

Data sheet

Actuators for modulating control AME 110 NL, AME 120 NL

Description



AME 110 NL and AME 120 NL actuators are used together with automatically balanced combination valve type AB-QM for DN 10 - 32.

The actuator can be used with fan coil units, induction units, small reheaters, recoolers, and zone applications in which hot/cold water is the controlled medium.

Main data:

- Gap detection at stem up position
- Modulating control
- Force switch-off at stem down position prevents overload of actuator and valve.
- No tools required for mounting
- Maintenance free during lifetime
- Low noise operation
- Self-positioning process
- Supplied with 1.5 m cable

Ordering

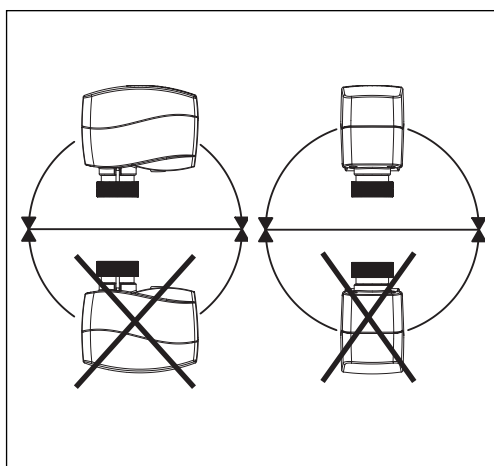
Type	Supply voltage	Speed	Code No.
AME 110 NL	24 V~	24 s/mm	082H8057
AME 120 NL		12 s/mm	082H8059

Type	Code No.
Cable (5 m)	082H8053

Technical data

Type	AME 110 NL	AME 120 NL
Power supply	24 Vac; +10 to -15%	
Power consumption	2 VA	
Frequency	50 Hz/60 Hz	
Close of force	130 N	
Stroke	5 mm	
Speed	24 s/mm	12 s/mm
Max. medium temperature inside the pipe	120 °C	
Ambient temperature	0 ... 55 °C	
Storage and transport temperature	-40 ... +70 °C	
Protection code	IP 42	
Weight	0.3 kg	
CE - marking in accordance with standards	Low Voltage Directive 73/23/EEC, EMC - Directive 2004/108/EEC: EN 60730-1, EN 60730-2-14	

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

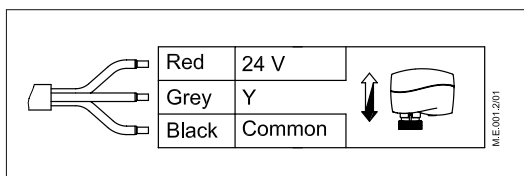
Important: It is strongly recommended that the mechanical installation is completed before the electrical installation.

Each actuator is supplied with the connecting cable for the controller.

Disposal

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

Wiring

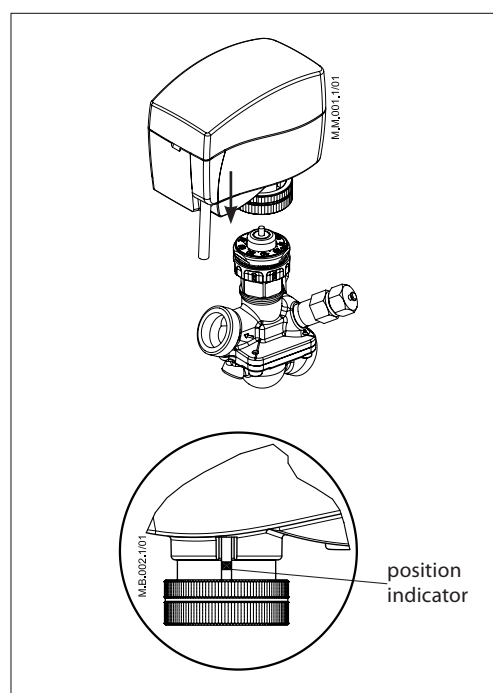


Commissioning

The factory setting of the spindle is the fully stem up position because of easier mechanical connection of the actuator on the valve.

Installation procedure

- 1 Check the valve's neck. The actuator should be in stem up position (factory setting). Ensure that the actuator is mounted securely on the valve body.
- 2 Energize the actuator according to the wiring diagram - see the part "Wiring".
- 3 The direction of the stem movement can be observed on the position indicator.



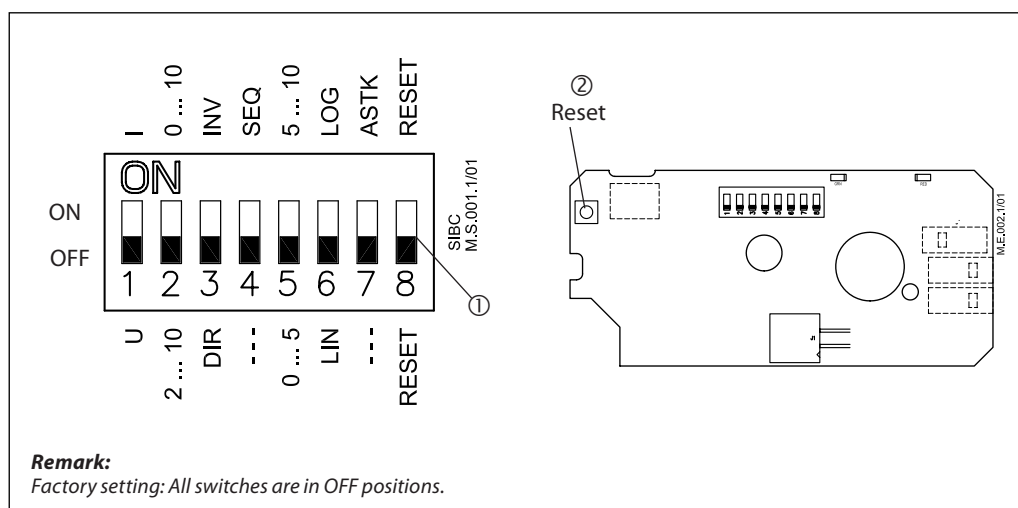
DIP Switch Setting
(for service purposes only)

The actuator has a function selection DIP switch under the removable cover.

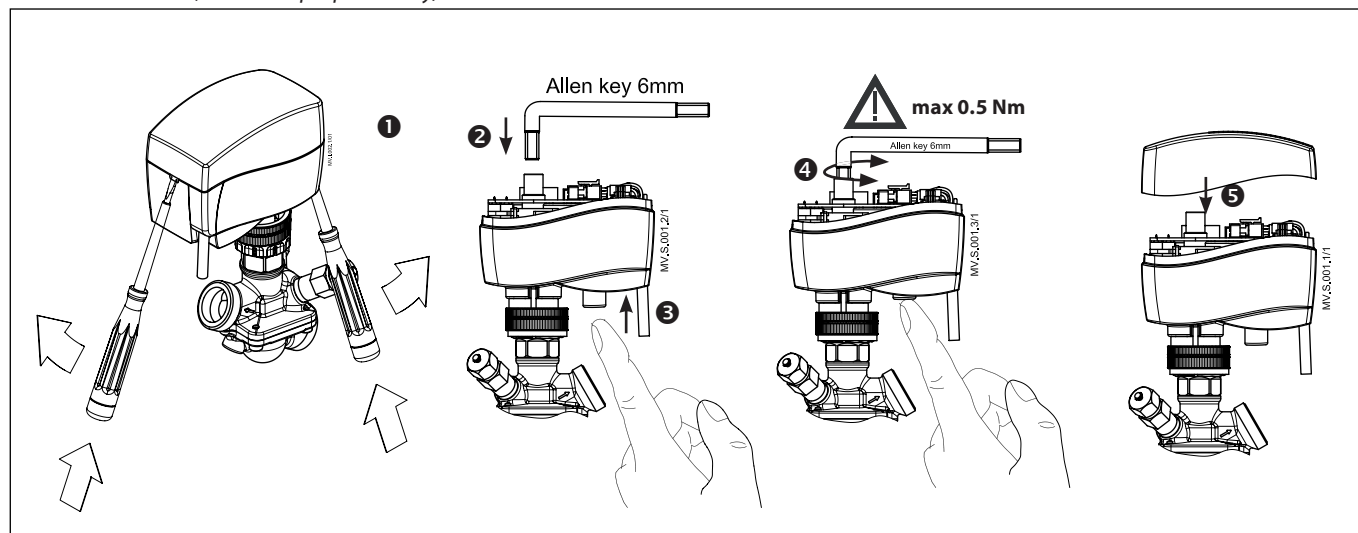
The switch provides the following functions:

- 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.
- SW 2:
0/2 - Input signal range selector
If set to OFF position, the input signal is in the range from 2 V ... 10 V (voltage input) or from 4 mA ... 20 mA (current input). If set to ON position, the input signal is in the range from 0 V ... 10 V (voltage input) or from 0 mA ... 20 mA (current input).
- SW 3:
D/I - Direct or inverse acting selector
If set to OFF position, the actuator is direct acting (stem contracts as voltage increases). If the actuator is set to ON position, the actuator is inverse acting (stem extracts as voltage increases).
- SW 4:
---/Seq - Normal or sequential mode selector
If set to OFF position, the actuator is working in the 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).
- SW 5:
0 ... 5 V/5 ... 10 V - Input signal range in sequential mode
If set to OFF position, the actuator is working in the sequential range 0(2) ... 5 (6) V or 0(4) ... 10 (12) mA. If set to ON position, the actuator is working in the sequential range; 5(6) ... 10 V or 10(12) ... 20 mA.
- SW 6:
LIN/LOG - Linear or equal percentage flow through valve selector
If set to ON position, the flow through the valve is equal percentage-wise equals the control signal. If set to OFF position, the valve position is linear acc. to the control signal.
- SW 7:
---/ASTK - Anti-blocking function
Exercises the valve to avoid blocking in periods when the heating/cooling is off. If set to ON position (ASTK), the valve motion is switched on. The actuator opens and closes the valve every 7 days. If set to OFF position (---), the function is disabled.
- SW 8:
Reset switch and reset button on PCB
Changing this switch position will cause the actuator to go through a self stroking cycle.

Note: Reset switch ① and reset button on PCB ② have the same function. The reset switch must be in OFF position to make reset button function active (press it for 2 sec.).



Manual override (for service purposes only)



Caution:
Do not manually operate the drive under power!

Don't dismount the actuator from the valve when it is in a stem down position!

If dismounted in a stem down position, there is a high risk that the actuator gets stuck.

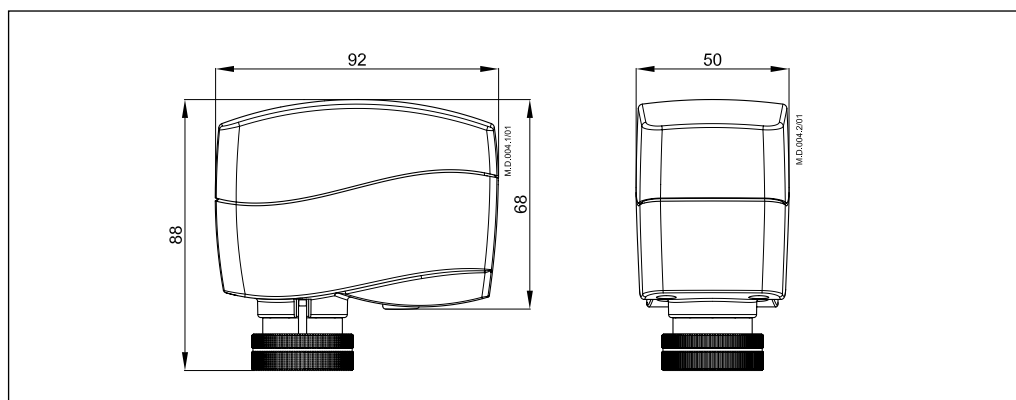
- 1 Remove the cover.
- 2 Insert the Allen key 6 mm into the spindle.
- 3 Press and hold the button (on the bottom side of the actuator) during manual override.
- 4 Pull out the tool.
- 5 Place cover back on the actuator.

Remark:

A click after energizing the actuator indicates that the gear wheel has jumped into normal position.

If manual override has been used, the Y signal will not be correct until the actuator has reached its end position. If this is not accepted, reset the actuator.

Dimensions (mm)



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