

# Time-Based Dosing Control Panel

Time-Based Dosing with UV Disinfection | 240 VAC Pump Circuit · 120 VAC Control | UL 508A Listed  
ENGINEERED & MANUFACTURED FOR AKHA MANUFACTURING, LLC · HYDRO-ACTION® SYSTEMS

## PRODUCT OVERVIEW

Engineered and manufactured by Legacy Controls for AKHA Manufacturing, LLC, this UL Listed panel both powers and protects the treatment process: dual-voltage pump power (120 or 240 V — 20 FLA at 2 HP) with precise time-based dosing control over that pump, UV lamp and air compressor power from its 120 V control circuit, UV supervision, and layered failsafe lockouts for Hydro-Action time-dosed dispersal systems.

## KEY FEATURES

- Elko SHT-13/2 Wi-Fi timer — cyclic, daily, weekly & astronomical programs · phone programming (no app) · hour meter
- Powers and supervises the UV lamp — PRI51 relay detects failure and degradation
- Powers and protects the air compressor — low pressure locks out the spray/dose pump
- Dedicated 120 V control circuit keeps alarms powered if the 240 V main trips
- Timer enable float (7–8) blocks short doses · alarm float (9–10) alarms only

## PANEL IDENTIFICATION

MODEL  
**CP-001-3-0006-240V**  
UL FILE NUMBER  
**E547664**  
DOCUMENTATION  
**Manual v3.0 · Drawings 240V v1.0**  
MANUFACTURED FOR  
**AKHA Manufacturing, LLC**  
SYSTEM PLATFORM  
**Hydro-Action®**  
TIMER  
**Elko SHT-13/2 · Wi-Fi**

## ⚠ READ FIRST — CONTROL CIRCUIT

**TWO separate feeds:** 240 V main powers only the spray/dose pump; a dedicated 120 V control circuit powers the air pump, UV, alarms, and timer, and **remains energized when the 240 V main is OFF** — disconnect BOTH and verify with a tester. Neutrals from both feeds must land on the same neutral bus.

## TECHNICAL SPECIFICATIONS

| PARAMETER                          | SPECIFICATION                                                                                                             |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------|
| Model / Compliance                 | CP-001-3-0006-240V · UL 508A Listed · File E547664 · NSF/ANSI 40 compatible                                               |
| Main Power (Pump Circuit)          | 240 VAC, 60 Hz, single phase — powers the spray/dose pump only                                                            |
| Control Power (Dedicated Feed)     | 120 VAC, 60 Hz, single phase — dedicated feed required                                                                    |
| Feeder Protection (Field Supplied) | Upstream, at the feeder panel (not in this panel): 240 V pump feed 30 A · 120 V control feed 10–15 A                      |
| Spray / Dose Pump                  | 240 V, up to 2 HP (20 FLA)                                                                                                |
| Compressor (Air Pump)              | 120 V, ¼ HP (5.0 FLA) — panel rated ½ HP max; internal overload protection required                                       |
| Total FLA / SCCR                   | Approx. 25 A combined (20 A pump + control side) · SCCR 5 kA                                                              |
| Timer / Scheduler                  | Elko SHT-13/2 Wi-Fi smart timer · built-in run-time hour meter                                                            |
| Protection & Monitoring            | PRI51 UV current relay · air pressure switch · timer enable float · high-water alarm float                                |
| Enclosure / Wiring                 | Polycase ZH-100804 NEMA 4X polycarbonate, 10.0 × 8.4 × 5.2 in external · Cu 60 °C min · torque 4–5 in-lbs (0.45–0.56 N·m) |

## MONITORING & PROTECTION

Protection is multi-tier, and the only output ever locked out is the spray/dose pump. High water raises the alarm only — the panel keeps the pump on schedule, since high water means it is not keeping up.

| CONDITION                    | DEVICE                                 | RESPONSE                                      |
|------------------------------|----------------------------------------|-----------------------------------------------|
| Low air pressure             | Air pressure switch                    | Alarm + spray/dose pump lockout               |
| UV lamp fault or degradation | PRI51 current relay — constant engaged | Alarm + spray/dose pump lockout               |
| Insufficient dose level      | Timer enable float (terminals 7–8)     | Timer cannot engage the spray/dose pump       |
| High water                   | Alarm float (terminals 9–10)           | Alarm only — pump stays on schedule by design |
| Pump run tracking            | SHT-13/2 Channel 1 hour meter          | Record hours at every service visit           |

## FLOAT SWITCH SYSTEM

### TIMER ENABLE FLOAT — TERMINALS 7 & 8

#### Enable + Redundant Protection

Enables the SHT-13/2 and acts as a redundant safeguard: even on schedule, the timer cannot engage the spray/dose pump unless this float indicates sufficient water for a full dose.

### ALARM FLOAT — TERMINALS 9 & 10

#### Alarm Only — By Design

Mounted in the dose tank (pump vault). Triggers the beacon and horn but never locks anything out — high water means the pump is not keeping up, so the panel keeps it on schedule.

**PROGRAMMING** Step-by-step Elko SHT-13/2 dose scheduling (Section 6) and PRI51 UV lamp supervision setup (Section 7) are provided in the CP-001-3-0006-240V Operation Manual — including Wi-Fi programming from your phone, no app required.

### SUPPORT & WARRANTY

All technical support, warranty claims, and service questions must be directed to:

#### AKHA Manufacturing, LLC

2055 Pidco Dr. / P.O. Box 640  
Plymouth, Indiana 46563

Toll Free 800-370-3749 · Ph (574) 936-2542  
hydro-action.com

*Two (2) year limited warranty to the original purchaser. Legacy Controls does not accept direct end-user or installer inquiries for this product line.*

## COMPLIANCE & NOTES

- Installation by qualified personnel only, per NEC and UL 508A
- Field-supplied main disconnect required on the 240 V circuit; verify with a voltage tester before opening
- Feeder protection is field supplied at the main panel — 240 V pump feed (30 A) + 120 V control feed (10–15 A)
- Connect compressor (120 V), spray/dose pump (240 V), UV ballast, pressure switch, and floats exactly per the schematic
- Any alteration, modification, or unauthorized repair voids the UL listing and warranty
- See CP-001-3-0006-240V Operation Manual v3.0, Line Drawing 240V v1.0, and Connection Diagram 240V v1.0