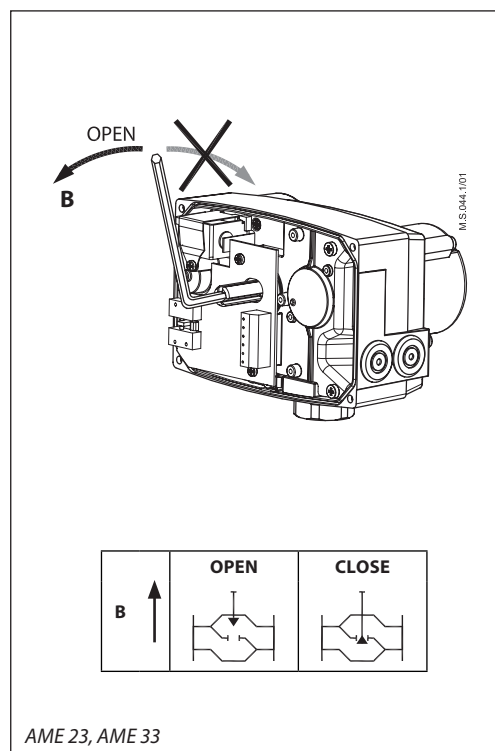
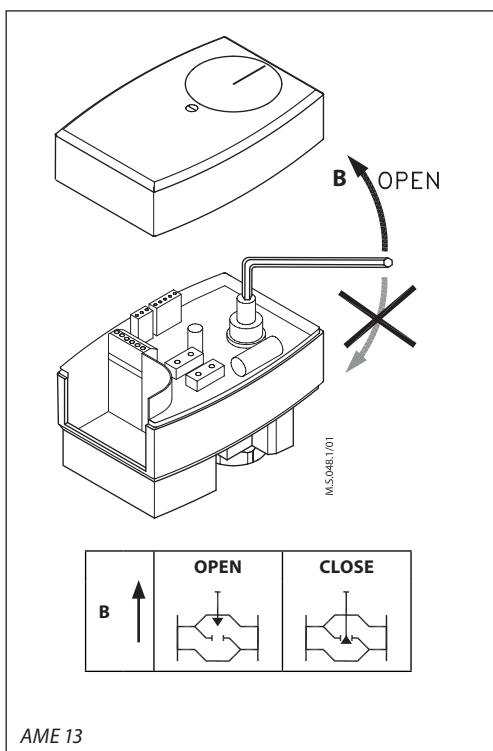
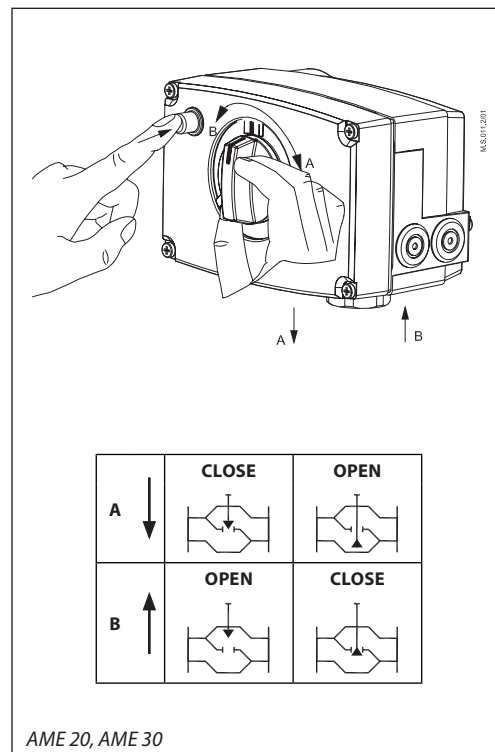
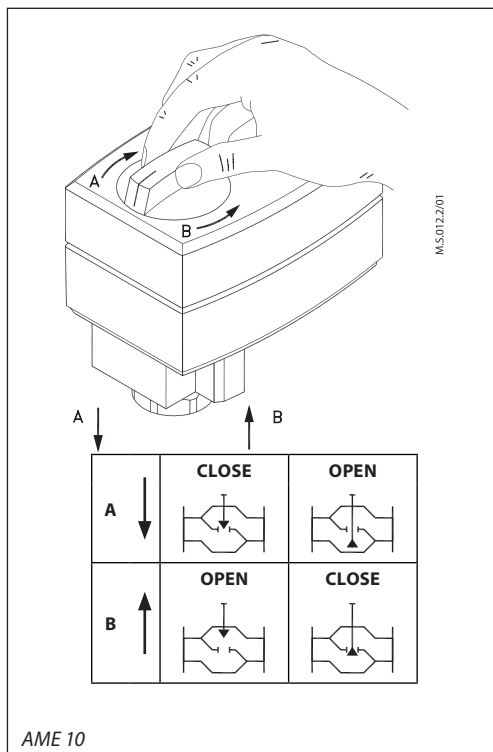
Valve type	Spring action selection will	
	Close port A-AB	Open port A-AB
VS	SD	-
VM (DN 15-50)	SD	-
VB (DN 15-50)	SD	-
AVQM (DN 15-50)	SD	-
VMV	-	SD



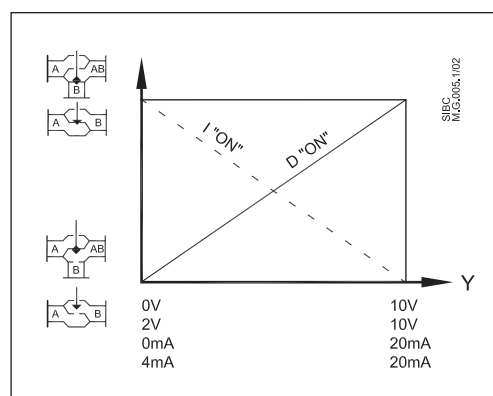
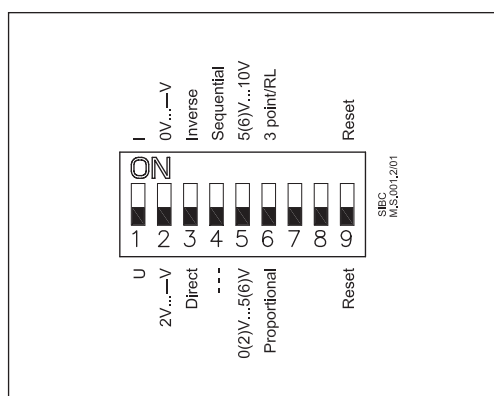
Disposal

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

Manual Override



DIP switch setting



The actuator has a function selection DIP switch under the removable cover. In particular, if SW6 is set to ON, the actuator will perform as 3-point actuator.

The switch provides the following functions:

• SW1: U/I - Input signal type selector:

If set to OFF position, voltage input is selected.
If set to ON position, current input is selected.

• SW2: 0/2 - Input signal range selector:

If set to OFF position, the input signal is in the range from 2-10 V (voltage input) or from 4-20 mA (current input).

If set to ON position, the input signal is in the range from 0-10 V (voltage input) or from 0-20 mA (current input).

• SW3: D/I - Direct or inverse acting selector:

If set to OFF position, the actuator is direct acting (stem lowers as voltage increases).

If actuator is set to ON position the actuator is inverse acting (stem raises as voltage increases).

• SW4: —/Seq - Normal or sequential mode selector:

If set to OFF position, the actuator is working in range 0(2)-10 V or 0(4)-20 mA.

If set to ON position, the actuator is working in sequential range; 0(2)-5(6) V or (0(4)-10(12) mA) or (5(6)-10 V) or (10(12)-20 mA).

• SW5: 0-5 V/5-10 V - Input signal range in sequential mode:

If set to OFF position, the actuator is working in sequential range 0(2)-5(6) V or 0(4)-10(12) mA.

If set to ON position, the actuator is working in sequential range; 5(6)-10 V or 10(12)-20 mA.

• SW6: Prop./3-pnt - Modulating or 3-point mode selector:

If set to OFF position, the actuator is working normally according to control signal.

If set to ON position, the actuator is working as 3-point actuator.

• SW7: LOG/LIN - Not in use.

• SW8: 100 % k_{VS} /Reduced k_{VS} - Not in use.

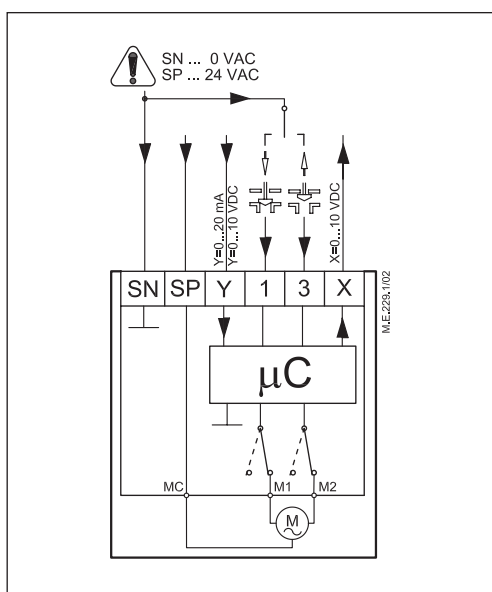
• SW9: Reset:

Changing this switch position will cause the actuator to go through a self calibration cycle.

Wiring



24 V AC



Wiring length	Recommended square of the wiring
0-50 m	0,75 mm ²
> 50 m	1,5 mm ²

SP	24 V AC	Power supply
SN	0 V	Common
Y	0-10 V (2-10 V)	Input signal
	0-20 mA (4-20 mA)	
X	0-10 V (2-10 V)	Output signal

Automatic self stroking feature

When power is first applied, the actuator will automatically adjust to the length of the valve stroke. Subsequently, the self stroking feature can be re-initialised by changing position of SW9.

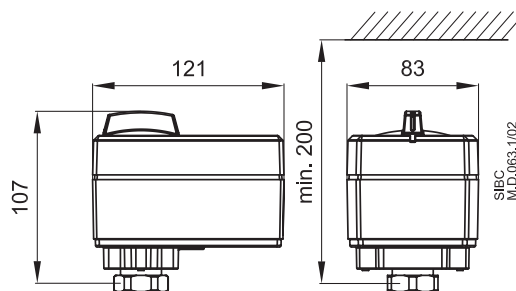
Diagnostic LED

The red diagnostic LED is located on the pcb under the cover. It provides indication of three operational states:

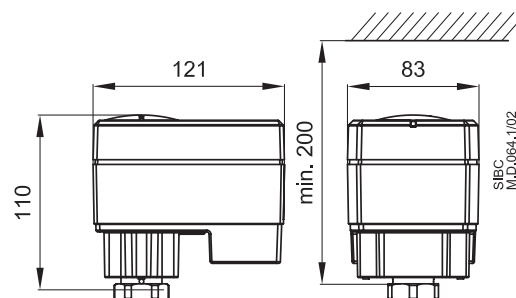
- Actuator Healthy (Permanently ON),
- Self Stroking (Flashes once per second),
- Error (Flashes 3 times per second - seek technical assistance).

Dimensions

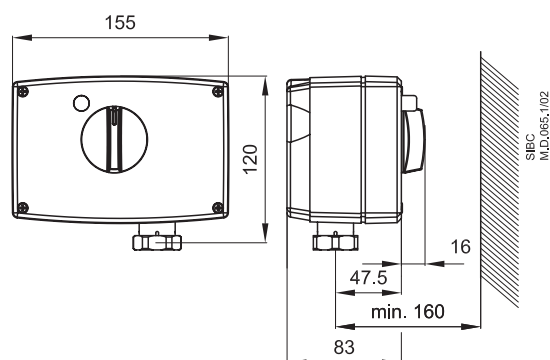
AME 10



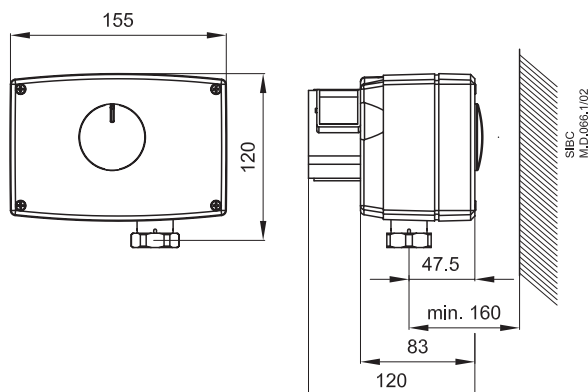
AME 13



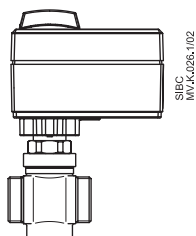
AME 20, AME 30



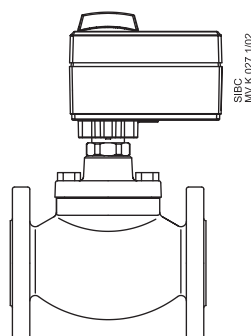
AME 23, AME 33



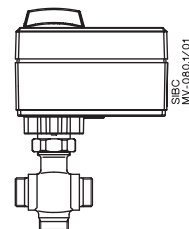
Actuator - valve combinations



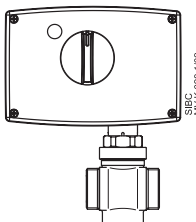
AME 10, AME 13 +
VM2 (DN 15 - 25)
VS2 (DN 20* - 25)



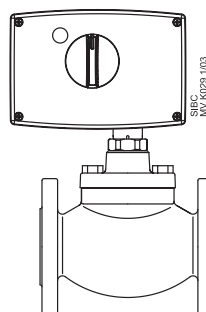
AME 10, AME 13 +
VB2 (DN 15 - 20)



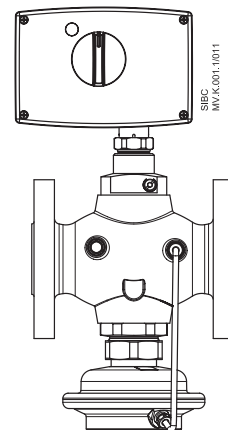
AME 10 +
VMV (DN 15 - 40)



AME 20/30, AME 23/33 +
VM2 (DN 15 - 50)
VS2 (DN 20* - 25)



AME 20/30, AME 23/33 +
VB2 (DN 15 - 50)



AME 20/30, AME 23/33 +
AVQM (DN 15 - 50)

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