Model shown contains optional Seal Fail circuitry.

**PROGRAMMING INSTRUCTIONS**

WITH POWER ON, HIGH, OFF, FLOATS OFF OR DISCONNECTED, PRESS DESIRED FLOAT BUTTON RAPIDLY 4 TIMES AND HOLD

<table>
<thead>
<tr>
<th>OPTIONS</th>
<th>DEFAULT</th>
<th>OPERATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP FAIL ALARM</td>
<td>STOP ON</td>
<td>ACTIVATES IF A PUMP CAUSES &quot;LAG&quot; 3 CYCLES IN A ROW</td>
</tr>
<tr>
<td>MANUAL ALARM RESET</td>
<td>LEAD OFF</td>
<td>LATCHES HIGH ALARM CLEAR WITH EXTERNAL TEST SWITCH</td>
</tr>
<tr>
<td>ALARM FLASHER ALARM</td>
<td>ALARM OFF</td>
<td>FLASHES BEACON UPON HIGH ALARM</td>
</tr>
</tbody>
</table>

**PUMP LEDS WILL FLASH UPON SUCCESSFUL PROGRAMMING**

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<tr>
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</tr>
</thead>
<tbody>
<tr>
<td>PUMP FAIL</td>
<td>FLASHING</td>
<td>RED PUMP LIGHT</td>
</tr>
<tr>
<td>SEAL FAIL</td>
<td>FLASHING</td>
<td>RED PUMP LIGHT</td>
</tr>
<tr>
<td>FLOAT FAIL</td>
<td>FLASHING</td>
<td>BAD FLOAT NOT LIT</td>
</tr>
<tr>
<td>HIGH ALARM</td>
<td>SOLID</td>
<td>ALARM FLOAT</td>
</tr>
</tbody>
</table>

**ALARM CONDITIONS**

<table>
<thead>
<tr>
<th>ALARM CONDITIONS</th>
<th>BEACON</th>
<th>CONTROLLER LED</th>
<th>HORN</th>
</tr>
</thead>
<tbody>
<tr>
<td>PUMP FAIL</td>
<td>FLASHING</td>
<td>RED PUMP LIGHT</td>
<td>NO</td>
</tr>
<tr>
<td>SEAL FAIL</td>
<td>FLASHING</td>
<td>RED PUMP LIGHT</td>
<td>PROG</td>
</tr>
<tr>
<td>FLOAT FAIL</td>
<td>FLASHING</td>
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<td>NO</td>
</tr>
<tr>
<td>HIGH ALARM</td>
<td>SOLID</td>
<td>ALARM FLOAT</td>
<td>YES</td>
</tr>
</tbody>
</table>

**PUMP 2**

**AUX PUMP 2**

**CONTROLLER**

1054970

1055156

1058484A

**WITH POWER ON, HOAs OFF, FLOATS OFF OR DISCONNECTED, PRESS DESIRED FLOAT BUTTON RAPIDLY 4 TIMES AND HOLD**

**ALARM FLASHER**

ALARM OFF

FLASHES BEACON UPON HIGH ALARM

**MANUAL ALARM RESET**

LEAD OFF

LATCHES HIGH ALARM CLEAR WITH EXTERNAL TEST SWITCH

**SEAL FAIL HORN**

LAG OFF

ACTIVATES HORN UPON SEAL FAIL

**DUPLEX**

1054970

1055156

**AUX HORN**

LAG OFF

ACTIVATES HORN UPON SEAL FAIL

**DIAGNOSTIC TEST BUTTON**

1-2 ALT 2-1

**LEAD / LAG SELECTOR**

1-2 ALT 2-1

**ALARM CONDITIONS**

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<tr>
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**WARNING!**

ELECTRICAL SHOCK HAZARD

Do not connect power sources before servicing. Failure to do so could result in death or injury.

**Warranty void if panel is modified.**

Call factory with servicing questions:

1-800-543-2550

Liberty Pumps offers a three-year limited warranty.

For complete terms and conditions, please visit www.libertypumps.com.

Products returned must be cleaned, sanitized, or decontaminated as necessary prior to shipment to ensure that employees will not be exposed to hazardous materials.

All applicable laws and regulations shall apply.
Installing the Float Switches

The Three Phase Duplex control panel operates with float switches to activate pump STOP, LEAD pump START, LAG pump START and high level ALARM functions.

1. **WARNING!**
   - Ensure all power is turned off before installing floats in tank. Failure to do so could result in serious or fatal shock.

2. **CAUTION!**
   - If the distance to the control panel exceeds the length of the float switch cords or the pump power cord, splicing in a liquid-tight junction box will be required. For outdoor or wet installation, we recommend a Liberty Pumps UL Type 4X junction box.

Mounting the Control Panel

- **NOTE**
  - If the floats are not properly mounted and connected in the correct order, the pumps will not function properly.
  - Floats require free range of motion. They must not touch each other or any equipment in the pump chamber.
  - Pipe Clamp Mounting

Wiring the Control Panel

1. **Determine conduit entrance locations on control panel as shown.**
   - Check local codes and schematic on the inside cover of the panel for the number of power circuits required.

   **CAUTION!**
   - Be sure the pump power voltage and phase are the same as the pump motor being installed.

   **2. Connect the following wires to the proper terminal positions:**
   - incoming power
   - pump 1
   - pump 2
   - float switches

   See schematic on inside cover of the control panel for details.

Operation

Liberty Pumps Three Phase Duplex control panel operates with float switches. When all floats are in the open or OFF position, the panel is inactive. As the liquid level rises and closes the STOP float, the panel remains inactive until the LEAD float closes. At this point the LEAD pump will turn ON (if the Hand-Off-Auto switch is in the AUTO mode and the power is ON). The pump will remain ON until both the STOP and LEAD floats return to their OFF positions. If the liquid level rises beyond both the STOP and LEAD floats to reach the LAG float, the lag pump will turn ON (if the Hand-Off-Auto switch is in the AUTO mode and the power is ON). Both pumps will remain ON until the STOP, LEAD, and LAG floats return to their OFF positions. If the liquid level rises to reach the ALARM float, the alarm will be activated.

Alarm System (Indicator Light and Horn)

When an alarm condition occurs, the red light and horn will be activated.

Transformer

The transformer converts incoming three phase power to 120V to be used for control and alarm.

If the TEST/NORMAL/SILENCE switch is moved to the SILENCE position and released, the horn will be silenced. When the alarm condition is cleared, the alarm system is reset.

Auxiliary Contact

Form C - Can be wired normally open or normally closed.

Motor Protective Switches

Each pump circuit has motor protective switches that provides pump disconnect, overload, and branch circuit protection. Adjust overload to pump FLA.

Hand-Off-Auto (HOA) Switches

The HOA 3-way switches control pump functions.

- In HAND mode, the pump will turn ON.
- OFF turns the pump OFF.
- In AUTO mode, commands from the float switches turn each pump ON and OFF.

Motor Contactors

Motor contactors control pumps by switching electrical lines.

Technical support, service questions:

1-800-543-2950

Monday - Friday
7:00 AM to 6:00 PM Eastern Time