SJE RHOMBUS®

Three Phase Duplex

Installation and Operation Manual

c (UL) us
LISTED

Parts Included

STOP	STOP
LEAD	LEAD
LAG	LAG
ALARM	ALARM

x4

x3 or x4

Control panel may be ordered with or without these items.
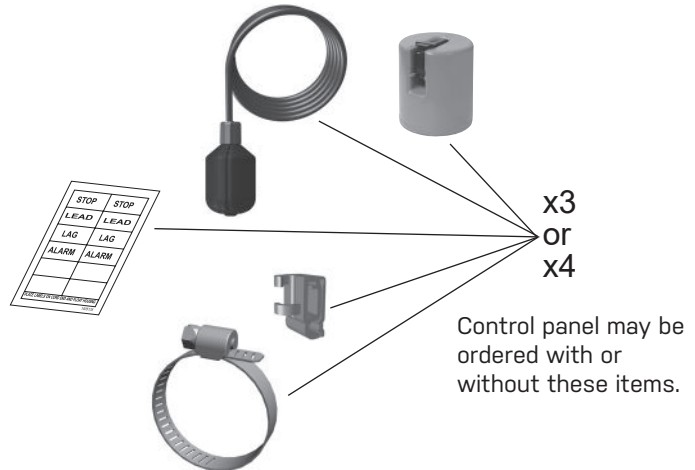
⚠ WARNING!

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

This control panel must be installed and serviced by a licensed electrician in accordance with the National Electric Code NFPA-70, state and local electrical codes. UL Type 4X enclosures are for indoor or outdoor use.

Warranty void if panel is modified.

? For information regarding operation, available options, or servicing questions, please call SJE Rhombus Technical Support.

SJE Rhombus offers a five-year limited warranty.
For complete terms and conditions, please visit www.sjerhombus.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.
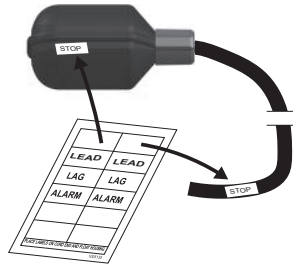
Installing the Float Switches

The Model 322 Three Phase Duplex control panel operates with float switches. They activate pump STOP, LEAD pump START, LAG pump START and high-level ALARM functions.

1

Ensure all power is turned OFF before installing floats in tank. Failure to do so could result in serious or fatal shock.
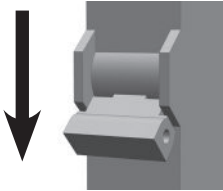
2 Label each float and cord end with the provided pairs of STOP, LEAD, LAG, and ALARM stickers.
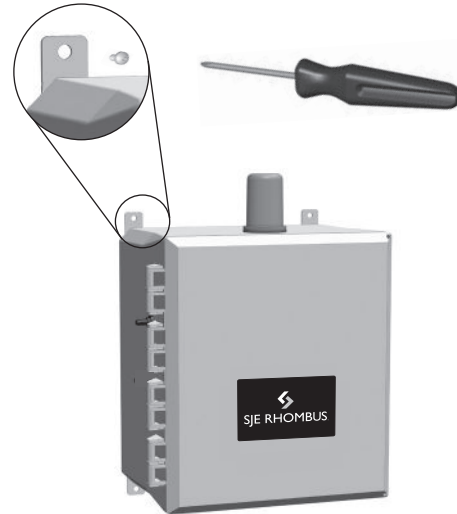
3 ⚠ **CAUTION!**

If the floats are not properly mounted and connected in the correct order, the pumps will not function properly.

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the f
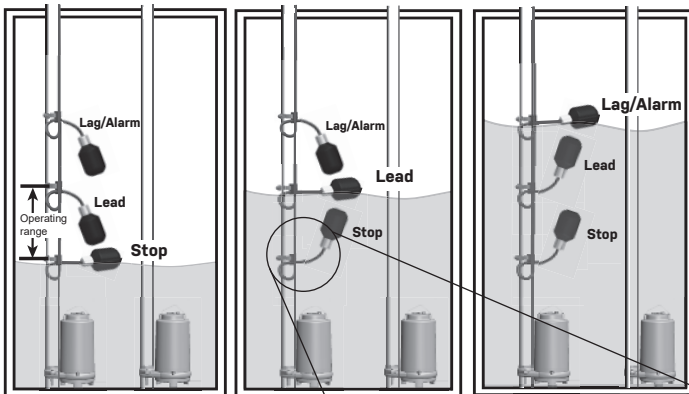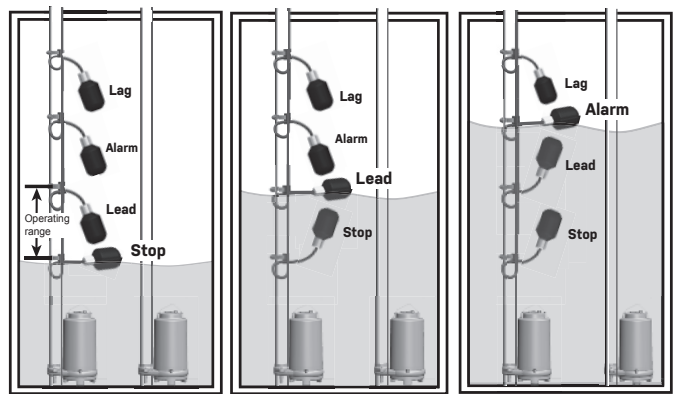in a l
or we
Type

Floats require free range of m
They must not touch each other or any equipmen

Pipe Clamp Mounting
3 Float Operation

Lag/Alarm

Lead

Operating range

Stop

Lag/Alarm

Lead

Stop

Lag/Alarm

Lead

Stop

Pipe Clamp Mounting
4 Float Operation

Lag

Alarm

Lead

Operating range

Stop

Lag

Alarm

Lead

Stop
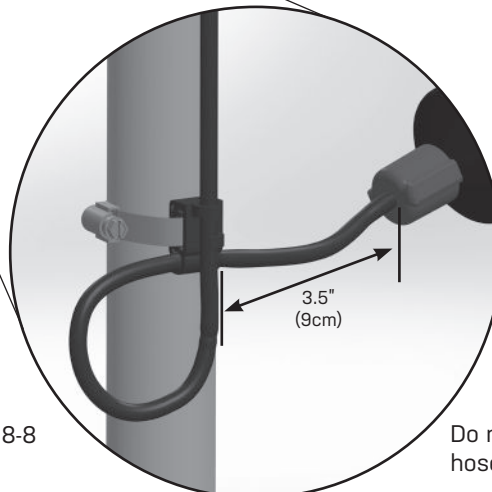
Lag

Alarm

Lead

Stop

Tighten the clamp.

Hose clamp is 18-8 stainless steel.

3.5" (9cm)

Make sure hose clamp band does not interfere with float operation.

Do not install cord under hose clamp.

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.
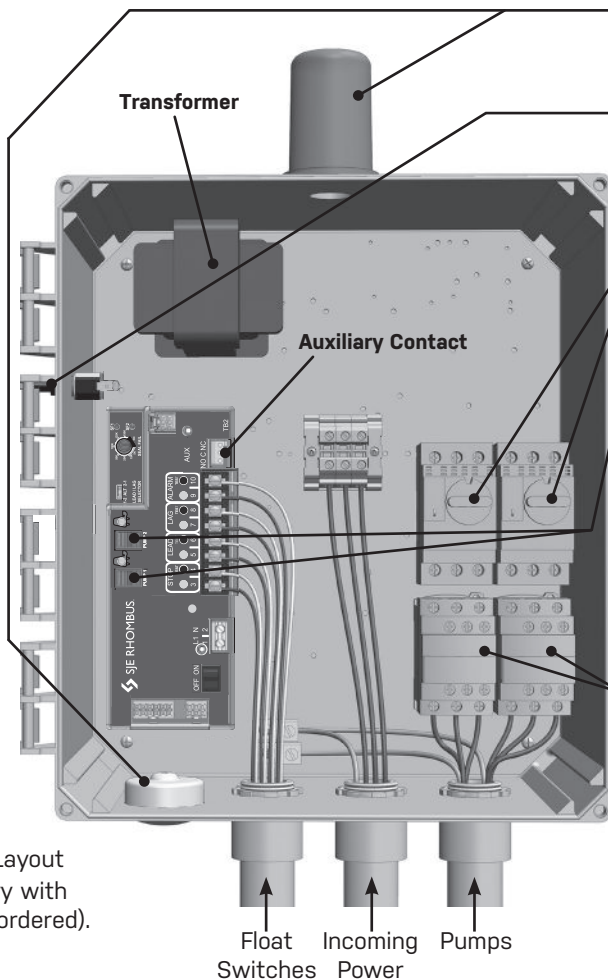
> ### ⚠ CAUTION!
> Be sure the pump power voltage and phase are the same as the pump motor being installed.

2 Connect the following wires to the proper terminal positions:
- inco
- pum
- pum
- floa

See

Transformer

Auxiliary Contact

Typical Layout
(May vary with
options ordered).

Float
Switches

> ### ⚠ CAUTION!
> moisture or gases from entering the panel.

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

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

Operations

SJE Rhombus Model 322 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

d-Off-Auto switch is in the AUTO mode N). Both pumps will remain ON until the G floats return to their OFF positions. es to reach the ALARM float, the alarm

or Light and Horn)
occurs, the red light and horn will

ENCE switch is moved to the ased, the horn will be silenced. is cleared, the alarm system is

ches
tor protective switches that t, overload, and branch circuit ad to pump FLA.

Switches
control pump functions.

he pump will turn ON.

mp OFF.

ommands from the float switches ON and OFF.

pumps by switching electrical lines.

incoming three phase power to rol and alarm.

rmally open or normally closed.
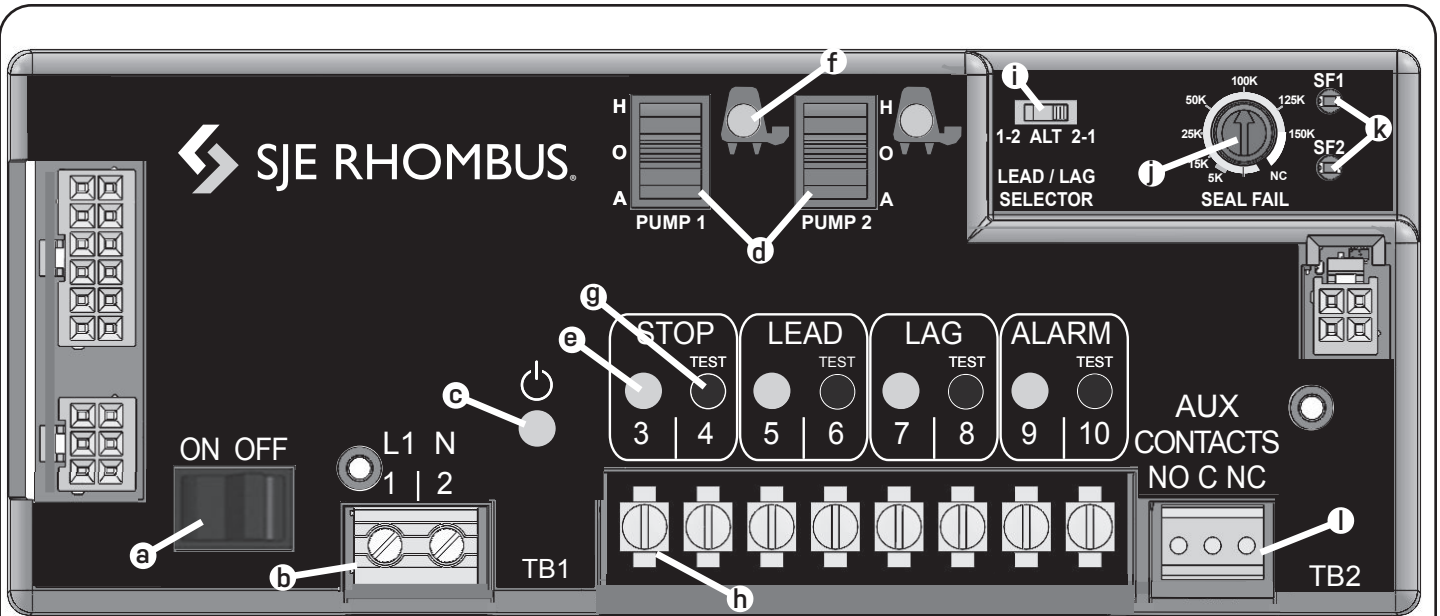
Model shown contains optional seal fail circuitry.

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 x2
   Pump Run - (Green)
   Pump Fail - (Red)

g. Simulate Float Buttons x4
h. Float Terminals x8
i. Lead/Lag Selecter Switch
j. Dual Seal Fail Pot - (Optional)
k. Dual Seal Fail LEDs - (Red) - (Optional)
l. Aux Alarm Terminals

PROGRAMMING INSTRUCTIONS			
WITH POWER ON, HOAs OFF, FLOATS OFF OR DISCONNECTED, PRESS DESIRED FLOAT BUTTON RAPIDLY 4 TIMES AND HOLD			
PUMP LEDs WILL FLASH UPON SUCCESSFUL PROGRAMMING			
OPTIONS	**FLOAT BUTTON**	**DEFAULT**	**OPERATION**
PUMP FAIL ALARM	STOP	ON	ACTIVATES IF A PUMP CAUSES "LAG" 3 CYCLES IN A ROW
MANUAL ALARM RESET	LEAD	OFF	LATCHES HIGH ALARM: CLEAR WITH EXTERNAL TEST SWITCH
SEAL FAIL HORN	LAG	OFF	ACTIVATES HORN UPON SEAL FAIL
ALARM FLASHER	ALARM	OFF	FLASHES BEACON UPON HIGH ALARM

ALARM CONDITIONS			
ALARM	**BEACON**	**CONTROLLER LED**	**HORN**
PUMP FAIL	FLASHING	RED PUMP LIGHT	NO
SEAL FAIL	FLASHING	SF1, SF2	PROG
FLOAT FAIL	FLASHING	BAD FLOAT NOT LIT	NO
HIGH ALARM	SOLID	ALARM FLOAT	YES

SJE RHOMBUS.

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