

- PROTECTIVE HEAT SHRINK LOCATION**
- 1) Connect the probes to the liquid level controller.
 - 2) Slide the extra piece of shrink tubing over the connector where it will touch the side of the control.
 - 3) Use a heat gun or other heat source to shrink the tubing around the connector, sealing it from harmful vapors.
 - 4) This shrink tubing will protect the pins inside the connector from corrosion.



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LC2/LC3 MANUAL



LC2/LC3 INTRODUCTION AND CONDUCTIVITY CONTROL

The LC2/LC3 Conductivity Level Controls operate on the principle of passing a small AC current (approximately 2 ma.) through a conductive solution. Advanced solid state circuitry senses the presence or absence of solution level by monitoring current flow. When properly applied and maintained, the LC2/LC3 Conductivity Level Control will provide years of reliable level detection.

SPECIFICATIONS

- Input:** 120/208-240 VAC, 1 PH, 50/60 HZ, 5 watts
- Output:** SPDT 1-(N/O), 1-(N/C), 240 VAC, 10 Amps, 1/2 HP Max. @ 240 VAC
- Ambient:** 0° to 131°F (-18° to 55°C), 99% RH
- Sensing:** 14.5 VAC, max 70,000 ohm-CM solution resistance.
- Probes:** Fluoropolymer sheathed 316 stainless steel, titanium, Hastelloy C® or carbon tipped.
- Case:** UL Type 1, IP60 flame-retardant plastic.
- Certification:** UL listed, E190611.
- Hastelloy C® is a registered trademark of Haynes International, Inc.

Warning: Do not use in flammable solutions, in the presence of flammable gases or deionized water service.

GENERAL OPERATION

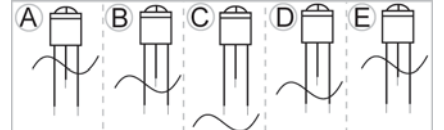
- Ensure all wiring is installed correctly. Apply power to the level control:
- **POWER** light illuminates (red)
 - **LOW LEVEL (LOW LEVEL PUMP UP*)** light illuminates (amber)
 - Alarm sounds (if installed)
 - Heater is inoperative (if installed)
 - Pump or solenoid energizes*
- * LC3 only

ESTABLISH NORMAL LIQUID LEVEL

- Ensure all wiring is installed correctly before establishing liquid level:
- **POWER** light remains illuminated (red)
 - Alarm silences (if installed)
 - Pump or solenoid de-energizes*
 - **LOW LEVEL (LOW LEVEL PUMP UP*)** light extinguishes (amber)
 - Heater energizes on temperature demand (if installed)
- * LC3 only

LC3 OPERATION

- Liquid above all probes
Condition: Heater system on, refill off, LC3 output latched on.
- Liquid drops below short probe
Condition: Heater system on, refill off, LC3 output latch disabled.
- Liquid below all probes
Condition: Heater system off, refill on, LC3 output off.
- Liquid returns to longer probes
Condition: Heater system off, refill on, LC3 output latch engaged.
- Liquid returns to cover all probes
Condition: Heater system on, refill off, LC3 output latched on.



TROUBLESHOOTING

- No Lights—Power interruption, check circuit breaker, fuse on incoming power line.
Check incoming power line for breaks.
- **POWER ON** Light is illuminated, no amber **LOW LIQUID** light on, even though level is below probes— Shorted probe. Unplug probe connector from control. If **LOW LIQUID** light illuminates, replace probe assembly; or:
Defective control. If above did not work, replace control.
- **POWER ON** light is illuminated, amber **LOW LIQUID** light is illuminated, alarm sounds, liquid level normal—Occluded probe tips: Remove probe assembly and examine tips for salts buildup or oil

fouling. Cleanse tips and reinstall; or:
Solution resistivity is too high: Remove probe assembly and install a temporary jumper between tips. If amber **LOW LIQUID** light extinguishes and alarm silences, the liquid solution resistivity may be too high. Consult factory.

MAINTENANCE

Inspect and clean probe assembly frequently—excessive conductive deposits may cause bridging between the probes and control failure. Inspect and, if necessary, clean probe tips on a monthly basis to avoid calcium and other mineral buildup that creates increased measured resistance. Replace probes showing excessive etching. For special tips designed for aggressive chemistry applications, consult factory.

DIMENSIONS AND MOUNTING

