CSI Controls®

Fusion™
Single Phase Simplex

Installation and Operation Manual

c**UL**us
LISTED

Parts Included

(Images May vary with options ordered).

x3

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 CSI Controls Technical Support.

CSI Controls offers a five-year limited warranty. For complete terms and conditions, please visit www.csicontrols.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.
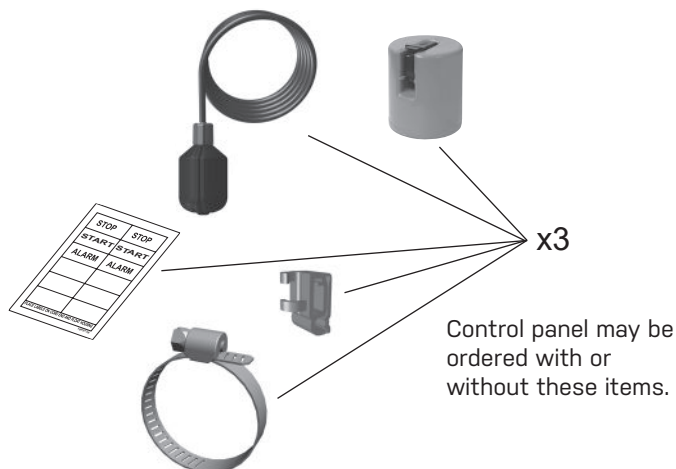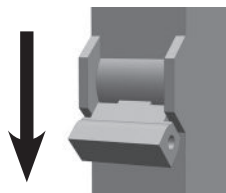
Installing the Float Switches

The Fusion™ Single Phase Simplex control panel operates with 3 float switches to activate pump STOP, pump START, and high-level ALARM functions.
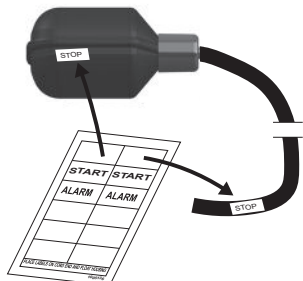
1 **⚠ WARNING!**

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, START and ALARM stickers.

3 **⚠ CAUTION!**

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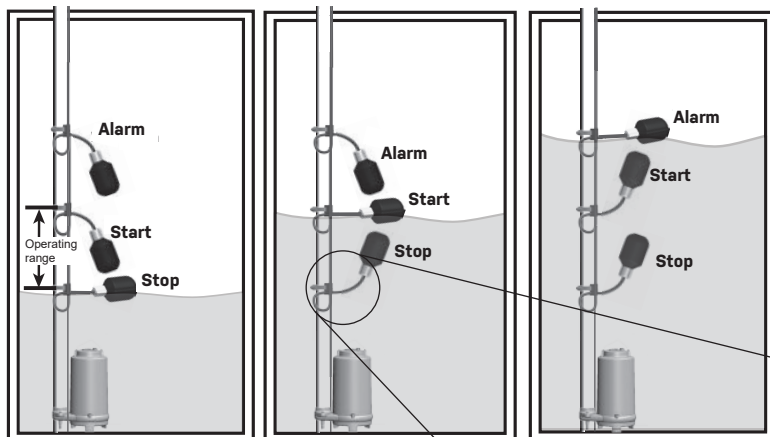
Mounting the Control Panel

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 CSI Controls UL Type 4X junction box.
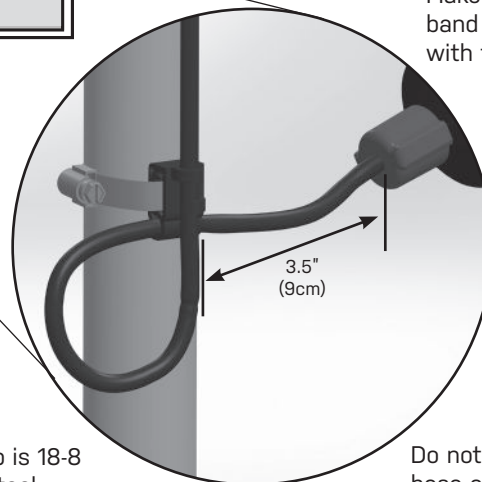
Floats require free range of motion.
They must not touch each other or any equipment in the pump chamber.

Pipe Clamp Mounting
Simplex

Alarm
Start
Stop
Operating range

Alarm
Start
Stop

Alarm
Start
Stop

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

3.5"
(9cm)

Tighten the clamp.

Hose clamp is 18-8 stainless steel.

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 inside the panel for the number of power circuits required.
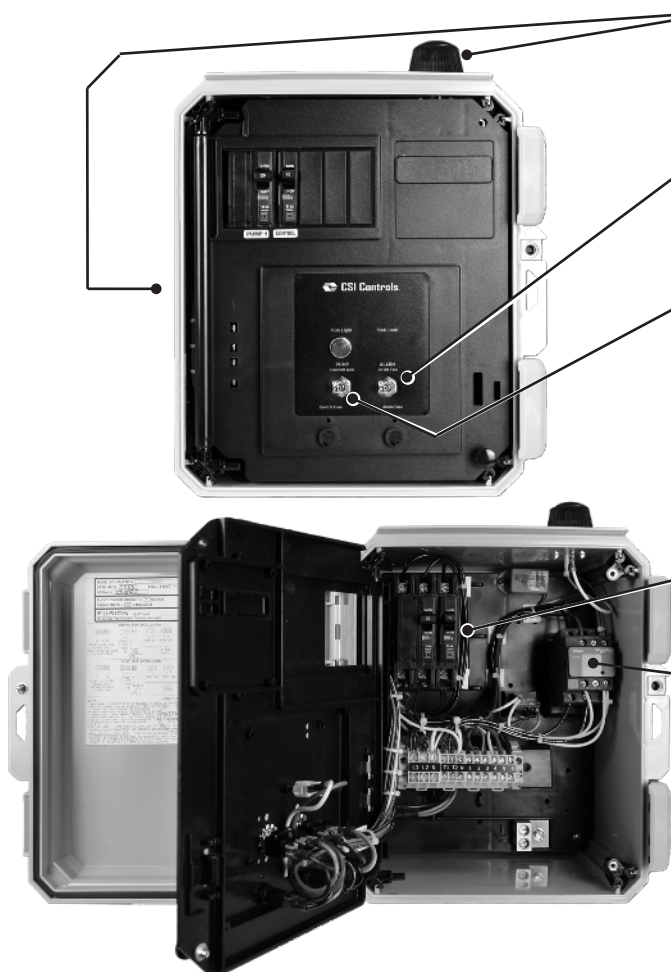
⚠ CAUTION!

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
- float switches

See schematic inside control panel for details.

Typical Layout (May vary with options ordered).

⚠ 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.

Operation

Fusion™ Single Phase Simplex 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 START float closes. At this point the 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 START floats return to their OFF positions.

If the liquid level rises to reach the ALARM float, the alarm will be activated.

Alarm System (Beacon Light and Horn)
When an alarm condition occurs, the flashing red light and horn will be activated.

If the **TEST/SILENCE** switch is toggled when alarm is present, it will silence the horn until the alarm condition is reset. If the alarm is not present, the TEST/SILENCE toggle will activate the alarm until the toggle is released.

Hand-Off-Auto (HOA) Switch (Not pictured)
The HOA 3-way switch controls pump functions.

In HAND mode, the pump will turn ON.

OFF turns the pump OFF.

In AUTO mode, commands from the float switches turn pump ON and OFF.

Circuit Breakers
Circuit breakers provide pump and control/alarm disconnecnt and branch circuit protection.

Motor Contactor
Motor contactor controls pump by switching electrical lines.

? **Technical support, service questions:**
+1-800-746-6287
techsupport@sjeinc.com

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

Notes