Dual Voltage Simplex Time Dose Pump Control Panel

Device-Classified Troubleshooting | Retail LE-4002 / LE-4004 | UL 508A Listed

DESIGNED & MANUFACTURED BY LEGACY CONTROLS · MIMS, FLORIDA · UL 508A LISTED

DOCUMENT VERSION **1.2**

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PART NUMBERS **CP-001-4-0002 & 4-0004 · Retail LE-4002 / LE-4004**

UL FILE NUMBER **E547664**

SOURCE **Master Troubleshooting Matrix v1.1 (Working Draft)**

COMPANION TO **Operation Manual v3.2**

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WEB **Legacy-Controls.com**

This guide covers the device classes present in this panel: incoming power and feeds, 120/240 V grouping-pin voltage selection, float switches, the Elko CRM-2H_UNI timer, motor-integral overloads, and the alarm circuit. Work top to bottom within the section that matches the symptom. De-energize the panel and verify with a voltage tester before opening it.

⚠ NO OVERLOAD DEVICES IN THIS PANEL

Overload protection is integral to the pump motors. There is nothing in the panel to reset after an overload trip — let the motor cool and investigate the run conditions. **High water on this panel is alarm only — it never interrupts the pump.**

POWER & FEEDS

SYMPTOM	POSSIBLE CAUSE	ACTION
No lights, no loads, no alarm	Loss of incoming power · feeder breaker off · loose connections	Verify the feeder breaker, incoming voltage at the panel terminals, and connection torque (0.79 N·m (7.0 in-lbs))
Nuisance breaker trips	Undersized feeder · short or ground fault · load fault	Verify feeder sizing per the spec sheet (30 A minimum supply circuit ampacity — 25 A pump branch + 5 A alarm & control circuit branch); inspect field wiring; isolate loads to find the fault

120/240 GROUPING PIN

SYMPTOM	POSSIBLE CAUSE	ACTION
No power or erratic behavior at energization	Grouping pin does not match the supply voltage	Verify: pin installed = 120 V, pin removed = 240 V; confirm against the connection diagram with a voltage tester
Equipment damage at first start	240 V applied with the 120 V pin installed	De-energize immediately; correct the pin; inspect connected equipment before restart

FLOAT SWITCHES

SYMPTOM	POSSIBLE CAUSE	ACTION
Pump will not start on demand	Float failed, tangled, or miswired · selector not in AUTO	Verify the selector position; test each float by manual actuation; check terminal landings against the diagram
Pump runs continuously	Float stuck closed · wiring short	Inspect and test all floats; check for wiring shorts
No dose despite the timer	Timer enable float down or failed — insufficient water for a full dose	Verify tank level and the enable float; this is the float doing its job if the level is genuinely low

TIMER (ELKO CRM-2H_UNI)

SYMPTOM	POSSIBLE CAUSE	ACTION
Pump never runs on its timed cycle	Selector not in AUTO · timer-enable float down · wrong potentiometer settings	Set the selector to AUTO and verify P1–P4 per Section 6 of the operation manual
Dose or pause length wrong	Range switch or potentiometer value incorrect	Re-check P1/P2 (ON) and P3/P4 (OFF) against the site design flow; observe one full cycle to confirm

MOTOR-INTEGRAL OVERLOADS

SYMPTOM	POSSIBLE CAUSE	ACTION
Pump stops, restarts after cooling	The pump's integral overload tripped	Let the motor cool; investigate supply voltage, impeller binding, and run conditions — there is no overload device in the panel to reset

ALARM CIRCUITS

SYMPTOM	POSSIBLE CAUSE	ACTION
Alarm will not activate	High-water float or test circuit fault	Manually lift the high-water float; use the Alarm Test button
Horn will not silence / mute	Silence or test/mute switch wiring · alarm relay failure	Inspect the switch circuit and alarm relay
High water alarm active	Inflow exceeding capacity · restricted discharge · pump issue	The pump is never interrupted by high water on this panel — verify it is running, then investigate inflow and discharge

IF ISSUES PERSIST Contact your authorized dealer or installer with the model and serial number — their information is recorded on the Service & Support card in the operation manual. If your dealer cannot be reached, visit Legacy-Controls.com.