

Dual Voltage Simplex Pump Control Panel

Device-Classified Troubleshooting | Retail LE-4001 / LE-4003 | UL 508A Listed

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

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SOURCE Master Troubleshooting Matrix v1.1 (Working Draft)

COMPANION TO Operation Manual v3.2

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This guide covers the device classes present in this panel: incoming power and feeds (including the control-circuit wire jumper), 120/240 V grouping-pin voltage and float-configuration selection, float switches, motor-integral overloads, and the alarm circuit. Work top to bottom within the section that matches the symptom. De-energize the panel — including any separate control-circuit feed — and verify with a voltage tester before opening it.

⚠ CHECK THE CONTROL CIRCUIT FIRST · NO OVERLOAD DEVICES IN THIS PANEL

The control circuit powers every controlling function — logic relay, indicators, HOA switch, and alarm. Verify the factory control-circuit wire jumper — it feeds the Separate Control Feed terminals from L1 — or the separate 120 V control-circuit feed before any other diagnosis. **Overload protection is integral to the pump motors — there is nothing in the panel to reset. 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))
Panel dead, incoming power present	Control-circuit wire jumper missing or loose · separate control-circuit feed de-energized where used	Verify the factory control-circuit wire jumper feeding the Separate Control Feed terminals — not the 120/240 grouping pin — or the separate 120 V control-circuit feed
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 & FLOAT-CONFIGURATION PINS

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
Erratic float behavior after a configuration change	3-float vs 2-float pin setting incorrect	Verify Configuration A/B pin placement per Section 4 of the operation manual; confirm the factory 9–10 pin is not connected to terminals 6, 7, or 8

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 · R1 latched	Inspect and test all floats; check for wiring shorts; a failed R1 logic relay can hold the run signal
False or nuisance high-water alarms	High Water float positioned too low or affected by turbulence · float cable damage causing intermittent shorts	Reposition the float; inspect the cable for chafing or water intrusion; verify the float-configuration pins

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.

© 2026 LEGACY CONTROLS. All rights reserved. Generated from the Legacy Controls Master Troubleshooting Matrix v1.1 (Working Draft) — device classes filtered to this panel. New field issues are added to the Matrix first, then propagated to this guide at its next revision.