

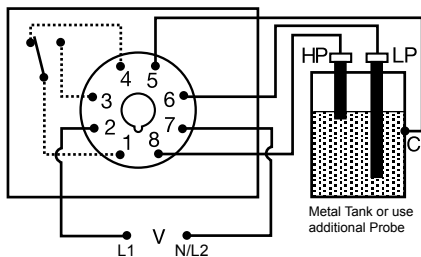
## LLC5 SERIES

### Liquid Level Controls



8-PIN

### Wiring Diagram



HP = HIGH LEVEL PROBE  
LP = LOW LEVEL 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.

### Description

The LLC5 provides dual probe conductive liquid level control in a convenient octal plug-in package. Models are available for fixed fill or drain operation. Isolated, pulsed DC voltage on the probes prevents electrolytic plating. Less than 1 mA of current is used to sense the presence of conductive liquid between the probes and common. On adjustable units, the sensitivity adjustment eliminates false tripping caused by floating debris and foaming agents.

### Operation

**Drain (Pump-Down Mode):** When the liquid level rises and touches the high level probe, the output relay and LED energize and remain energized until the liquid level falls below the low level probe. The output relay and LED de-energize and remain de-energized until the liquid rises and touches the high level probe.

**Fill (Pump-Up Mode):** When the liquid level falls below the low level probe, the output relay and LED energize and remain energized until the liquid level rises and touches the high level probe. The output relay and LED de-energize and remain de-energized until the liquid level again falls below the low level probe.

### Features & Benefits

| FEATURES                             | BENEFITS                                                                              |
|--------------------------------------|---------------------------------------------------------------------------------------|
| <b>Unique Probe Protection logic</b> | Probes are protected from scale build up through pulsed DC signal between the probes. |
| <b>LED status indicator</b>          | Visual indication of relay engagement in pump-up or pump-down activity                |
| <b>Isolated 5A SPDT contacts</b>     | Allows control of loads for AC voltage                                                |

### Ordering Information

| MODEL     | LINE VOLTAGE | DESCRIPTION                                                                                               |
|-----------|--------------|-----------------------------------------------------------------------------------------------------------|
| LLC52AA   | 24VAC        | For Drain (pump-down) operation with adjustable sense resistance                                          |
| LLC52BA   | 24VAC        | For Fill (pump-up) operation with adjustable sense resistance                                             |
| LLC54AA   | 120VAC       | For Drain (pump-down) operation with adjustable sense resistance                                          |
| LLC54AAS  | 120VAC       | For Drain (pump-down) operation with adjustable sense resistance and reverse connection (#8 low, #6 high) |
| LLC54AF10 | 120VAC       | For Drain (pump-down) operation with fixed sense resistance of 10 kΩ                                      |
| LLC54BA   | 120VAC       | For Fill (pump-up) operation with adjustable sense resistance                                             |
| LLC54BAS  | 120VAC       | For Fill (pump-up) operation with adjustable sense resistance and reverse connection (#8 low, #6 high)    |
| LLC56AA   | 230 VAC      | For Drain (pump-down) operation with adjustable sense resistance                                          |

### 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. Rated at 10A @ 300VAC. 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.

**Note:** use of the PSC8 clips partially covers the LED window of the LLC5 unit. Use of alternative socket base P1011-6 with its corresponding hold down clips PSC8B8 do not cover up the LED window, but the socket base is not DIN rail mountable.

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

# Protection Relays

## Pump Controls and Liquid Level Controls

# LLC5 SERIES

## Accessories



**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

|                                      |                                                                                                                                                 |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control Type</b>                  | Resistance sensing for high & low level detection of conductive liquids<br>Pulsed DC at probe terminals<br>Factory fixed or adjustable to 100KΩ |
| <b>Sensing Voltage</b>               | Adjustable: 1K ±500Ω at low end;                                                                                                                |
| <b>Sensing Resistance</b>            | 100KΩ ±25%, 0% at high end                                                                                                                      |
| <b>Sensing Resistance Tolerance</b>  | Factory fixed: ±10% or 500Ω whichever is greater<br>Debounce time delay <1s                                                                     |
| <b>Response Time</b>                 |                                                                                                                                                 |
| <b>Input Tolerance</b>               |                                                                                                                                                 |
| <b>24VAC</b>                         | -15%, +20%                                                                                                                                      |
| <b>120 &amp; 230VAC</b>              | -20%, +10%                                                                                                                                      |
| <b>AC Line Frequency</b>             | 50/60 Hz                                                                                                                                        |
| <b>Output Type</b>                   | Electromechanical relay                                                                                                                         |
| <b>Form</b>                          | Isolated, SPDT                                                                                                                                  |
| <b>Rating</b>                        | 5A resistive @ 240VAC, 1/10 hp @ 240VAC                                                                                                         |
| <b>Protection</b>                    |                                                                                                                                                 |
| <b>Isolation Voltage</b>             | ≥ 1500V RMS between input, output, & probe                                                                                                      |
| <b>Mechanical</b>                    |                                                                                                                                                 |
| <b>Mounting</b>                      | Plug-in socket                                                                                                                                  |
| <b>Dimensions</b>                    | <b>H</b> 60.7 mm (2.39"); <b>W</b> 45.2 mm (1.78");<br><b>D</b> 76.5 mm (3.01")                                                                 |
| <b>Termination</b>                   | Octal 8-pin plug-in                                                                                                                             |
| <b>Environmental</b>                 |                                                                                                                                                 |
| <b>Operating/Storage Temperature</b> | -20° to 60°C / -40° to 80°C                                                                                                                     |
| <b>Weight</b>                        | 6 oz (170 g) approx.                                                                                                                            |