# Installation - Operation - Parts

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>External Packaged Components</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPLC24</td>
<td>Pump protection from low pressure or run-dry. Blue, powder-coated steel, UL-50 Type 3R listed enclosure</td>
<td>20 PSI pressure sensor</td>
</tr>
<tr>
<td>MPLC24T</td>
<td>Pump protection from low pressure, run-dry and high temperature due to dead head. Blue, powder-coated steel, UL-50 Type 3R listed enclosure</td>
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### Replacement Parts

- **ELRELAY1D**: Contactor – 24V, 40amp, din rail mount
- **ELTIMER1**: Timer – On delay, 0s-10m
- **ELSWITCH2**: Pressure Sensor - 20 PSI
- **ELTEMP2**: Temperature Sensor - 130°F / 54°C

**Troubleshooting Guide - SmartBox (MPLC24 Shown)**

- **Checking the Time Delay**: Turn the time delay down to 5 seconds. Next, cross the red and blue wire. The “on” light should turn on. After 5 seconds the system should shut off and both the “on” and “up” lights should be on.

**Note**: Filling system lines may require multiple run cycles to build enough pressure to initiate the sensor.

**Did You Know?**

- During a normal run cycle, no lights should be lit on the time delay.
- Should a sensor detect a possible system problem, the “on” light will engage. If the system is shut down during a cycle both the “on” and “up” lights will be lit for the duration of the lawn controller cycle.

**Call Munro technical support for any questions relating to this product.**

Toll Free: 1.800.942.4270

[www.munropump.com](http://www.munropump.com)
**Typical SmartBox Installation**

**Step 1**
- Turn Breaker “OFF”
  - Never work with electrical wiring on a live circuit.

**Step 2**
- Plumb for Sensors
  - Pressure Sensor - 1/4” NPT
    - Install directly in the pump case or on the discharge line. If on the discharge line, place the pressure sensor after the y-strainer, or before the check valve.
    - Optional High Temperature Sensor - 1/4” NPT
      - Install directly on pump case or within 12” of the pump.

**Step 3**
- Wire Sensor(s)
  - Wire sensor(s) to RED & BLUE leads in the SmartBox, secure with wire nuts.
    - Optional temperature sensor is wired in parallel with pressure sensor.
  - NOTE - RED & BLUE lead wires can be placed on either terminal of the pressure sensor and high temperature sensor.

**Step 4**
- Wire Lawn Controller
  - Locate the Master Valve (mv) and Common (com) inside Lawn Controller.
  - Wire MV to BLACK wire lead in SmartBox, secure with wire nuts.
  - Wire COM to WHITE wire lead in SmartBox, secure with wire nuts.

**Step 5**
- Wire Relay to Pump
  - Refer to wiring diagram on motor plate for proper voltage and wire placement.
  - Refer to NEC wire cable chart for proper size of wire. Undersized wire can affect pump performance.

**Step 6**
- Wire Power Supply
  - Run power supply wires from breaker box (110 v or 220 v).
    - Attach GREEN grounding wire.
    - Attach BLACK HOT to L2 on relay.
    - Attach WHITE Neutral (110 v) / second HOT (220 v) to L1 on relay.

**Step 7**
- Turn Breaker “On”

**WARNING**
- DO NOT ATTEMPT TO REWIRE OR ALTER WIRING IN THE SMARTBOX OR WARRANTY WILL BE VOIDED.
- DO NOT WIRE POWER DIRECTLY TO THE PRESSURE OR TEMPERATURE SENSOR. PRESSURE SENSOR WILL WORK WITH 24 VOLT ONLY.

**System Fill Tip**
- Timer inside the SmartBox is preset at 30 seconds. Initial start-up or large zones may require additional time.
  - To temporarily increase cycle time, turn the timer dial 1/4 turn to the right.
  - Repeat run cycle, as needed, to fill all lines. Return timer to preset time.

**NOTE:**
- Refer to specific wiring diagram located on inside cover of enclosure.

**EFFECTIVE JANUARY, 2002. FOR MODELS BUILT PRIOR TO JANUARY, 2002, CONTACT MANUFACTURER FOR INSTRUCTIONS.**
Note 1: Checking the Time Delay – Turn the time delay down to 5 seconds. Next, cross the red and blue wire. The “on” light should turn on. After 5 seconds the system should shut off and both the “on” and “up” lights should be on.

Note 2: Filling system lines may require multiple run cycles to build enough pressure to initiate the sensor.

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OPTIONAL DOMESTIC VALVE: When low pressure occurs, a 24 VAC valve can be energized. Call Munro for additional information about wiring this component.