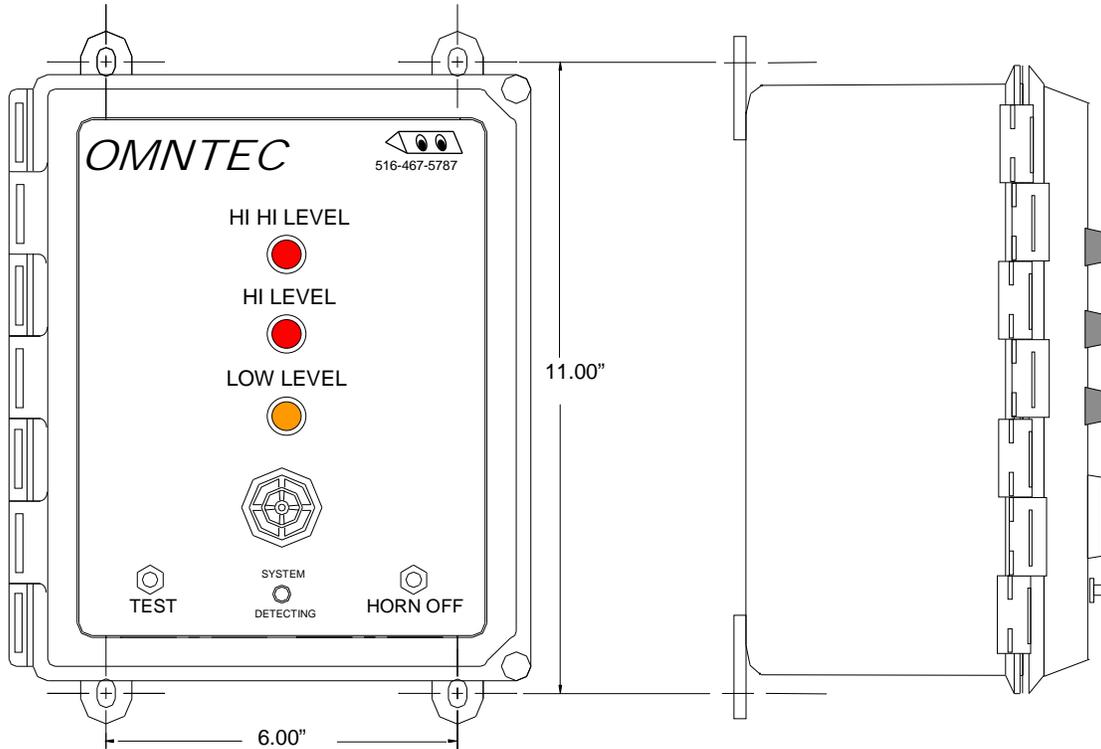


**OMNTEC**

**ELP21LU3-LF-HHLO**

**THREE CHANNEL**



**SPECIFICATIONS**

**POWER INPUT**

85-125 VAC, 47-440 Hz  
16 Watts maximum

**POWER TO SENSORS**

13.80 VDC @ 13 ma

**RELAY OUTPUTS**

SPST normally open dry contacts .5 AMPS, 120 AC/DC switches when an alarm condition occurs

**WEIGHT      DIMENSIONS**

6 LBS.      (W) 9" x (H) 10.5"

**SENSOR CABLE**

Shielded 22 AWG UL-E118830 CM  
Maximum length 2000 feet

**ENCLOSURE      OPERATING TEMPERATURE**

NEMA 4X      -40° to 140° F

**AUDIO/VISUAL CONSOLE**

Audible alarm - 95 dB pulsing horn with 30 second timeout  
RED light - Indicates hi hi liquid level alarm and/or hi liquid level alarm for LF-series float sensor  
AMBER light - Indicates low liquid level alarm for LF-series float sensor  
TEST BUTTON- When pressed will test system electronics  
GREEN LIGHT- indicates the power is on  
Horn off button - Silences the audible alarm when pressed

**SENSORS**

(1) LF-3-SS - Three liquid level float sensor for hi hi, hi, and low levels, normally closed.

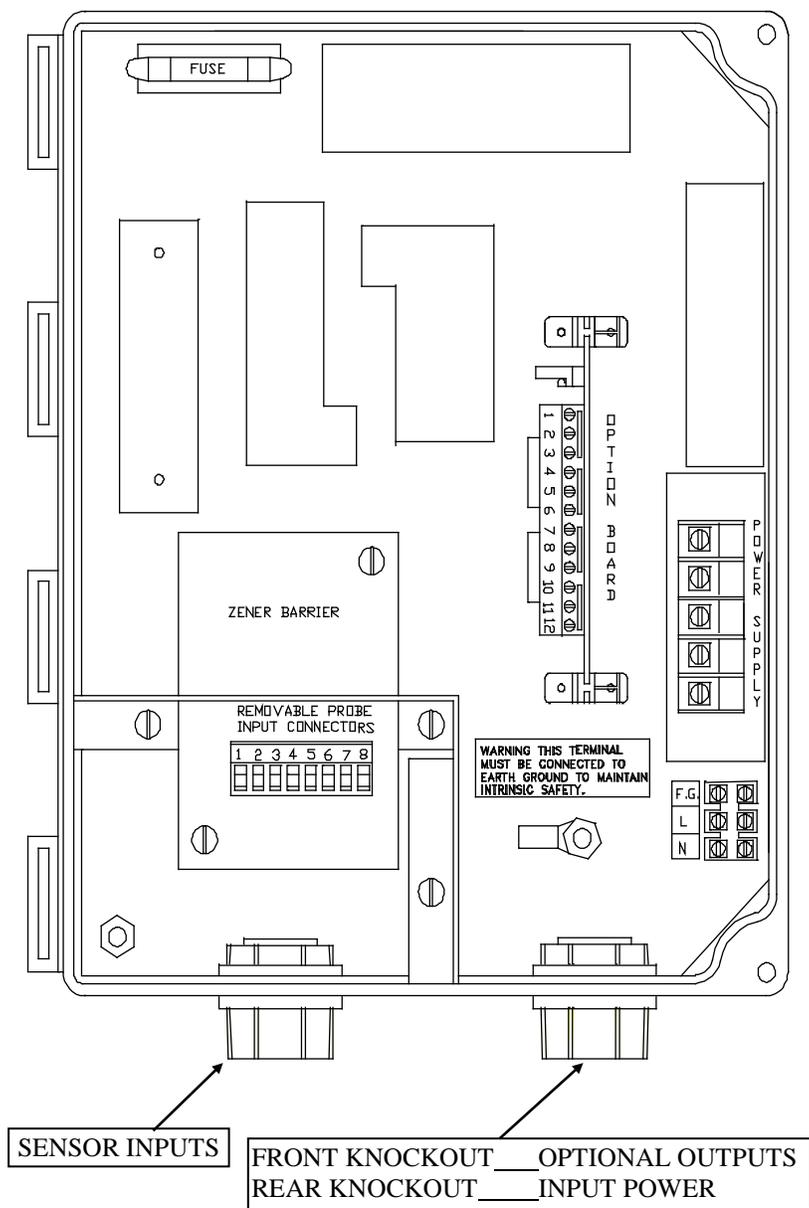
**ACCESSORIES**

RA-2 - audio/visual remote annunciator  
RLY-RA-1 - SPDT 5 amp 120V relay for pump off, pump on, and hi level.

**LABELS**

Provided with controller

# ELP21LU3-LF-HHLO CONTROLLER CONNECTION DIAGRAM



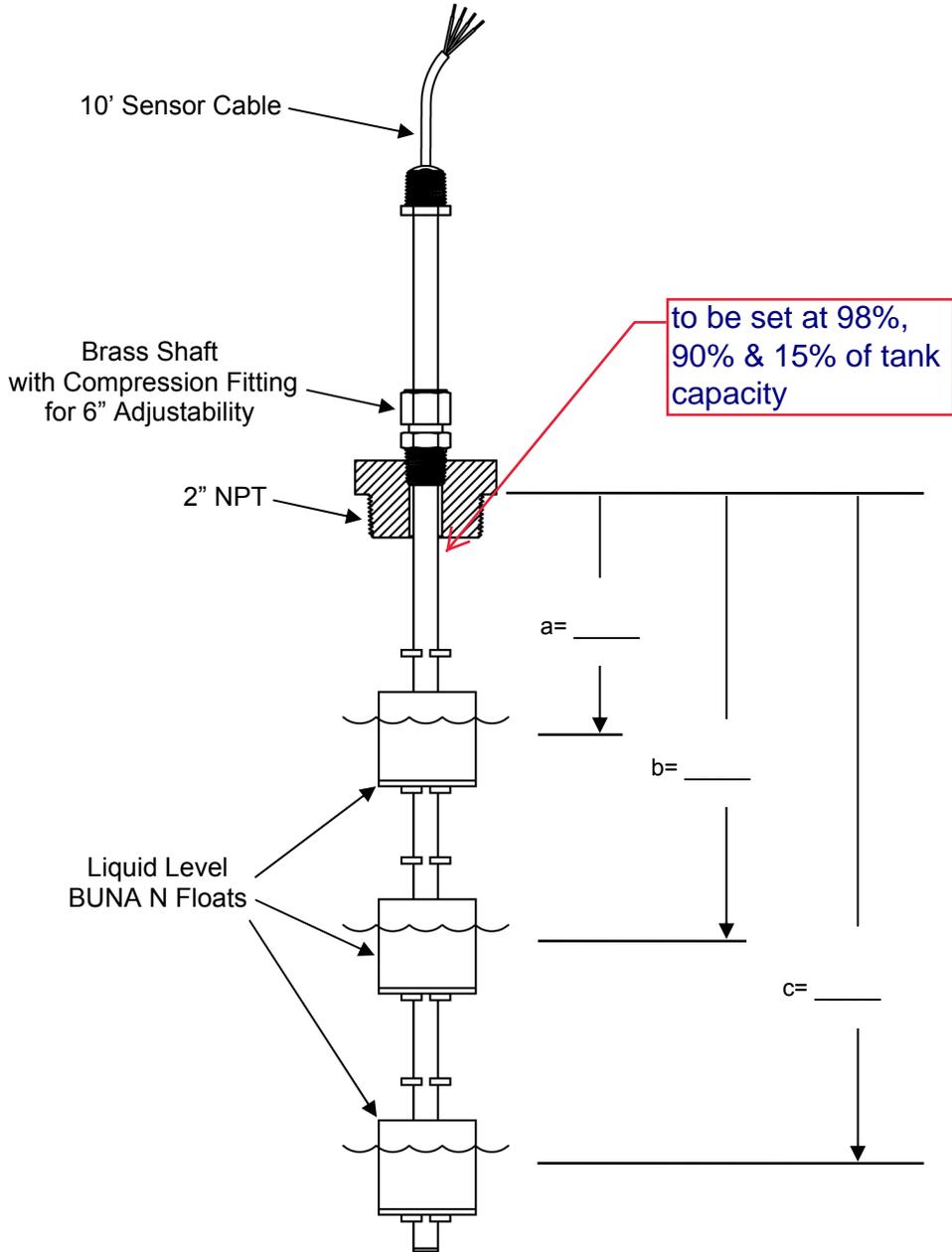
COLOR CODE		
CABLES FROM SENSOR TO REMOVABLE SENSOR INPUT CONNECTORS		
1	UNUSED	SENSOR #1
2	ORANGE	HI HI LEVEL
3	UNUSED	SENSOR #1
4	GREEN	HI LEVEL
5	UNUSED	SENSOR #1
6	RED	LOW LEVEL
7	BLACK .WHITE,BLUE	FROM SENSOR #1
8	SHIELD DRAIN	FROM SENSOR #1
WIRES TO OPTION BOARD		
WIRES FROM RA-SERIES REMOTE		
1	GREEN	-HORN
2	RED	+HORN
3	BLACK	GROUND
4	WHITE	SENSOR #1 HI HI LEVEL
5	ORANGE	SENSOR #1 HI LEVEL
6	BLUE	SENSOR #1 LOW LEVEL
WIRES FROM RELAY OUTPUTS		
7	COMMON	SENSOR #1
8	NORMALLY OPEN	LOW LEVEL
9	COMMON	SENSOR #1
10	NORAMLLY OPEN	HI LEVEL
11	COMMON	SENSOR #1
12	NORMALLY OPEN	HI HI LEVEL
120VAC		
WIRES TO POWER SUPPLY		
F.G.	FIELD GROUND	
L	LINE	
N	NEUTRAL	

**NOTE:** To maintain proper shielding, BLACK sensor wires and SHIELD DRAINS should not be connected together at sensors.

# LF-3-SL SENSOR DIMENSION

## APPROVAL SHEET

CUSTOMER
PO#
SO#
SHIP DATE
QUANTITY
PRODUCT



Dimensions should be calculated from the top of the tank or riser down to the required alarm level(s) in inches. Be sure to take into account any riser pipes or manway risers.

Name: \_\_\_\_\_

Company: \_\_\_\_\_

Signature: \_\_\_\_\_

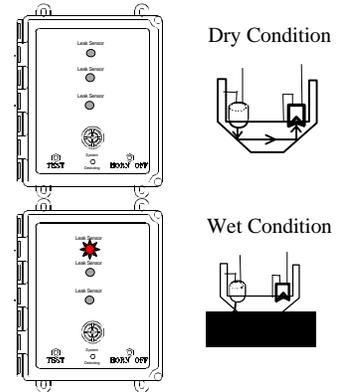
Date: \_\_\_\_\_

*Signature is required to release product to production.  
Custom parts are non cancellable and non returnable.*

# OMNTEC LU-SERIES SYSTEM OPERATION AND TEST INSTRUCTIONS

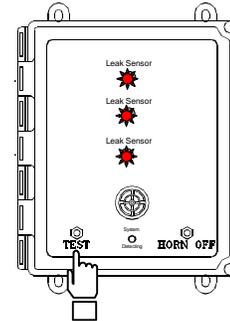
1. On the front panel the Green "SYSTEM DETECTING" light should be on indicating that system is up and running. Note: if all red lights are on the horn will not sound when test button is pressed.

2. If sensors are not in alarm, all Red lights should be off
- Optical sensors are solid state and use a normally closed light loop in a prism for sensing. When liquid is present at sensor, the normally closed loop of light is open, thus sending an alarm signal back to the alarm panel. The panel responds by turning on the appropriate light and sounding an audible alarm



3. Since system sensors are solid state and work with normally closed loop of light, sensors can be tested as follows:

- Hit the test button on alarm panel and observe panel lights
- If all lights illuminate and audible alarm sounds, system test is complete
- When test button is hit a signal is sent to sensor to turn its light off. What this does is put the sensor into an alarm condition
- The sensor then responds as explained in part (2)



4. System should be tested on a weekly basis

5. Every alarm, malfunction and test result should be recorded in a dated signed log

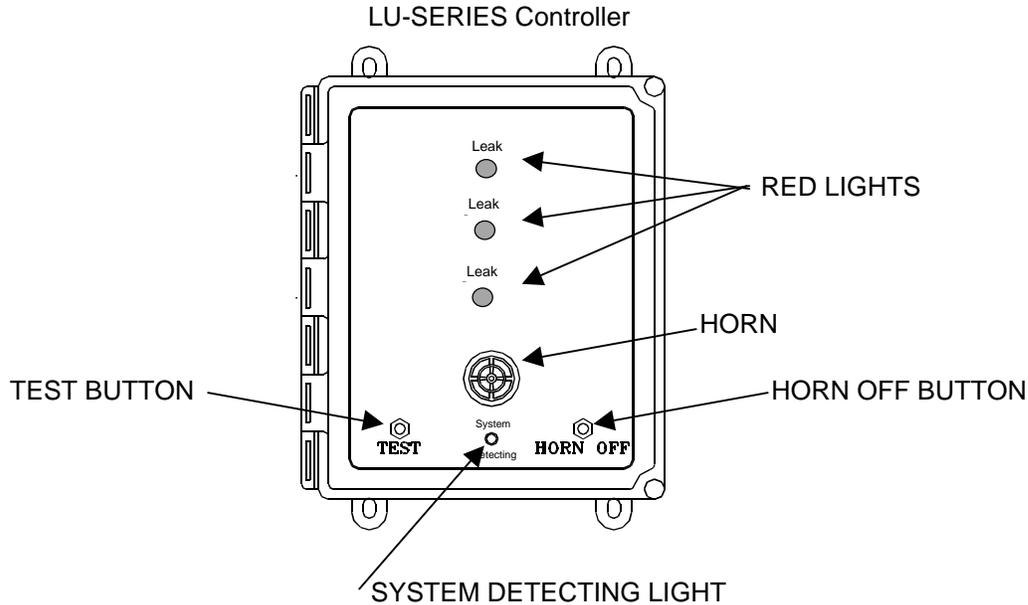
**Manufactured by:**

**Installed by:**



**OMNTEC** Mfg., Inc.  
1993 Pond Rd.  
Ronkonkoma, New York 11779  
Phone 631-981-2001 Fax 631-981-2007

# Troubleshooting Procedures



SYMPTOM	TROUBLESHOOTING PROCEDURE	RESULT
"Red Light" does not come on when test button is pressed.	1) Unplug sensors "Removable input connector" at controller. Does the "red Light" illuminate?	(YES) controller is functioning. Proceed to step 2.  (NO) controller is not functioning (consult factory).
	2) Check wiring at removable input connector. Concentrate on white, black and shield wire inputs from sensors, making sure no shorts are present. Re-plug connector and press test button. Does the "Red Light" illuminate?	(YES) system is functioning properly.  (NO) Proceed to step 3.
	3) Check splice at sensor for moisture or mis-wire (concentrating on white and black wires from sensor). Correct problem and press test button. Does the "Red Light" illuminate?	(YES) problem are in the wire connections at splice  (NO) sensor is not functioning properly. Proceed to step 4.
	4) Remove sensor from installation, connect at controller, shroud from light and press test button. Does the "Red Light" illuminate?	(YES) problem in wire run to sensor. System is functioning properly.  (NO) The sensor failed (consult factory)

SYMPTOM	TROUBLESHOOTING PROCEDURE	RESULT
"Red Light" remains on.	1) Check if sensor is actually in alarm (submerged)	(YES) correct alarm condition. (NO) proceed to step 2.
	2) Check wiring at removable input connector concentrating on red, white, black and shield wire inputs from sensors. Make sure no open circuits are present. Re-plug the connector and press test. Does the "Red Light" stay on?	(YES) proceed to step 3. (NO) System is functioning properly. Problem was in the wire or connections.
	3) Disconnect sensor wires from removable sensor input connector. Connect a jumper from sensors white wire input. Make sure all sensor wiring is disconnected. Does the "Red Light" stay on?	(YES) Controller is not functioning properly (consult factory) (NO) Controller is functioning properly. Proceed to step 4.
	4) Check splice at sensor for moisture or mis-wire. Correct problem. Does the "Red Light" stay on?	(YES) proceed to step 5. (NO) If light goes off before pressing test button and goes on after pressing test button System is functioning properly. Problem was in the connection or wire.
	5) Connect sensor directly to controller. Make sure sensor head is not exposed to light during test. Does the "Red Light" stay on?	(YES) Sensor is not functioning properly (consult factory) (NO) Problem is in the wire or connections.
Horn does not sound on controller when the "TEST" button is pressed.	1) Are any "Red Lights" illuminated on controller?	(YES) Make sure at least one input is not in alarm state. Then proceed to step 2. (NO) proceed to step 2.
	2) Shut down system for 30 seconds. Turn system back on. Does horn sound when hitting the "TEST" button?	(YES) Controller is functioning properly. (NO) Controller is not functioning properly. Proceed to step 3.
	3) While holding the "TEST" button down put a voltmeter on the positive and negative on the back of the horn. Do you get 13.8 volts +/- 1?	(YES) Your horn does not work. Replace horn. (NO) Your horn board is not working (consult factory)



## WARRANTY

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The seller OMNTEC Mfg., Inc. warrants to buyer, for one year: That all components meet specifications herein. All components are free of defects when properly installed, and maintained by user. The sellers sole obligation is to repair or replace parts found to be defective, or non-conforming after evaluation by factory. The liability of the seller shall not exceed the price paid for the components found to be defective. The above warranty is exclusive of all other warranties whether implied or expressed. Seller assumes no obligation for special or, indirect damages incurred by user.