

Installation Guide

Mounting

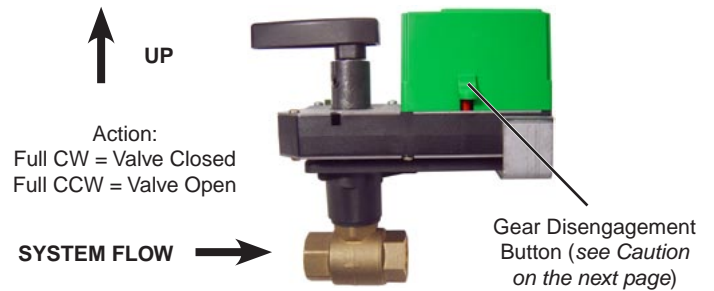
1. Clean the lines upstream from the valve. Remove any debris larger than 0.06" (.015 mm).
2. Align the valve's flow indicator with the system flow.
3. Mount the valve so the actuator is positioned over valve.

⚠ CAUTION

To prevent condensation from dripping onto the actuator housing, mount the valve with the actuator in the upright position or, at most, at a 45° angle. A 45° angle is recommended in steam applications.

4. Seal valves with approved pipe sealant.
5. Using two wrenches, secure the valve to the pipe. Torque should not exceed 75 ft-lbs. (102 N•m).
6. Eliminate air from the system to keep the valves full of fluid during operation.

NOTE: If the system experiences large amounts of debris, steps should be taken to keep the system clean.



⚠ CAUTION

To avoid overheating the valve's actuator in steam applications, be sure to use standard fiberglass insulation to insulate the pipe near the valve. Also, mounting the valve at a 45° angle is recommended in steam applications.

⚠ CAUTION

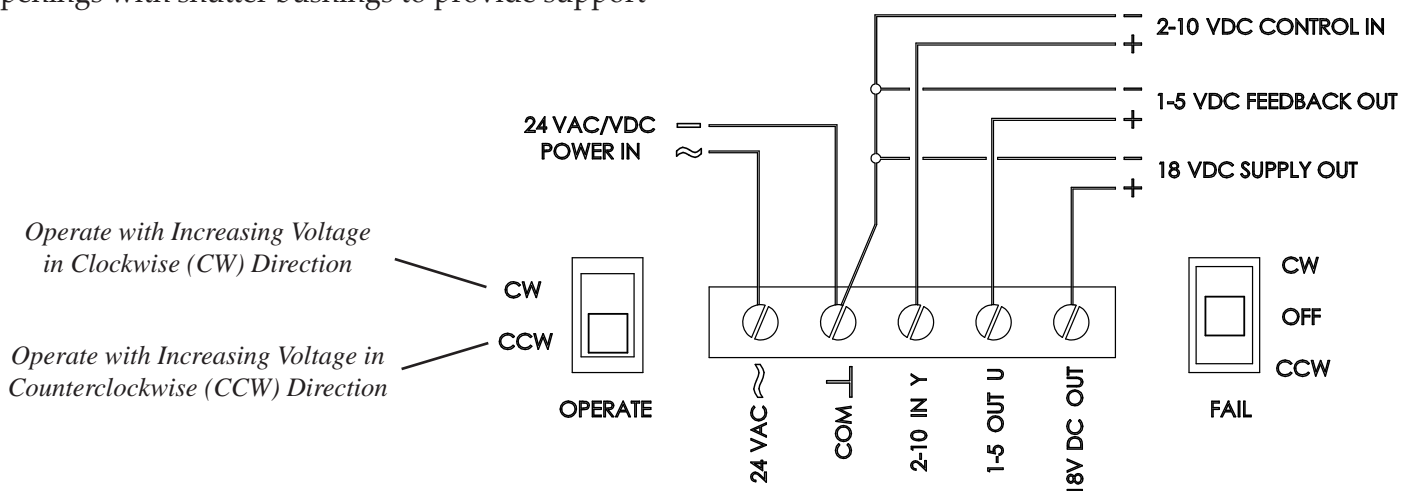
Using mineral oil lubricants or other incompatible substances in system fluids may damage EPDM rubber seals in valves. Before using any lubricant or additive in a water or ethylene glycol base, consult the substance manufacturer for compatibility with EPDM (Ethylene Propylene Diene Monomer).

Wiring

Connect wiring according to the diagram. See the Accessories/Repair Parts section for connection accessories.

The actuator's wiring cover has two 5/8" diameter openings with shutter bushings to provide support

for 0.125" through 0.4" diameter wire/cable. Use the HMO-4518 for 1/2" flexible conduit, the HMO-4520 compression connector for plenum cable, or the HMO-4526 female connector for 1/2" conduit.



Adjustments

The actuator is factory-set with the *OPERATE* selector switch in the clockwise *CW* position, and the actuator will rotate clockwise with a 2–10 VDC increasing control signal.

For Clockwise Rotation

1. Leave the *OPERATE* selector switch in the *CW* position.
2. Depress the gear disengagement button and rotate the drive hub fully counterclockwise to the 90 mark.
3. Determine what position the valve should be at 2 VDC input.
4. If needed, position the valve linkage to the full open or close position as determined in step 3. This ensures that as voltage increases and the actuator rotates in the clockwise direction, the valve rotates in the proper direction.
5. Secure the actuator if needed.

For Counterclockwise Rotation

1. Set the *OPERATE* selector switch in the *CCW* position.
2. Depress the gear disengagement button and rotate the drive hub fully clockwise to the 0 mark.
3. Determine what position the valve should be at 2 VDC input.
4. If needed, position the valve linkage to the full open or close position as determined in step 3. This ensures that as voltage increases and the actuator rotates in the counterclockwise direction, the damper or valve rotates in the proper direction.
5. Secure the actuator if needed.

Fail-Safe Function

The fail-safe switch is factory-set in the *Off* position. Select either *CW* or *CCW* on the three-position switch to choose the direction the actuator will rotate when power is lost.

Limit Min./Max. Travel with End Stop Screws

1. If desired, loosen the minimum and maximum stop screws one-half turn.
2. Slide the screws to the desired positions.
3. Tighten the stop screws (9 in-lbs. maximum).

⚠ CAUTION

Do not press the gear disengagement button when the actuator is powered, under load, or driven against the end stops. Balance the load and remove power to the actuator **BEFORE** pressing the button.

Operation

After the mechanical and electrical installations have been completed, cycle the actuator to verify the direction of rotation for normal operation and fail-safe if so equipped.

Maintenance

No routine maintenance is required. The motors are permanently lubricated and all internal gear-train components are oil-impregnated. Careful installation will also ensure long term reliability and performance.

Specifications

See the VEB-4303*SDL series data sheet (070-035-01).

Accessories/Repair Parts

CME-1002	Single auxiliary switch
CME-1004	Dual auxiliary switch
HMO-4518	Snap-in connector for 1/2" flexible metal conduit
HMO-4520	Compression connector for plenum cable
HMO-4526	Female connector for 1/2" conduit
HPO-5072	Ball valve to actuator repair kit
MEP-5372	Replacement proportional, fail-safe actuator
VFB-4303*SX	Replacement valve body with option for use with an MEP-4000 series actuator—see the data sheet for details

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