SJE RHOMBUS™

EZ Series®

Single Phase Simplex/Duplex

Installation Instructions and Operation Manual

CONTROL POWER   **ALARM POWER**

PUMP 1 RUN   **PUMP 2 RUN**

EZ SERIES

DUPLEX CONTROL PANEL

TEST/ SILENCE

c(UL)us LISTED

Parts included

STOP | STOP
LEAD | LEAD
LAG | LAG
ALARM | ALARM
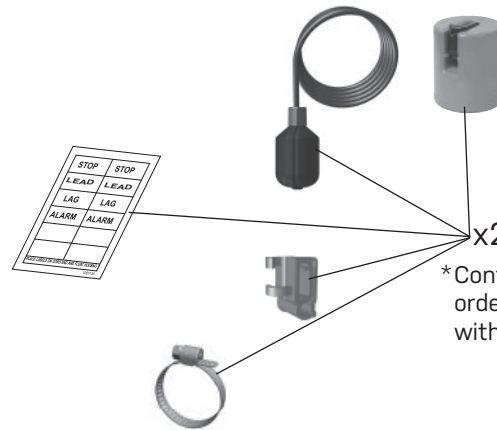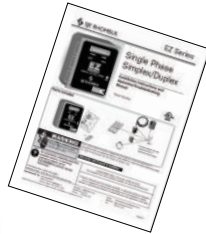
x2, x3, or x4*

*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 an SJE RHOMBUS customer service technician:**

1-800-Rhombus (1-800-746-6287)
Monday-Friday, 7:00 AM to 6:00 PM Central Time

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 EZ Series® Single Phase control panel operates with two, three, or four float switches.

1 🔺 **WARNING!**

Ensure all power is turned OFF before installing floats in tank. Failure to do so could result in serious or fatal shock.
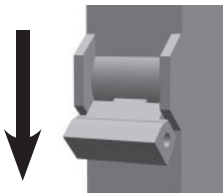
2 Label each float and cord end with the provided pairs of stickers.

3 🔺 **CAUTION!**

If the floats are not properly mounted and connected in the correct order, the pumps will not function properly.
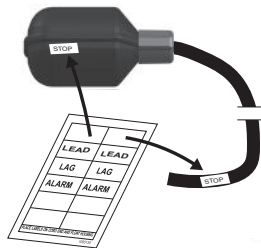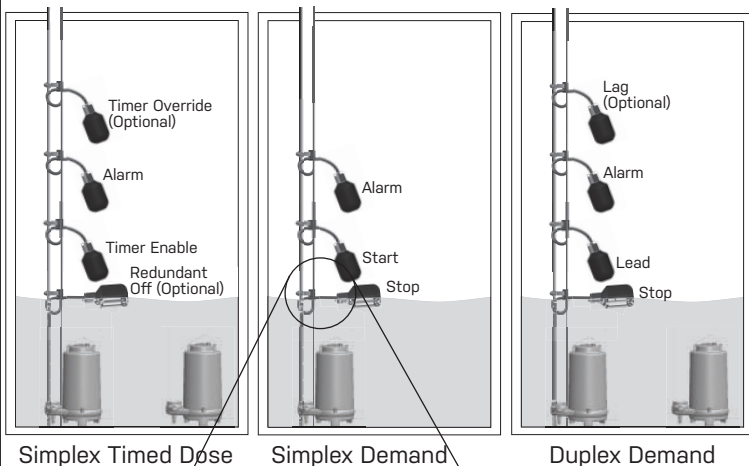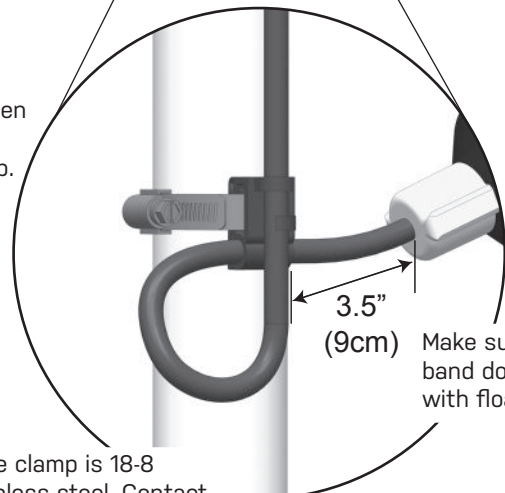
Floats require free range of motion.

Simplex Timed Dose	Simplex Demand	Duplex Demand

Simplex Timed Dose:
- Timer Override (Optional)
- Alarm
- Timer Enable
- Redundant Off (Optional)

Simplex Demand:
- Alarm
- Start
- Stop

Duplex Demand:
- Lag (Optional)
- Alarm
- Lead
- Stop

Tighten the clamp.

3.5" (9cm) Make sure hose clamp band does not interfere with float operation.

Hose clamp is 18-8 stainless steel. Contact your SJE Rhombus supplier for replacements.

Do not install cord under hose clamp.

Mounting the Control Panel

Mount control panel with mounting devices furnished.

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 an SJE RHOMBUS, UL Type 4X junction box.

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.

Use of separate pump and control/alarm power sources is recommended.

2 Connect the following wires to the proper terminal positions:
- incoming power for each pump circuit
- incoming power for control/alarm circuit
- pump 1
- pump 2 (Duplex)
- float switches

🔺 **CAUTION!**

You must use conduit sealant to prevent 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

The EZ Series® (EZS) control panel uses float switches to continuously monitor and control the liquid level in the tank.

Hand Operation - Press and hold the "Push to Run" switch if stop float is OPEN. If stop float is CLOSED, press "Push to Run" switch and the pump will run until stop float opens.

Off Operation - Turn control/alarm breaker off to be in Off operation.

Auto Operation - In timed dose mode (simplex models only) the timer controls pump ON and OFF time as long as the timer enable float is raised. In demand dose mode, the stop and start floats control the pump.

Green Control and Alarm Power Indicators - Illuminate when control power and alarm power is present. Alarm light will flash if alarm power is lost.

Controller

CONTROL POWER SHORT

ALARM POWER SHORT

MENU / ENTER

SET / CHANGE

PUMP 1 PUSH TO RUN

PUMP 1 RUN

PUMP 2 PUSH TO RUN

PUMP 2 RUN

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Viewing Panel Settings:

Press menu/enter button to view:

- Float Status or Float Error
- Elapsed Time Meter
- Cycle Count
- Pump 2 Elapsed Time Count (Duplex)
- Pump 2 Cycle Count (Duplex)
- High Level & Power Fail Alarm Counts
- Float Error Count
- Auxiliary Alarm Input Counts (OPTIONAL)
- Lag Float Count (Duplex)

Timed Dose Mode only:

- Timer Override Count
- ON Time
- Off Time
- Remaining ON/OFF Times

Programming Panel Settings:

Press set/change button for 3 seconds to enter program mode.

Simplex:

The display will show ON time in mm:ss.

Press set/change button to set the pump ON time. Use menu/enter button to select digit desired to change. Use set/change button to change ON time.

Press menu/enter button. The display will show OFF time in hh:mm.

Press set/change button to set the pump OFF time. Use menu/enter button to select digit desired to change. Use set/change button to change OFF time.

Note: Setting the OFF times to 00:00 turns off timed dose mode and timed dose menu items. The panel will operate in demand mode.

Duplex:

The display will show Set Alternation, then either Alternate, 1-2 or 2-1.

Press set/change button to set the desired pump sequence.

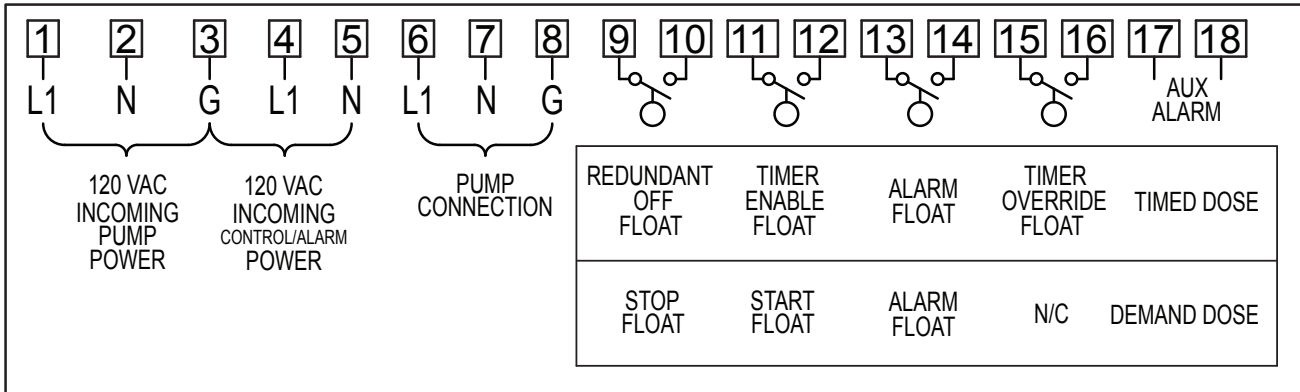Press menu/enter button to display number of floats.

Press set/change button to choose 3 Floats or 4 floats.
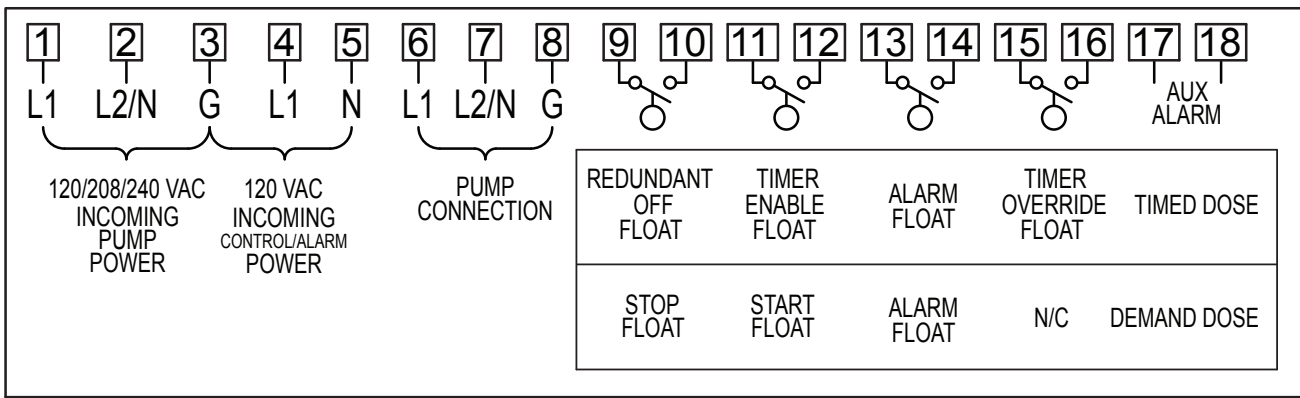
Press menu/enter button.

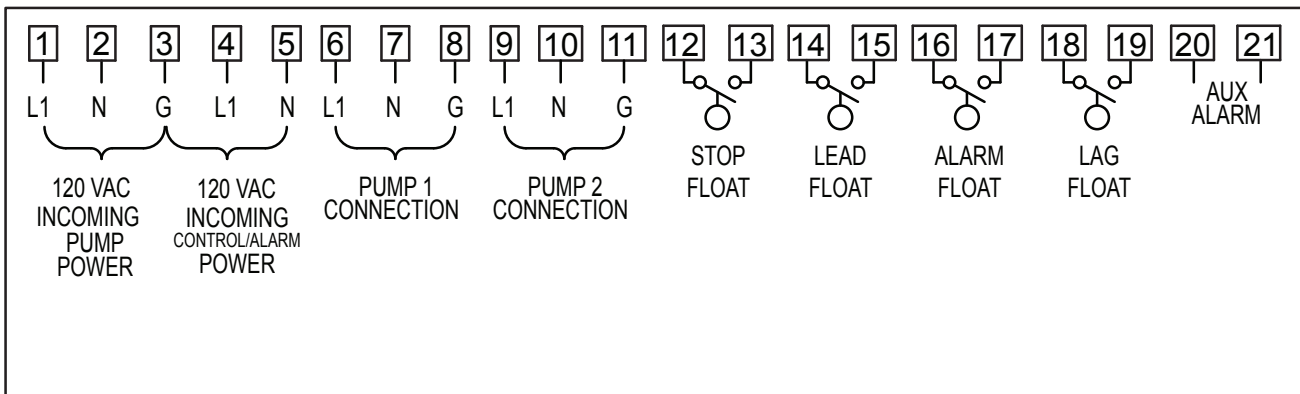Press set/change button for 3 seconds to return to the view menu.

Standard EZ Wiring

Simplex 120 VAC - Models EZS11W914* / EZ21W914* shown below:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L1	N	G	L1	N	L1	N	G									AUX ALARM	

120 VAC INCOMING PUMP POWER — 120 VAC INCOMING CONTROL/ALARM POWER — PUMP CONNECTION

REDUNDANT OFF FLOAT	TIMER ENABLE FLOAT	ALARM FLOAT	TIMER OVERRIDE FLOAT	TIMED DOSE
STOP FLOAT	START FLOAT	ALARM FLOAT	N/C	DEMAND DOSE

Simplex 120/208/240 VAC - Models EZS11W914* / EZS21W114* shown below:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
L1	L2/N	G	L1	N	L1	L2/N	G									AUX ALARM	

120/208/240 VAC INCOMING PUMP POWER — 120 VAC INCOMING CONTROL/ALARM POWER — PUMP CONNECTION

REDUNDANT OFF FLOAT	TIMER ENABLE FLOAT	ALARM FLOAT	TIMER OVERRIDE FLOAT	TIMED DOSE
STOP FLOAT	START FLOAT	ALARM FLOAT	N/C	DEMAND DOSE

Duplex 120 VAC - Model EZS41W914* shown below:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
L1	N	G	L1	N	L1	N	G	L1	N	G									AUX ALARM	

120 VAC INCOMING PUMP POWER — 120 VAC INCOMING CONTROL/ALARM POWER — PUMP 1 CONNECTION — PUMP 2 CONNECTION — STOP FLOAT — LEAD FLOAT — ALARM FLOAT — LAG FLOAT

Duplex 120/208/240 VAC - Model EZS41W114* shown below:

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
L1	L2/N	G	L1	N	L1	L2/N	G	L1	L2/N	G									AUX ALARM	

120/208/240 VAC INCOMING PUMP POWER — 120 VAC INCOMING CONTROL/ALARM POWER — PUMP 1 CONNECTION — PUMP 2 CONNECTION — STOP FLOAT — LEAD FLOAT — ALARM FLOAT — LAG FLOAT