

Gravity UV Aeration Control Panel — Troubleshooting

120 VAC · Single Phase | Gravity-Flow Aerobic Treatment | Factory-Integrated CAM-4G Cellular Alarm

ENGINEERED & MANUFACTURED FOR AKHA MANUFACTURING, LLC · HYDRO-ACTION® SYSTEMS

GUIDE VERSION **1.0**

DATE **August 2026**

PANEL **CP-001-2-0003**

UL FILE NUMBER **E547664**

REFERENCE DRAWINGS **Line Drawing v1.1 · Connection Diagram v1.0**

COMPANION **Operation Manual v2.1 · Spec Sheet v2.0**

BEFORE YOU OPEN THE PANEL

This panel is fed by TWO separate 120 V circuits — main power on terminal 1 and a dedicated control / alarm feed on terminal 2. The control feed keeps the alarm circuit and the CAM-4G module live when main power is lost, so terminal 2 **REMAINS ENERGIZED** with the main feed off. Disconnect both circuits before opening the panel. Land the neutrals of both feeds on the same neutral bus in the feeder panel.

FAULT ISOLATION BY DEVICE CLASS

CLASS	SYMPTOM	PROBABLE CAUSE	ACTION
Power	No lights, no compressor, no alarm	Loss of main power feed	Verify the feeder breaker and incoming voltage at terminal 1. Remember terminal 2 is a separate circuit and may still be live.
Power	Alarm and CAM-4G dead, compressor running	Loss of the control / alarm feed	Check the control circuit breaker and voltage at terminal 2. The alarm circuit is fed separately by design.
Compressor	Compressor fault annunciated	No air pressure, blocked airline, or failed pressure switch	Check the airline for restriction, confirm the compressor is turning, then test the air pressure switch contacts.
Compressor	Compressor will not run	Branch-circuit protection open, or motor overload tripped	Reset the branch-circuit protection. The overload is integral to the motor — allow it to cool and reset, then confirm running current is within 5.0 FLA.
Compressor	Compressor short-cycles	Air leak or pressure switch differential	Inspect fittings and diffuser for leaks before adjusting anything at the panel.
UV	UV fault annunciated	Lamp failed or at end of life	Replace the UV lamp with a 25–35 W unit. Handle and dispose of lamps per local regulations.
UV	UV fault with a known good lamp	PRI-51/1 trip level or response delay out of adjustment	The trip level and 0.5–10 s delay are factory set. Do not adjust without AKHA guidance.
UV	Ballast dead, lamp intact	Loss of ballast supply	Verify 120 V at terminal 12 with respect to the ballast neutral, and check the lamp circuit at terminals 9, 10 and 11.

CLASS	SYMPTOM	PROBABLE CAUSE	ACTION
Alarm	High-water alarm active	Excessive tank fluid level	Investigate influent restriction or overflow. High water never stops the compressor or UV — it annunciates only.
Alarm	Beacon and horn will not silence	Silence push-button or alarm relay wiring	Inspect the silence push-button wiring and the R1 relay contacts. Silence the horn only after acknowledging the condition.
Alarm	False or repeated alarms	Float positioning or nuisance trips	Verify float position and cable routing, then increase the input delay by SMS if the condition is genuinely transient.
CAM-4G	No SMS received	Weak signal, low batteries, or unstored numbers	Press the Test button — the module should chirp twice. Check the four AA batteries, improve antenna position, and confirm numbers are stored.
CAM-4G	Module will not accept commands	Caller ID lock	Once numbers are stored, only stored numbers can send commands. Text from a stored phone, or contact AKHA to reset.
CAM-4G	Power-loss text only, no sounder	Working as designed	Power-loss alerts are text-only with no audible output. The pwrdelay default is 5 seconds.
Terminals	Intermittent field device	Under- or over-torqued terminal	Re-torque to the Dinkle rated value for that terminal type: DK4N / DK4N-PE 0.6 N·m, DK2.5N / DK2.5N-PE 0.4 N·m. Do not apply a single blanket value.

ALARM-ONLY BY DESIGN High water annunciates and never interrupts compressor or UV operation on this panel. If pumping or aeration stops during a high-water event, look for a separate fault — not the float.

COMPLETE PANEL DOCUMENTATION Scan for the current Operation Manual, Specification Sheet, Quick Start Guide, and drawings for this panel.



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panels/CP-001-2-0003/

ESCALATION

IF ISSUES PERSIST Contact AKHA Manufacturing, LLC with the model and serial number — Toll Free 800-370-3749 · (574) 936-2542 · hydro-action.com. All support, service, and warranty for this panel is administered by AKHA.