



General Troubleshooting Guide

KZValve motorized valve actuators are built to provide years of maintenance-free use when properly installed in compatible applications.

Disregarding feedback signals, there are two primary types of control circuits; **variable positioning** (commonly polarity reversing) and **on/off** (commonly one or two switched signals).

Always refer to the standard wiring diagrams for testing of the control harness before opening the actuator housing. As a general rule, standard actuators will rotate clockwise (viewed from top) while running to a valve closed position and counterclockwise while running to a valve open position. All **KZValve** motorized valve actuators currently require power to operate in either direction. Actuators are operable in any direction, even upside down.

IF UNIT IS UNDER WARRANTY, CONTACT A KZValve AUTHORIZED SERVICE/REPAIR CENTER. OPENING ACTUATOR VOIDS WARRANTY.

Actuator Issues

Problem	Possible Cause	Solution
Actuator will not run at all	i) Limit switch problem	i) Check and adjust limit switches per instructions.
	ii) Cam assembly problem	ii) Check and adjust cams per instructions.
	iii) Integrated circuit breaker tripped	iii) Disconnect power to unit for 20 seconds; reconnect power.
	iv) Dead or open short in control harness	iv) Check harness for cuts in insulation or sharp pinch point. Check for continuity of each wire in the harness. Check connectors for damage or corrosion. Repair or replace as needed.
	v) Dead or open short in actuator control circuit	v) Check actuator housing for damage or missing hardware. Check actuator for internal corrosion. Check for loose motor lead. Clean circuit with electrical contact cleaner and compressed air. Solder connections if necessary. Replace circuit board assembly if required.
	vi) Failed gear motor	vi) Disconnect motor leads at circuit board or motor. Apply power directly to motor terminals. Motor should run continuously when power is applied. Replace motor if rotation is not smooth.
	Motor runs continuously	i) Limit switch problem
ii) Cam assembly problem		ii) Check and adjust cams per instructions.
iii) Defective or damaged circuit board component		iii) Replace circuit board assembly.
Constantly tripping integrated circuit breaker or blowing line fuse	i) Valve operating torque excessive; tight from incompatible valve or media, or buildup	i) Remove motorized actuator from valve. Manually turn valve with torque wrench when possible. Confirm that valve torque is within actuator capability. Refer to Actuator Information chart in Actuator Data Spec Sheet section of catalog. Disassemble and clean valve.
	ii) Defective or damaged circuit board component	ii) Many models have internal relays. Listen for audible click upon activation. Bypass circuit board assembly to test motor, see <i>iii) Failed gear motor</i> . Replace motor if rotation is not smooth.
	iii) Failed gear motor	iii) Disconnect motor leads at circuit board or motor. Apply power directly to motor terminals. Motor should run continuously when power is applied. Replace motor if rotation is not smooth.

For additional trouble shooting information regarding device LED feedback options, please reference the **KZValve LED Feedback Manual, available upon request.*

Valve Issues

Problem	Possible Cause	Solution
Valve is leaking past ball	i) Seats damaged or worn out	i) Install valve repair kit.
	ii) Valve is not stopping at proper closed position	ii) Adjust limit switches of actuator.
Valve stem leaks	i) Worn stem seats	i) On metal valves: tighten stem packing nut ~ ¼- ½ turn. CAUTION! Over tightening stem nut could cause excessive operating torque and trip internal circuit breaker. If leak continues or for plastic valves, install repair kit.
	ii) Damaged stem or stem bore	ii) Replace valve stem if available, otherwise replace valve.
Valve body leaks	i) Loose body bolts or excessive operating pressure	i) Check bolts and confirm application is within recommended pressure ratings.
	ii) Defective body seals	ii) Install repair kit or replace valve.
Valve operating torque excessive	i) Swollen seals or particulate buildup in valve chamber	i) Check valve for compatibility with product. May require valve cleaning, repair kit, or new valve.
	ii) Valve bolts too tight	ii) Loosen bolts slightly. Plastic, bolted valves only.
	iii) Stem nut too tight or damaged stem seal	iii) Loosen stem nut slightly. Install repair kit if needed.

