

The AME 55QM is a modulating electronic actuator utilized for AB-QM valves for 5” and 6” sizes. This low voltage powered actuator automatically adapts its travel to valve end positions reducing setup time.

Features:

- The advanced design incorporates load related ‘switch-off’ to ensure that actuators and valves are not exposed to overload.
- The advanced design incorporates a diagnostic LED, operational data capture and self-calibration feature.
- A battery backup module, 082H7090, is available which is used as an electronic spring return unit powering the valve to an open or closed position during a power failure
- Manual override

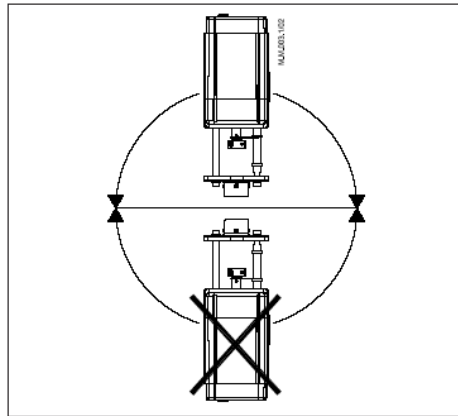
Ordering:

| Code No. | Style | Description | Signal |
|-----------------|----------|-----------------------------|---------------------------------|
| 082H3078 | AME 55QM | Motorized electric actuator | Proportional & 3-point floating |

Technical Data:

| Type | AME 55QM |
|-------------------------|-------------------------------|
| Power supply | 24 VAC, +10...-15% |
| Power consumption | 9 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) |
| Actuator force | 450 lbf (2000N) |
| Max. stem travel | 40mm |
| Speed | 8 s/mm |
| Max. medium temperature | 392°F (200°C) |
| Enclosure rating | NEMA 2 |
| Weight | 8.4 lb (3.8 kg) |

Installation Orientation:

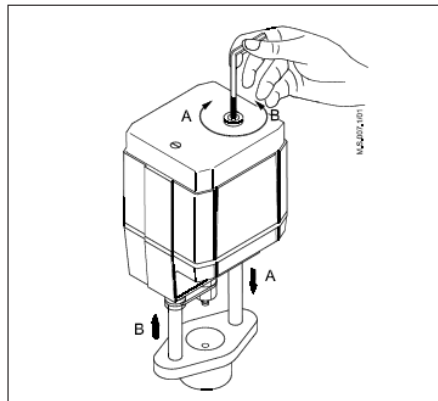


The actuator should be mounted with the valve stem in either horizontal position or pointing upwards. Use a 4 mm Allen key (not supplied) to tighten the actuator to the valve body.

Allow for necessary clearance for maintenance purposes.

The valve has position indication rings which should be pushed together before commissioning; after calibration cycling they will indicate the ends.

Manual Override:

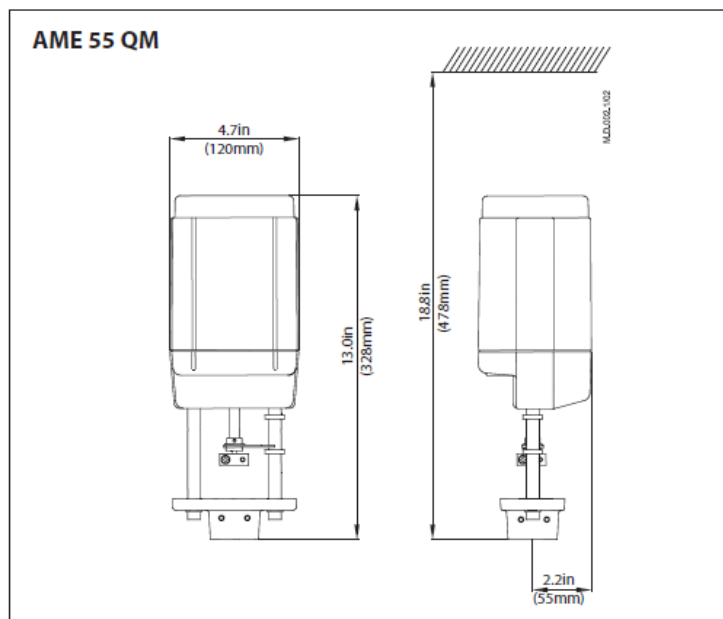


The manual override is applied by rotating the 4 mm Allen key (not supplied) to the required position. Observe the direction of the rotation symbol.

- Disconnect power supply
- Adjust valve position using an Allen key
- Set valve to closed position
- Restore power supply

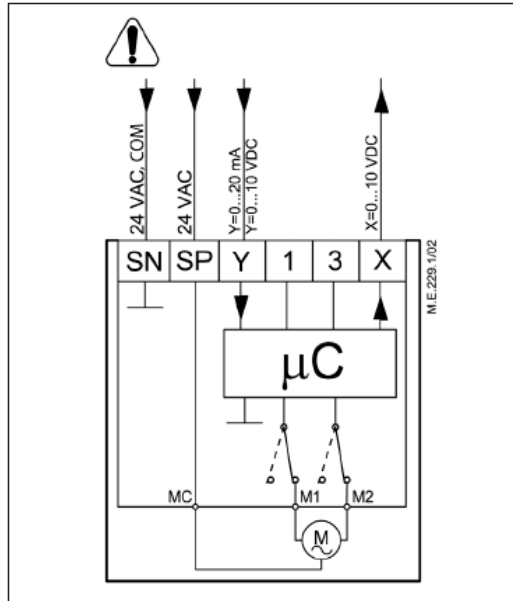
If manual override has been used then X and Y signal are not correct until the actuator reaches its end position. If this is not acceptable, reset the actuator.

Dimensions:

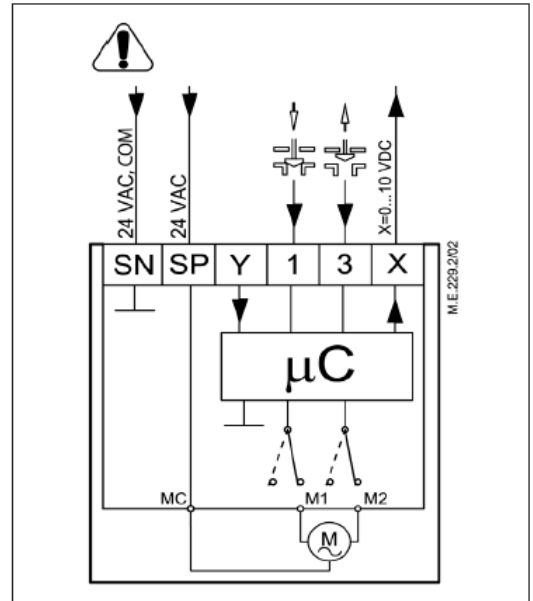


Electrical Wiring:

Wiring for proportional control



Wiring for 3-point floating control



Automatic self-calibration feature

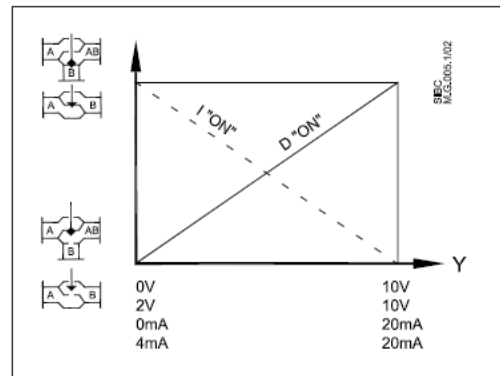
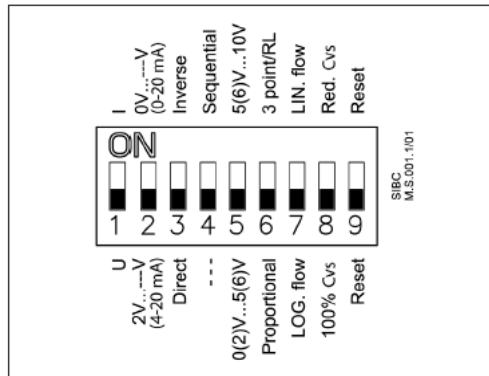
When power is first applied, the actuator will automatically adjust to the length of the valve stroke. Subsequently, the self- calibration feature can be reset by toggling DIP switch 9 once (located under the cover).

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)
- 1,3 3-point floating signal
- X 0 to 10 V.....Output signal
(2 to 10 V)

AME 55QM
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. 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 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 flow through valve selector 1:**

If set to OFF position, the flow through valve is equal percentage. If set to ON position, the flow 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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