# LLC4 SERIES

## Octal Plug-In Liquid Level Controls





8-PIN

## Description

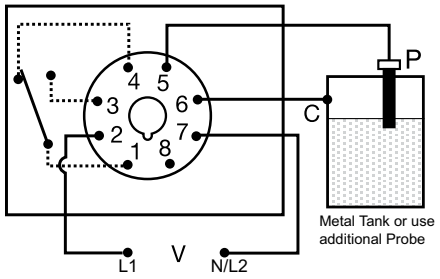
The LLC4 combines resistance sensing circuitry with solid-state timing to provide single probe level maintenance. On adjustable units, the sensitivity adjustment allows accurate level sensing while ignoring foaming agents and floating debris. Isolated 12VAC is provided at the probe to prevent electrolysis. A trickle current of less than 1mA determines the presence or absence of conductive liquid between the probe and common. The LLC4 Series can be used with many types of low voltage (resistance changing) transducers to perform other control functions like temperature limit control, photo limit control, condensation sensing, and ice sensing.

### Operation

**Drain (Pump-Down Mode):** When the liquid level rises and touches the probe, the time delay begins. This time delay prevents rapid cycling of the output relay and its load. At the end of the time delay, the output relay energize and remain energized until the liquid level falls below the probe level. The output relay de-energize and remain de-energized until the liquid rises and touches the probe.

**Fill (Pump-Up Mode):** When the liquid level falls below the probe, the time delay begins. This time delay prevents rapid cycling of the output relay and its load. At the end of the time delay, the output relay energize and remain energized until the liquid level rises and touches the probe. The output relay then de-energize and remain de-energized until the liquid level again falls below the probe level.

## Wiring Diagram




P = Probe
C = Probe Common
V = Voltage

Relay contacts are isolated.

Connect common to conductive tank. Additional probe is necessary for non-conductive or insulated tanks.

## Features & Benefits

| FEATURES | BENEFITS |
|---|---|
| **Isolated 12VAC probes** | Prevents scale buildup on probe |
| **Industry standard 8-pin octal plug connection** | Eliminates need for special connectors |
| **Sensitivity adjustment** | Provides accurate level sensing while ignoring foam or floating debris |

## Ordering Information

| MODEL | INPUT VOLTAGE | OPERATION | TIME DELAY | SENSE RESISTANCE | | MODEL | INPUT VOLTAGE | OPERATION | TIME DELAY | SENSE RESISTANCE |
|---|---|---|---|---|---|---|---|---|---|---|
| LLC42A10A | 24VAC | Drain | 10s | Adjustable 1 - 250kΩ | | LLC44B1A | 120VAC | Fill | 1s | Adjustable 1 - 250kΩ |
| LLC42A1A | 24VAC | Drain | 1s | Adjustable 1 - 250kΩ | | LLC44A60A | 120VAC | Drain | 60s | Adjustable 1 - 250kΩ |
| LLC42B15A | 24VAC | Fill | 15s | Adjustable 1 - 250kΩ | | LLC44B20A | 120VAC | Fill | 20s | Adjustable 1 - 250kΩ |
| LLC44A10A | 120VAC | Drain | 10s | Adjustable 1 - 250kΩ | | LLC44B2A | 120VAC | Fill | 2s | Adjustable 1 - 250kΩ |
| LLC44A15A | 120VAC | Drain | 15s | Adjustable 1 - 250kΩ | | LLC44B30A | 120VAC | Fill | 30s | Adjustable 1 - 250kΩ |
| LLC44A1A | 120VAC | Drain | 1s | Adjustable 1 - 250kΩ | | LLC44B4A | 120VAC | Fill | 4s | Adjustable 1 - 250kΩ |
| LLC44A2A | 120VAC | Drain | 2s | Adjustable 1 - 250kΩ | | LLC44B5A | 120VAC | Fill | 5s | Adjustable 1 - 250kΩ |
| LLC44A4A | 120VAC | Drain | 4s | Adjustable 1 - 250kΩ | | LLC44B5F100 | 120VAC | Fill | 5s | Fixed 100kΩ |
| LLC44A5A | 120VAC | Drain | 5s | Adjustable 1 - 250kΩ | | | | | | |

If you don't find the part you need, call us for a custom product 800-843-8848

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## Accessories



**BZ1 Front Panel Mount Kit**
Provides an easy method of through-the-panel mounting of 8- or 11-pin plug-in timers, flashers, and other controls.



**NDS-8 Octal 8-pin Socket**
8-pin 35mm DIN rail or surface mount. Surface mounted with two #6 (M 3.5 x 0.6) screws or snaps onto a 35 mm DIN rail. Uses PSC8 hold-down clips.



**PSC8 Hold-down Clips**
Securely mounts plug-in controls in any position. Provides protection against vibration. Use with NDS-8 Octal Socket. Sold in pairs.



**PHST-38QTN Electrode**
Designed for a maximum steam pressure of 240 PSI; 400° F. UL353 Recognized.



**LLP-24 Threaded Probe (24")**
Threaded stainless steel probe measuring 24" (61 cm) long. For use with PHST-38QTN liquid level control electrodes.

## Specifications

### Control

| | |
|---|---|
| **Type** | ON/OFF (single level) resistance sensor with built-in time delay to prevent rapid cycling |
| **Sensing Voltage** | 12VAC |
| **Sensing Resistance** | Fixed or adjustable to 250KΩ |
| **Sensing Resistance Tolerance** | Adjustable: 1K ±500Ω at low end; 250K ±25% at high end<br>Factory fixed: ±10% or 500Ω, whichever is greater |

### Input

| | |
|---|---|
| **Voltage** | 24, 120, or 230VAC |
| **Tolerance** | |
| **24VAC** | -15%, +20% |
| **120 & 230VAC** | -20%, +10% |
| **AC Line Frequency** | 50/60 Hz |

### Output

| | |
|---|---|
| **Type** | Electromechanical relay |
| **Form** | Isolated, SPDT |
| **Rating** | 4A resistive @ 240VAC;<br>1/10 hp @ 240VAC |

### Protection

| | |
|---|---|
| **Surge** | IEEE C62.41-1991 Level A |
| **Isolation Voltage** | ≥ 1500V RMS between input, output & probe |

### Mechanical

| | |
|---|---|
| **Mounting** | Plug-in socket |
| **Termination** | Octal 8-pin plug-in |
| **Dimensions** | **H** 73.9 mm (2.91"); **W** 60.7 mm (2.39");<br>**D** 45.2 mm (1.78") |

### Environmental

| | |
|---|---|
| **Operating/Storage Temperature** | -20° to 60°C/-40° to 80°C |
| **Weight** | ≅ 6 oz (170 g) |

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