

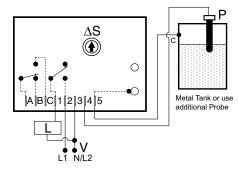
# LLC1 SERIES

## **Open Board Liquid Level Controls**

# (€**Я**) @



### Wiring Diagram



P = Probe L = Load V = Voltage  $\Delta S = Sensitivity$ Adjustment

Contacts A, B & C are isolated.

Connect common to conductive tank or an additional probe as required.

### Description

The LLC1 Series is a single probe conductive liquid level control designed for OEM equipment and commercial appliances. This unit may be ordered with fixed fill or fixed drain operation. A time delay (1-60s) prevents rapid cycling of the output relay. On adjustable units, the sensitivity adjustment allows accurate level sensing while ignoring foaming agents and floating debris. Isolated AC voltage is provided at the probe to prevent electrolysis. A trickle current of less than 1mA 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 (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.

#### Features & Benefits

FEATURES	BENEFITS			
Isolated AC voltage on probe	Prevents scale buildup on the probe			
Open PCB design	Cost effective design for OEM equipment and commercial appliances			
Conformally coated PCB	Protects against moisture and corrosion			
Sensitivity adjustment	Provides accurate level sensing while ignoring foam or floating debris			

#### **Ordering Information**

-					
MODEL	INPUT VOLTAGE	OPERATION	TIME DELAY	SENSE RESISTANCE	MOUNTING
LLC14A1AX	120VAC	Drain	1s	Adjustable	0.5 in nylon standoffs (3)
LLC14A5AX	120VAC	Drain	5s	Adjustable	0.5 in nylon standoffs (3)
LLC14B15AX	120VAC	Fill	15s	Adjustable	0.5 in nylon standoffs (3)
LLC14B1AX	120VAC	Fill	1s	Adjustable	0.5 in nylon standoffs (3)
LLC14B60AX	120VAC	Fill	60s	Adjustable	0.5 in nylon standoffs (3)
LLC16A25AX	230VAC	Drain	25s	Adjustable	0.5 in nylon standoffs (3)
LLC16A3AX	230VAC	Drain	3s	Adjustable	0.5 in nylon standoffs (3)

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



#### Accessories

LLC1 SERIES



P1015-13 (AWG 10/12), P1015-64 (AWG 14/16), P1015-14 (AWG 18/22) Female Quick Connect These 0.25 in. (6.35 mm) female terminals are constructed with an insulator barrel to provide strain relief.



**P1015-18 Quick Connect to Screw Adapter** Screw adapter terminal designed for use with all modules with 0.25 in. (6.35 mm) male quick connect terminals.



PHST-380TN 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

Sense Voltage

Sense Resistance Sense Resistance Tolerance

#### **Time Delay**

Range Input Voltage Tolerance 24VAC 120 & 230VAC AC Line Frequency Output Type Form Rating

Life Protection Surge Isolation Voltage Mechanical Mounting

Termination Dimensions (Open Board)

#### Environmental

Operating/Storage Temperature Coating

Weight

#### ON/OFF (single level) resistance sensor with built-in time delay to prevent rapid cycling Low voltage AC between probe & common.

built-in time delay to prevent rapid cycling Low voltage AC between probe & common. Isolated from input & output. Fixed or adjustable to  $250K\Omega$ Adjustable - guaranteed range Factory fixed  $\pm 10\%$ 

Fixed 1 - 60s in 1s increments

24, 120, or 230VAC

-15% - 20% -20% - 10% 50/60 Hz

Electromechanical relay Non-isolated, SPST & Isolated, SPDT contacts 10A resistive @ 120/240VAC & 28VDC; 1/3 hp @ 120/240VAC Mechanical - 1 x 10<sup>7</sup>; Electrical - 1 x 10<sup>5</sup>

IEEE C62.41-1991 Level A  $\geq$  1500V RMS between input, output & probe

Surface mount to probe common with two #6 (M3.5 x 0.6) screws or 0.50 in. (12.7 mm) nylon standoffs with three #6 (M3.5 x 0.6) screws (use Terminal 5 for probe common) 0.25 in. (6.35 mm) male quick connect terminals H 88.9 mm (3.5"); W 69.9 mm (2.75"); D 50.8 mm (2.0")

-20° to 55°C/-40° to 80°C

-20° to 55°C/-40° to 80°C Printed circuit board is conformal coated to resist moisture and corrosion  $\approx 8.7$  oz (247 g)

# **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for Controllers category:

Click to view products by Littelfuse manufacturer:

Other Similar products are found below :

61FGPN8DAC120 CV500SLK21 70177-1011 F03-03 HAS C F03-31 81550401 FT1A-C12RA-W FT1A-C14SA-B 88981106 H2CAC24A H2CRSAC110B R88A-CRGB003CR-E R88ARR080100S R88A-TK01K DCN1-1 DRT2ID08C DTB4896VRE DTB9696CVE DTB9696LVE E53-AZ01 E53E01 E53E8C E5C4Q40J999FAC120 E5CWLQ1TCAC100240 E5GNQ03PFLKACDC24 B300LKL21 NSCXDC1V3 NSH5-232CW-3M NT20SST122BV1 NV-CN001 OAS-160-N C40PEDRA K31S6 K33-L1B K3MA-F 100-240VAC K3TX-AD31A 89750101 L595020 SRM1-C02 SRS2-1 FT1A-C14SA-S G32X-V2K 26546803 26546805 PWRA440A CPM1AETL03CH CV500SLK11 3G2A5BI081 3G2A5LA122 3G2A5LK010E