



OMNTEC

Advanced Tank Monitoring & Leak Detection



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LU1-LF-20A

INSTALLATION GUIDE



ONE CHANNEL ALARM PANEL

Revision 2617

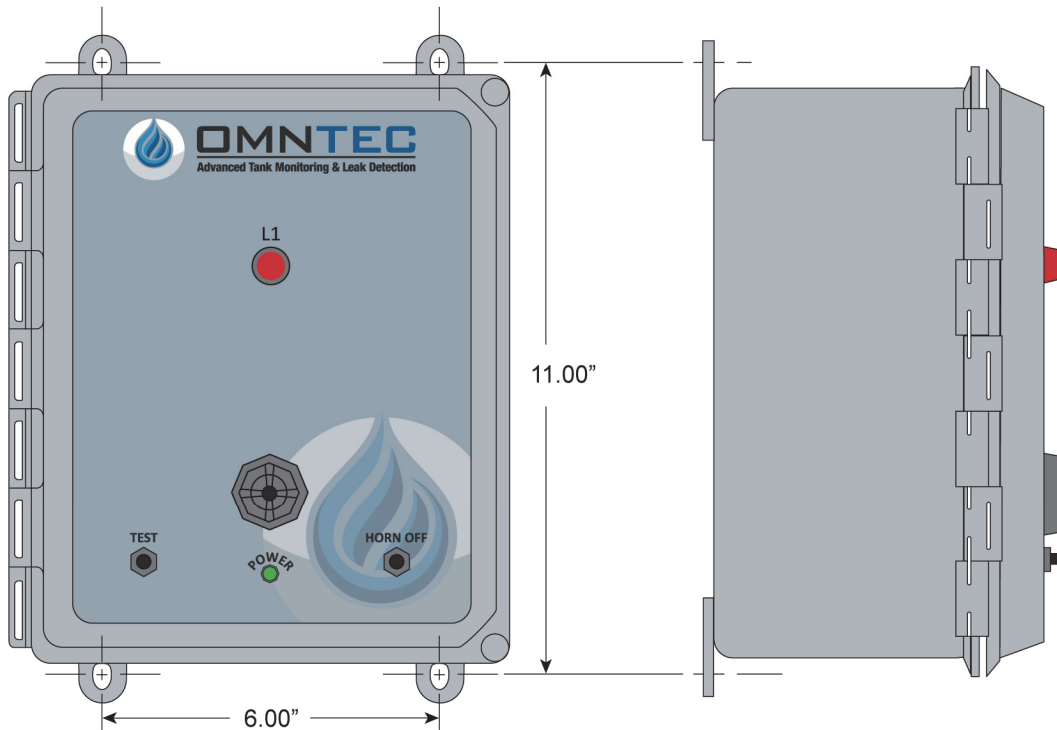
Document No. LU1-LF-20A

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LU1-LF-20A

ONE CHANNEL ALARM PANEL



LU1-LF-20A SPECIFICATIONS

POWER INPUT

100-240 VAC, 50/60 Hz
0.7 A

POWER TO SENSORS

2 VDC @ 13 ma

RELAY OUTPUT

SPDT (1) normally open (1) normally closed dry contacts 20.0 AMP, 120 AC/DC switches when an alarm condition occurs

WEIGHT

6 LBS.

DIMENSIONS

(W) 10" x (H) 12"

SENSOR CABLE

Shielded 22 AWG UL-E118830 CM
Maximum length 2000 feet

ENCLOSURE

NEMA 4X

OPERATING TEMPERATURE

-40° to 140° F

AUDIO/VISUAL CONSOLE

AUDIBLE ALARM - 95 dB pulsing horn with 30 second timeout

RED LIGHT - Indicates liquid 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

LF-1-SS-12-SL Single-point liquid float sensor; normally closed

LABELS

Provided with controller

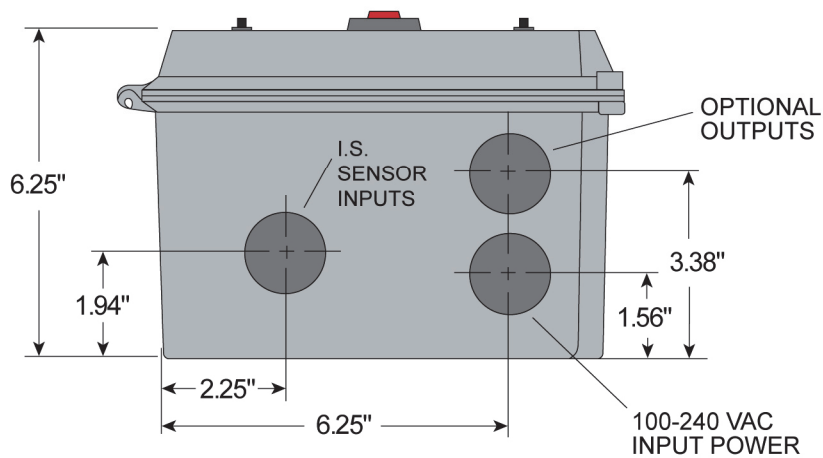
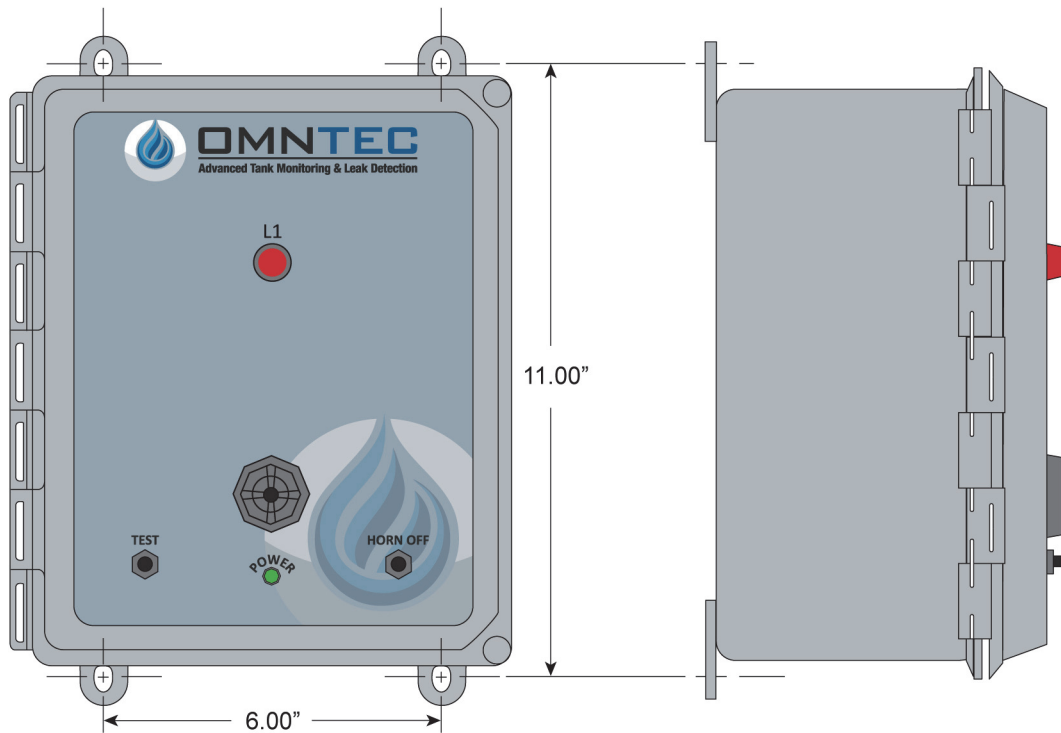


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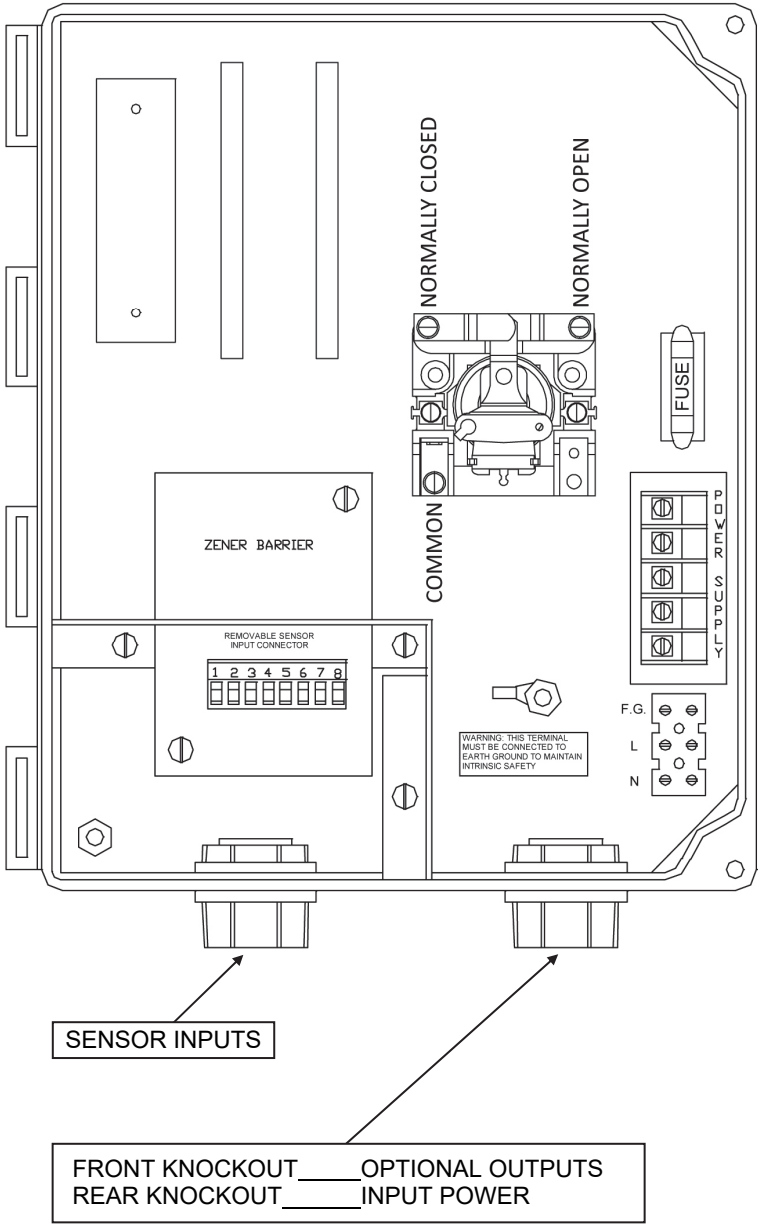
Advanced Tank Monitoring & Leak Detection

LU1-LF-20A

DIMENSIONS FOR MOUNTING AND KNOCKOUTS



LU1-LF-20A CONTROLLER CONNECTION DIAGRAM



COLOR CODE

CABLES FROM SENSORS TO REMOVABLE SENSOR INPUT CONNECTORS

1	UNUSED	SENSOR #1 LF-1
2	RED	
3	UNUSED	
4	UNUSED	
5	UNUSED	
6	UNUSED	
7	BLACK	FROM SENSOR #1
8	SHIELD DRAIN	

100-240 VAC

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-SERIES SENSOR

LIQUID LEVEL FLOAT SENSORS

FEATURES

- Stainless Steel or Brass Mountings
- 1 to 6 Actuation Levels
- Lengths to over 11 feet
- UL Recognized, CSA Listed

Stainless Steel or Brass Mountings

1 to 6 Actuation Levels

Lengths to over 11 feet

U.L. Recognized, CSA Listed

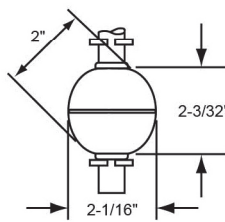
LF series float sensors have multiple options including material of construction, mountings and float sizes. This allows for the LF sensor to be extremely versatile in a wide range of applications such as water, oils, chemicals and corrosive liquid.

LF-* switches are U.L. Approved for Class I, Division 2, Groups A, B, C, D hazardous locations. FM Approved explosion proof junction box must be installed for Class I, Division I, Group D hazardous locations.



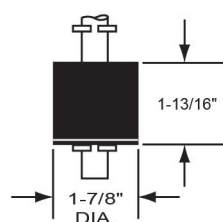
SPECIFICATIONS

	BUNA N	Stainless Steel
Operating Temperature	Water: to 180 F Oil: -40 F to +230 F	40 F to +300 F
Stem & Mounting Material	Brass	316 Stainless Steel
Max Length (Lo)	120" (305 cm)	
Float Stops*	Beryllium Copper	316 Stainless Steel
Compatible Controllers	Consult factory	
Approvals	U.L. Recognized, CSA Listed	



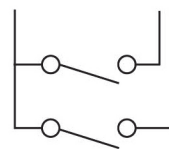
Stainless Steel Float

Consult factory for materials other than stainless steel and BUNA N.

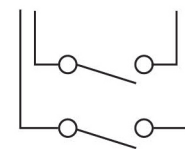


BUNA N Float

Group 1
Switch (N.O. or N.C.):
SPST: 50 VA

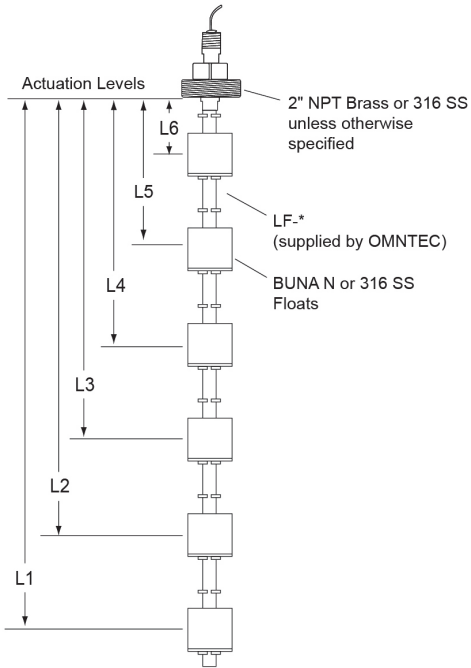


Group 2
Switch (N.O. or N.C.):
SPST: 50 VA



- For clarity, only two actuation levels are shown in each group diagram
- Standard setup is Group 2 unless otherwise specified.

LF-SERIES SENSOR



Switch actuation levels are determined following the guidelines below:

All units 72" or less overall unit length with Stainless Steel or BUNA N floats.

- A = 1-1/2" (38.1mm) minimum distance to highest level (2" (50.8mm), Type 5 only)
- B = 2" (50.8mm) minimum distance from end of unit to lowest level
- C = 3" (76.2mm) minimum distance between levels
- D = 1/4" (6.3mm) minimum distance between actuation levels
(Note: One float for two levels can be used only when low level is N.C. dry and high level is N.O. dry)

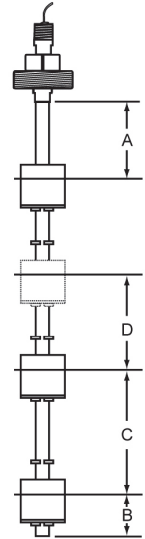
* Actuation level distances and L₀ (overall unit length) are measured from inner surfaces of mounting plug or flange.

** Length Overall L₀ = L₁ + Dimension B.

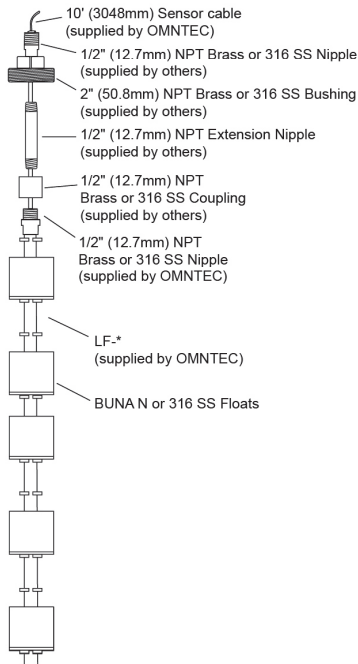
See mounting Types for Maximum Length values.

Notes:

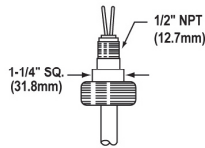
1. A, B and C dimensions based on a liquid specific gravity of 1.0.
2. One float for two levels can be used only when 20VA switch is used.
3. Actuation levels are calibrated on descending fluid level, with water as the calibrating fluid, unless otherwise specified.
4. Tolerance on actuation levels is +/- 1/8" (3.2mm).



Optional Alternative Mounting for 1/2" NPT



2" (50.8mm) NPT



Stem & Mounting Material	Brass or 316 Stainless Steel
Max Length	140" (355.6 cm)
Mounting Position	Vertical 30 Inclination
Float Stops*	Brass Units: Beryllium Copper Grip Rings, Stainless Steel Units: S.S. ARMCO PH-15-7MO Grip Rings

* Units greater than 72" (1828mm) overall length are supplied with collars with setscrews (made of same material as stem and mounting) in place of float-stop rings. Collars are optional on units less than 72" (1828mm) overall length. Units requiring 316 SS float stops must be special ordered with 316 SS collars instead of grip rings. In some instances, the use of concentration of chlorine and other corrosive compounds in the media require the use of collar type float stops. Consult factory for details.

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.