### Components
- **a. ON/OFF Switch - Control/Alarm Power**
- **b. 120V Incoming Power Terminals**
- **c. Power LED - (Green)**
- **d. Pump HOA Switches**
- **e. Float LEDs - (Red) x4**
- **f. Pump LEDs**
  - Pump Run - (Green)
  - Pump Fail - (Red)
- **g. Simulate Float Buttons x4**
- **h. Float Terminals x8**
- **i. Lead/Lag Selector Switch**
- **j. Dual Seal Fail LEDs - (Red) - (Optional)**
- **k. Auxiliary Alarm Terminals**

### Programming Instructions

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<td>STOP</td>
<td>ON activates if a pump causes &quot;Lag&quot; 3 cycles in a row</td>
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<td>MANUAL ALARM RESET</td>
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<td>SEAL FAIL HORN</td>
<td>LAG</td>
<td>OFF activates horn upon seal fail</td>
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<td>ALARM FLASHER</td>
<td>ALARM</td>
<td>OFF flashes beacon upon high alarm</td>
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**PUMP LEDS WILL FLASH UPON SUCCESSFUL PROGRAMMING**

### Alarm Conditions
- **PUMP Fail**
  - Flashing: Red Pump Light
  - Not: PROG
- **Float Fail**
  - Flashing: Bad Float Not Lit
  - Not: NO
- **High Alarm**
  - Solid: Alarm Float
  - Not: YES

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**WARNING!**

**Electrical Shock Hazard**

Disconnect all power sources before servicing. Failure to do so could result in serious injury or death.

**Warranty void if panel is modified.**

Liberty Pumps offers a three-year limited warranty. For complete terms and conditions, please visit www.liberty pumps.com.

Products returned must be cleaned, sanitized, or decontaminated as necessary prior to shipment to ensure that employees will not be exposed to health hazards in handling said material. All applicable laws and regulations shall apply.

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**Call factory with servicing questions:**

1-800-543-2550
Operation

Liberty Pumps Single 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.

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.

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.

Auxiliary Contact

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

Circuit Breakers (optional)

Circuit Breakers provide pump disconnect and branch circuit protection.

Motor Contactors

Motor contactors control pumps by switching electrical lines.

Installing the Float Switches

The Single 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 Label each float and cord end with the provided pairs of STOP, LEAD, LAG, and ALARM stickers.

3 CAUTION!

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.

Mounting the Control Panel

NOTE

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.

1 Determine conduit entrance locations on control panel as shown. Check local codes and schematic inside 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 inside control panel for details.

Wiring the Control Panel

You must use conduit sealant to prevent moisture or gases from entering the panel.

3 Verify correct operation of control panel after installation is complete.

Technical support, service questions:

1-800-543-2550

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

Type 4X conduit must be used to maintain a Type 4X rating of the control panel.