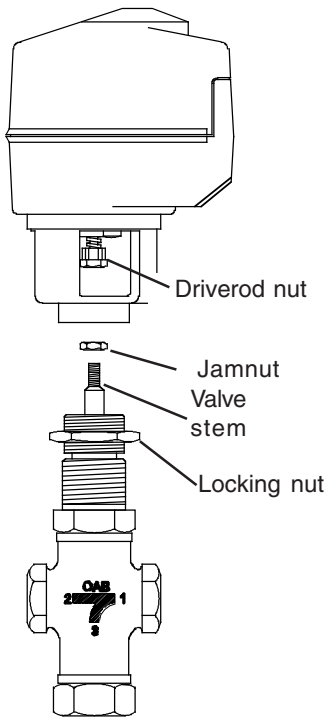
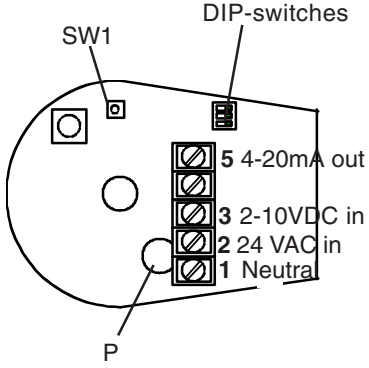
AQM2000A-1R



IMPORTANT: Read these instructions before installation and wiring of the product.



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INSTRUCTIONS

Valve actuator for 2...10V control signal

AQM2000A-1R is a valve actuator for 2...10 V DC control signal. It has an automatic calibration function for calibration of starting point and stroke. This allows simple adaptation to various valves.
AQM2000A-1R is intended for valves from the Osby NMTV/NMTR- and N2SA/N2SB-series.

Mounting position

The valve should be mounted so that the actuator is positioned with the drive rod within 90° from the vertical with the motor housing at the top. Ensure that there is adequate space above the valve stem to allow mounting of the actuator.

Mounting of the actuator on the valve

If the valve is not installed, grip it in a vice for stability.
Push the valve stem fully down and thread the supplied jam nut onto the stem such that the nut is slightly above the valve bonnet.
Fully extend the the valve stem.
Insert the stem into the actuator adaptor yoke and thread the drive rod nut onto the valve stem until snug. Loosen 1/2 turn again so the actuator may be screwed onto the valve without damaging the drive rod. Should the drive rod need to be extended, this can be done by turning the shaft marked ”P” counter-clockwise.
Gently push the actuator down to meet the thread on the valve bonnet. Screw the actuator onto the valve as far as it will go and lock it by tightening the locking nut against the yoke.
Turn the drive rod jam nut until tight against the drive rod nut. Lock the two nuts using two spanners.

Wiring

Connect supply and control signal. If the actuator and the controller share a common transformer it is important to ensure that both units use the same transformer pole as neutral.
Terminal 1 = Neutral.
Terminal 2 = 24 VAC supply voltage.
Terminal 3 = 2...10V DC control signal.
Terminal 5 = 4...20mA feedback.

Zero and span adjustment

On commissioning it is necessary to let the actuator run through the automatic calibration function in order to adapt it to the valve’s stroke and closing point.
After applying power wait at least 10 seconds (until the LED is extinguished). Depress and release the button SW1. This initiates the calibration feature. Over the next few minutes the actuator will self stroke fully up and down during which time the LED will remain lit. Once the LED is extinguished the calibration is completed. The actuator is now programmed to give a full 2...10V resolution for the stroke of the valve.

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Running direction

Running direction is set using the the DIPswitch #1.

Other control signals

The AQM2000A-1R actuator can be reprogrammed to suit other control signals within the range 2...10 V DC, for example
3...7 V DC or 6...10 V DC. This enables sequencing several actuators from one control signal.
Reprogramming of control input:

1. If the actuator is already under power, disconnect the power and wait for at least 10 seconds.
2. Apply power again and within the first 10 seconds press and hold the button SW1 until the LED blinks once. This initiates the calibration sequence.
3. Release SW1. The LED is now constantly illuminated.
4. Apply a control signal corresponding to the desired lower value. It must be in the range 2...7 V DC. Briefly depress SW1. Wait until the LED blinks once indicating acceptance of the value.
5. Increase the control signal to the desired upper voltage. This must be at least 3 V higher than the lower value. Briefly depress SW1. After a few seconds the LED will be extinguished indicating that the value has been accepted and the actuator has resumed normal operation.

3-point floating control

AQM2000A-R1 can be reprogrammed to 3-point floating control.

1. Wire the actuator
   Terminal 1 = Neutral
   Terminal 2 = 24 V AC (28...32 V DC) always connected
   Terminal 3 = 24 V AC (28...32 V DC) Drive up on activation
   Terminal 4 = 24 V AC (28...32 V DC) Drive down on activation
   Terminal 5 = 4...20 mA Feedback signal
2. Set all DIP-switches to Off position
3. Apply voltage and within 10 seconds, press and release SW1. The LED should start flashing.
4. Move DIP-switch #1 to On and then back to Off

The unit is now programmed for 3-point control.
It can be reprogrammed back to 2...10 V control by running through points 2...4 but using switch 3 instead of switch 1.
In 3-point control mode the unit is sensitive to induced electrical voltages from other sources. to prevent such interference, wire one of the supplied 2.2 kOhm resistors between terminals 1 and 3 and the second 2.2 kOhm resistor between terminals 1 and 4.

EMC emissions & immunity standards

This product conforms with the requirements of
European EMC standards CENELEC EN 50081-1 and EN 50082-1 and carries the CE mark.