Data sheet

Electric Actuators with Spring Function
For ABQM, Pressure Independent Control Valve
AME25SU, AME25SD

AME 25SU/SD

The AME 25 series of low voltage electronic actuators are proportionally controlled and internally incorporate a safety spring function. In the event of power loss, the actuator will return to either a normally open or normally closed position depending on the style selected (spring up-SU or spring down-SD). These series of actuators are mounted to ABQM valves in sizes of 1-½" to 4" valves.

Ordering:

Code No.	Style	Description	Signal
082H3041	AME 25SU	Electric actuator with safety spring open function	Proportional & 3-point floating
082H3038	AME25SD	Electric actuator with safety spring down function	

** code no. **003Z0694** adapter is required to mount to the AB-QMvalve*

Technical Data:

Type	AME 25SU	AME 25SD
Power supply	24 VAC, +10…-15%	
Power consumption	14 VA	
Frequency	50 Hz / 60 Hz	
Control input, Y	0…10VDC (2…10VDC) Ri=24kΩ 0…20mA (4…20mA) Ri=500Ω	
	3-point Floating	
Output signal, X	0…10V (2…10V)	
Safety function	Normally open	Normally closed
Actuator force	101.1 lbf (450N)	
Max. stroke	15mm	
Speed	15 s/mm	
Max. medium temperature	302°F (150°C)	
Enclosure rating	NEMA 2	
Weight	5.1 lb (2.3 kg)	

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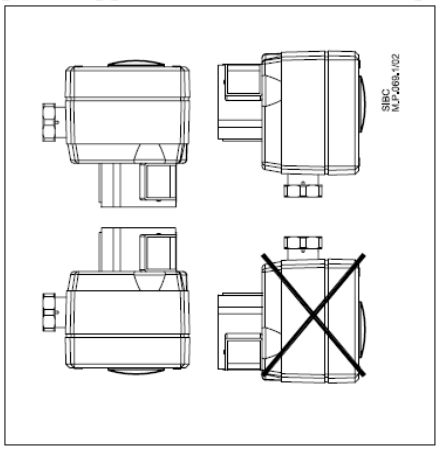
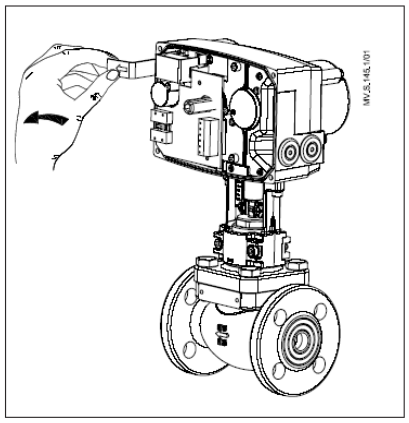
Installation Orientation:

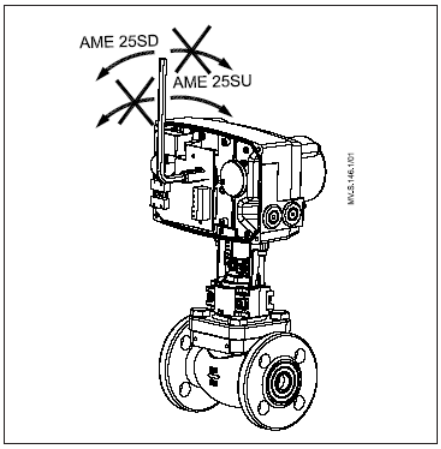
The actuator should be mounted with the valve stem either horizontal or pointing upwards. Use a 4 mm Allen key (not supplied) to fit the actuator to the valve body. Allow necessary clearance for maintenance purposes. During commissioning, the movement of the actuator (e.g. opens for heat) can be indicated by fitting red and blue pins (supplied) at either end of the position indication scale.





Spring down activation (AME 25SD only)

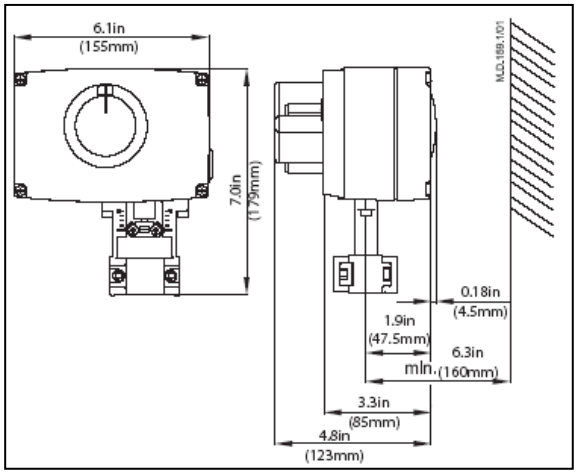
Manual Override:



On spring versions manual override is achieved by disconnecting the power supply, removing the cover and inserting a 5 mm Allen key (not supplied) into the top of the positioning spindle and turning the key against the spring. Observe the direction of rotation symbol. To hold a manual override position, the key must be wedged.

If manual override has been used then X and Y signal are not correct until the actuator reaches its end position. Another alternative to correct this is to reset the actuator.

Dimensions:



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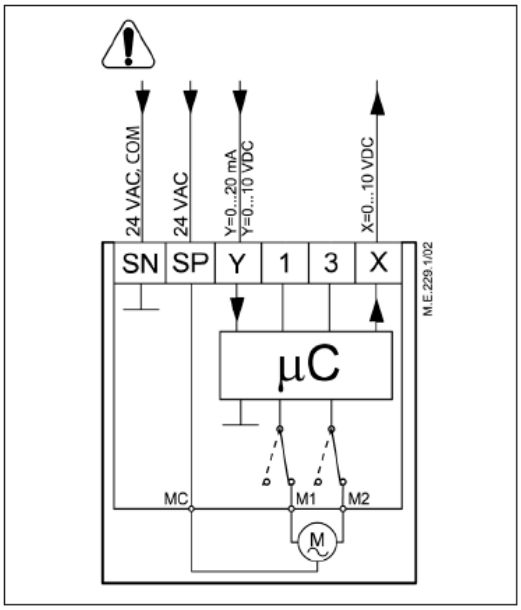
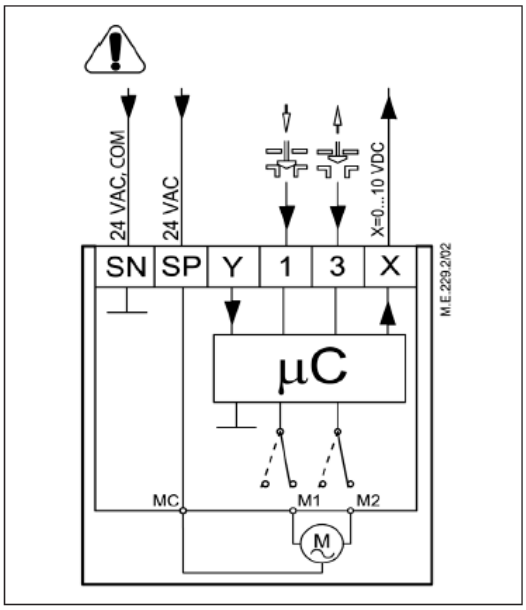
Electrical Wiring:

Wiring for proportional control



Wiring for 3-point floating control



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 reset by pressing the reset button once (located under the cover).

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).

SP	24 V~.....Power supply
SN	24 V~.....Common
Y	0 to 10 V.....Input signal (2 to 10 V) 0 to 20 mA (4 to 20 mA)
1	24 V, actuator close (3-point floating)
3	24V, actuator open (3-point floating)
X	0 to 10 V..... Output signal (2 to 10 V) Position indication (under 3-point floating signal)

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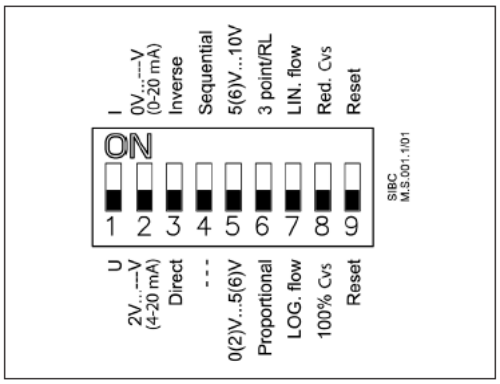
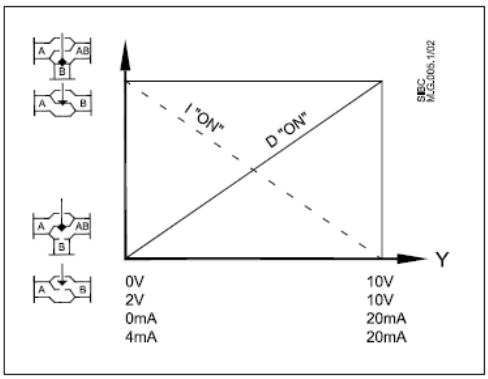
AME25SU/ AME25SD Proportional DIP switch setting





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. Ifset 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 V to 10 V (voltage input) or from 4 mA to 20 mA (current input). If set to ON position, the input signal is in the range from 0 to 10 V (voltage input) or from 0 mA to 20 mA (current input).

• **SW3: D/I - Direct or Reverse 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 reverse acting (stem raises as voltage increases).

• **SW4: —/Seq - Input signal range in sequential mode:**
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…5V/5…10V - Normal or sequential mode selector:**
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 - Equal percentage or linear fl ow through valve selector [1]:**
If set to OFF position, the fl ow through valve is equal percentage. If set to ON position, the he fl ow through valve is linear according to control signal.

• **SW8: 100% Cv/Reduced Cv - Flow reduction through valve selector:**
Leave in the OFF position (not required when in combination with AB-QM).

• **SW9: Reset:**
Changing this switch position will cause the actuator to go through a self stroking cycle.

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