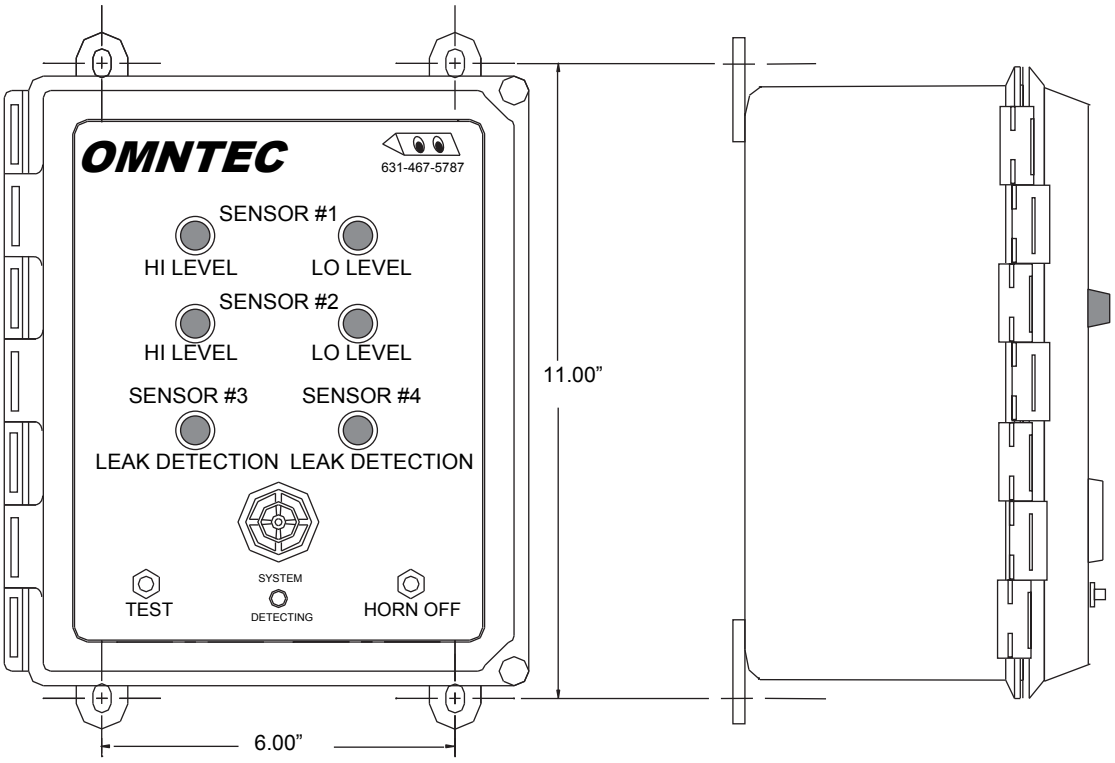
OMNTEC LU6-SP2

SPECIFICATIONS



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

POWER TO SENSORS
2 VDC @ 13 ma

RELAY OUTPUT
SPST normally open dry contacts 0.5 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 liquid alarm or hi level alarm for L-series sensors
AMBER light - Indicates lo level alarm for L-series sensor
TEST BUTTON - When pressed will actually test entire system electronics from control panel to sensors
GREEN LIGHT - Indicates the power is on
Horn off button - Silences the audible alarm when pressed

SENSORS

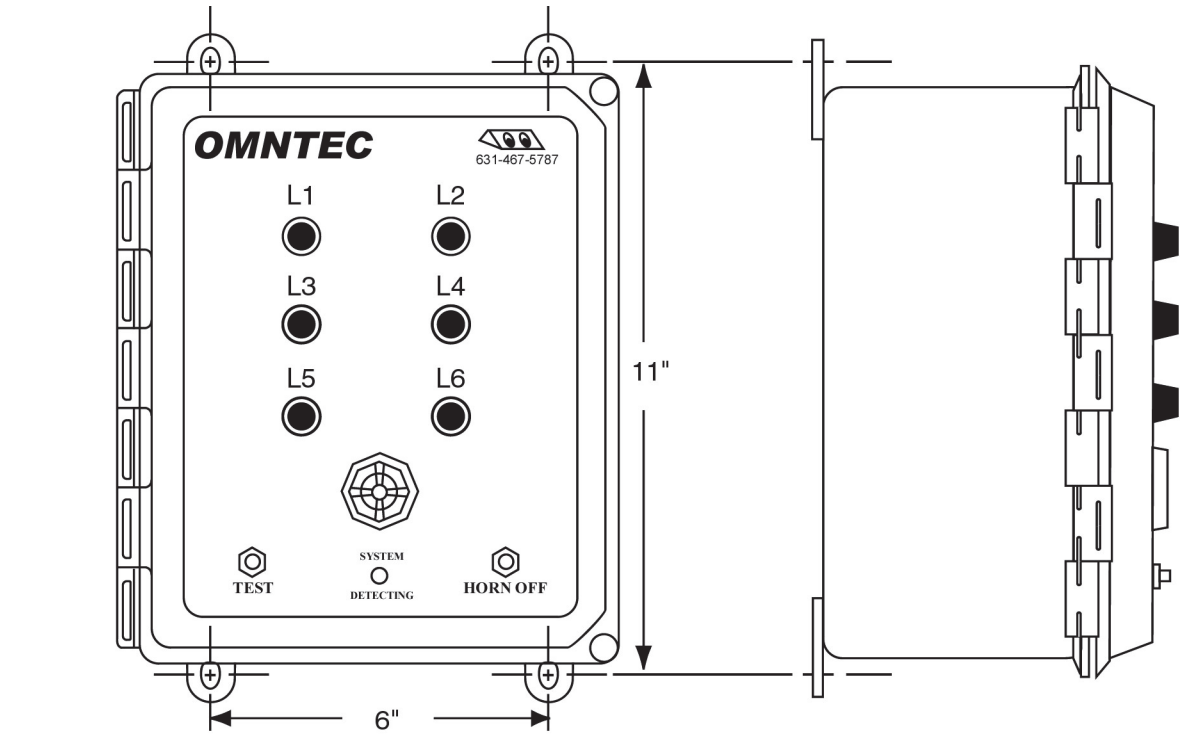
L-1	High level sensor
LS-ASC	Liquid sensor
LWF	Double wall liquid sensor
L-2	Dual level liquid optic sensor for hi and lo levels

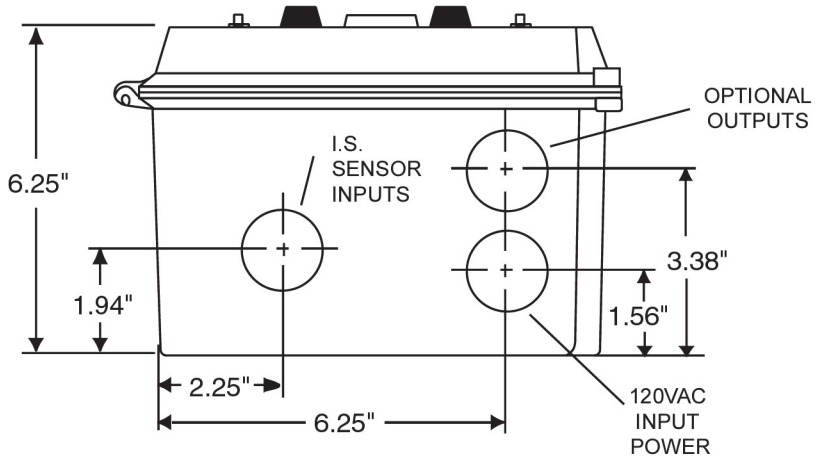
ACCESSORIES

RA-1	Audio/visual remote annunciator
RLY-RA	Relay (consult factory)
RA-1-NYS	Remote annunciator with strobe (consult factory)

LABELS
Provided with controller

Dimensions for mounting and knockouts





READ ALL INSTRUCTIONS PRIOR TO SYSTEM INSTALLATION. ALL WIRING IS TO BE DONE IN ACCORDANCE WITH ALL NATIONAL AND LOCAL ELECTRICAL CODES. POWER IS TO BE OFF DURING ANY WIRING. WIRE AND TEST ENTIRE SYSTEM BEFORE UTILIZING SK-3 CONNECTOR SEALING KITS. STANDARD EQUIPMENT IS COMPATIBLE WITH MOST PETROLEUM PRODUCTS. SOME CHEMICAL AND SOLVENTS REQUIRE SPECIFIC MATERIALS OF CONSTRUCTION. IF UNSURE OF COMPATIBLE CONTACT MANUFACTURER.

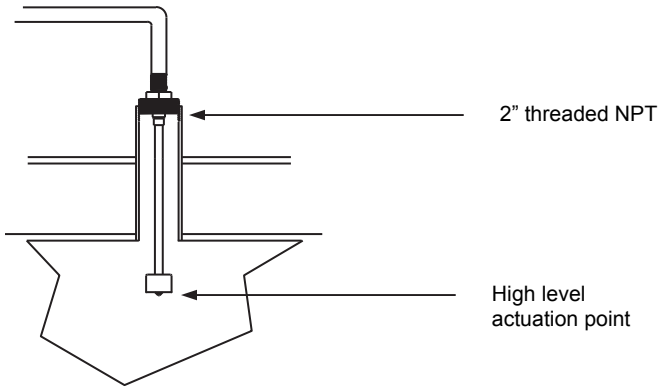
* For waste oil applications consult factory *

1. L-SERIES SENSOR

L-1 SENSOR

The L-1 sensor (see pg.8) is primarily used to detect a liquid level inside the tank. The sensor detects a single liquid level and is typically used for overfill protection at 90% tank capacity. Standard sensor part numbers are L-1-S (12”), L-1-L (20”), L-1-D (custom length).

The L-1 sensor is installed into the tank via the 2” bushing which is an integral part of the sensor. This sensor screws directly into a 2” female threaded NPT (use a reducer bushing if necessary).

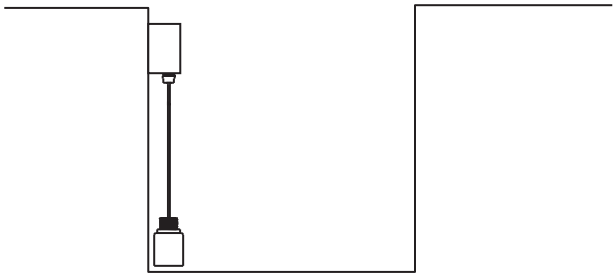


Connection of the sensor to the control unit cable is made in a junction box. For detailed wiring scheme refer to appropriate drawing (see pg.6 and 17). These connections must be made using supplied SK-3 connector sealing kit.

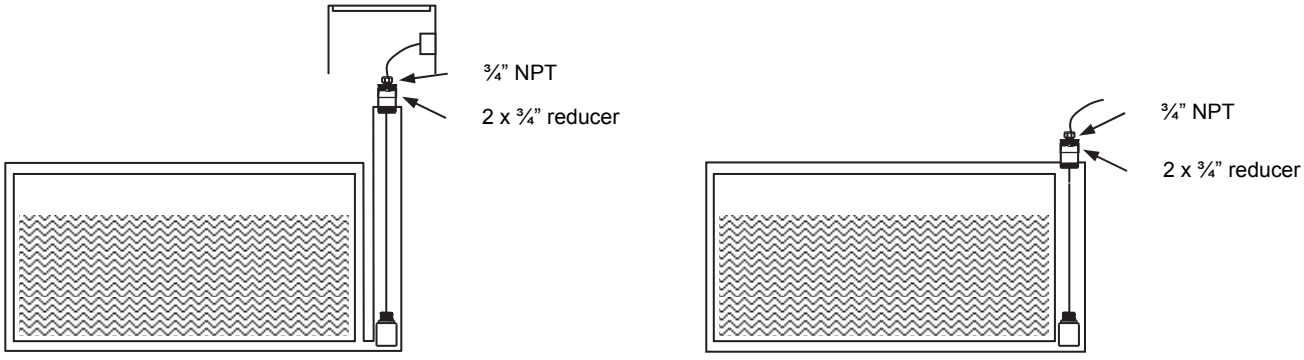
LS-ASC SENSOR

The LS-ASC sensor (see pg.7) is designed to detect liquid in sumps or containment areas and steel interstitial spaces for above ground and underground tanks.

1. To install the LS-ASC sensor as an above ground sump sensor mount a junction box between 2 and 3 feet above bottom of containment area. Attach sensor to junction box via conduit or cable clamp, leaving a ¼" clearance between the sensor end and the bottom of the containment area. For detailed wiring scheme refer to appropriate drawing (see pg.6 and 17). Connect sensor cables to control unit cables in junction box using supplied SK-3 connector sealing kit.



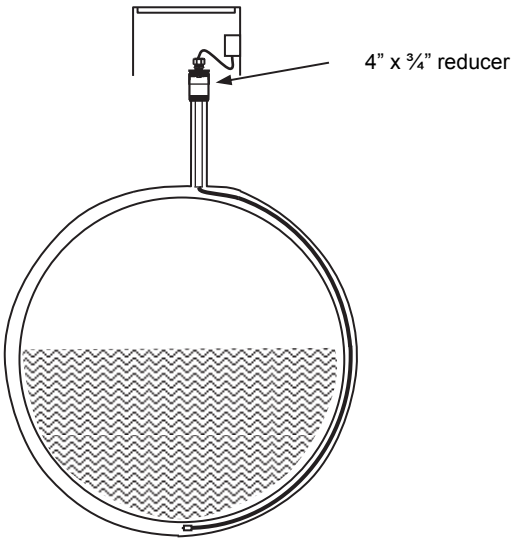
2. To install the LS-ASC as a doublewall tank sensor remove the oiltight from the sensor cable. Feed the cable through the appropriate bushing required to adapt the interstitial port to 3/4" NPT (oiltight). Feed wires through oiltight, leaving it loose. Gently lower sensor down interstitial port until it rests on the bottom. Install oiltight into the bushing. Pull sensor up by the cable until it just comes off the bottom. Maintain this position and tighten the oiltight fitting. This is required to seal the interstitial port. All connections are made using the supplied SK-3 connector kit.



LWF-* SENSOR

The LWF-* sensor (see pg.9) is designed to detect liquid in the interstitial space of a double wall fiberglass tank.

1. The LWF-* sensor is installed through the interstitial port. If the tank is pitched, locate the interstitial sensor at lowest elevation of tank. Insert sensor into the interstitial port and push down around outside of inner tank. When PVC handle contacts the inner tank the sensor should be located at the bottom of interstitial space. Reduce the riser to 3/4" NPT and install the supplied oiltight fitting. The oiltight fitting must be installed to prevent liquids from entering the interstitial space. Run conduit from interstitial man hole to the central junction box, located in the manway. Install a second oiltight on the sensor cable and pull sensor cable through conduit. Connect oiltight to conduit and tighten. For detailed wiring scheme refer to appropriate control drawing (see pg.6 and 17). Connect sensor wires in central junction box to control unit cable(s) and use SK-3 connector sealing kit.



2. CONTROL UNIT

The control unit (see pg.1) should be mounted in a manned area. Route sensor control cable through conduit from the junction box to the control unit. Sensor control cables enter the control unit through the output port only. The cables are wired as shown in the appropriate drawing (see pg.6). The control unit accepts any possible combination of L-series sensors.

INPUT POWER HOOKUP

Input power requirements are:
85 – 125 VAC
16 Watts max
47 – 440 Hz

Input power cable should be wired in accordance with all pertinent electrical codes. This cable should enter the control unit through the input power port only. The power is hooked up to the power supply and wired as per control drawing (see page 17). NOTE: EARTH GROUND TERMINAL MUST BE CONNECTED.

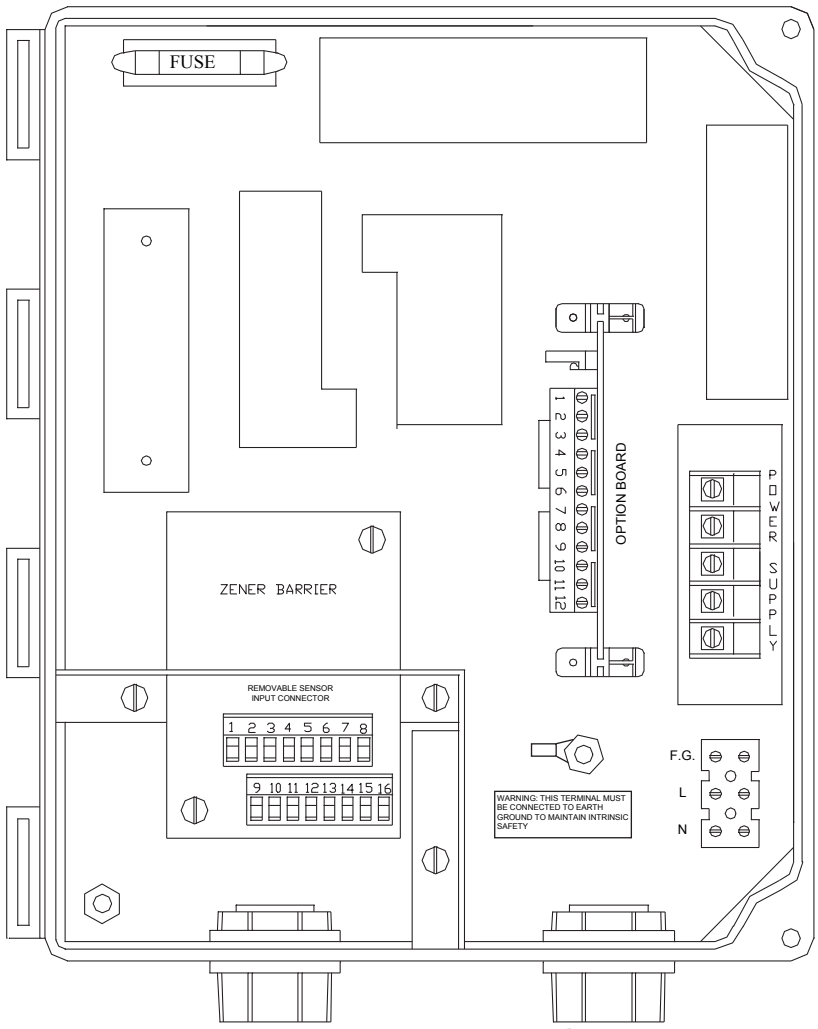
REMOTE ANNUNCIATOR OPTION

Mount remote annunciator (see pg.16) within audio / visual range of the filling operator. NOTE: the remote must be outside of the HAZARDOUS AREA. Pull appropriate low voltage wire from the remote to the control unit. See appropriate drawing for wiring details. Run wires through output port. Connect color coded nuts.

SK-3 CONNECTOR SEALING KIT

Make all splices using SK-3 connector kit (supplied)

LU6-SP2 Controller Connection Diagram



COLOR CODE

CABLES FROM SENSORS TO REMOVABLE SENSOR INPUT CONNECTORS

1	RED	L-2 HI LEVEL
2	WHITE	SENSOR #1
3	UNUSED	L-2 LO LEVEL
4	GREEN	SENSOR #1
5	RED	L-2 HI LEVEL
6	WHITE	SENSOR #2
7	BLACK	WIRES FROM
8	SHIELD DRAIN	SENSOR #1 & #2
9	BLACK	WIRES FROM
10	SHIELD DRAIN	LEAK SENSOR #3 & #4
11	UNUSED	L-2 LO LEVEL
12	GREEN	SENSOR #2
13	RED	SENSOR #3
14	WHITE	LEAK SENSOR
15	RED	SENSOR #4
16	WHITE	LEAK SENSOR

WIRES TO OPTION BOARD

WIRES FROM RA-SERIES REMOTE

1	GREEN	-HORN
2	RED	+HORN
3	BLACK	GROUND
4	WHITE	SENSOR #1 HI LEVEL
5	ORANGE	SENSOR #1 LO LEVEL
6	BLUE	SENSOR #2 HI LEVEL
7	BROWN	SENSOR #2 LO LEVEL
8	YELLOW	SENSOR #3 LEAK
9	PURPLE	SENSOR #4 LEAK
10	UNUSED	

WIRES FROM RELAY OUTPUTS

11	COMMON	ALL ALARM
12	NORMALLY OPEN	CONDITIONS

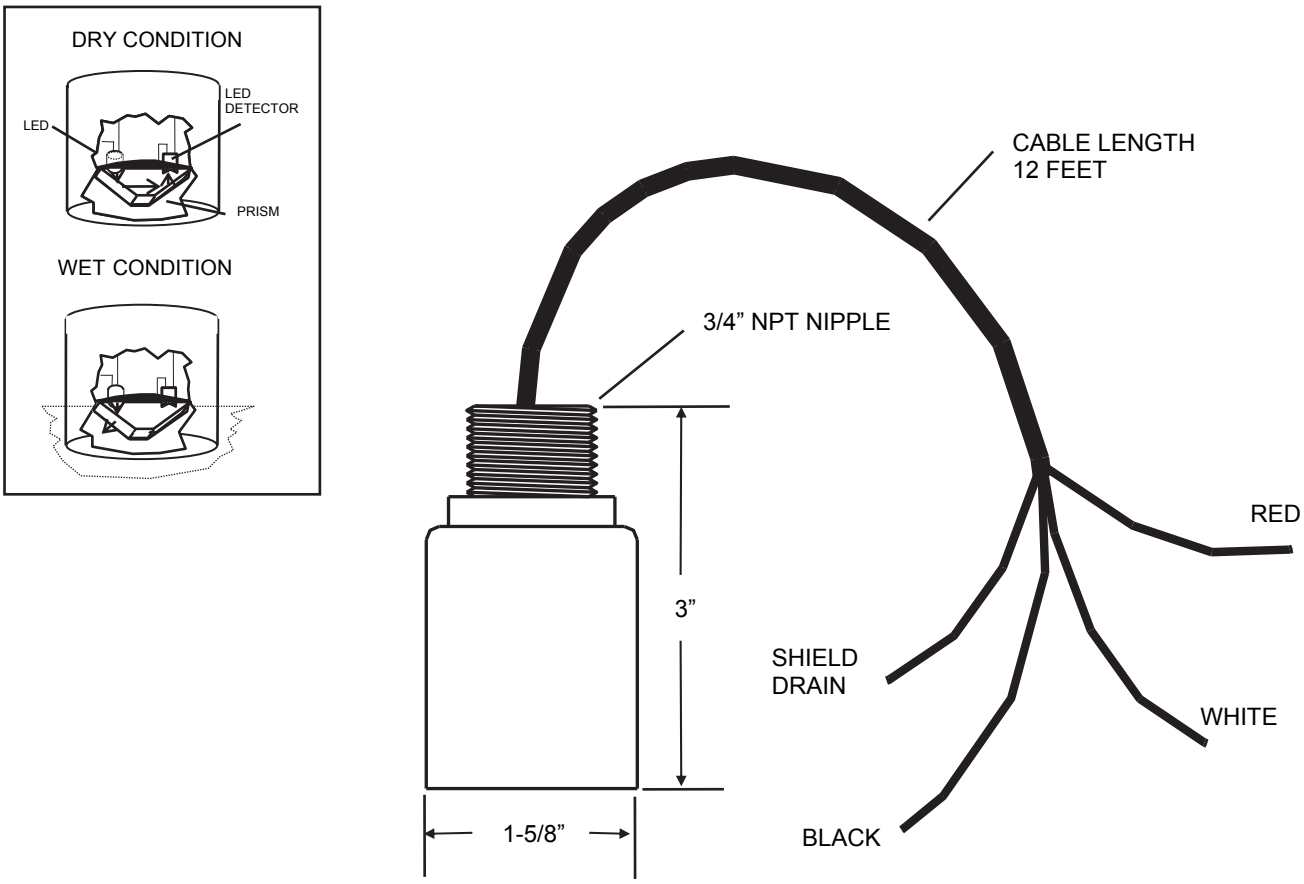
120VAC

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.

Non-product distinguishing Optic Sensor



LS-ASC SPECIFICATIONS

U.L. LISTED 5L04
Intrinsically safe Class I, Group D Hazardous Locations when connected in accordance with control drawing nos. L1, L2, L3, L4, L6, L9

OPERATING TEMPERATURE
-40 TO +140 F

POWER
2 VDC @ 13 mA

WEIGHT
1/2 pound

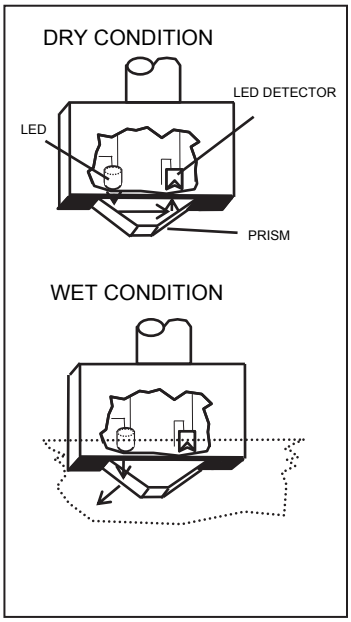
PRINCIPLES OF OPERATION
LIQUIDS (ex: fuel, water) – photo Optic
DRY CONDITION – Normally closed light beam
ALARM CONDITION – Opens (refracts) normally closed light beam

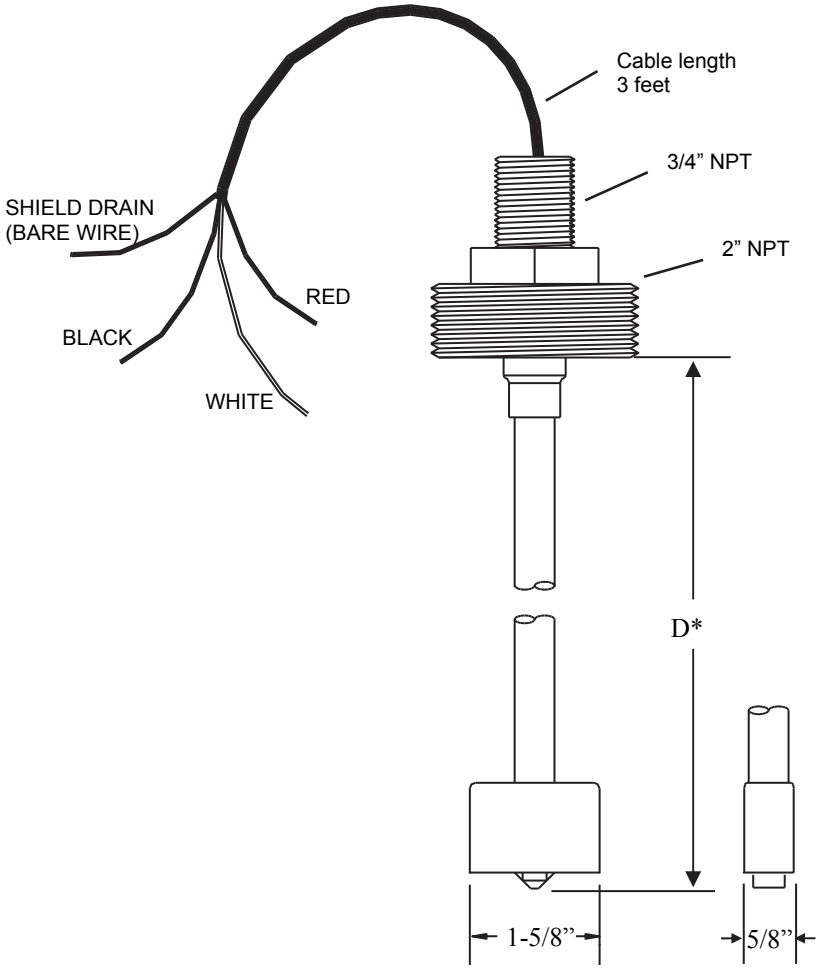
SENSOR CABLE
Shielded 22 AWG UL-E118830 CM
Maximum length 2000 feet

RESPONSE TIME
Immediate

Liquid Level Optic Sensor

Principles of Operation





L-1 SPECIFICATIONS

U.L. LISTED 5L04
Intrinsically safe Class I, Group D Hazardous Locations when connected in accordance with Control Drawing nos. L1, L2, L3, L4, L6, L9

OPERATING TEMPERATURE
-40 TO +140 F

POWER
2 VDC @ 13 mA

WEIGHT
2 pounds

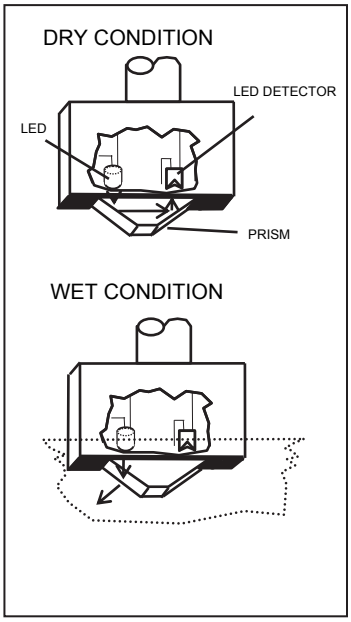
PRINCIPLES OF OPERATION
LIQUIDS (ex: fuel, water) – Photo Optic
DRY CONDITION – Normally closed light beam
ALARM CONDITION – Opens (refracts) normally closed light beam

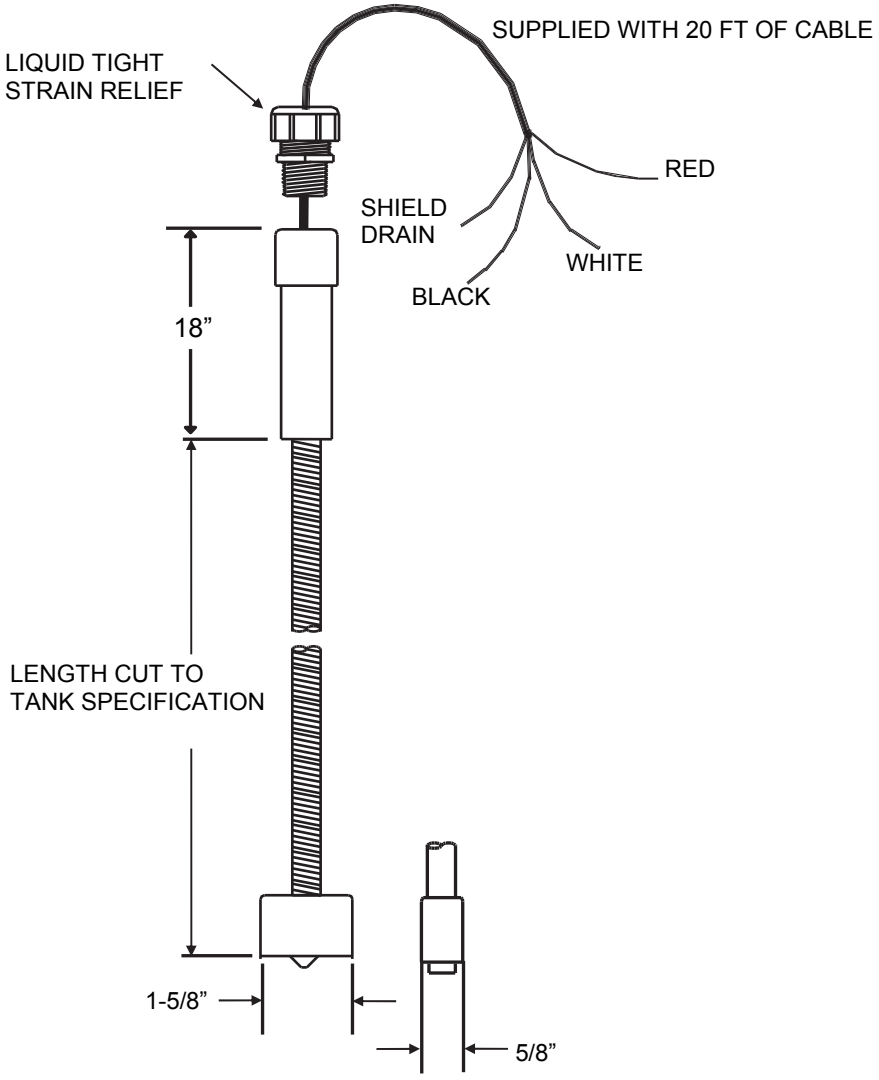
SENSOR CABLE
Shielded 22 AWG UL-E118830 CM
Maximum length 2000 feet

RESPONSE TIME
Immediate

Non-product distinguishing Fiberglass tank dry interstitial sensor

Principles of Operation





LWF SPECIFICATIONS

OPERATING TEMPERATURE
-40 TO +140 F

POWER
2 VDC @ 13 mA

WEIGHT
2 pounds

PRINCIPLES OF OPERATION
LIQUIDS (ex: fuel, water) – Photo Optic
DRY CONDITION – Normally closed light beam
ALARM CONDITION – Opens (refracts) normally closed light beam

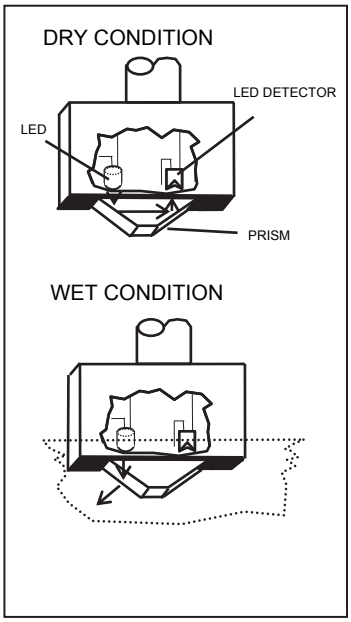
SENSOR CABLE
Shielded 22 AWG UL-E118830 CM
Maximum length 2000 feet

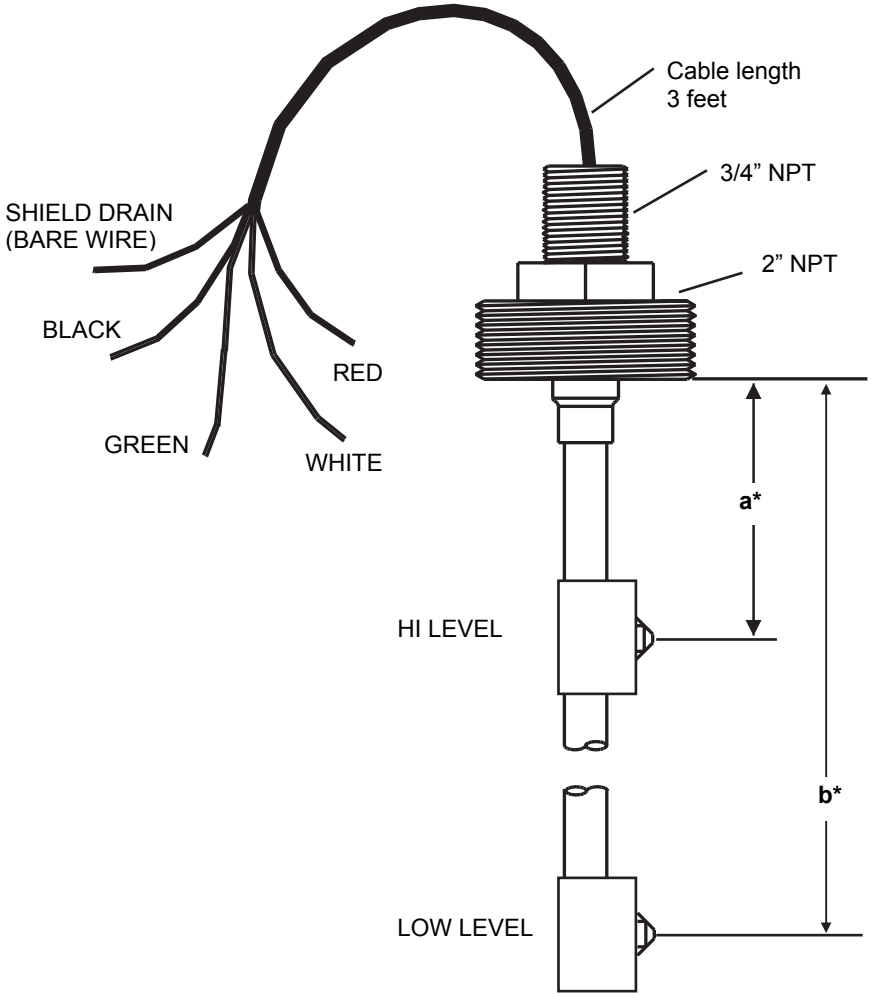
RESPONSE TIME
Immediate

OMNTEC L-2

Dual Level Liquid Optic Sensor for High and Low Level

Principles of Operation





L-2 SPECIFICATIONS

U.L. LISTED 5L04
Intrinsically safe Class I, Group D Hazardous Locations when connected in accordance with Control Drawing nos. L1, L2, L3, L4, L6, L9

PRINCIPLES OF OPERATION
LIQUIDS (ex: fuel, water) – Photo Optic
DRY CONDITION –
High level: Normally closed light beam
Low Level: Normally open light beam
ALARM CONDITION –
Hi level: Opens (refracts) normally closed light beam
Low level: Closes normally open light beam

OPERATING TEMPERATURE
-40 TO +140 F

SENSOR CABLE
Shielded 22 AWG UL-E118830 CM
Maximum length 2000 feet

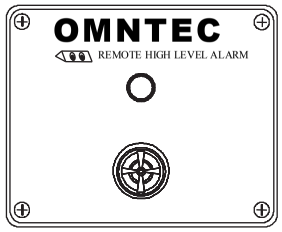
POWER
2 VDC @ 13 mA

RESPONSE TIME
Immediate

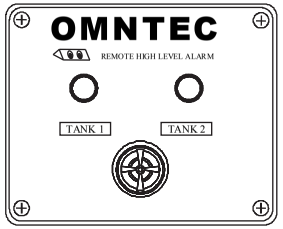
WEIGHT
2 pounds

RA-Series Remote High Level Alarm

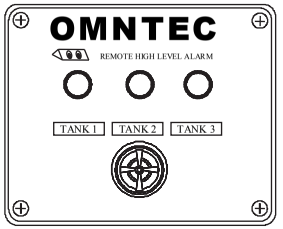
RA-1



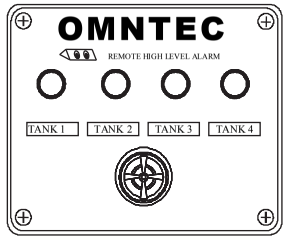
RA-2



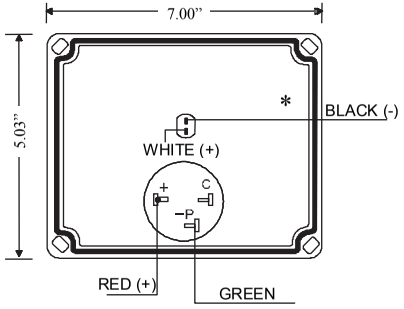
RA-3

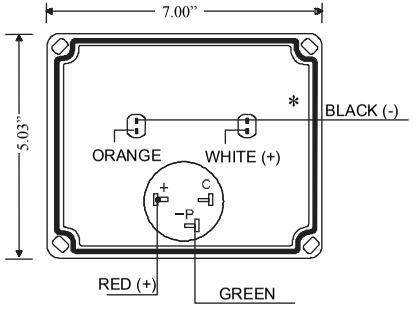


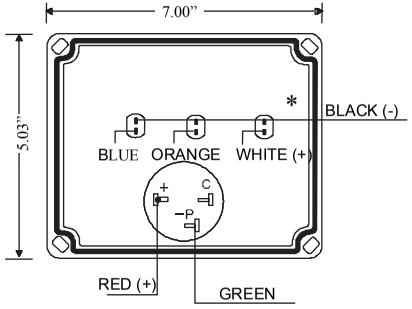
RA-4

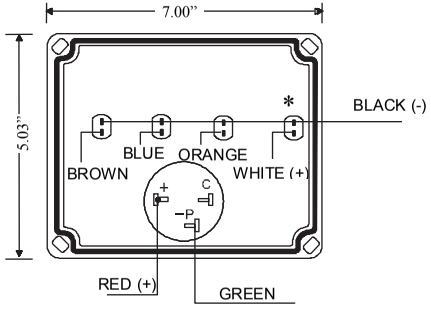


Internal Wiring Color Code





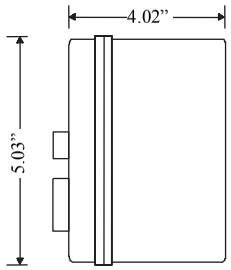




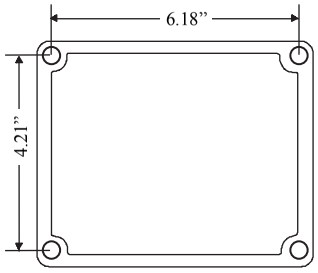
* **WARNING LABEL PLACED HERE**: Warning: Low voltage inputs only

SPECIFICATIONS	
Audible Alarm	95 dB pulsing horn
Red Light	Liquid-high-level alarm
Response Time	Immediate
Power Input	12VDC @200mA maximum from controller
Wire	22 AWG minimum
Weight	1 lb.

SIDE VIEW



MOUNTING DIMENSIONS



Note: It is recommended that knockouts be placed in the bottom of the enclosure

LOG SHEET

DATE	NAME	SYSTEM STATUS	SIGNATURE

WARRANTY

The seller OMNTEC Mfg., Inc. warrants to buyer 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 for one year and only 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 warrantees whether implied or expressed. Seller assumes no obligation for special or, indirect damages incurred by user.

All standard tank gauging systems are free of defects when properly installed and maintained by user. Warranty on tank gauging systems will only be effective after proper documentation has been submitted by the buyer to OMNTEC Mfg., Inc. The sellers sole obligation is to repair or replace parts found to be defective, or non-conforming for one year and only 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 warrantees whether implied or expressed. Seller assumes no obligation for special or indirect damages incurred by user.

All standard replacement parts, "add-ons", or spare parts 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 for 90 days and only 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 warrantees whether implied or expressed. Seller assumes no obligation for special or indirect damages incurred by user.

Equipment not covered by this warranty includes, but is not limited to: custom equipment, pressure transducers, and control systems.