



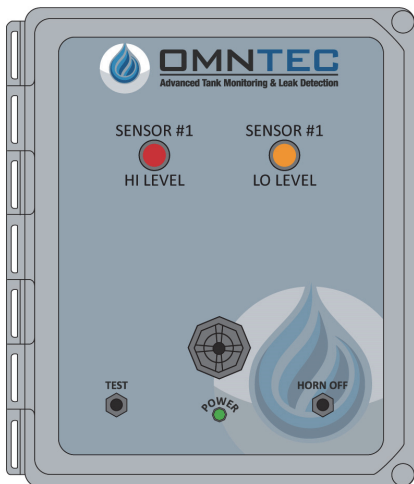
# OMNTEC

Advanced Tank Monitoring & Leak Detection



1. Open the camera app
2. Focus the camera on the QR code by gently tapping the code
3. Follow the instructions on the screen to view PDF file

# LU2-SP1-CUL INSTALLATION GUIDE



## TWO CHANNEL ALARM PANEL

Revision 2323

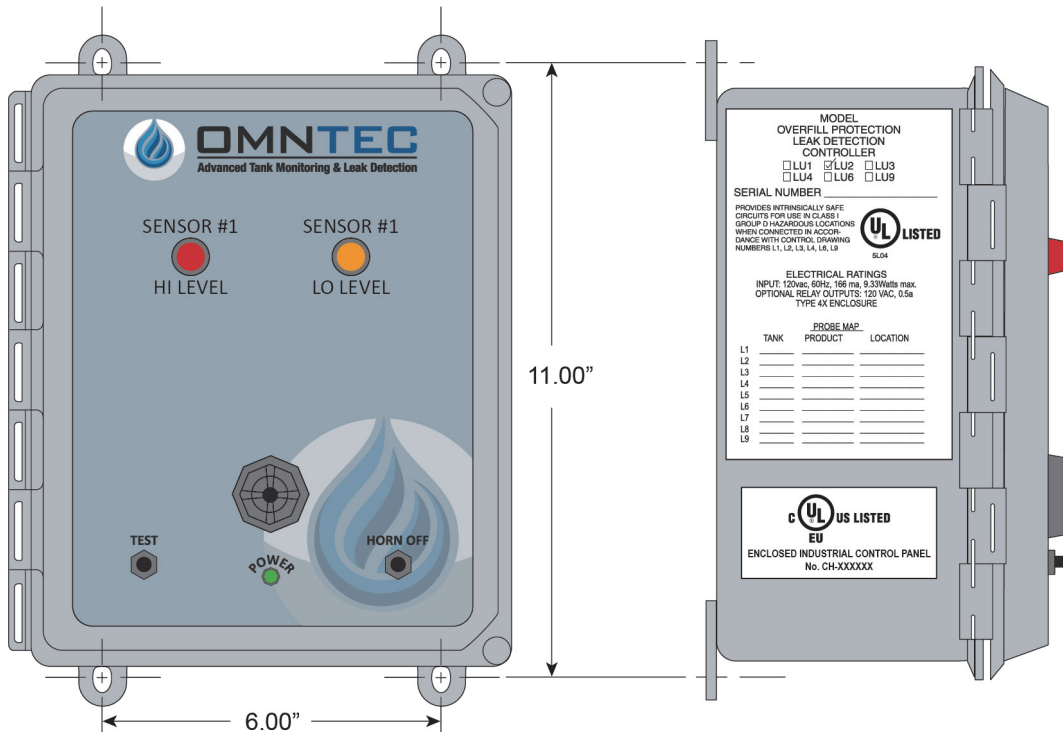
Document No. LU2-SP1-CUL rev2323

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**LU2-SP1-CUL**

**TWO CHANNEL ALARM PANEL**



**LU2-SP1-CUL 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 switches when an alarm condition occurs

**WEIGHT**

6 LBS.

**DIMENSIONS**

(W) 9" x (H) 10.5"

**SENSOR CABLE**

Shielded 22 AWG UL-E118830 CM  
Maximum length 2000 feet

**ENCLOSURE**

NEMA 4X

**OPERATING TEMPERATURE**

-40° to 140° F

**UL LISTED & CUL LISTED**

Intrinsically safe circuits for use in class I group D hazardous locations when connected in accordance with control drawings L1

**AUDIO/VISUAL CONSOLE**

**AUDIBLE ALARM** - 95 dB pulsing horn with 30 second timeout

**RED LIGHT** - Indicates Hi Level alarm

**AMBER LIGHT** - Indicates Lo Level alarm

**TEST BUTTON** - When pressed will test 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-2 Series** Dual point optic sensor for Hi and Lo Level

**L-R-1** Reservoir sensor

**OPTIONAL 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

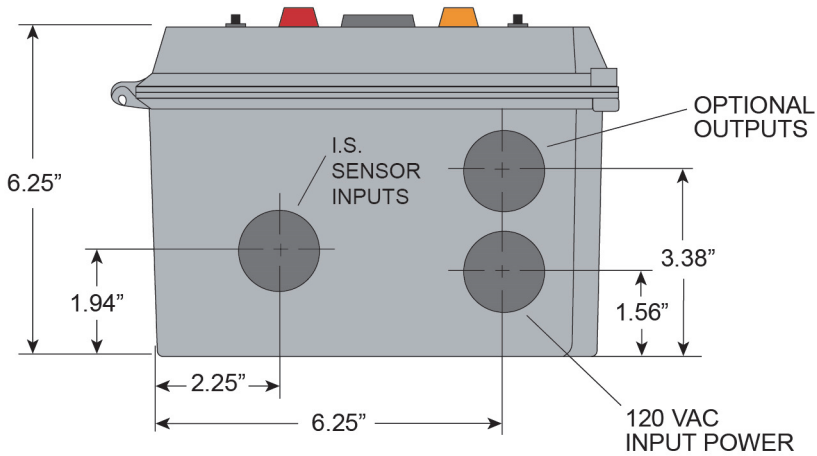
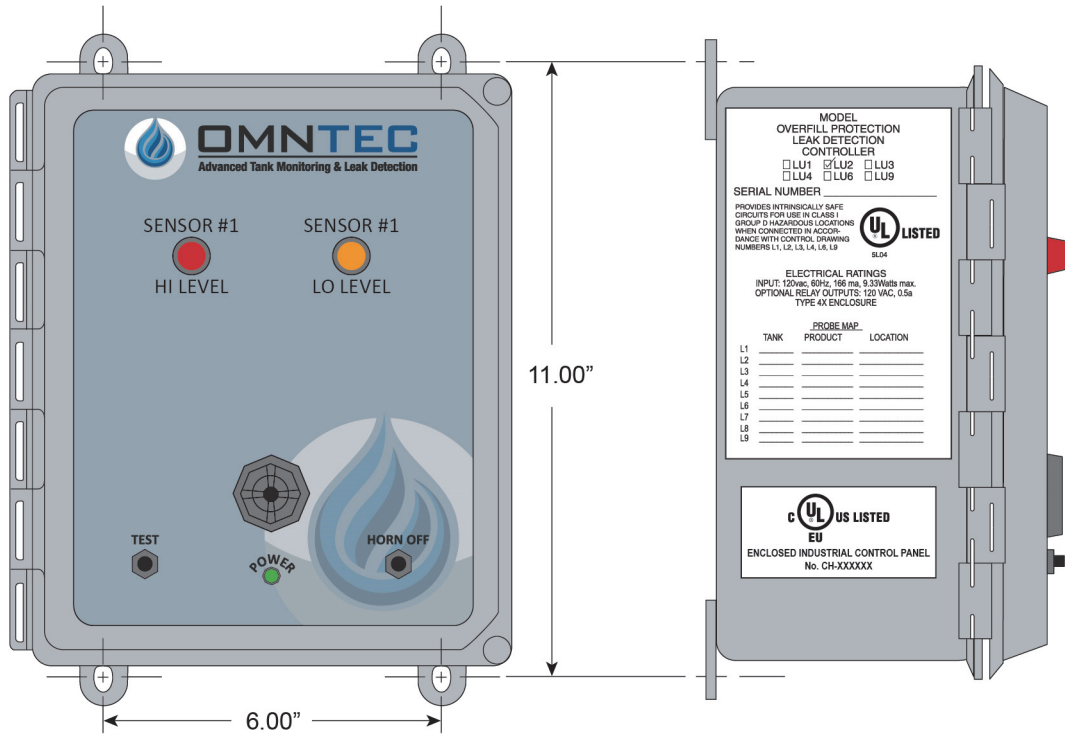


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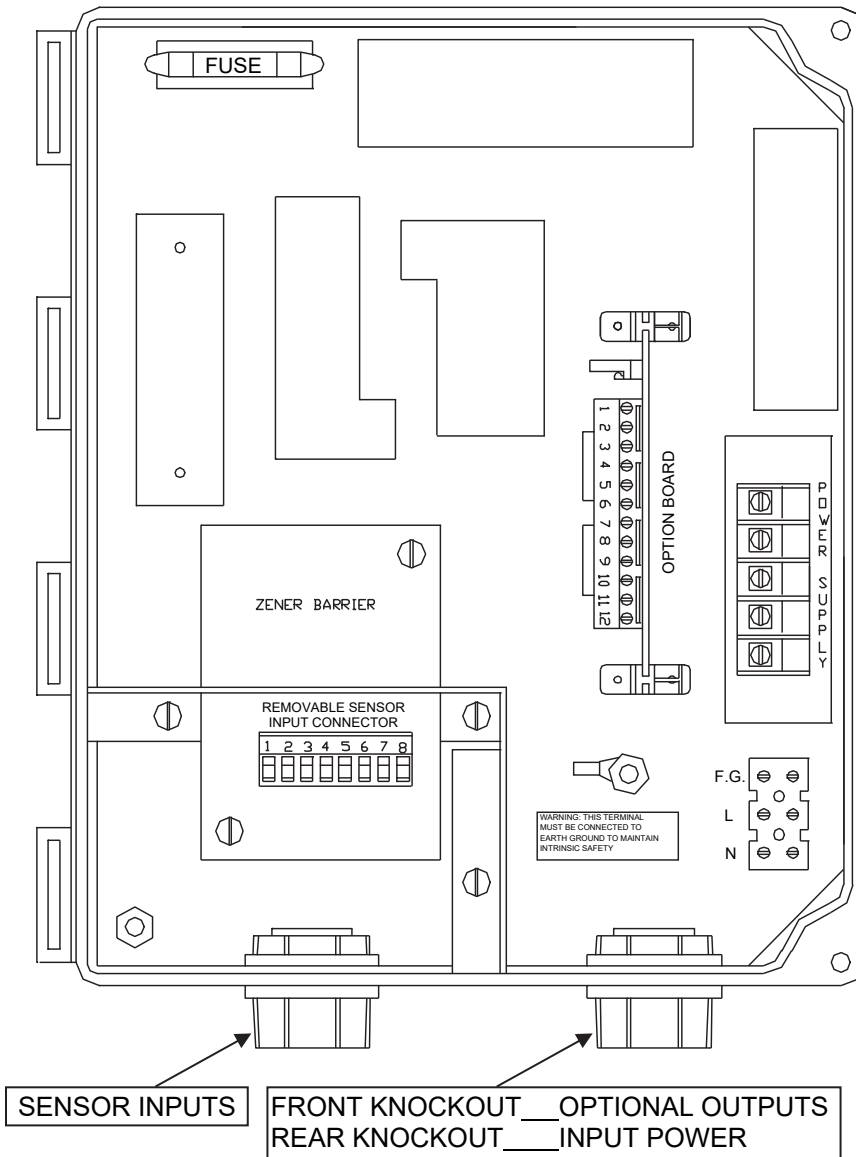
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## LU2-SP1-CUL

### DIMENSIONS FOR MOUNTING AND KNOCKOUTS



# LU2-SP1-CUL CONTROLLER CONNECTION DIAGRAM



## COLOR CODE

### CABLES FROM SENSORS TO REMOVABLE SENSOR INPUT CONNECTORS

|   |              |                       |
|---|--------------|-----------------------|
| 1 | RED          | SENSOR #1             |
| 2 | WHITE        |                       |
| 3 | UNUSED       |                       |
| 4 | GREEN        |                       |
| 5 | UNUSED       | GROUND FROM SENSOR #1 |
| 6 | UNUSED       |                       |
| 7 | BLACK        |                       |
| 8 | SHIELD DRAIN |                       |

### 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 | UNUSED |                    |

#### WIRES FROM RELAY OUTPUTS

|    |               |           |
|----|---------------|-----------|
| 7  | UNUSED        |           |
| 8  | UNUSED        |           |
| 9  | COMMON        | SENSOR #1 |
| 10 | NORMALLY OPEN | LO LEVEL  |
| 11 | COMMON        | SENSOR #1 |
| 12 | NORMALLY OPEN | 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.



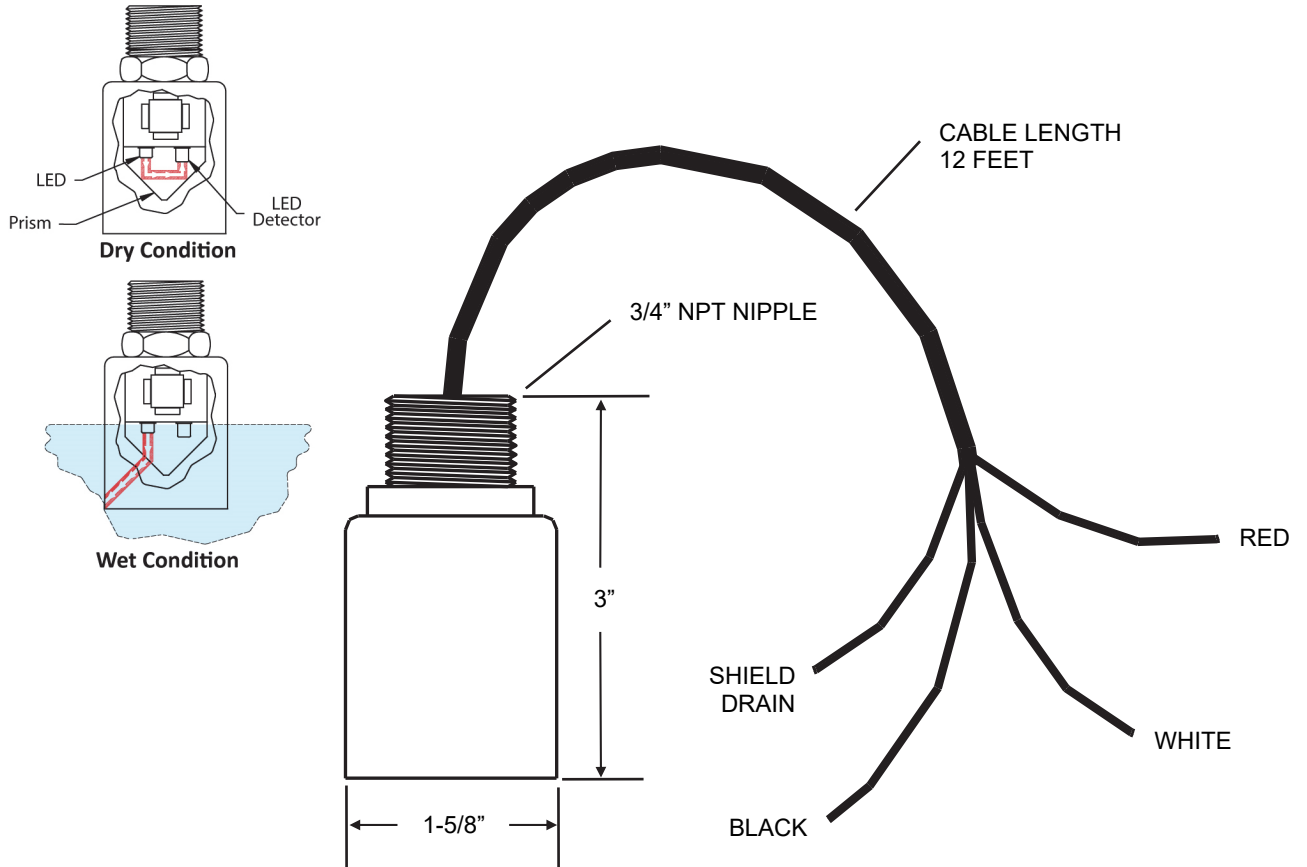
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## LS-ASC SENSOR

NON-PRODUCT DISTINGUISHING OPTIC SENSOR

### PRINCIPLES OF OPERATION



### 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

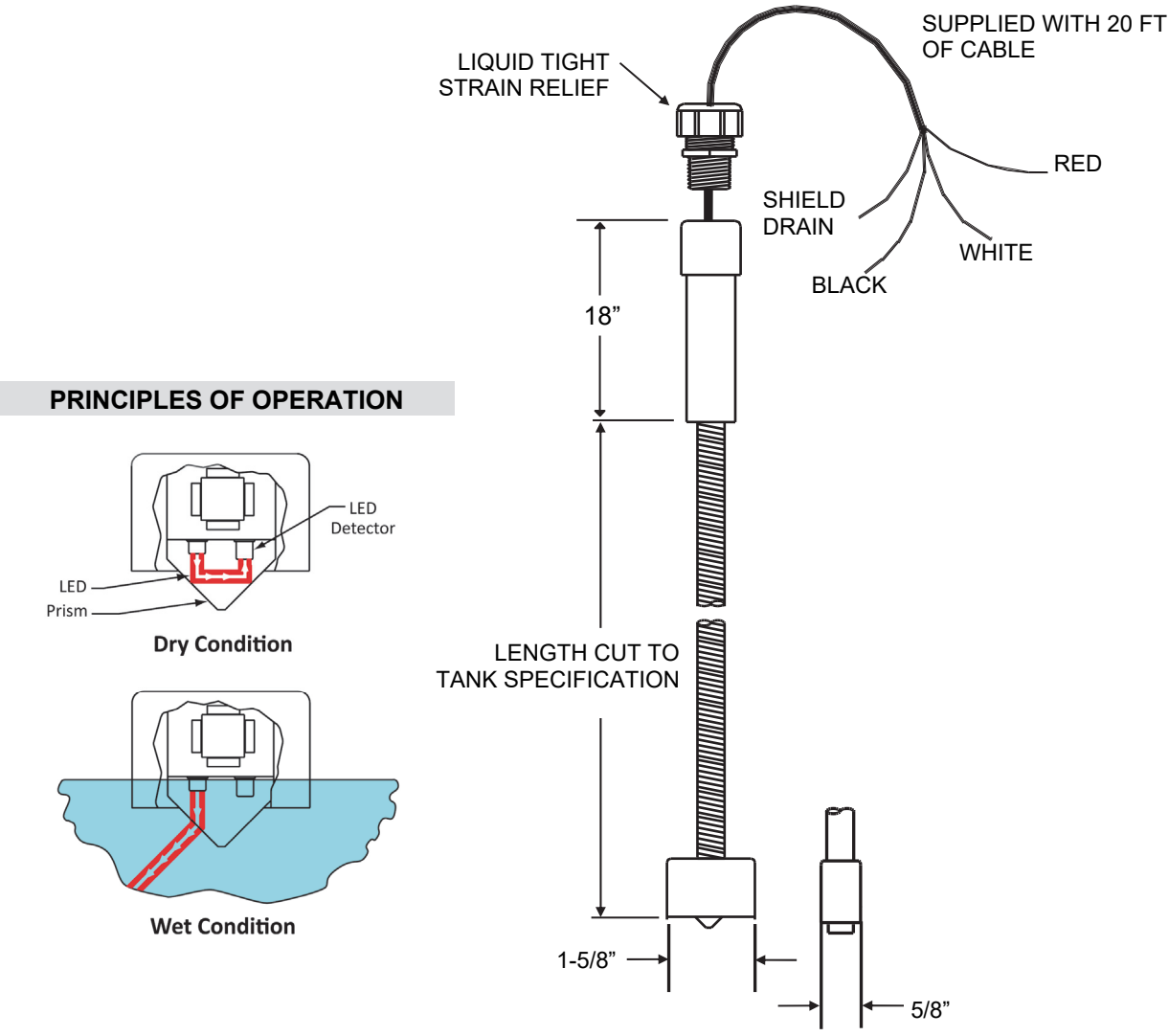
Maximum length 2000 feet

#### RESPONSE TIME

Immediate

# LWF SENSOR

## NON-PRODUCT DISTINGUISHING FIBERGLASS TANK DRY INTERSTITIAL SENSOR



### PRINCIPLES OF OPERATION

### LWF SPECIFICATIONS

**OPERATING TEMPERATURE**

-40 TO +140 F

**PRINCIPLES OF OPERATION**

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

**POWER**

2 VDC @ 13 mA

**SENSOR CABLE**

Shielded 22 AWG UL-E118830 CM  
 Maximum length 2000 feet

**WEIGHT**

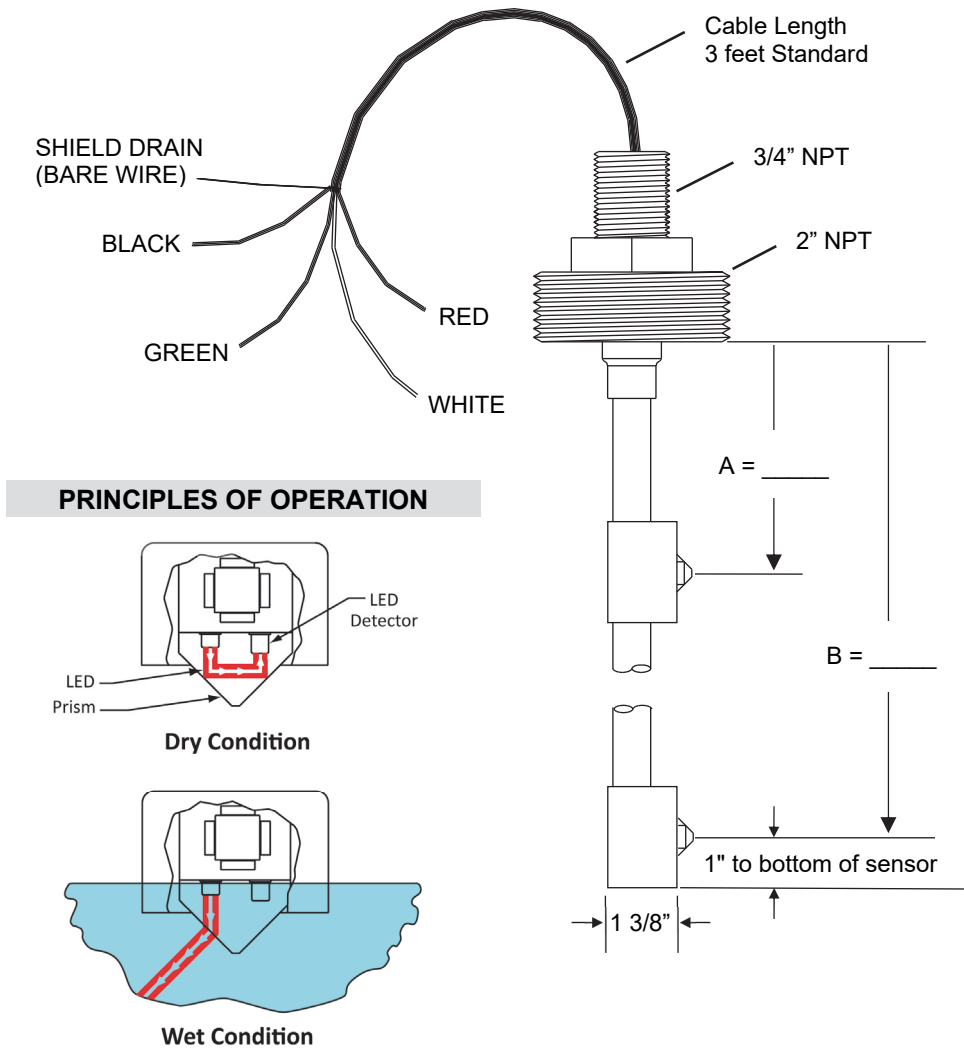
2 pounds

**RESPONSE TIME**

Immediate

# L-2 SENSOR

**DUAL LEVEL LIQUID OPTIC SENSOR FOR HIGH AND CAUTION LEVEL**



## 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

**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**

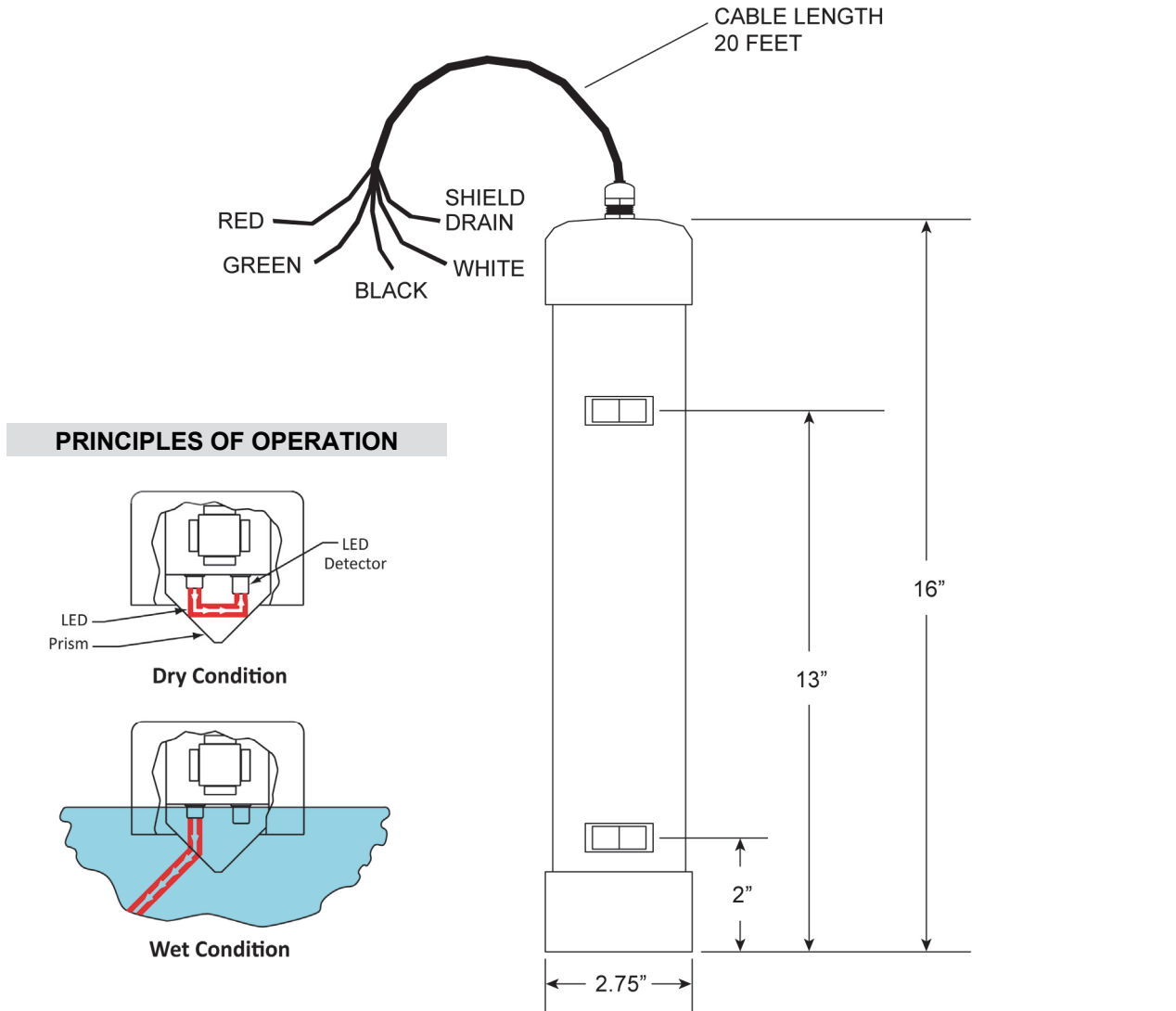
Shielded 22 AWG UL-E118830 CM  
 Maximum length 2000 feet

**RESPONSE TIME**

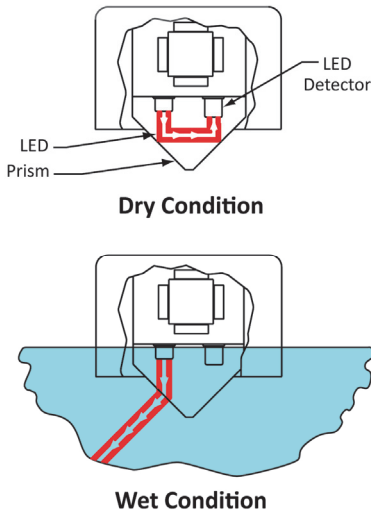
Immediate



## L-R-1 SENSOR RESERVOIR SENSOR



### PRINCIPLES OF OPERATION



### L-R-1 SPECIFICATIONS

SOLID STATE (NO MOVING PARTS)

#### OPERATING TEMPERATURE

-40 TO +140 F

#### POWER

2 VDC @ 13 mA

#### WEIGHT

2 pounds

#### RESPONSE TIME

Immediate

#### 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

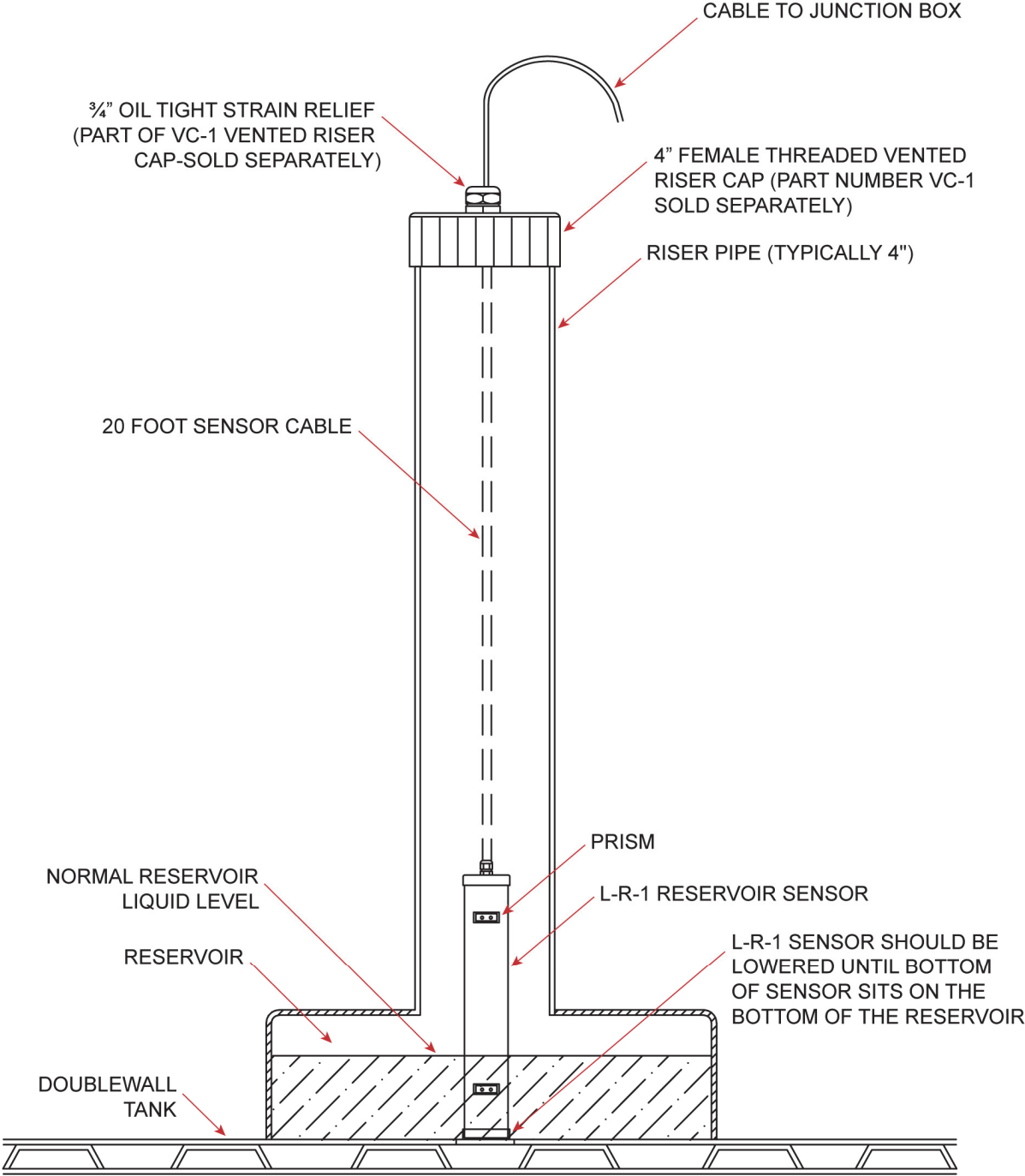
#### SENSOR CABLE

Shielded 22 AWG UL-E118830 CM

Maximum length 2000 feet

# L-R-1 SENSOR

## TYPICAL RESERVOIR SENSOR INSTALLATION



# RA-SERIES REMOTE HIGH-LEVEL ALARM

**RA-1**



**RA-2**



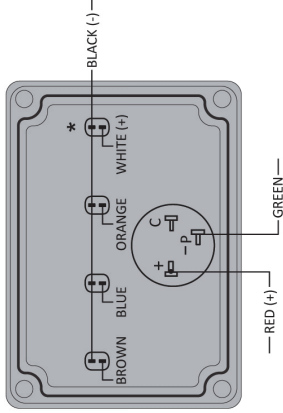
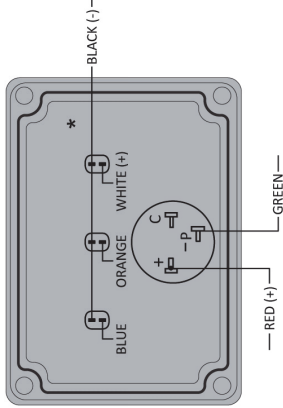
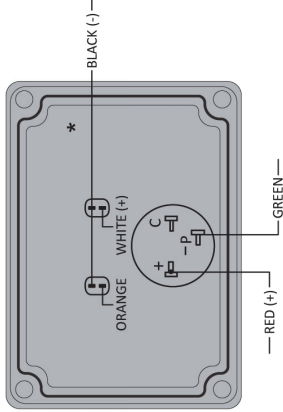
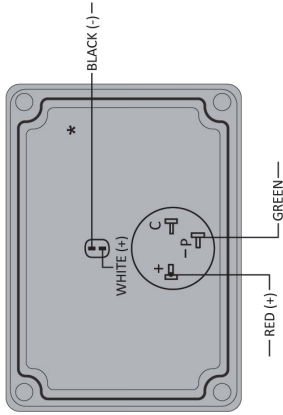
**RA-3**



**RA-4**

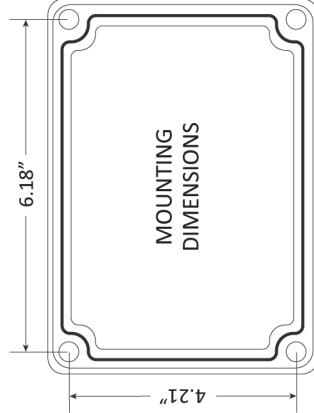
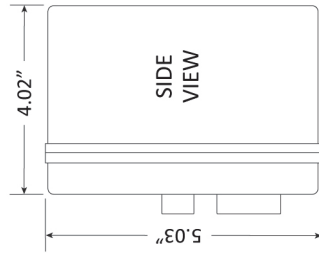


## INTERNAL WIRING COLOR CODE



\*Warning Label Placed Here

**WARNING: LOW VOLTAGE INPUTS ONLY**



### SPECIFICATIONS

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

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

**LOG SHEET**

| <b>DATE</b> | <b>NAME</b> | <b>SYSTEM STATUS</b> | <b>SIGNATURE</b> |
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## WARRANTY

The seller OMNTEC Mfg., Inc. warrants to buyer defects when properly installed, and maintained by user. The seller's 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 warranties 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 seller's sole obligation is to repair or replace parts found to be defective, or non-conforming for one year and only after evaluation by factory. Technical support must be contacted for a Return Material Authorization (RMA #) prior to sending any potentially defective parts. 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.

All standard replacement parts, "add-ons", or spare parts are free of defects when properly installed and maintained by user. The seller's 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 warranties 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 and control systems.