

Duplex Time-Dose Pump Control Panel

120/240 VAC · Field Selectable | Duplex · Automatic Alternation | Time-Dose Control

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

DOCUMENT VERSION 2.0 (Full)

DATE July 2026

MODEL CP-001-6-0002 · 6-0004 · Retail LE-6002 / LE-6004

UL FILE NUMBER E547664

PREPARED BY Legacy Controls · 6200 FL-46, Mims, FL 32754

COMPLIANCE UL 508A · NFPA 70

SOLD & SERVICED THROUGH Authorized Legacy Controls Dealers

WEB Legacy-Controls.com

PRODUCT OVERVIEW

Designed and manufactured by Legacy Controls, the CP-001-6-0002 / 6-0004 is a UL 508A Listed dual-voltage duplex time-dose control panel for wastewater and onsite pump systems. A single 120/240 V feed powers two pump circuits, the alarm system, and the control logic. The TELE E1ZI10 asymmetrical timer provides precise timed dosing, and the TELE E1ZMLA10 load alternator switches the lead and lag pumps on every cycle for balanced wear. Three floats govern operation — Timer Enable, Override, and a high-water Alarm/HWLA float that runs both pumps simultaneously while the alarm sounds. The -0004 / LE-6004 configuration ships with all three floats included; the -0002 / LE-6002 is the panel only.

SERVICE & SUPPORT — CONTACT YOUR DEALER FIRST

This control panel is sold and serviced through authorized dealers and installers. **For all technical support, service calls, alarm response, and warranty claims, contact the dealer or installer who supplied your system.**

INSTALLED & SERVICED BY (COMPANY)

PHONE

INSTALLATION DATE

PANEL SERIAL NUMBER

Manufactured by Legacy Controls, Mims, Florida. If your dealer or installer cannot be reached, visit Legacy-Controls.com.

⚠ READ FIRST — 120/240 V VOLTAGE SELECTION

This panel is field-selectable between 120 V and 240 V by grouping pin. **The jumper pin installed is for 120 V operation — the pin MUST be removed for 240 V operation.** Verify the pin configuration against the connection diagram and confirm panel voltage with a voltage tester before energizing. A neutral conductor is required in both configurations. Incorrect configuration can damage connected equipment.

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1. SAFETY INSTRUCTIONS

WARNING Risk of electric shock and serious injury. This control panel operates at 120 or 240 VAC depending on field configuration. Improper handling can result in serious injury, death, electrical shock, fire, or equipment damage. Only qualified personnel familiar with local electrical codes (NEC), UL 508A standards, and onsite wastewater pump systems should install, operate, or maintain this panel.

Critical Safety Requirements

- **Power Off Procedures** — Disconnect power at the main panel disconnect switch and use proper lockout/tagout procedures before opening the panel or performing any wiring. Always verify with a voltage tester.
- **Voltage Verification** — Confirm the grouping-pin configuration matches the supply voltage before energizing. The pin installed selects 120 V; the pin must be removed for 240 V operation.
- **Grounding** — Ensure proper grounding of the panel and all connected equipment per NEC requirements.
- **Overload Protection** — Both pump motors must incorporate internal overload protection.
- **High Water Alarm** — If the high-water alarm activates, investigate immediately to prevent system backup or overflow. Never override or disable the high-water alarm.
- **PPE** — Wear insulated gloves, safety glasses, and appropriate protective clothing when working near electrical components or the pump station.
- **Field Wiring** — Use copper conductors rated 60 °C minimum. Torque all terminal screws to 4.425 in-lbs (0.50 N·m).
- **Environmental Protection** — Verify all conduit entries are sealed to preserve the Type 4X rating. Keep the door closed and latched at all times.
- **Unauthorized Modifications** — Any alteration, modification, or unauthorized repair will void the UL listing, the manufacturer's warranty, and may create serious safety hazards.

CAUTION A main panel disconnect switch must be supplied and installed in the field. Always verify with a voltage tester before working inside the panel.

2. SPECIFICATIONS

Panel Identification & Electrical Ratings

PARAMETER	SPECIFICATION
Model / Retail	CP-001-6-0002 (panel only) · CP-001-6-0004 (floats included) — Retail LE-6002 / LE-6004
UL File Number	E547664
Supply	120/240 VAC, 60 Hz, single phase — single feed, field-selectable via grouping pin (neutral required)
Total FLA	40 A
Pump Circuits	Two · 120/240 V · 2.5 HP max per pump (16 FLA each) — largest motor 16 A
Feeder Protection (Field Supplied)	Upstream, at the feeder panel (not in this panel): 50 A breaker recommended
SCCR	5 kA
Pump Control	Duplex alternating time dose — TELE E1ZI10 asymmetrical timer + TELE E1ZMLA10 load alternator · 3-float control
Alarm System	High water — red beacon + 85–95 dB horn · silence switch · alarm test push-button
Controls & Indicators	Two 3-position pump selectors (AUTO / OFF / ON) · pump run indicators
Enclosure	NEMA 4X polycarbonate · 10.3" W × 13.28" H × 5.8" D · mounting height 11.32" · lockable quick latch
Field Wiring	Copper conductors, 60 °C minimum · terminal torque 4.425 in-lbs (0.50 N·m)
Operating Temperature	–10 °C to 60 °C
Compliance	UL 508A Listed · NFPA 70 (NEC)

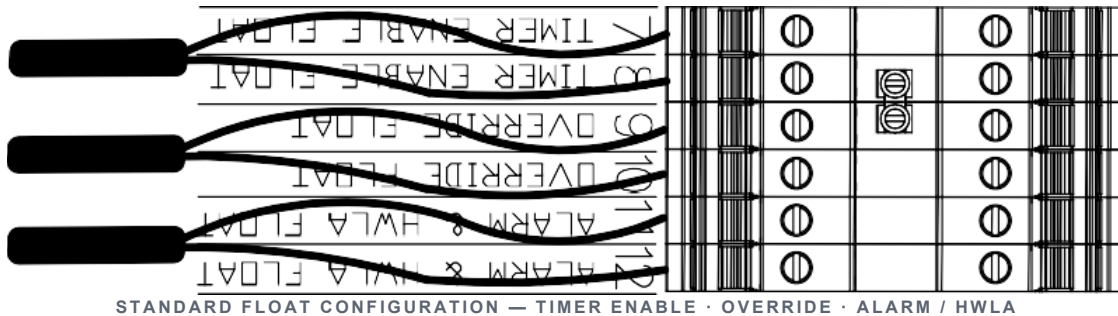
Key Components

PARAMETER	SPECIFICATION
TELE E1ZI10 Timer	Asymmetrical timer activated by the Timer Enable float — sets lead-pump run and pause durations (see Section 6.1)
TELE E1ZMLA10 Alternator	Load alternator — switches lead/lag designation on each falling edge for balanced runtime (see Section 6.2)
R1 Relay	High-water response relay — engages the lag pump so both pumps run simultaneously
Timer Enable Float (N.O.)	Lowest float — enables the timer to start the timed dosing cycle
Override Float (N.O.)	Middle float — bypasses the timer and runs the lead pump continuously during high inflow
Alarm / HWLA Float (N.O.)	Highest float — activates the red beacon, horn, and R1 relay (both pumps run)
Pump Selectors	Two 3-position rotary switches (AUTO / OFF / ON) for independent manual control of each pump
Motor Contactors	Heavy-duty contactors switch power to the pumps — pumps must include internal overload protection
Floats — Supply	CP-001-6-0004 / LE-6004 ships with all three floats · CP-001-6-0002 / LE-6002 is panel only (floats by others)

3. INSTALLATION INSTRUCTIONS

WARNING Installation must be carried out by qualified personnel only. Follow local electrical codes (NEC) and consult the panel schematic and connection diagram.

1. **Mounting** — Secure the NEMA 4X enclosure to a stable vertical surface protected from direct weather and physical damage. Mounting height 11.32"; allow clearance for the door and service access.
2. **Voltage Configuration** — Set the grouping pin for the supply voltage BEFORE wiring: pin installed = 120 V; pin removed = 240 V. A neutral conductor is required in both configurations. Verify against the connection diagram.
3. **Power Supply** — Provide a single 120/240 V single-phase feed on a dedicated circuit (50 A breaker recommended — feeder protection at the main panel, not part of this panel). Install a field-supplied main disconnect switch upstream.
4. **Field Wiring** — Use copper conductors rated 60 °C minimum and land all field devices exactly as shown on the terminal connection diagram. Torque all terminal screws to 4.425 in-lbs (0.50 N·m).
5. **Float Installation** — Install the three N.O. floats per the standard configuration below: Timer Enable lowest, Override in the middle, Alarm/HWLA highest. LE-6004 includes all three floats; for LE-6002 they are supplied by others.



6. **Sealing** — Verify all conduit entries are properly sealed to preserve the Type 4X rating.
7. **Commissioning Test** — Energize the panel and set both pump selectors to AUTO. Confirm timed dosing on the Timer Enable float, continuous run on the Override float, and both pumps plus alarm on the Alarm/HWLA float. Confirm alternation between cycles and test the alarm with the test push-button before leaving the site.

4. WIRING AND CONNECTIONS

Refer to the CP-001-6-0002/0004 Line Drawing v1.1 and Connection Diagrams (120 V and 240 V configurations, reproduced on the following pages for reference) for complete wiring details.

Incoming Power

Connect the single incoming feed to the utility terminal block: G (utility ground), L1 (incoming leg 1), L2 (incoming leg 2, 240 V only), and N (incoming neutral). The grouping pin must match the supply voltage — installed for 120 V, removed for 240 V. One feed powers both pump circuits, the control logic, and the alarm system.

Field Connections

- Pump 1 — black wire, white wire, and ground to the Pump 1 terminals
- Pump 2 — black wire, white wire, and ground to the Pump 2 terminals
- Timer Enable float — two wires to the TIMER ENABLE FLOAT terminals (N.O.)
- Override float — two wires to the OVERRIDE FLOAT terminals (N.O.)
- Alarm / HWLA float — two wires to the ALARM & HWLA FLOAT terminals (N.O.)
- Neutrals — land field-device neutrals on the neutral terminal block as shown on the diagram

WARNING Verify all connections match the schematic before energizing. Incorrect wiring or an incorrect grouping-pin configuration can cause faults, damage equipment, or create safety hazards.

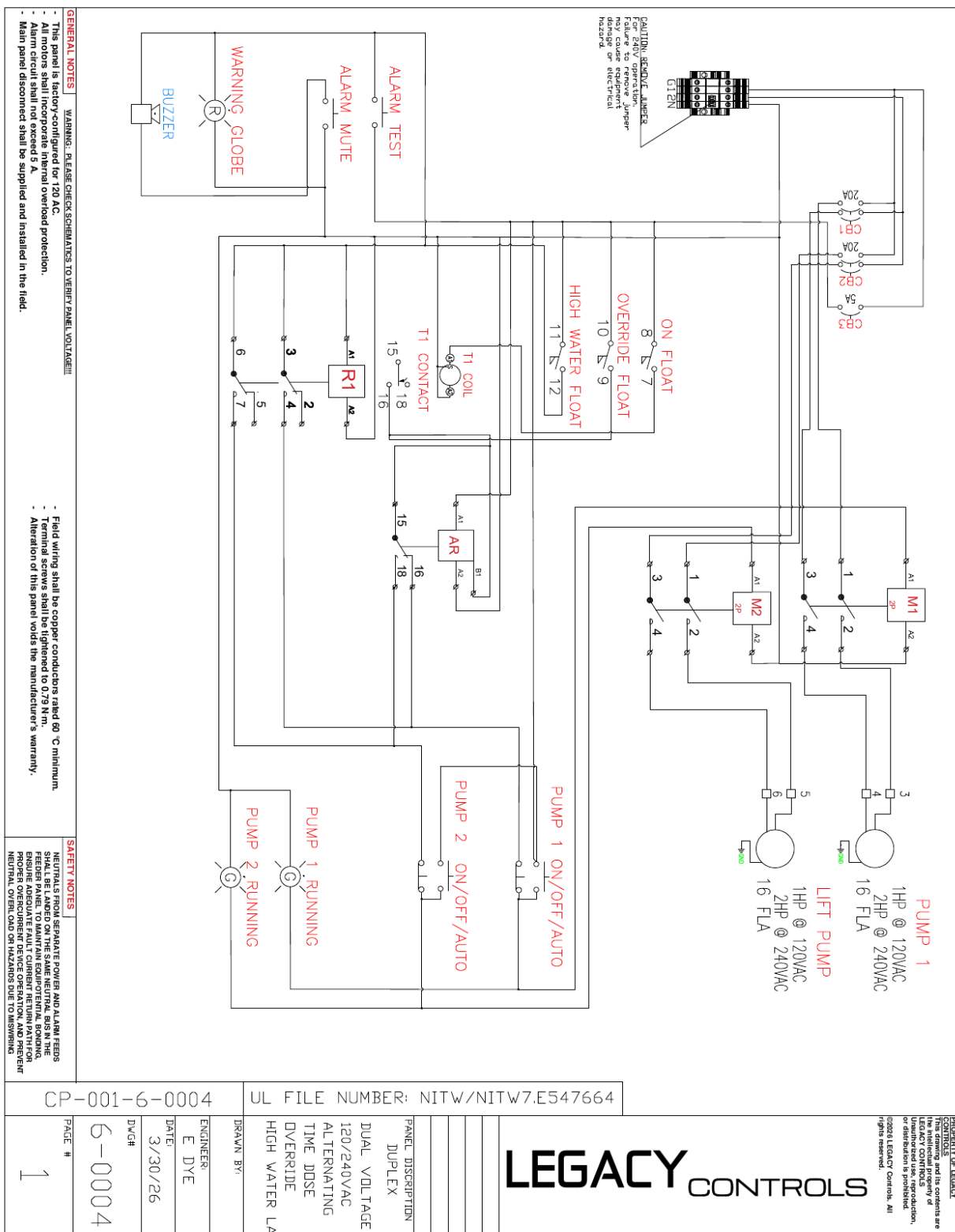


FIGURE 1 — LINE DRAWING v1.1 (REFERENCE)

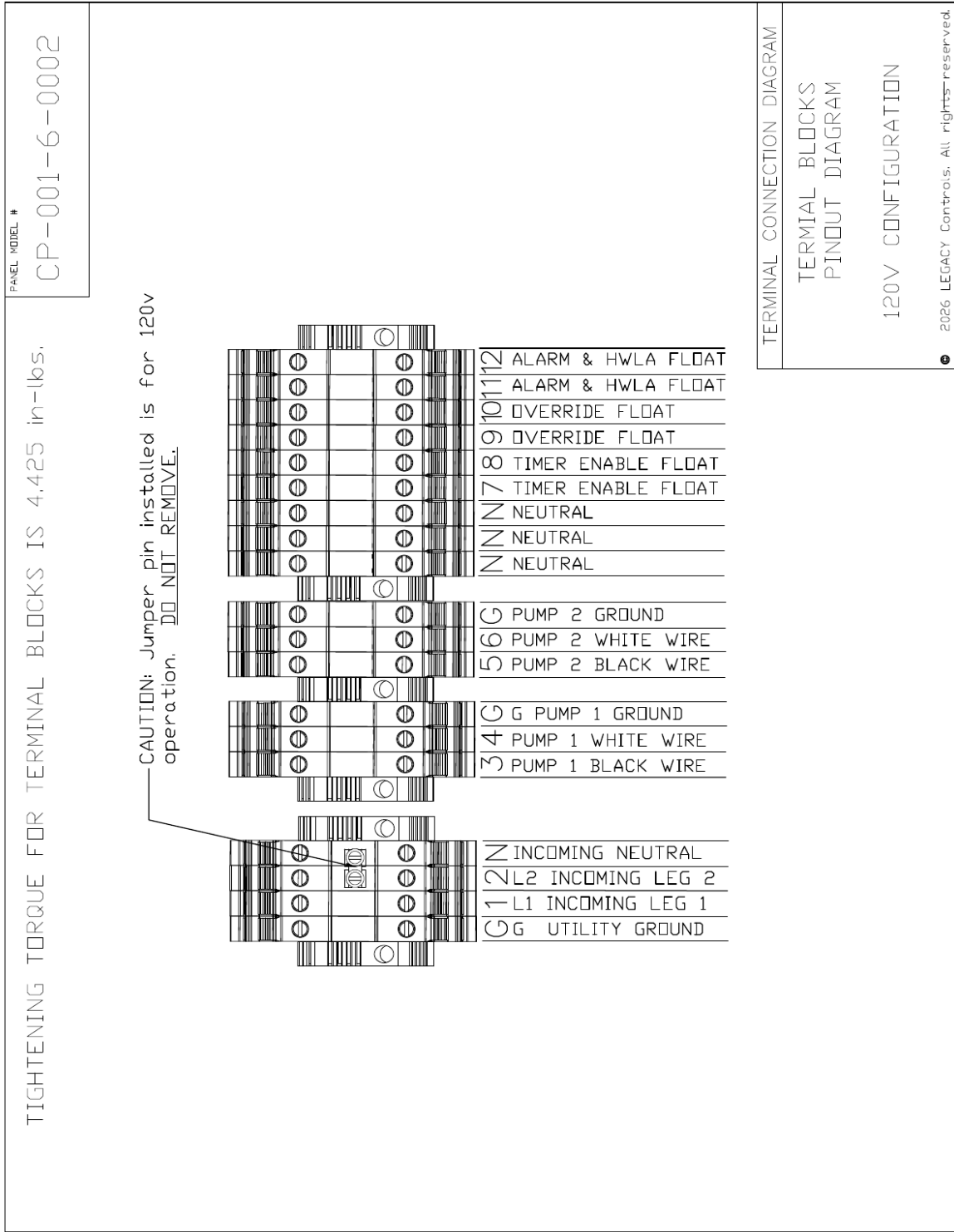
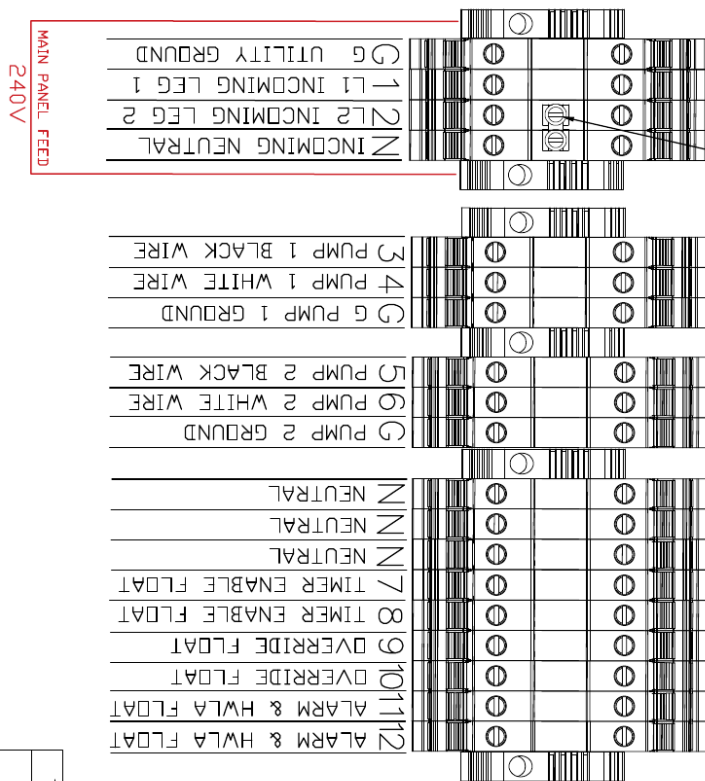


FIGURE 2 — CONNECTION DIAGRAM · 120 V CONFIGURATION (REFERENCE)

TIGHTENING TORQUE FOR TERMINAL BLOCKS IS 4.425 in-lbs.

PANEL MODEL #
CP-001-6-0002

CAUTION: Jumper pin installed is for 120V operation. MUST REMOVE PIN FOR 240V OPERATION.



TERMINAL CONNECTION DIAGRAM
TERMINAL BLOCKS
PINOUT DIAGRAM
240V CONFIGURATION

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FIGURE 3 — CONNECTION DIAGRAM · 240 V CONFIGURATION (REFERENCE)

5. OPERATION

System Initialization

Verify all field wiring against the connection diagram and confirm the grouping-pin configuration matches the supply voltage. Energize the feed, set both pump selectors to AUTO, and confirm the alarm circuit is armed. With no faults present, the beacon is off and both pumps are idle.

Normal Operation

When liquid reaches the Timer Enable float, the TELE E1ZI10 asymmetrical timer begins the dosing cycle and runs the lead pump through the TELE E1ZMLA10 load alternator for the set duration. At the completion of each cycle the alternator switches the lead and lag designations, balancing runtime and wear. If inflow outpaces the timed cycle, the Override float bypasses the timer and runs the lead pump continuously until the level drops.

Alarm & Response Behavior

CONDITION	DETECTED BY	PANEL RESPONSE
High water	Alarm / HWLA float (N.O.)	Red beacon + horn · R1 relay runs BOTH pumps simultaneously
High inflow	Override float (N.O.)	Timer bypassed — lead pump runs continuously
Normal demand	Timer Enable float (N.O.)	Timed dosing cycle — lead pump runs per E1ZI10 settings

HIGH WATER RESPONSE The high-water condition does not stop pumping — it escalates it. The R1 relay brings the lag pump online so both pumps run together while the red beacon and horn annunciate. Silence the horn only after acknowledging the condition; the beacon remains lit until the level clears.

Manual Control

Each pump selector provides AUTO (normal float/timer control), OFF (pump disabled), and ON (pump forced on) positions. Use ON only for testing and service; return both selectors to AUTO for normal operation.

6. COMPONENT PROGRAMMING

Both control components ship factory-configured for standard duplex time-dose operation. Verify the settings below at commissioning and after any component replacement.

6.1 TELE E1ZI10 Asymmetrical Timer — Dose Timing

MANUFACTURER DOCUMENTATION TELE E1ZI10 Data Sheet

Scan for the official TELE data sheet with complete functions, time ranges, and wiring detail — tele-online.com/resources/data-sheets/en_e1zi10.pdf



8. **Function** — Set the function selector to li (asymmetric flasher, pulse first) or lp (pause first) as shown on the schematic. li starts with the pump-run interval; lp starts with the pause.
9. **Run time (t1)** — Set the t1 range and value knobs to the desired lead-pump run duration.
10. **Pause time (t2)** — Set the t2 range and value knobs to the desired pause between doses.
11. **Verify** — With the Timer Enable float up, observe one full cycle: the green U/t LED flashes during timing and the yellow R LED indicates the output relay driving the lead pump.

Worked Example

For a 2-minute dose every 30 minutes: function li · t1 range 10 min, value 0.2 (≈ 2 min) · t2 range 1 h, value 0.5 (≈ 30 min). Doses only occur while the Timer Enable float is up.

6.2 TELE E1ZMLA10 Load Alternator — Pump Alternation

MANUFACTURER DOCUMENTATION TELE E1ZMLA10 Data Sheet

Scan for the official TELE data sheet with complete functions, time ranges, and wiring detail — tele-online.com/resources/data-sheets/en_e1zmla10.pdf



12. **Function** — Set the function selector (P1) to LA (Load Alternator). Alternation occurs on every falling edge of the control signal from the timer or Override float.
13. **Delay** — Turn both time knobs (P2 range, P3 value) fully counter-clockwise for the standard minimum ≈ 50 ms de-bounce delay.
14. **Verify** — Observe one full cycle: the green U/t LED confirms supply (flashing during delay); the yellow R LED illuminated indicates Pump 2 is the selected pump.

Time Ranges (Both Components)

TIME RANGE	ADJUSTMENT RANGE
1 s	50 ms – 1 s
10 s	500 ms – 10 s
1 min	3 s – 1 min
10 min	30 s – 10 min
1 h	3 min – 1 h
10 h	30 min – 10 h
100 h	5 h – 100 h

MANUAL MODES The E1ZMLA10 selector also provides L1 (manual OFF — locks the relay off, disabling Pump 2) and L2 (manual ON — locks the relay on, disabling Pump 1). Use these only for service; return the selector to LA for automatic alternation.

7. MAINTENANCE

Recommended service intervals below, or immediately upon any alarm condition. Record all readings and adjustments on the maintenance log.

INTERVAL	TASK
Monthly	Test the alarm and pump alternation using the test push-button and simulated float activations
Quarterly	Inspect all three floats and their cables · verify float switching by manual actuation
Biannually	Verify TELE E1ZI10 timer and TELE E1ZMLA10 alternator operation · inspect enclosure seals and latches
Annually	Re-torque all terminal screws to 4.425 in-lbs (0.50 N·m)
Always	Keep the enclosure door closed and securely latched

OPERATOR NOTE Respond immediately to any audible or visual alarm, and silence the horn only after the condition has been acknowledged and addressed. Never override or disable the high-water alarm.

8. TROUBLESHOOTING

Preliminary checks: verify incoming power and the grouping-pin configuration, confirm both selectors are in AUTO, then work through the matrix below.

SYMPTOM	POSSIBLE CAUSE	ACTION
No lights, no pumps, no alarm	Loss of main power	Verify the feeder breaker and incoming voltage at the panel terminals
Alarm active, pumps not running	Failed contactor or wiring	Inspect contactors, check coil voltage, verify wiring per the schematic
No pump alternation	E1ZMLA10 misconfigured or failed	Confirm the function selector is set to LA and both time knobs are fully counter-clockwise; replace the relay if necessary
Lead pump does not run	Selector, float, timer, or contactor	Verify the pump selector is in AUTO; check the Timer Enable and Override floats, E1ZI10 settings, wiring, and contactor
Lag pump does not run on high water	R1 relay or float wiring	Verify Alarm/HWLA float operation and R1 relay wiring
Pumps run continuously	Float stuck closed or wiring short	Inspect and test all float switches; check for wiring shorts
Horn will not silence	Silence switch wiring or alarm relay	Inspect the silence switch wiring and alarm relay

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

9. WARRANTY

Definitions

For the purposes of this Limited Warranty:

- **“Product”** refers to the UL Listed industrial control panel manufactured by Legacy Controls, including all components, assemblies, and associated hardware as originally supplied.
- **“Defect”** means a failure of the Product to conform to Legacy Controls’ published specifications due to faults in materials or workmanship under normal use and service.
- **“Authorized Service Provider”** means Legacy Controls or its designated dealers, distributors, or repair facilities authorized in writing by Legacy Controls.
- **“Original Purchaser”** means the end-user who first purchases the Product from Legacy Controls or an authorized dealer/distributor for use, not resale.
- **“Warranty Period”** means the period of two (2) years commencing from the date of original purchase as evidenced by valid proof of purchase.

Warranty Statement

Legacy Controls warrants to the Original Purchaser that the Product will be free from Defects in materials and workmanship for the Warranty Period when used in accordance with the instructions provided in this operation manual, the accompanying panel schematic and connection diagram, and applicable UL standards (including UL 508A for industrial control panels). This Limited Warranty is non-transferable and applies only to the Original Purchaser. It does not extend to any subsequent owners or users.

Coverage

If a Defect occurs during the Warranty Period, Legacy Controls or an Authorized Service Provider will, at its sole discretion, repair or replace the defective Product or component. Repaired or replaced Products or components are warranted for the remainder of the original Warranty Period or ninety (90) days from the date of repair or replacement, whichever is longer.

Exclusions & Limitations

This Limited Warranty does not cover damage or failure resulting from misuse, abuse, negligence, improper installation or maintenance, alterations by unauthorized parties, normal wear and tear, cosmetic damage, environmental deterioration, external factors, or products purchased from unauthorized sellers. Consumable items such as fuses and bulbs are excluded unless the defect is due to manufacturing workmanship. Liability is limited to the original purchase price. TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, LEGACY CONTROLS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES.

Making a Warranty Claim

All warranty claims must be submitted through the authorized dealer or distributor from whom the Product was purchased, with proof of original purchase, the model number, and a detailed description of the issue. The dealer will coordinate the claim with Legacy Controls. If return of the Product or a component is directed, ship prepaid with all original accessories and documentation. The Product will be inspected to verify the Defect and eligibility, and the Original Purchaser will be notified of the results and proposed resolution within a reasonable time, typically within thirty (30) days of receipt.

Component Substitution

Legacy Controls reserves the right to substitute any control panel component with an alternative meeting equivalent specifications, including identical operational parameters and performance standards. Legacy Controls assumes full responsibility for the functional performance of any such substitution and for its continued compliance with all applicable regulatory and operational requirements.

Governing Law

This Limited Warranty shall be governed by the laws of the State of Florida. Any disputes shall be resolved exclusively in the state or federal courts located in Brevard County, Florida.

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