# **Electronic Liquid Level Controllers**

- Kimberlite's liquid level controllers monitor and control the level of a liquid that contains even the smallest amount of ions. Distilled water is 0.000002 Siemens. Our liquid level controllers monitor and control liquids down to 0.000008 Siemens or mhos.
- Liquid level control is accomplished using two probes (black & white) which control a pump relay or water solenoid.

# Three continuity modes of operation:

- 1. Low resistive. 2. Medium high resistive. 3. High capacitive.
- Four LED status codes.
- MOSFET solid state switches (no moving parts, replaces relay contacts.) as controlled contacts, rated at 3 amps resistive.

# **Model options:**

- AC or DC voltages.
- Custom probe lengths.
- Auxiliary contacts for H/L level alarms and heater enable.



#### Markets

- Equipment Cooling
- Cooling Towers
- Water and Waste Water
- Marine Tanks and Bilges
- Condensate Systems
- Industrial Processing
- Minerals and Chemicals
- Irrigation
- Storm Water
- Holding Tanks
- Portable Battery Operated

# Theory of Operation

The processor monitors the conductivity of the liquid between probes, and controls the electronic (MOSFETs) outputs. The status LED provides maintenance personnel the condition of the water. There are no relays or moving parts that can fail resulting in longer life.

# **Easy Installation**

Complete assembly includes: electronics, probes, mounting kit and LED status indicator.

Cut probes to length, mount the controller and run cable to panel or junction box, terminate wires to your system that's it your finished.

Companies that sell liquid conductive level controllers ask customers to select model numbers for the conductivity of the liquid. The customer may not know the conductivity of their liquid.

All our liquid level controllers work down to 8 micro Siemens, practically distilled water which is about 2 micro Siemens. Any liquid that has any amount of ions will work with our controllers.

# **Questions Before Ordering**

- 1. Will the unit be pumping into a tank (pump in), or pumping out (pump out)?
- 2. What are the voltage or voltages required?
- 3. What length probes are needed?
- 4. How many probes are needed?
- 5. Will the mounting kit included work for the installation?
- 6. Standard cable length is 6 feet, what is the cable length required?

For help with your requirements, please call 410-675-4901.



#### **Products**

Standard stocked items are 120VAC; 3, 4, 5 & 6 probes with 29 inch stainless steel rods. Rods are cut to length by customer.

Custom orders with input voltages of 9 to 30VDC, 12/24/220VAC and probe lengths up to 72 inches may take up to 2 weeks for shipment.

3, 4, 5 & 6 probe functional printed circuit boards.





Water analysis LED indicator





Bottom potted

# **Specifications**

- · Processor monitoring and controlled.
- 2" PVC schedule 40 construction.
- Low power consumption .050 amps. at 120VAC.
- Liquid probe to probe conductive sensitivity 0.000008 Siemens/ mhos.
- Output contacts are electronic MOSFETs switches (no moving parts), rated at 3.5 amps resistive.
- Surge protected outputs.
- Input voltages from 9 to 30VDC, 12/24/120/220VAC are determined when ordering.
- Probes 1/4 inch diameter 304 or 316 stainless steel with lengths from 29 to 72 inches.
- · Water proof & rugged.
- 6' feet of Tray cable with 18 AWG wire. Adhesive heat shrink covered strain relief.
- Conformal coated printed circuit board.
- Water stilling tube & mounting hardware included.
- Status LED indicator.
- All contacts have a 6 second delay before changing states, blue probe has 20 second delay.
- Operating temperatures -20 to +85 centigrade.



Descri	iption
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# **PRICES**

High Voltage 120VAC In Stock 220 VAC Custom Order

# **PRICES**

Low Voltage 9 - 30 VDC 12 - 24VAC Custom Order

3-Probe main level controller uses two probes (black & white) to control a MOSFET output to pump relay or solenoid. 6 feet of cable length. Standard 304 stainless steel probes.

3 Probe - \$599 **3PIN120/29** – 120VAC, 29" Probes, Pump In **3POUT120/29** – 120VAC, 29" Probes, Pump Out

3 Probe - \$639 **3PINACDC/29** – 12-30V DC or AC, 29" Probes, Pump In **3POUTACDC/29** – 12-30V DC or AC, 29" Probes, Pump Out

4-Probe - one extra probe (yellow) and one extra auxiliary MOSFET output. (NO/COM/NC). 6 feet of cable length. Standard 304 stainless steel probes

4 Probe - \$649 **4PIN120/29** – 120VAC, 29" Probes, Pump In **4POUT120/29** – 120VAC, 29" Probes, Pump Out

5 Probe - \$799

**5PIN120/29** – 120VAC, 29" Probes, Pump

4 Probe - \$699 **4PINACDC/29** – 12-30V DC or AC, 29" Probes, Pump In 4POUTACDC/29 - 12-30V DC or AC, 29" Probes, Pump Out

5 Probe - \$839

6 Probe - \$879

6PINACDC/29 - 12-30V DC or AC, 29" Probes,

**5PINACDC/29** – 12-30V DC or AC, 29" Probes,

5-Probe – two extra probes (yellow & red) and two extra auxiliary MOSFET outputs (NO / COM / NC). 6 feet of cable length.

Standard 304 stainless steel probes

6-Probe – three extra probes, yellow (NO),

**5POUT120/29** – 120VAC, 29" Probes, Pump Out

Pump In

5POUTACDC/29 - 12-30V DC or AC, 29" Probes, Pump Out

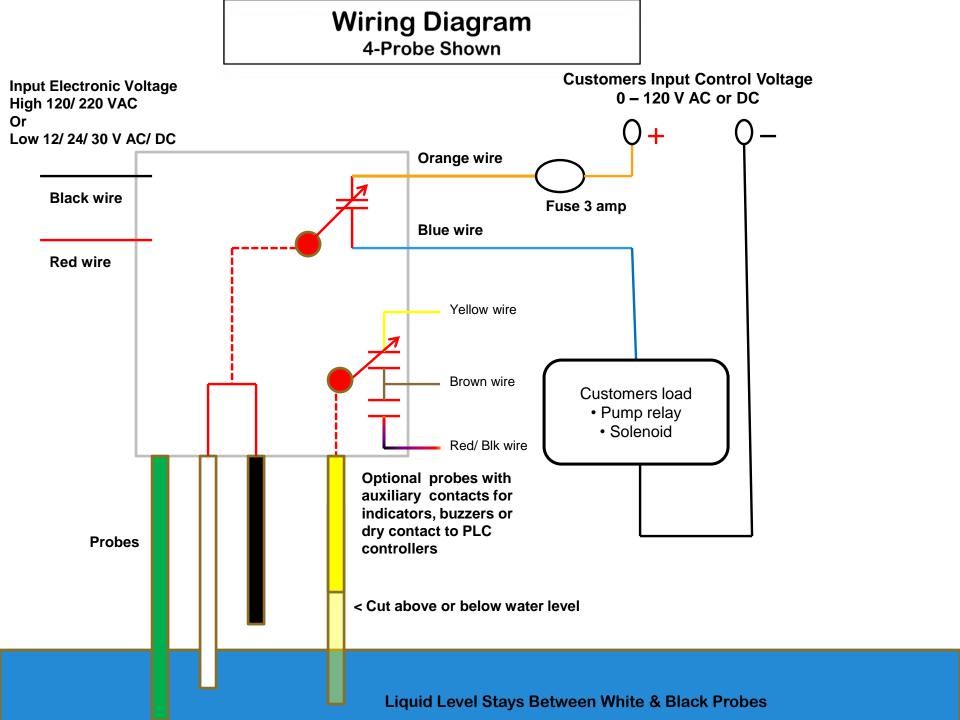
6 Probe - \$839 6PIN120/29 - 120VAC, 29" Probes, Pump In

Pump In 6POUTACDC/29 - 12-30V DC or AC, 29" Probes, Pump Out

6 feet of cable length. Standard 304 stainless steel probes

red (NC) & blue (NO).

**6POUT120/29** – 120VAC, 29" Probes, Pump Out





Our Guarantee 30 Day 100 % Satisfaction 1 Year warranty on parts & labor Tech Support, 8am - 4pm EST

# **LED Status Codes Explanation**

Solid LED normal operation

- ☐ Blinks at 1 second intervals, time to clean probes, signal strength between probes getting low, unit in capacitive mode, unit still works normally.
- ☐ Blinks 2 times every 5 seconds, pump contact has been on for more then 1 hour, maintenance personnel need to be notified.
- ☐ Blinks 3 times every 5 seconds, high conductivity (short between probes) with high conductive liquid this may be normal but usually indicates something metallic between probes.
- ☐ Blinks 4 times every 5 seconds, high build-up on probe (not seeing white probe) causing pump to short cycle.

The highest priority code is in the capacitive mode at 1 blink a second. The capacitive mode over rides all other codes indicating the probes need to be cleaned.

Clean probes and clear error codes by resetting power to electronics.

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