

PROSSER®

LIQUID LEVEL CONTROL INSTRUCTION SHEET

SUBJECT: FOR FIELD INSTALLATION OF LIQUID LEVEL CONTROL (LLC)
FOR SINGLE PHASE PUMPS

A. In pump control:

1. Disconnect control from power source.
2. Disconnect pump cable from the circuit breaker and from enclosure ground lug, loosen cable clamping connector, remove pump cable from enclosure. See if LLC cable assembly fits cable clamp. If the cable diameter is too large for the clamp, remove the pump cable clamping connector from the enclosure. Remove next size knock-out and install clamping connector supplied with LLC.
3. Remove lead between relay terminals #5 and circuit breaker
4. Install LLC cable assembly per electrical schematic diagram supplied with LLC. (Figures 1 & 2 for 9-200911 & 9-500912) (Figures 3 & 4 for 9-100910).
5. After the orange and red leads of the LLC cable are connected, bend the relay spade lugs down so as to provide clearance between the cable terminals and the enclosure cover.
6. **CAUTION:** Be certain that green (ground) cable lead is well connected to the enclosure ground lug.

B. In the LLC

1. Install the pump cable in the LLC per the Electrical schematic diagram supplied with the LLC. (Figures 1 & 2 for 9-200911 & 9-500912) (Figures 3 & 4 for 9-100910)
2. Connect sensing probe tubing to the pressure switch with the union provided. After inserting tubing in union, tighten union nut finger-tight plus 1½ turns for air-tight fitting.
3. Position LLC sensing probe relative to liquid level desired. Ty-wraps may be used to hold probe tubing secure. (See pages 2 & 3).
4. Secure the covers of LLC and pump control enclosures.
5. Verify the integrity of the grounding circuit. Using a low voltage ohmmeter (20 VDC maximum) measure the resistance between the ground lug of the pump control and one of the cap screws at the pump discharge case. This resistance must be less than 2.0 ohms.
6. Connect pump power cable to proper power source. The pump with LLC is now ready for use.

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The liquid level control is an additional control, installed between the pump and the pump control. It is activated by air pressure through the probe tube. A rise of water in the air trap increases pressure transmitted to the diaphragm switch.

In all cases, the regular switch supplied with the pump must be left in the system; it must be in the "on" (or "run") position. It continues to act as the protector for the pump.

The Liquid Level Control is an add-on item; **it does not replace the control switch** already on the pump. It contains only "On - Off" controls; no protective devices; no start switch for single phase winding.

All of the Prosser Liquid Level Controls are adjustable from 3 inches to 20 inches **differential**. This adjustment involves one component only; the diaphragm switch used in all current models. (see page 3)

In instances where the sump is large in surface area, it may be desirable to maintain a small differential. That is: the level at which the pump starts is close to where it stops.

In cases where the sump is small in size but quite deep, the maximum differential may be desirable to avoid fast pumping cycles. Use of a check valve in the discharge to avoid back-flow may be necessary if the hose is long.

For those instances where the differential desired is greater than 20 inches, the Prosser wide range liquid level control should be used. This control uses two air traps: one to turn the pump on at high level and one to turn it off at the low level desired. Contact your Prosser distributor for this control.

INSTALLATION

Hang pump & LLC enclosures above high water level. Submerge air trap until pump draws water level down to desired point. Raise trap until pump stops. Suspend air trap at this setting. Excess tubing may be coiled and kung near enclosure.

The pressure switches are preset at the factory to turn the pump on at a probe submergence (H) of 12 inches and to turn the pump off when the level drops to (DL) differential level from H to within 6 inches of probe submergence (L).

When it is necessary to adjust the operational levels in the field, the following procedure should be followed.

Screw in both adjustment screws fully. Back off the center screw (depth adjustment) per the following schedule:

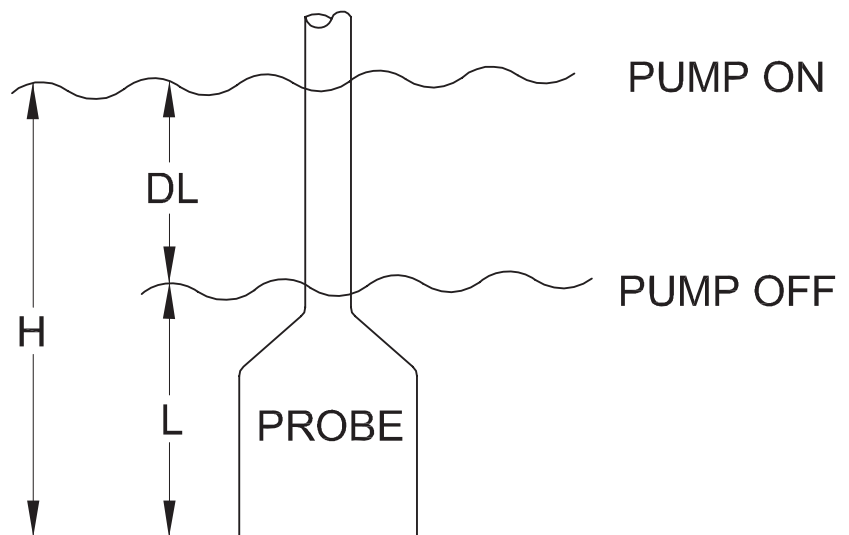
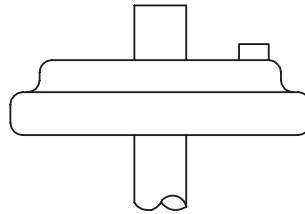
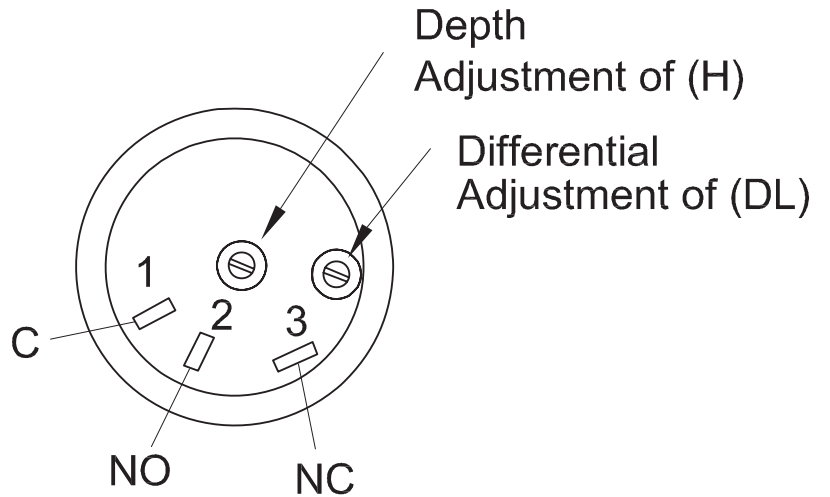
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Center Screw Turns Out (approx.)	H Depth
0	22"
1	19"
2	17"
3	15"
4	12"
5	9"
6	7"
7	5"
8	3"

Set the differential level (DL) by adjusting the outer screw. Screw in to increase differential. Screw out to decrease differential.

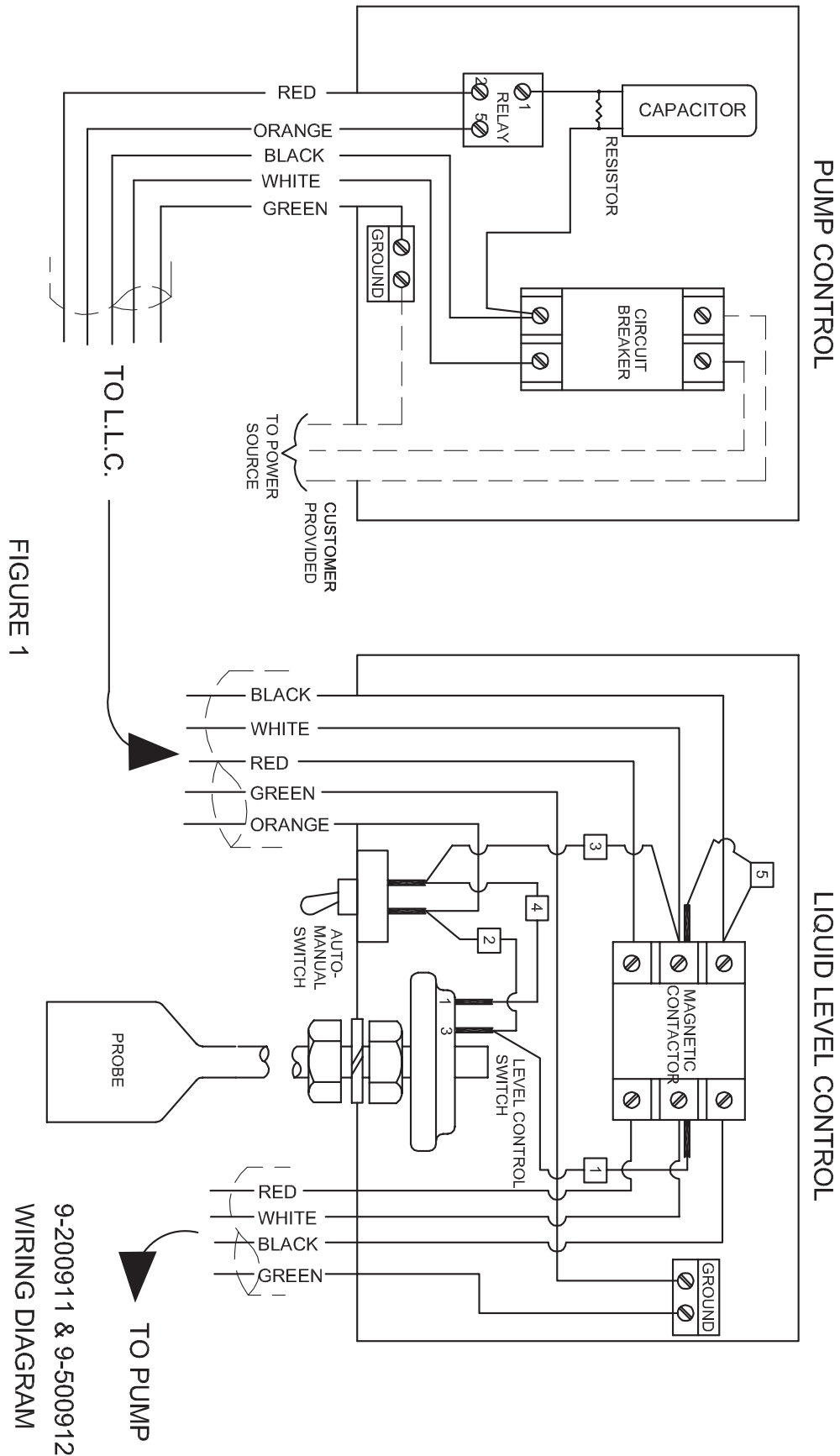
Position bottom of probe "H" inches below desired high level.



H must be greater than DL.

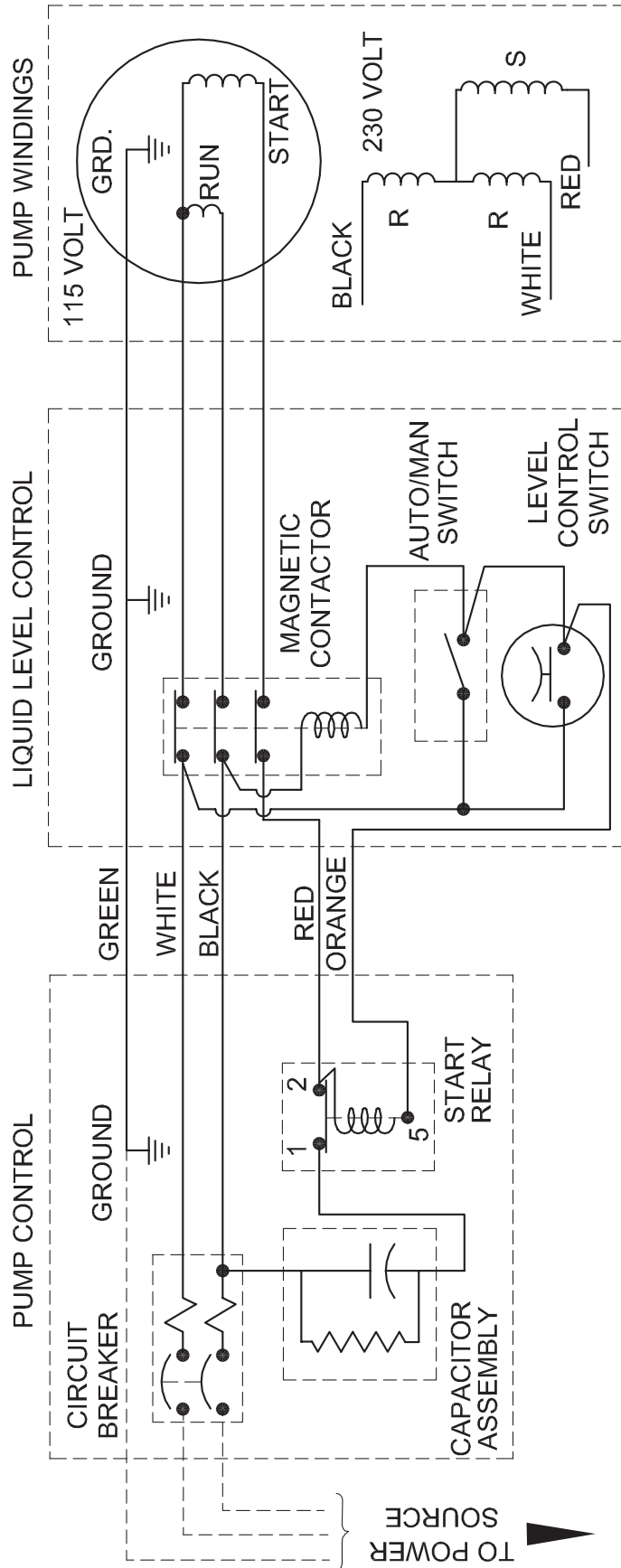
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9-200911 & 9-500912
WIRING DIAGRAM

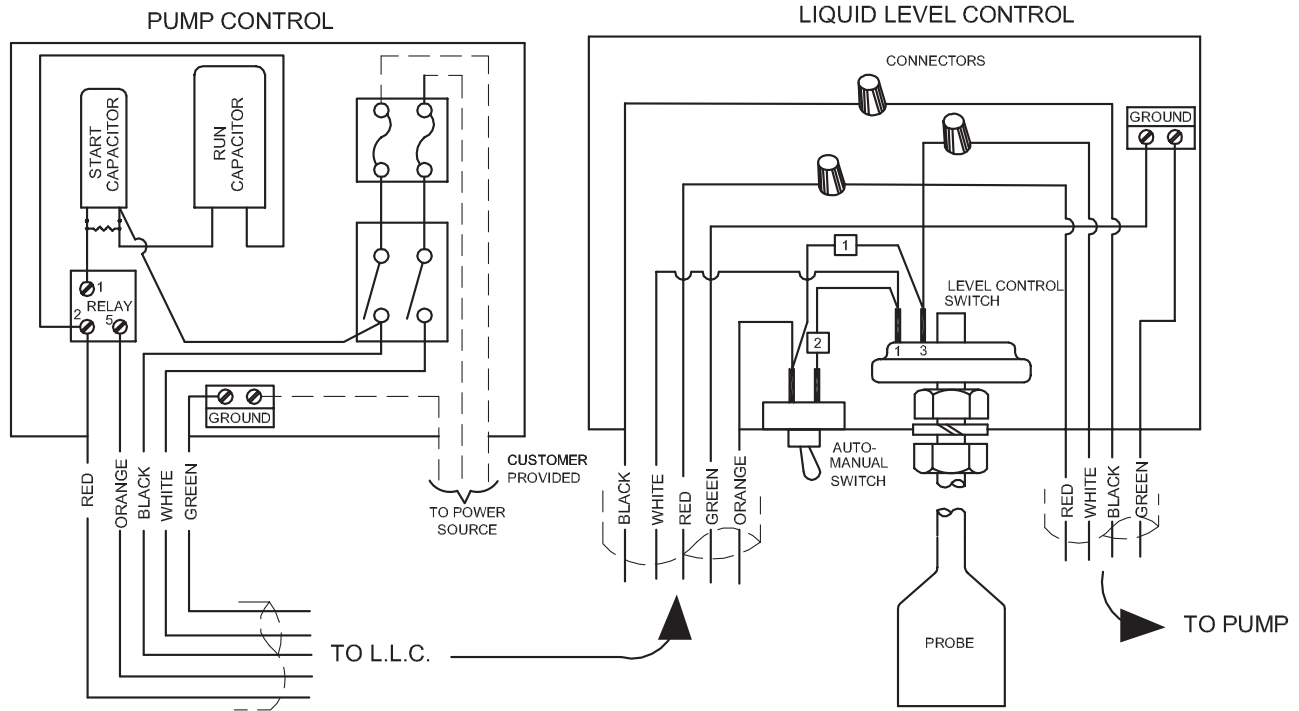
FIGURE 2

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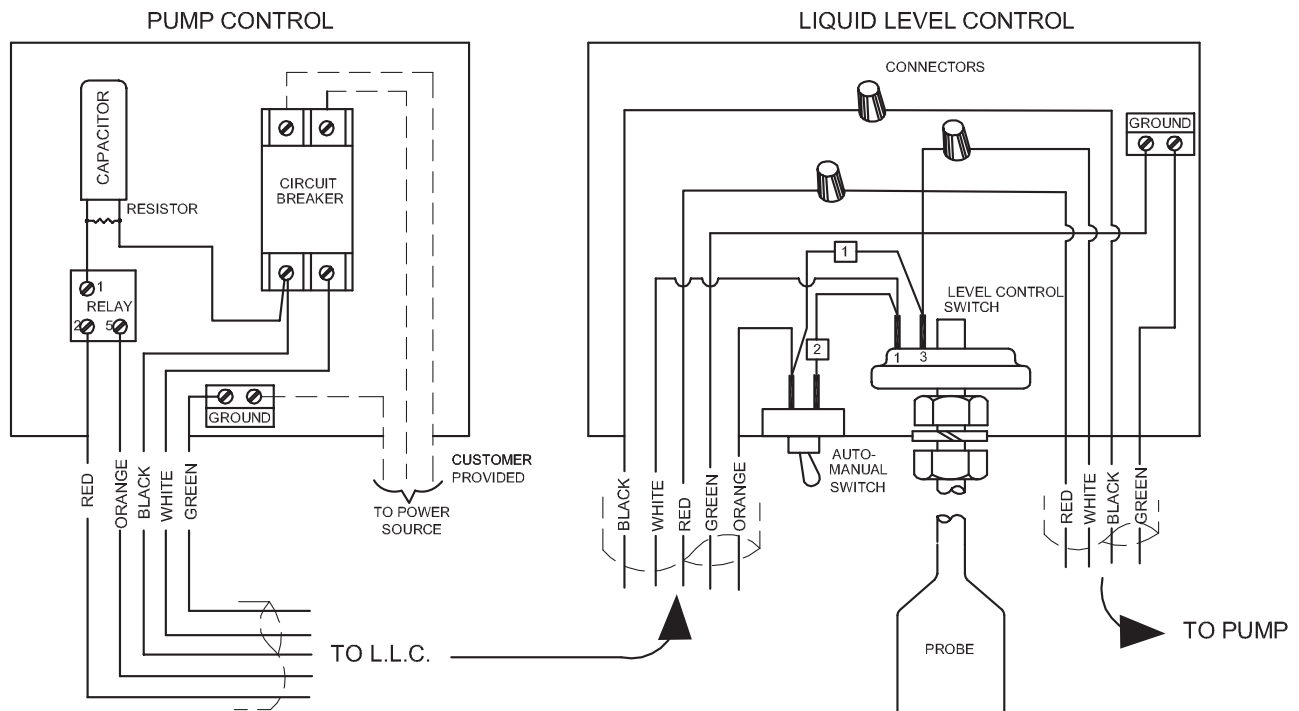
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9-100910 WIRING DIAGRAM SINGLE PHASE 115/230 VOLT 15 AMP

9-500912 WIRING DIAGRAM SINGLE PHASE 208/230 VOLT 10 AMP



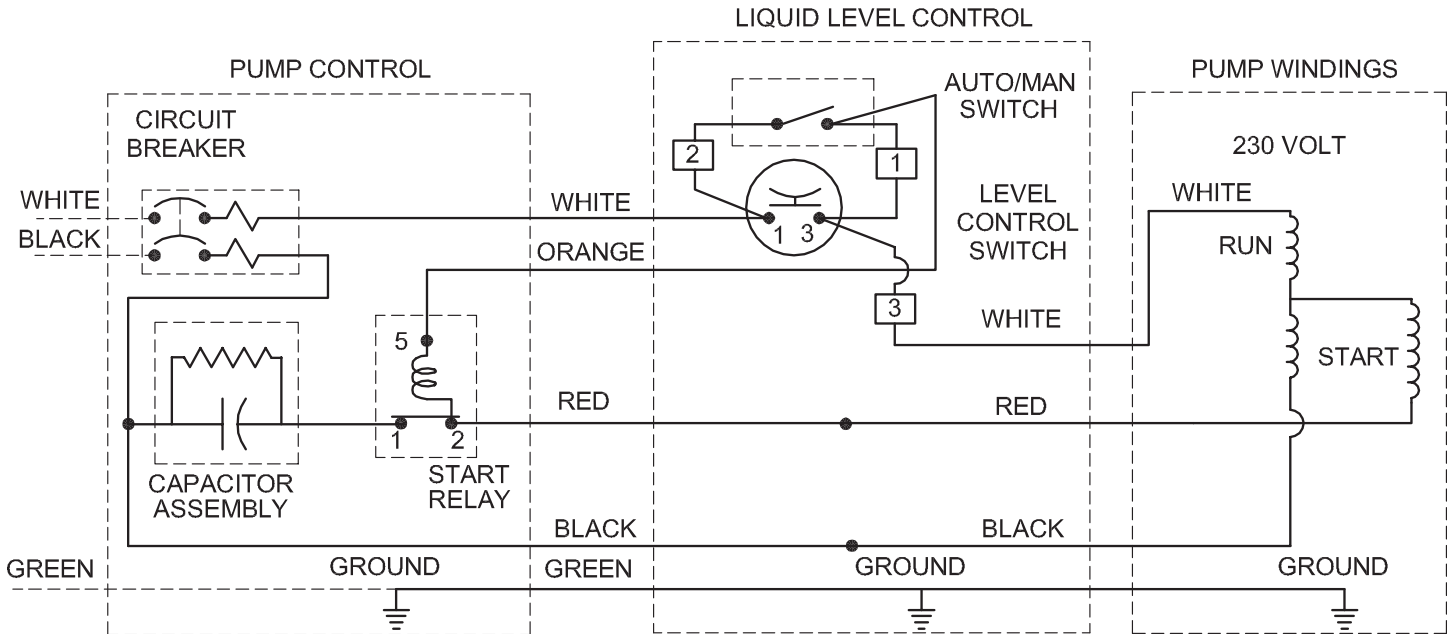
115 VOLT WIRING DIAGRAM



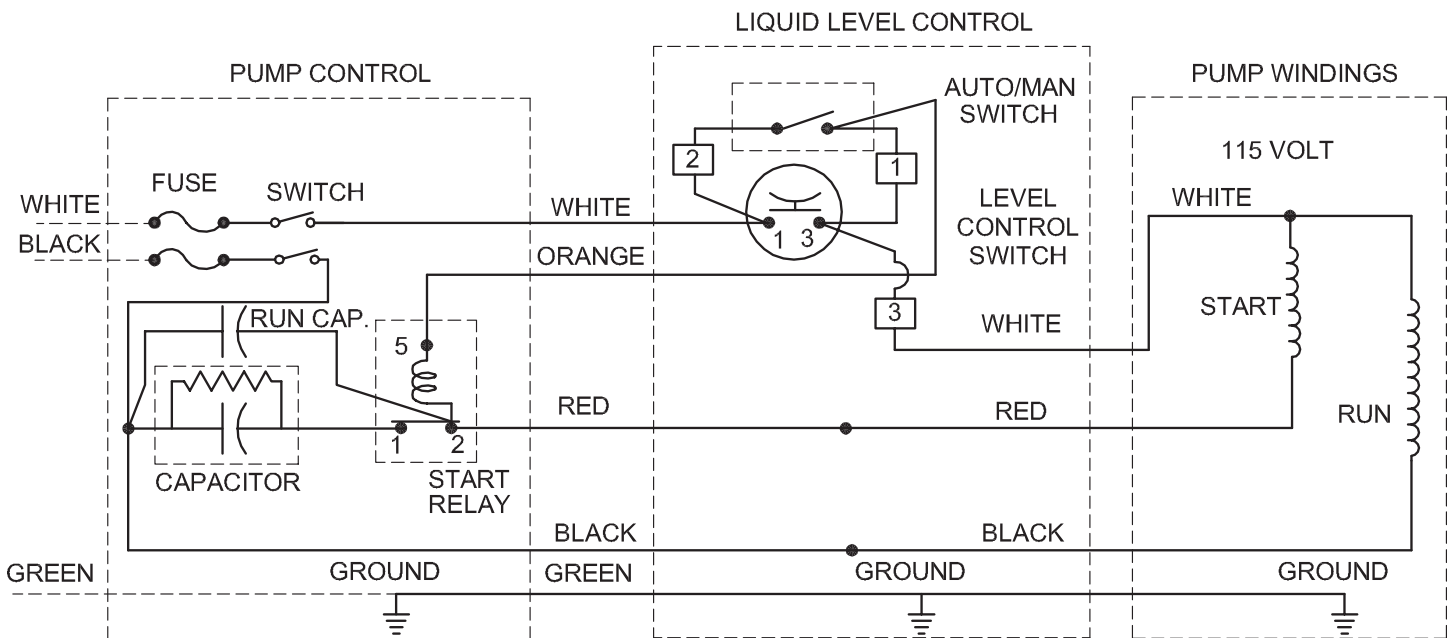
230 VOLT WIRING DIAGRAM

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230 VOLT SINGLE PHASE



115 VOLT SINGLE PHASE

FIGURE 4