

Gravity UV Aeration Control Panel — Quick Start

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

PANEL CP-001-2-0003

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

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FULL DOCUMENTATION Operation Manual v2.1 · Spec Sheet v2.0 · Troubleshooting Guide v1.0

READ FIRST — TWO SEPARATE 120 V FEEDS

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.

1. BEFORE YOU ENERGIZE

- Mount** — secure the Type 4X enclosure to a stable wall or post, protected from direct weather and physical damage. Allow clearance for the door and service access.
- Bring two circuits** — main power to terminal 1 on a 15 A breaker, and a dedicated control / alarm circuit to terminal 2 rated 5 A max. Land the neutrals of both feeds on the same neutral bus in the feeder panel. Select the upstream feeder and main disconnect and size all supply conductors per the NEC, including Articles 240, 310 and 430.
- Land the compressor** — air pump power on terminal 3 with its neutral and ground. 120 V, ¼ HP max, 5.0 FLA. The motor must incorporate integral overload protection — this panel contains no overload devices.
- Land the UV circuit** — ballast power on terminal 12 with the ballast neutral; lamp on terminals 9, 10, and 11 (bulb 1, bulb 2, common). Install the customer-supplied 25–35 W lamp.
- Land the alarm float** — high-water float on terminals 5 and 6.
- Torque** — use the Dinkle rated value for each terminal type — DK4N / DK4N-PE (GG12) M3 to 0.6 N·m (5.3 in-lbs), 22–10 AWG; DK2.5N / DK2.5N-PE M2.5 to 0.4 N·m (3.5 in-lbs), 22–12 AWG. Copper, 60 °C minimum. Never apply a single blanket torque across both types.
- Seal** — verify all conduit entries are sealed to preserve the Type 4X rating.

2. START-UP & FUNCTIONAL TEST

- Energize** — switch on both the main and control circuit feeds.
- Confirm aeration** — the compressor runs continuously whenever main power is present. Confirm air delivery at the diffuser.
- Test the pressure switch** — restrict or disconnect the airline briefly — a compressor fault should annunciate.
- Test high water** — lift the high-water float — the beacon and horn must activate. Confirm the compressor and UV keep running; high water is annunciation only.
- Test the CAM-4G** — press the Test button on the module. It should chirp twice and send a test SMS to every stored number within 60 seconds.
- Confirm before leaving** — silence the horn, verify the beacon clears when the condition clears, and leave both feeds energized.

3. ALARMS & INDICATORS

- **Red beacon + 95 dB horn** — UV fault, compressor fault, or high water. The silence push-button quiets the horn; the beacon stays lit until the condition clears.
- **CAM-4G** — sends SMS to up to three stored numbers on any configured alarm, and continues to send during a utility outage on battery backup.

ALARM-ONLY BY DESIGN High water annunciates and never interrupts compressor or UV operation.

4. CAM-4G SETUP — QUICK CHECK

Configuration is by SMS text command from any cellular phone; no software or laptop is required.

- **Alert numbers** — text “phone1 [ten-digit number]”, then phone2 and phone3 for up to three recipients.
- **Unit name** — text “name [unit name]”, up to 20 characters. The name appears in every alert.
- **Alert delay** — text “delay1 [seconds]”, 0–9999 s, default 0, to require a condition to persist before annunciating.
- **Power-outage delay** — text “pwrdelay [seconds]”, 0–999 s, default 5. Power-loss alerts are text-only with no sounder.
- **Verify** — exit Configure Mode, tap CONFIGURE/TEST, and confirm the test SMS arrives at every stored number.

CALLER ID LOCK Once numbers are stored, only stored numbers can send commands. To clear stored numbers or perform a factory reset, contact AKHA Manufacturing.

5. SERVICE & SUPPORT

SERVICE & SUPPORT All technical support, service calls, alarm response, and warranty claims are handled by AKHA Manufacturing, LLC — Toll Free 800-370-3749 · (574) 936-2542 · hydro-action.com. Scan for the complete panel documentation.



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