



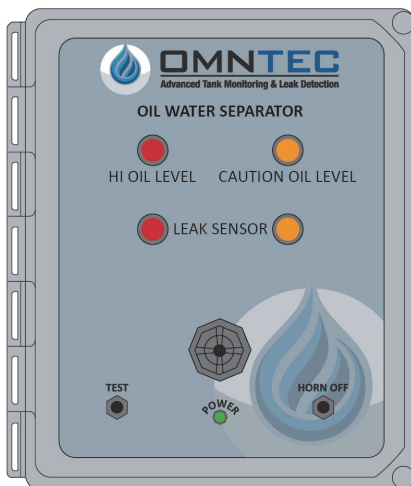
OMNTEC

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

LU3-OWIR-CUL INSTALLATION GUIDE



OIL/WATER SEPARATOR ALARM PANEL

Revision 2406

Document No. LU3-OWIR-CUL

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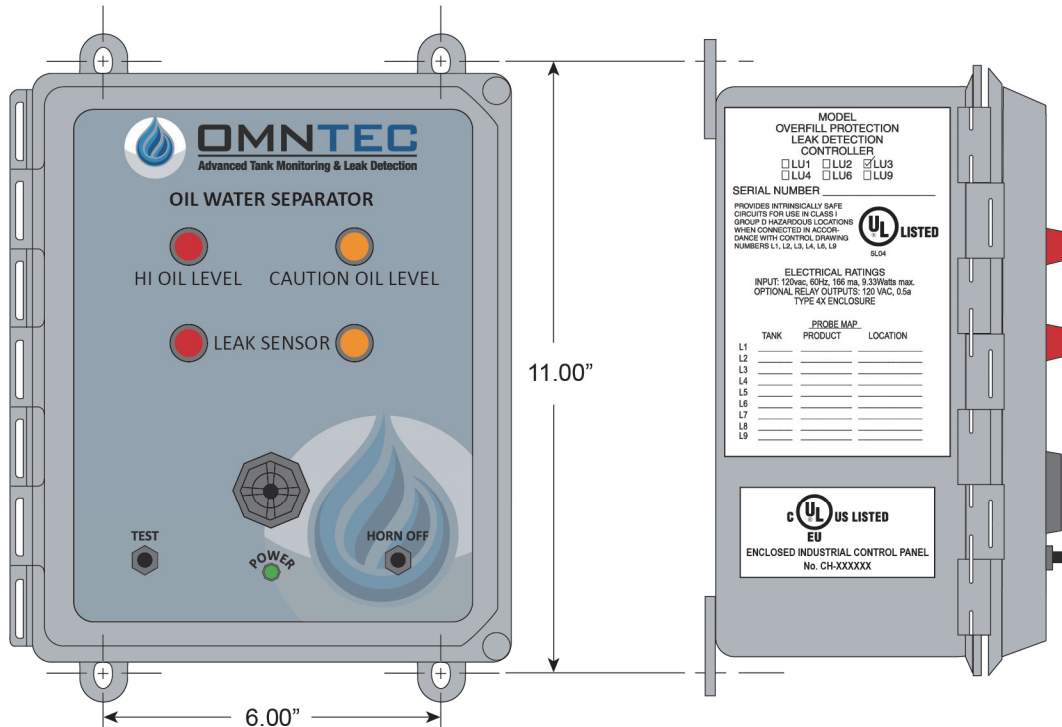
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LU3-OWIR-CUL

OIL/WATER SEPARATOR ALARM PANEL



LU3-OWIR-CUL SPECIFICATIONS

POWER INPUT

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

POWER TO SENSORS

2 VDC @ 13 mA

RELAY OUTPUT

(3) SPST normally open dry contacts 0.5 AMPS, 120 AC/DC 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 drawing LU3-OWIR

LABELS

Provided with controller

AUDIO/VISUAL CONSOLE

AUDIBLE ALARM - 95 dB pulsing horn with no timeout

CAUTION OIL LIGHT - Indicates oil has accumulated below the caution oil interface float

HI OIL LIGHT - Indicates oil has accumulated below the hi oil interface float or the tank liquid level is below the hi oil interface float

RED LEAK LIGHT - Indicates hi alarm for L-R-1 or product alarm for PD-Series sensor

AMBER LEAK LIGHT - Indicates low level alarm for L-R-1 or water alarm for PD-Series sensor

TEST BUTTON - When pressed will test system lights and horn

GREEN LIGHT - Indicates the power is on

HORN OFF BUTTON - Silences the audible alarm when pressed

SENSORS

OWI-2 Two point oil/water interface float sensor

L-R-1 Reservoir sensor

PD-Series Product distinguishing liquid optic sensor

ACCESSORIES

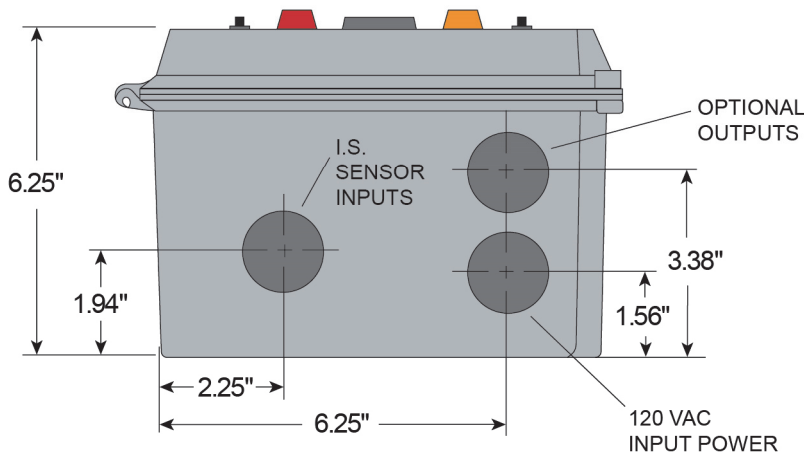
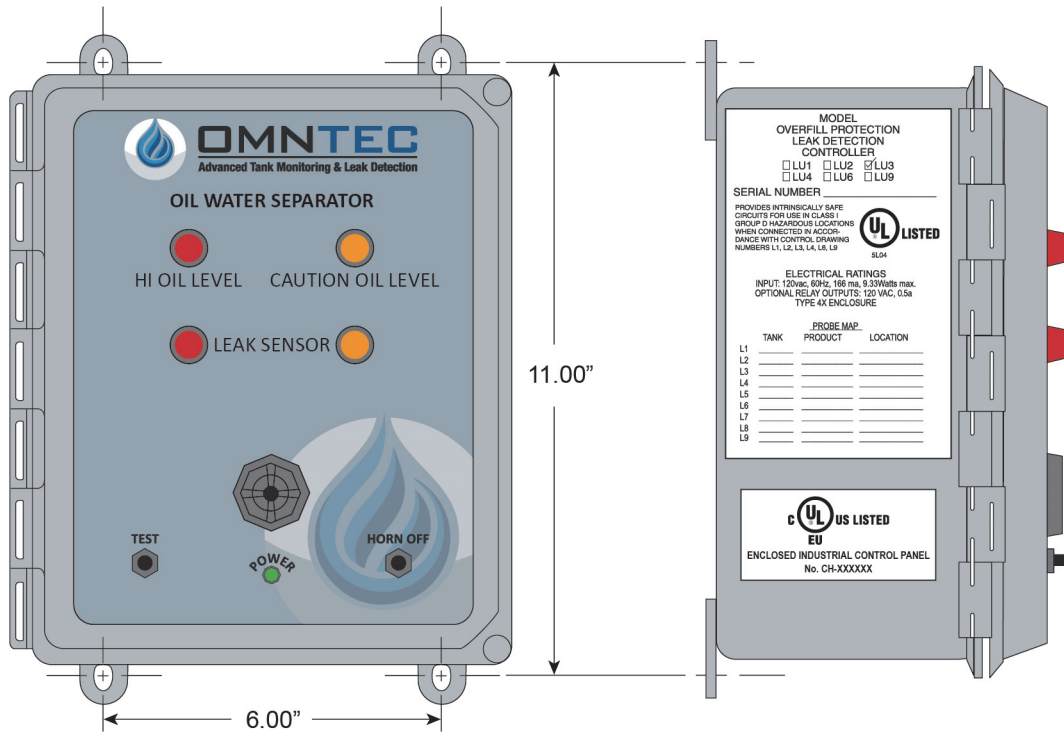
RA-1 Audio/visual remote annunciator

RLY-RA Relay (consult factory)

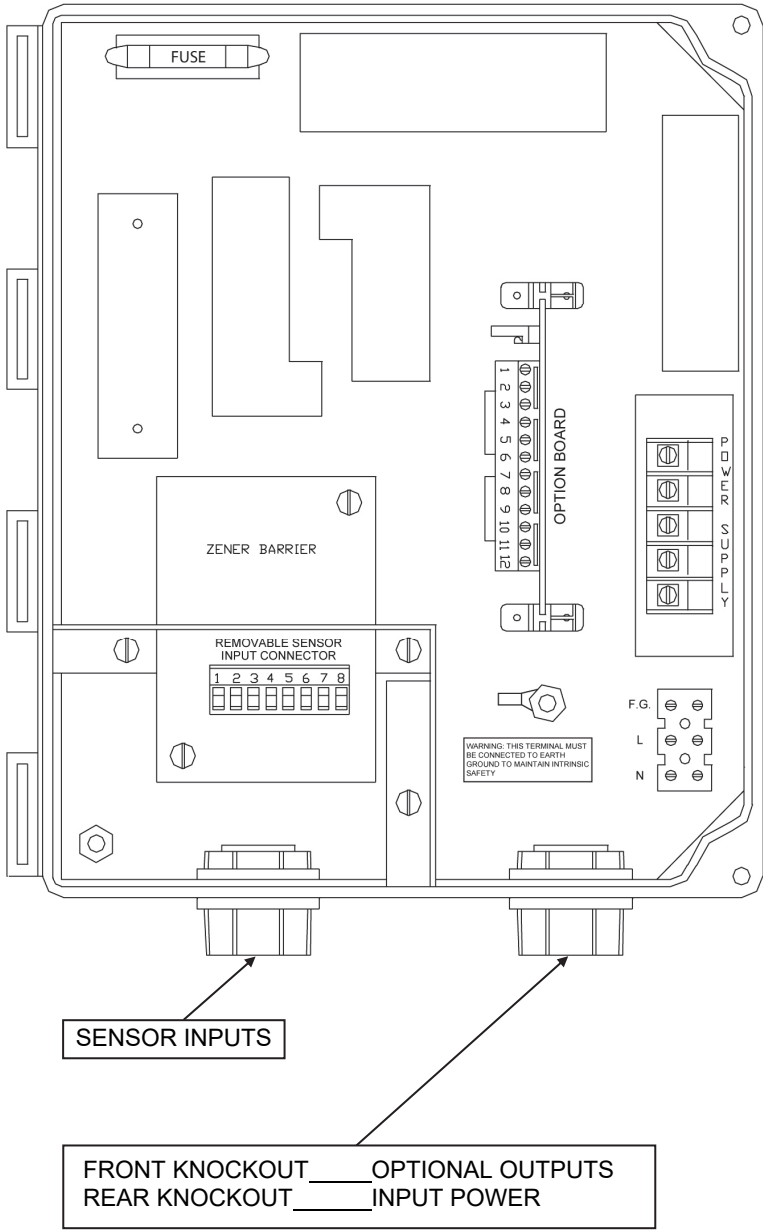
RA-1-NYS Remote annunciator with strobe (consult factory)

LU3-OWIR-CUL

DIMENSIONS FOR MOUNTING AND KNOCKOUTS



LU3-OWIR-CUL CONTROLLER CONNECTION DIAGRAM



COLOR CODE

CABLES FROM SENSORS TO REMOVABLE SENSOR INPUT CONNECTORS

| | | |
|---|--------------|-----------------------------------|
| 1 | RED | HI OIL LEVEL SENSOR #1 OWI-2 |
| 2 | WHITE | CAUTION OIL LEVEL SENSOR #1 OWI-2 |
| 3 | UNUSED | |
| 4 | RED | LEAK DETECTION SENSOR #2 |
| 5 | WHITE | |
| 6 | GREEN | FROM SENSOR #1 & #2 |
| 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 | HI OIL LEVEL |
| 5 | ORANGE | CAUTION OIL LEVEL |
| 6 | BLUE | LEAK DETECTION |

WIRES FROM RELAY OUTPUTS

| | | |
|----|---------------|-------------------|
| 7 | COMMON | LEAK DETECTION |
| 8 | NORMALLY OPEN | |
| 9 | COMMON | CAUTION OIL LEVEL |
| 10 | NORMALLY OPEN | |
| 11 | COMMON | HI OIL LEVEL |
| 12 | NORMALLY OPEN | |

120VAC

WIRES TO POWERSUPPLY

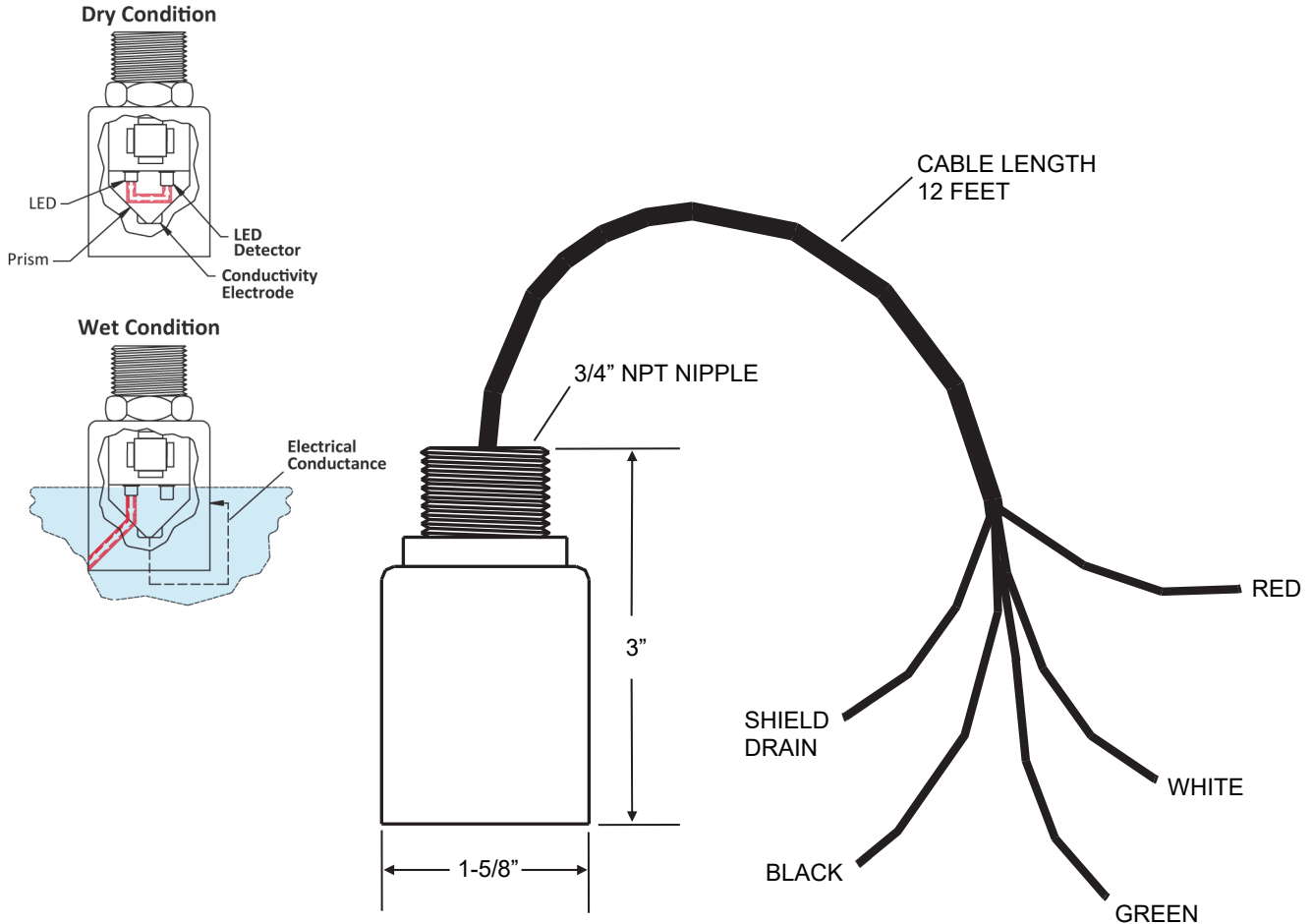
| | |
|------|--------------|
| F.G. | FIELD GROUND |
| L | LINE |
| N | NEUTRAL |

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

PDS SENSOR

PRODUCT DISTINGUISHING OPTIC SENSOR

PRINCIPLES OF OPERATION



PDS SPECIFICATIONS

U.L. LISTED 5L04

Intrinsically safe Class I, Group D Hazardous Locations when connected in accordance with control drawing nos. L1PD2, L2PD4, L3PD6

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
 Water Detection - Conductance

SENSOR CABLE

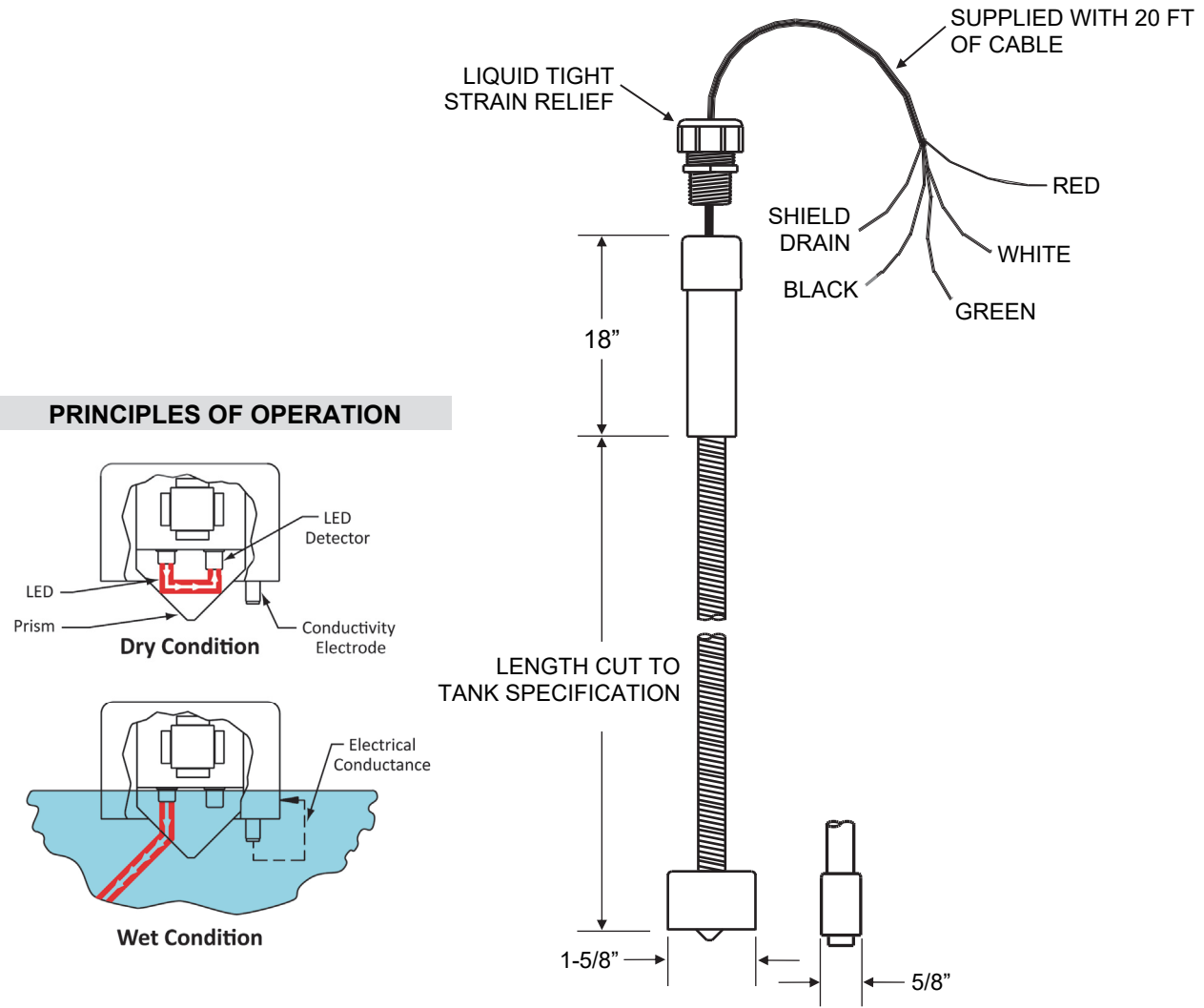
Shielded 22 AWG UL-E118830 CM
 Maximum length 2000 feet

RESPONSE TIME

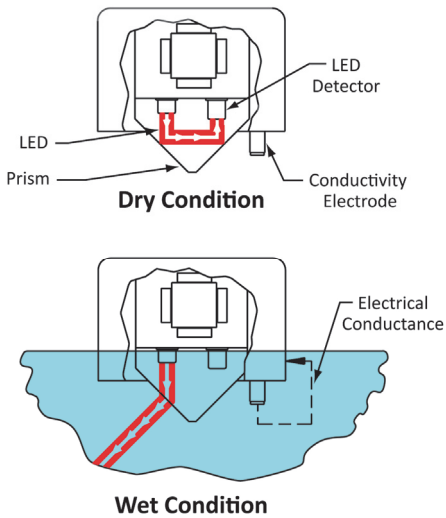
Immediate

PDWF SENSOR

PRODUCT DISTINGUISHING FIBERGLASS TANK DRY INTERSTITIAL SENSOR



PRINCIPLES OF OPERATION



PDWF SPECIFICATIONS

U.L. LISTED 5L04

Intrinsically safe Class I, Group D Hazardous Locations when connected in accordance with control drawing nos. L1PD2, L2PD4, L3PD6

OPERATING TEMPERATURE

-40 to +140 F

POWER

2 VDC @ 13 mA

WEIGHT

1/2 pounds

PRINCIPLES OF OPERATION

Liquids (ex: fuel, water) - Photo optic
 Dry Condition - Normally closed light beam
 Alarm Condition - Opens (refracts) normally closed light beam
 Water Detection - Conductance

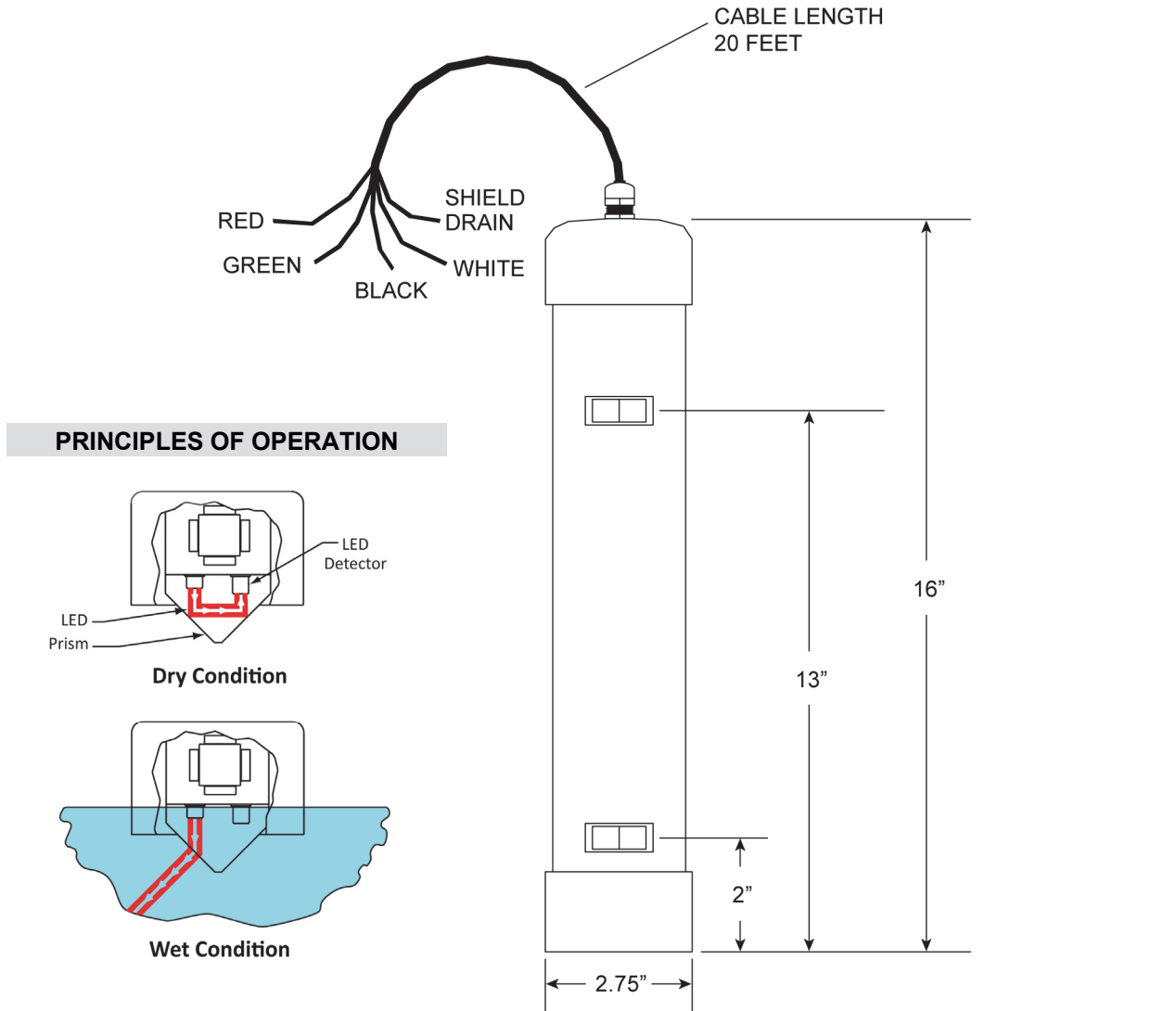
SENSOR CABLE

Shielded 22 AWG UL-E118830 CM
 Maximum length 2000 feet

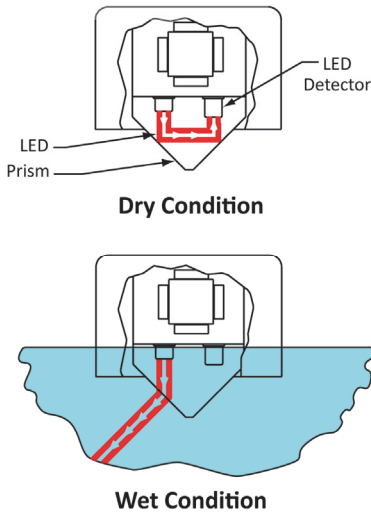
RESPONSE TIME

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

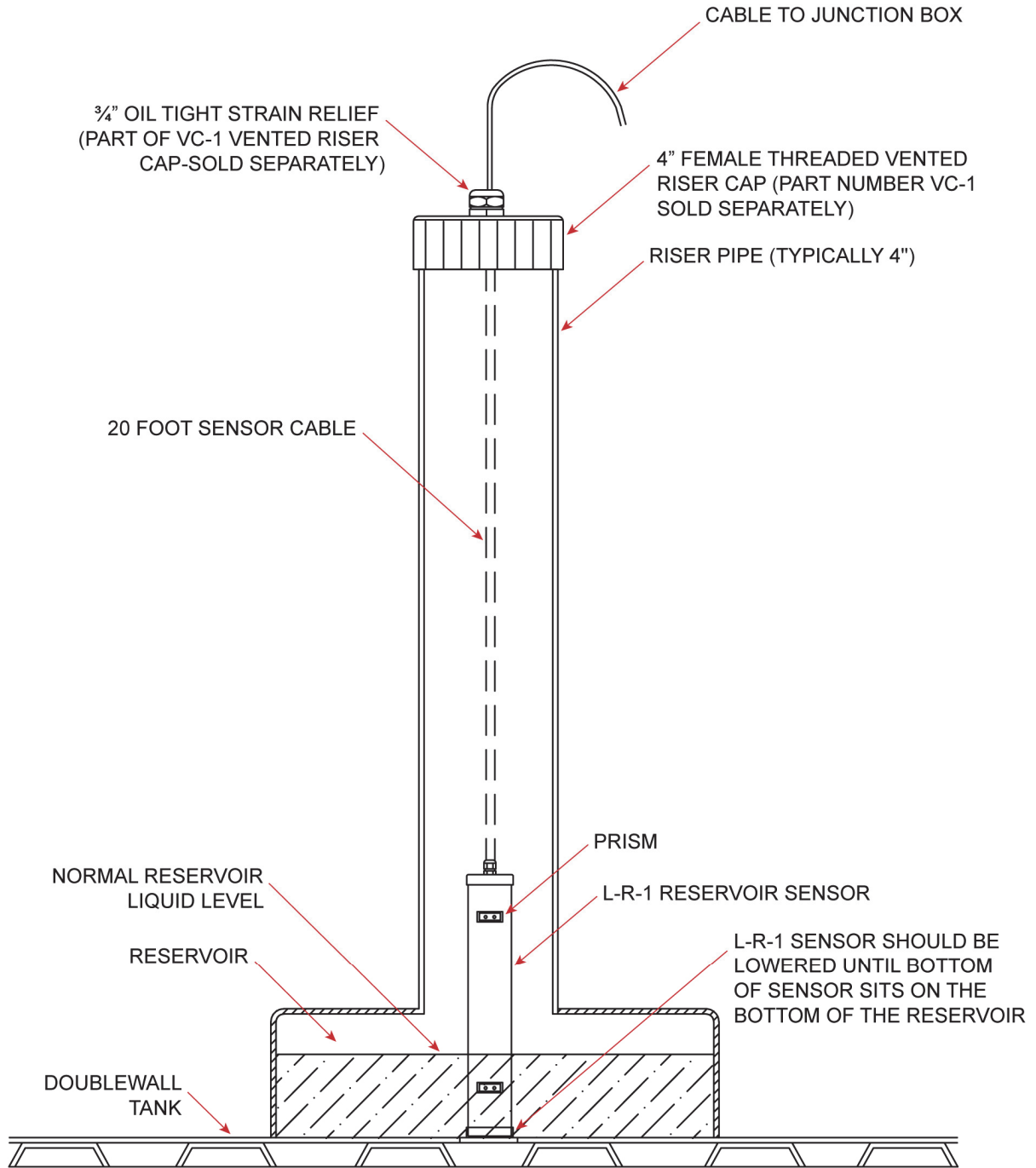


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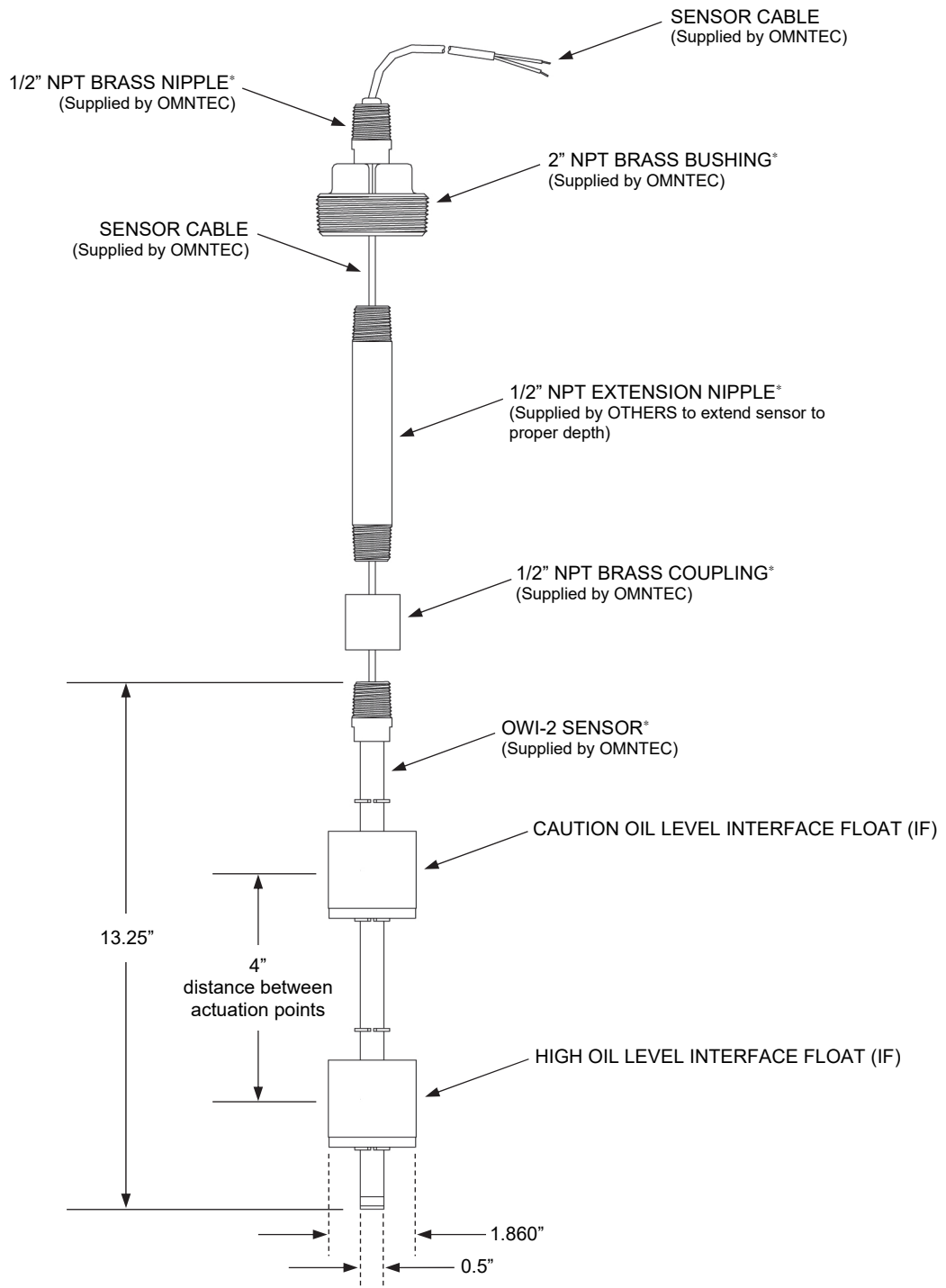
L-R-1 SENSOR

TYPICAL RESERVOIR SENSOR INSTALLATION



OWI-2 OIL WATER SEPARATOR SENSOR

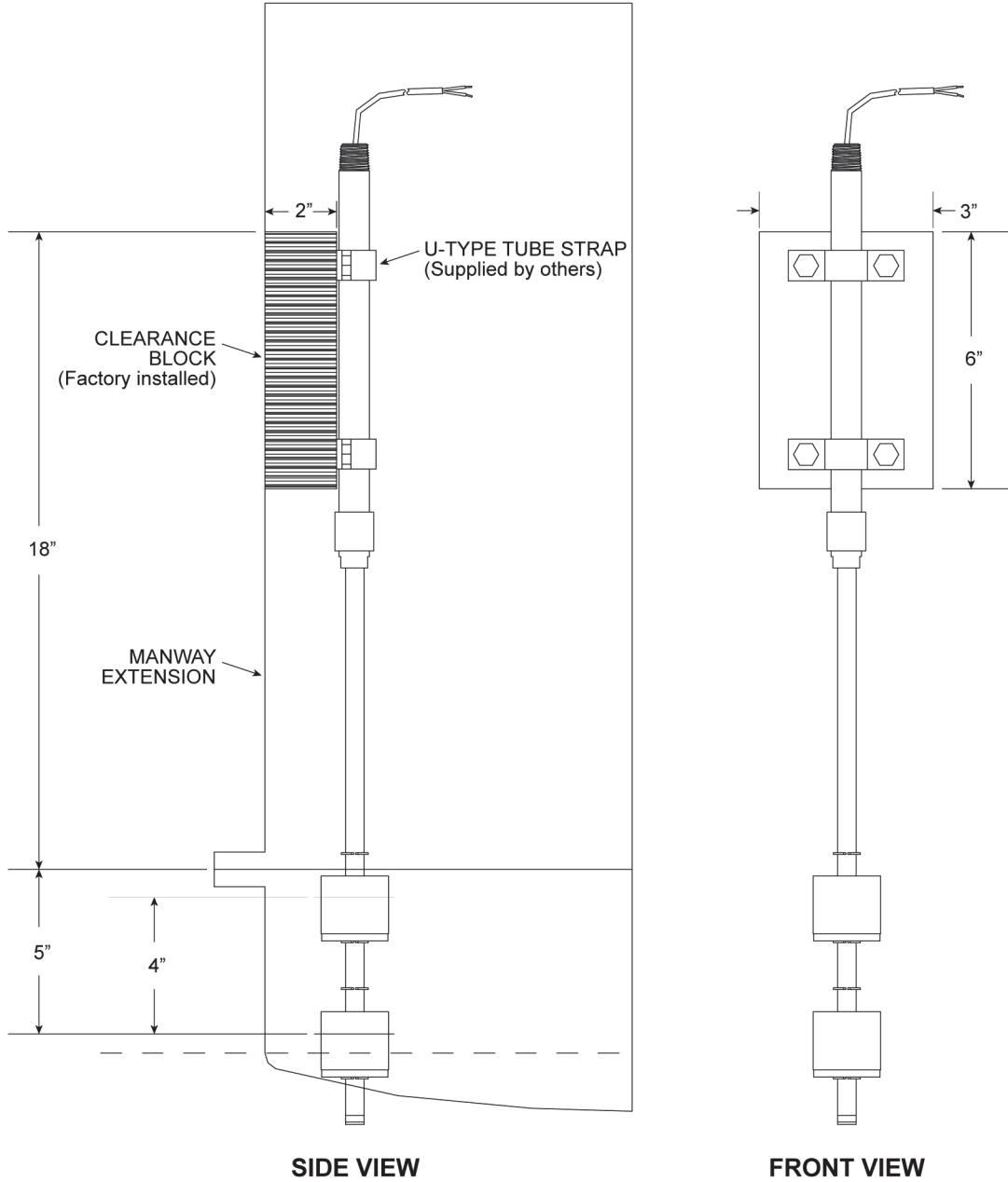
TYPICAL 2" FITTING ASSEMBLY



* **WARNING** - It is the installer's responsibility to select a thread sealant that is compatible with the product being stored and that all NPT fittings are fastened properly to assure liquid tight seal for proper sensor operation.

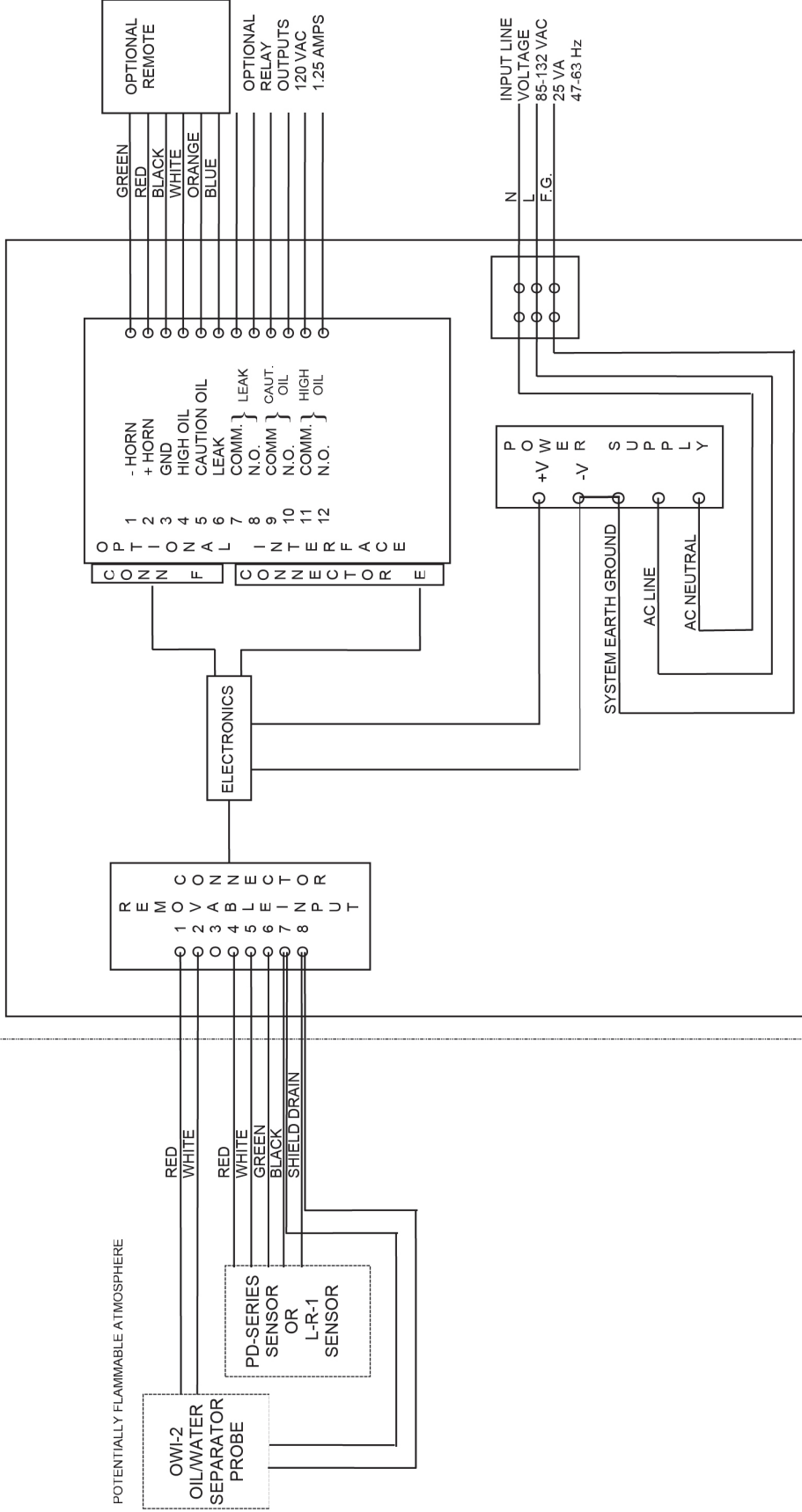
OWI-2 OIL WATER SEPARATOR SENSOR

TYPICAL MANWAY EXTENSION BRACKET INSTALLATION



* **WARNING** - It is the installer's responsibility to select a thread sealant that is compatible with the product being stored and that all NPT fittings are fastened properly to assure liquid tight seal for proper sensor operation.

LU3-OWIR-CUL CONTROL DRAWING



CLASS 1, GROUP D
HAZARDOUS AREA

NOTES ON PROBES

1. THE INTRINSICALLY SAFE FIELD WIRING SHALL BE INSTALLED IN ACCORDANCE WITH ARTICLE 504 IN THE NATIONAL ELECTRICAL CODE ANSI/NFPA 70
2. ALL PROBES ARE ELECTRICALLY IDENTICAL AND MAY BE INTERCHANGED ALLOWING SYSTEM FLEXIBILITY
3. PROBE TO CONTROL UNIT CABLE WILL BE TWO PAIR OF #22 AWG WITH SHIELD AND DRAIN PVC JACKETED UL-118830 CM. CABLE LENGTH WILL BE LIMITED TO 2000 FEET MAXIMUM

NON-HAZARDOUS AREA

NOTES ON CONTROL EQUIPMENT

1. ALL WIRING MUST MEET LOCAL AND NATIONAL ELECTRICAL CODES
2. SYSTEM EARTH GROUND MUST BE CONNECTED TO TERMINAL F.G. TO INSURE INTRINSIC SAFETY AND MUST BE LESS THEN 1Ω WITH RESPECT TO EARTH GROUND
3. OPTIONAL REMOTE REQUIRES #22 AWG LOW VOLTAGE COMMUNICATION CABLE MINIMUM

RA-SERIES REMOTE HIGH-LEVEL ALARM

RA-1



RA-2



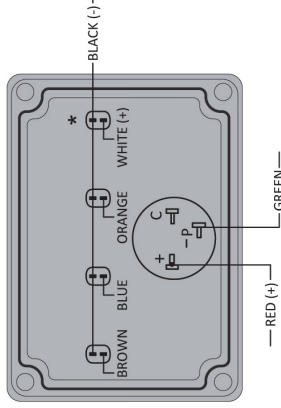
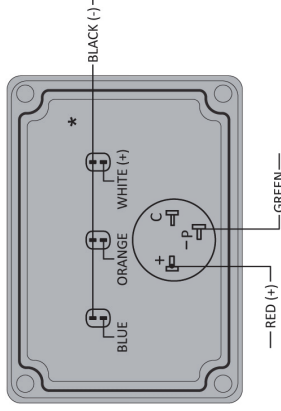
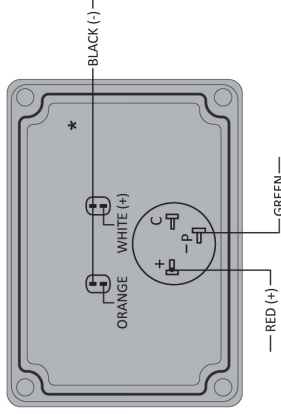
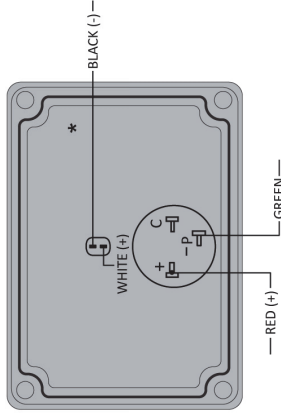
RA-3



RA-4

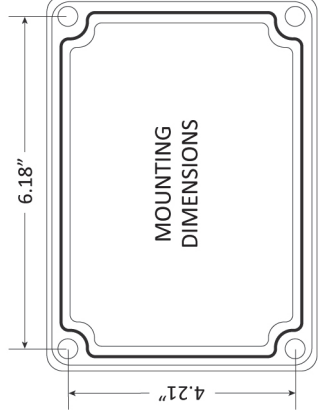
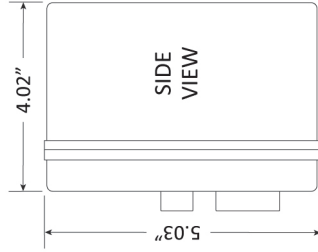


INTERNAL WIRING COLOR CODE



*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. |

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



LOG SHEET

| DATE | NAME | SYSTEM STATUS | SIGNATURE |
|------|------|---------------|-----------|
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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.