

Liquid Level Control

LLC4 Series

Single Probe



10 YEAR WARRANTY

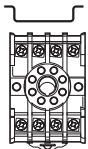
- Single Probe Level Control for Conductive Liquids
- Adjustable or Fixed Sensing up to 250KΩ
- Fill or Drain Operation Available
- 24, 120, or 230 V AC Models are Available
- Isolated AC Voltage on the Probes
- 4 A Resistive SPDT Isolated Contacts

Approvals:

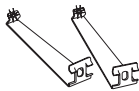
Accessories



Panel mount kit
P/N: BZ1



Octal
8 pin socket
P/N: NDS-8



Hold down clips
P/N: PSC8

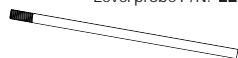


Electrode with
common connection
P/N: WCC-1138-3



Electrode
P/N: WCC-1138

Level probe P/N: LLP-24



See accessory pages for specifications.

Description

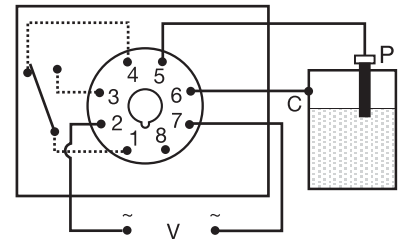
The LLC4 combines resistance sensing circuitry with solid state timing to provide single probe level maintenance. On adjustable units, the sensitivity adjustment allows accurate level sensing while ignoring foaming agents and floating debris. Transformer isolated 12 V AC is provided at the probe to prevent electrolysis. A trickle current of less than 1 mA determines the presence or absence of 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, a fixed 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 energizes and remains energized until the liquid level falls below the probe. The output relay then de-energizes and remains de-energized until the liquid again touches the probe.

Fill (Pump Up Mode): When the liquid level falls below the probe, a fixed 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 energizes and remains energized until the liquid level rises and touches the probe. The output relay then de-energizes and remains de-energized until the liquid level again falls below the probe.

Connection



Relay contacts are isolated. Dashed lines are internal connections.

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

P = Probe C = Probe Common V = Voltage

Ordering Table

LLC4 Series	X Input	X Operation	X Time Delay (Seconds)	X Sense Resistance
	-2 - 24 V AC	-A - Drain	-Specify fixed delay (1 ... 60) secs. in 1 s increments	-A - Adjustable
	-4 - 120 V AC	-B - Fill		-F - Fixed
	-6 - 230 V AC			Specify fixed resistance (1 ... 250) in 1K Ω increments

Example P/N: LLC44A1A Fixed – LLC46B5F50

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Technical Data

Control Type Sense Voltage Sense Resistance Sense Resistance Tolerance	ON/OFF (Single Level) Resistance sensor with built-in time delay to prevent rapid cycling 12 V AC at probe terminals Factory fixed or adjustable to 250K Ω Adjustable - guaranteed range Factory fixed +/-10%
Input Voltage Tolerance Frequency	24, 120, or 230 V AC -15% ... +20% -20% ... +10% 50 ... 60 Hz
Output Type Form Rating	Electromechanical relay Isolated single pole double throw (SPDT) contacts 4 A resistive at 240 V AC; 1/10 hp at 240 V AC
Protection Surge Isolation Voltage	IEEE C62.41-1991 Level A ≥ 1500 V RMS between input, output, & probe
Mechanical Mounting Termination Package	Plug-in socket 8 Pin plug-in 2.91 x 2.39 x 1.78 in. (73.9 x 60.7 x 45.2 mm)
Environmental Operating Temperature Storage Temperature Weight	-20°C ... +60°C -40°C ... +80°C $\cong 6$ oz (170 g)

Mechanical View

