

LEGACY CONTROLS

Control Panel Operation Manual

Dual Voltage Simplex Time Dose Pump Control Panel

Model: CP-001-4-0002 & CP-001-4-0004

Document Version: 1.4 **Date:** April 13th, 2026

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UL File Number: NITW/NITW7.E547664

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Thank you for choosing the CP-001-4-0002 Dual Voltage Simplex Time Dose Pump Control Panel from Legacy Controls. This panel is designed for reliable time-dose control of simplex (single) pump systems in wastewater, septic, or similar applications. It supports dual-voltage operation (120/240 VAC) and includes built-in alarms for enhanced safety and monitoring.

This manual provides essential information on installation, operation, maintenance, and troubleshooting. Read it thoroughly before use. If you have questions, contact Legacy Controls support at support@legacy-controls.com or visit www.legacy-controls.com.

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Important: This panel is UL Listed. Any alterations, modifications, or unauthorized repairs will void the UL certification, along with the warranty, and may introduce serious safety hazards such as electrical shock, fire, or system failure. For all field-installed components, strictly follow this manual and the included panel schematic. Consult Legacy Controls or its authorized network for all replacement components to ensure ongoing compliance and safety. To maintain UL compliance, always consult a qualified electrician and adhere to this manual for installation, operation, and maintenance.

1. Safety Instructions

WARNING: Electrical Hazard – This panel operates at high voltages (120V or 240V AC). Improper handling can result in serious injury, death, or equipment damage. Always follow these guidelines:

- **Qualified Personnel Only:** Installation and maintenance must be performed by licensed electricians familiar with local electrical codes (e.g., NEC) and UL standards.
- **Power Off:** Disconnect all power sources before opening the panel or performing wiring. Use lockout/tagout procedures.
- **Voltage Verification:** Check schematics and confirm voltage configuration (120V or 240V) before energizing. Factory default is 120V AC via grouping pin.
- **Grounding:** Ensure proper grounding to prevent shock hazards.
- **Environmental Protection:** Install in a dry, non-hazardous location. The enclosure is rated for indoor/outdoor use but must be protected from direct water exposure.
- **Overload Protection:** All motors must include internal overload protection. Alarm circuit limited to 5A.
- **Field Wiring:** Use copper conductors rated 60°C minimum. Tighten terminal screws to 0.79 N·m (4.425 in-lbs).
- **Neutral Bonding:** Neutrals from separate power and alarm feeds must land on the same neutral bus in the feeder panel to maintain equipotential bonding, ensure fault current return, and prevent overloads or hazards.
- **Alterations:** Do not modify the panel; doing so voids the warranty and UL listing.

CAUTION: Main panel disconnect must be supplied and installed in the field.

2. Specifications

- **Voltage:** Dual – 120V AC (factory default with grouping pin between Terminal 2 and Neutral) or 240V AC (remove pin).
- **Pump Capacity:** Single pump, up to 16 FLA (1HP) @ 120V AC, 16 FLA (2HP) @ 240V AC.
- **Control System:** 3-float level control (On, Override, High Water) with ELKO CRM-2H_UNI asymmetrical timer for time-dose operation.
- **Alarm System:** Integrated red globe (visual) and buzzer (audible, 85 to 95dB).
- **Controls:**
 - Pump Run Indicator: Green pilot light (illuminates when pump is running).
 - Pump Selector: 3-position rotary switch (AUTO – float/timer-controlled; OFF – pump disabled; ON – manual override).
 - Alarm Test: 22mm push button (tests alarm globe and buzzer).
 - Alarm Buzzer: 2-position rotary switch (ON – buzzer enabled; OFF – buzzer silenced).
- **Enclosure:** Type 4x rated for environmental protection (specific rating: consult label).
- **Wire Size:** 26-10 AWG, 600V rated.
- **Torque:** 4.425 in-lbs for terminals.
- **Certifications:** UL Listed (NITW/NITW7.E547664) for industrial control panels per UL 508A.
- **Dimensions:** 10x8x5 in.
- **Weight:** Approximately 7 lbs.

- **Operating Temperature:** 0°C to 40°C (32°F to 104°F).
- **Humidity:** Up to 95% non-condensing.

3. Installation Instructions

1. **Mounting:** Secure the panel to a stable, vertical surface using appropriate hardware. Ensure accessibility for maintenance and visibility of controls. Maintain clearance for heat dissipation.
2. **Voltage Configuration:**
 - For 120V: Leave the factory-installed grouping pin between Terminal 2 and Neutral.
 - For 240V: Remove the grouping pin. Verify with a multimeter before powering on.
3. **Float Installation:** Position floats in the tank as follows:
 - On Float: Activates ELKO CRM-2H_UNI asymmetrical timer.
 - Override Float: Bypasses timer for immediate pump operation.
 - High Water Float: Highest, for alarm activation only.

Ensure floats are wired for normally open (NO) type.

4. **Power Supply:** Connect to a dedicated circuit with appropriate breaker to supply FLA listed on Panel ID Plate. Install main disconnect switch upstream.
5. **Grounding:** Connect ground wire to designated terminal (All other grounding terminals, including rail and bonded via pass through terminals).
6. **Testing:** After wiring, test all functions in a safe environment before commissioning.

4. Wiring and Connections

Refer to the included schematic (CP-001-4-0002_Line Drawing or CP-001-4-0004_Line Drawing) and connection diagram (CP-001-4-0002_Connection Diagram or CP-001-4-0004_Connection Diagram) for detailed wiring.

Terminal Connection Diagram

- **Incoming Power (120/240V):**
 - L1: Hot (Black) ◦ L2/N: Hot/Neutral (White for 120V; Hot for 240V)
 - Ground: Green
- **Note:** This panel requires a neutral wire in the event of 240VAC installations (e.g., for alarm or control circuits that operate on 120V).
- **Pump Connections:** Pump L1, Pump L2
- **Alarm Connections:** Alarm Float (High Water)
- **Float Connections:** On Float, Override Float, High Water Float
- **Jumper:** Between L2 and Neutral for 120V (factory-installed).

Wire Gauge: 26-10 AWG copper, 600V. 75-degree C. **Torque:** 4.425 in-lbs.

Schematic Overview

- Power feeds through terminals to relay T1 for pump control (M1).
- On float activates ELKO CRM-2H_UNI asymmetrical timer; Override float bypasses timer; High Water float activates alarm only.
- Controls: Pump selector (AUTO/OFF/ON), Alarm Test button, Alarm Mute switch.
- Indicators: Pump Running (green light), Alarm Globe (red), Buzzer.

WARNING: Verify all connections match the schematic. Incorrect wiring can cause faults or hazards.

5. Operation

1. **Startup:** Set Pump Selector to AUTO. Ensure Alarm Buzzer is ON. Power on the panel.
2. **Automatic Mode (AUTO):** On float activates the TELE E1Z110 asymmetrical timer, which runs the pump for the set time-dose duration. Override float bypasses the timer and runs the pump immediately. High Water float triggers alarm only.
3. **Manual Mode (ON):** Pump runs continuously (override floats and timer). Use for testing only.
4. **Off Mode:** Pump disabled.
5. **Alarm Activation:** High water triggers globe and buzzer. Press Alarm Test to verify.
6. **Silencing Alarm:** Rotate Alarm Buzzer to OFF (silences buzzer; globe remains lit until condition resolves).
7. **Pump Run Light:** Green when pump is active.

Monitor the system regularly. The panel is designed for unattended operation but requires periodic checks.

6. Maintenance and Troubleshooting

Maintenance:

- Inspect floats and wiring quarterly.
- Clean enclosure as needed.
- Test alarm monthly using the Test button.
- Replace components only with manufacturer-approved parts.

Troubleshooting:

- **No Power:** Check breaker, connections, and voltage config.
- **Pump Won't Start:** Verify floats, timer settings, selector in AUTO/ON, internal overload protection.
- **Alarm Not Activating:** Test High Water Float and button.
- **Buzzer Not Silencing:** Check mute switch.
- **Overheating:** Ensure ventilation; check motor overload.

If issues persist, contact Authorized Dealer. Provide model number and serial.

7. 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 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.

This warranty reflects Legacy Controls’ commitment to high-quality manufacturing and is provided in lieu of all other warranties, express or implied, except as expressly stated herein. Legacy Controls’ Products are designed and certified to meet UL safety and performance standards, ensuring reliability in industrial applications.

Coverage

If a Defect occurs during the Warranty Period, Legacy Controls or an Authorized Service Provider will, at its sole discretion:

- Repair the defective Product or component using new, reconditioned, or equivalent parts; or
- Replace the defective Product or component with a new, reconditioned, or equivalent Product or component of equal or better quality and functionality.

All repairs or replacements shall meet or exceed the original specifications, performance standards, and UL certification requirements. At Legacy Controls’ discretion, any component in the control panel may be replaced with an equivalent component that meets or exceeds the original specifications and performance standards, thereby facilitating timely repairs and mitigating the impact of supply chain constraints on the repair process.

This Limited Warranty covers only:

- The cost of replacement parts.
- Diagnostic and inspection fees incurred by Legacy Controls’ certified technicians.

Shipping costs to and from the repair facility are the responsibility of the Original Purchaser. Legacy Controls reserves the right to charge for services if the claim is determined to be invalid or excluded under this Limited Warranty.

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

This Limited Warranty does not cover, and Legacy Controls shall have no liability for:

- Damage or failure resulting from misuse, abuse, negligence, accident, improper installation, operation, storage, or maintenance, including but not limited to failure to follow the instructions in this operation manual, the accompanying panel schematic, or applicable industry standards.
- Alterations, modifications, repairs, or servicing performed by any party other than Legacy Controls or an Authorized Service Provider, which may void this Limited Warranty and the Product's UL certification.
- Normal wear and tear, cosmetic damage (such as scratches, dents, or discoloration), or deterioration due to environmental conditions, including but not limited to excessive moisture, heat, cold, dust, corrosion, vibration, power surges, electrical fluctuations, or exposure to chemicals or incompatible substances.
- Damage caused by external factors, such as acts of God, fire, flood, lightning, pests, or third-party equipment/interfaces not supplied or approved by Legacy Controls.
- Products that have been disassembled, tampered with, or used in applications exceeding the rated capacities or outside the specified environmental conditions.
- Consequential, incidental, indirect, special, or punitive damages, including but not limited to loss of use, data, profits, revenue, business interruption, or damage to other property or equipment.
- Products purchased from unauthorized sellers, resellers, or through secondary markets.
- Products used or installed outside the United States or in non-compliant electrical systems.
- Any issues arising from software, firmware, or programming not provided by Legacy Controls, or from integration with incompatible systems.
- Consumable items, such as fuses, bulbs, or batteries, unless specifically included in the Product specifications.

Legacy Controls makes no warranty regarding the performance of the Product in combination with third-party components or systems unless expressly approved in writing.

Limitations of Liability

TO THE MAXIMUM EXTENT PERMITTED BY APPLICABLE LAW, LEGACY CONTROLS' TOTAL LIABILITY UNDER THIS LIMITED WARRANTY SHALL NOT EXCEED THE ORIGINAL PURCHASE PRICE OF THE PRODUCT. LEGACY CONTROLS SHALL NOT BE LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, INDIRECT, SPECIAL, PUNITIVE, OR EXEMPLARY DAMAGES, WHETHER IN CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY, OR OTHERWISE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

This limitation applies regardless of whether the damages arise from breach of warranty, negligence, or any other cause. Some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitations may not apply to you.

Disclaimer of Other Warranties

EXCEPT AS EXPRESSLY PROVIDED IN THIS LIMITED WARRANTY, LEGACY CONTROLS DISCLAIMS ALL OTHER WARRANTIES, WHETHER EXPRESS, IMPLIED, STATUTORY, OR OTHERWISE, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, TITLE, AND NON-INFRINGEMENT. NO ORAL OR WRITTEN INFORMATION OR ADVICE PROVIDED BY LEGACY CONTROLS, ITS EMPLOYEES, AGENTS, OR AUTHORIZED SERVICE PROVIDERS SHALL CREATE ANY ADDITIONAL WARRANTY OR IN ANY WAY INCREASE THE SCOPE OF THIS LIMITED WARRANTY.

This disclaimer is made to the fullest extent permitted by law. In jurisdictions where implied warranties cannot be disclaimed, any such implied warranties are limited in duration to the Warranty Period.

Making a Warranty Claim

To initiate a warranty claim, the Original Purchaser must:

1. Contact Legacy Controls customer support within the Warranty Period at 321-284-8592 or via email at support@legacy-controls.com. Provide:
 - o Proof of original purchase (e.g., receipt, invoice, or order confirmation).
 - o Product model number (e.g., CP-001-4-0002) and serial number.
 - o A detailed

description of the issue, including photographs or diagnostic data if requested. o Evidence that the Product was installed and used in compliance with this manual and UL standards.

2. If directed by Legacy Controls, return the Product (or defective component) to the designated Florida facility, shipping prepaid by the Original Purchaser. Include all original accessories, documentation, and packaging to prevent further damage.
3. Upon receipt, Legacy Controls will inspect the Product to verify the Defect and eligibility under this Limited Warranty. Legacy Controls reserves the right to deny claims if exclusions apply or if the Product has been altered.
4. Legacy Controls will notify the Original Purchaser of the inspection results and proposed resolution (repair, replacement, or denial) within a reasonable time, typically within thirty (30) days of receipt.
5. For any replacement components, consult a Legacy Controls Authorized Service Provider to ensure compatibility, performance, and maintenance of UL compliance.

Failure to follow this procedure may result in denial of the claim. Legacy Controls is not responsible for lost or damaged items during shipping.

Governing Law and Dispute Resolution

This Limited Warranty shall be governed by and construed in accordance with the laws of the State of Florida, without regard to its conflict of laws principles. Any disputes arising out of or relating to this Limited Warranty shall be resolved exclusively in the state or federal courts located in Brevard County, Florida. The Original Purchaser agrees to submit to the personal jurisdiction of such courts.

Severability

If any provision of this Limited Warranty is held to be invalid or unenforceable by a court of competent jurisdiction, the remaining provisions shall remain in full force and effect.

Entire Agreement

This Limited Warranty constitutes the entire agreement between Legacy Controls and the Original Purchaser regarding the warranty for the Product and supersedes all prior or contemporaneous understandings, agreements, or representations, whether oral or written.

This Limited Warranty gives you specific legal rights, and you may also have other rights that vary by state or jurisdiction. For questions, assistance, or to obtain a copy of this Limited Warranty, visit www.legacy-controls.com or contact Legacy Controls directly at the provided support channels.

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