

Liquid Level Control

LLC1 Series

Single Probe



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

Approvals:

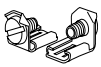
Accessories



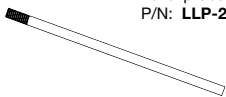
Electrode
P/N: **PHST-38QTN**



Female quick connect
P/Ns:
P1015-13 (AWG 10/12)
P1015-64 (AWG 14/16)
P1015-14 (AWG 18/22)



Quick connect to screw adaptor
P/N: **P1015-18**



Level probe
P/N: **LLP-24**

See accessory pages for specifications.

Description

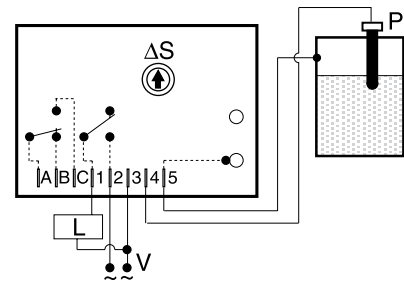
The LLC1 Series is a single probe conductive liquid level control designed for OEM equipment and commercial appliances. This device may be ordered in one of two modes: Fill or Drain. A factory fixed time delay (1-60 s) prevents rapid cycling of the output relay. On adjustable units, the sensitivity adjustment 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 LLC1 Series printed circuit board is conformal coated to resist moisture and corrosion.

Operation

Drain: 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: 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



Connect common to conductive tank or an additional probe as required. Contacts A, B, & C are isolated.

P = Probe L = Load V = Voltage
ΔS = Sensitivity Adjustment

Ordering Table

LLC1 Series	X Input	X Operation	X Time Delay	X Sense Resistance	X Mounting
	-2 - 24 V AC	-A - Drain	Specify fixed delay (1 ... 60) secs. in 1 s increments	-A - Adjustable	Blank - Surface Mount
	-4 - 120 V AC	-B - Fill		-F - Fixed	-X - 0.50 in. nylon standoffs (three)
	-6 - 230 V AC			Specify fixed resistance (1 ... 250) in 1KΩ increments	

Example P/N: **LLC14A7A** Fixed - **LLC14B1F100X**

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Liquid level controls

Technical Data

Control		
Type		ON/OFF (Single Level) Resistance sensor with built-in time delay to prevent rapid cycling
Sense Voltage		12 V AC at probe terminals
Sense Resistance		Factory fixed or adjustable to 250KΩ
Sense Resistance Tolerance		Adjustable - guaranteed range Factory fixed +/-10%
Input		
Voltage		24, 120, or 230 V AC
Tolerance	24 V AC	-15% ... +20%
	120 & 230 V AC	-20% ... +10%
Frequency		50 ... 60 Hz
Output		
Type		Electromechanical relay
Form		SPST non-isolated & SPDT isolated contacts
Rating		10 A resistive at 120/240 V AC & 28 V DC; 1/3 hp at 120/240 V AC
Life		Mechanical - 1 x 10 ⁷ ; Electrical - 1 x 10 ⁵
Protection		
Isolation Voltage		≥ 1500 V RMS between input, output, & probe
Mechanical		
Mounting		Surface mount to probe COMMON with two #6 (M3.5 x 0.6) screws or 0.50 inch (12.7 mm) nylon standoffs with three #6 (M3.5 x 0.6) screws (use Terminal 5 for probe COMMON)
Termination		0.25 in. (6.35 mm) male quick connect terminals
Package (Open Board)		3.5 x 2.75 x 2 in. (88.9 x 69.9 x 50.8 mm)
Environmental		
Operating / Storage Temperature		-20°C ... +55°C / -40°C ... +80°C
Protection		Printed circuit board is conformal coated to resist moisture and corrosion
Weight		≈ 8.7 oz (247 g)

Mechanical View

