

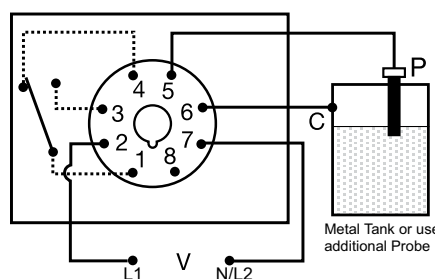
## LLC4 SERIES

### Octal Plug-In Liquid Level Controls



8-PIN

### 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.

For dimensional drawing see: Appendix, page 513, Figure 33.

### 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.

### Features & Benefits

FEATURES	BENEFITS
<b>Isolated 12VAC probes</b>	Prevents scale buildup on probe
<b>Industry standard 8-pin octal plug connection</b>	Eliminates need for special connectors
<b>Sensitivity adjustment</b>	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	24VAC	Fill		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					

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## LLC4 SERIES

### 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

12VAC

Fixed or adjustable to 250KΩ

##### Sensing Voltage

##### Sensing Resistance

##### Sensing Resistance

##### Tolerance

Adjustable: 1K ±500Ω at low end;

250K ±25% at high end

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;

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");

**D** 45.2 mm (1.78")

#### Environmental

##### Operating/Storage

##### Temperature

-20° to 60°C/-40° to 80°C

##### Weight

≈ 6 oz (170 g)