

# LIQUID LEVEL SWITCH

# Model L-21N & L-21VCR

**LOW COST - HIGH PERFORMANCE - ALL PLASTIC UNITS**

**COMPONENT RECOGNIZED /c  (E85349)**

**Feature Variable Liquid Level Differential  
PLUS Single Point Pump Up/Pump Down Level Control**

- Four field replaceable liquid level differential bands are standard.
- $\Delta H = 1.0''$   $\Delta H = 2.0''$   $\Delta H = 3.0''$   $\Delta H = 5.0''$
- Interchangeable differential band modules allow 5 minute on site switching of differential from 1.0" to 2.0" to 3.0" to 5.0" in any sequence to satisfy variable operational requirements as they occur.
- Large Differential provides immunity to nuisance switch tripping due to severe wave action and turbulence.
- Large Differential also provides very low cost single point pump up/pump down level control.
- Model L-21 is ideal for make-up water level control in cooling towers, plating and washing tanks, fish farms, fountains, and aquariums.
- For use in contaminated fluids. However, we suggest appropriate analysis and testing in each situation.

**L-21N Employs Noryl® Polyphenylene Oxide (PPO) Engineering Plastic and 316 Stainless**

Wetted Surfaces For:

- Clean Water
- Contaminated Groundwater
- Filtered Sewage
- Filtered Waste Water
- Inorganic aqueous solutions and related liquids
- Mild Acid/Bases
- Sea Water

**L-21VCR Employs Fortron® Polyphenylene Sulfide (PPS) Engineering Plastic and Hast.® C.**

Wetted Surfaces For:

- Acids and bases
- Alcohols
- Amines
- Chlorinated organics
- Contaminated Groundwater
- Esters
- Ethers
- Hydro carbons
- Inorganic solutions
- Ketones
- Nitrites
- Phenols
- Waste water

- 11 amp 120/240 VAC SPDT Switch allows direct control of 1/3 hp pumps, 1.2 kw heaters, motor contactors, solenoid valves, etc.
- Intrinsically safe relay allows Model L-21 to be used in hazardous area.
- Temperature to 200°F continuous at 75 psig
- Pressures to 250 psig at 75°F
- Maintenance and checkout is a snap for plant maintenance personnel using any standard multimeter.
- Each unit comes with detailed Instruction Manual and Parts List.

**L-21 Employs Magnetic Coupling**



- Plastic test strips are available for testing in your particular "real world" chemical environment.
- Note: Model L-21 employs magnetic coupling between float arm and switch body. Magnetic particles can accumulate on and around magnet housing which may affect proper operation. Please conduct appropriate fluid magnetic particle evaluation and operational tests prior to and during installation and use.
- Extensive Chemical Corrosive List Available (see page 49).

**NOTE:** Model L-21N employs magnetic coupling between bending blade and switch body. Magnetic particles can accumulate on and around magnetic housing which may affect proper operation. Please conduct appropriate fluid magnetic particle evaluation and operational tests prior to and during installation and use.



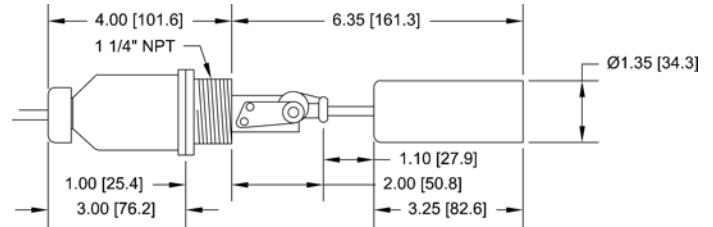
**Limited Warranty Page 7**

# Model L-21N & L-21VCR

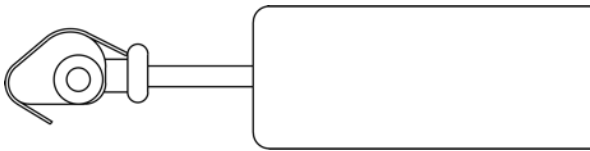
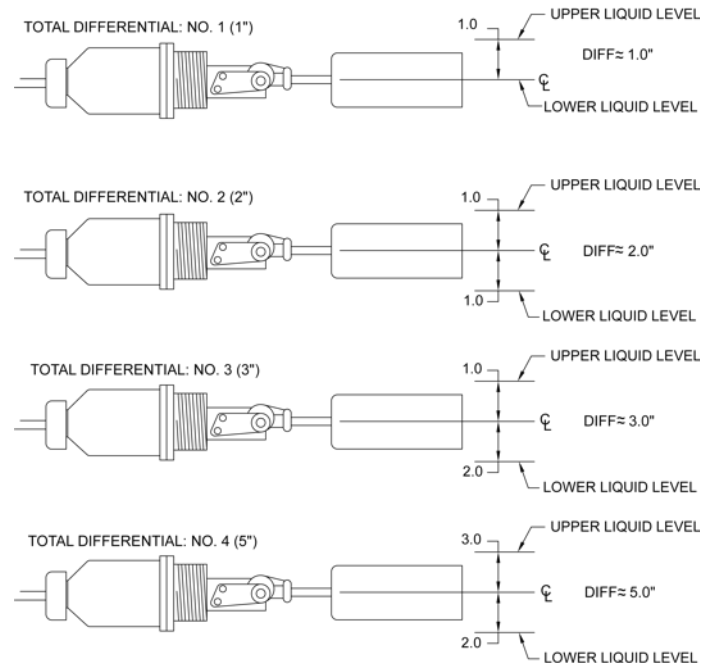
## Specifications

- **L-21N Wetted Surfaces**
  - 1) Noryl® Polyphenylene Oxide (PPO) with 10% glass fiber.
  - 2) 316 Stainless hardware
- **L-21VCR Wetted Surfaces**
  - 1) Tycona Fortron® Polyphenylene Sulfide (PPS) with 40% glass fiber.
  - 2) Hastelloy® C Hardware
- **Electrical Switch Characteristics**  
 SPDT UL and CSA listed  
 11 A, 1/3 HP; 125/250 VAC  
 1/2 A 125 VDC, 1/4 AMP 250 VDC  
 4A 125 VAC (lamp load)
- **L-21N**
  - Nominal working temperature & pressure:
  - Temperature (°F)           75       100       150       180
  - Pressure (PSI)               250      200      150      75
- **L-21VCR**
  - Nominal working temperature & pressure:
  - Temperature (°F)           75       100       150       200
  - Pressure (PSI)               250      225      175      150
- **Working Fluid Spec. Gravity: 0.7 Min.**
  - (L-21N and L-21VCR):
- **Weight: 5 oz. (142 g)**

## Installation Dimensions



## Liquid Level Differential Dimensions



**1, 2, 3, and 5 INCH LINE REPLACEABLE DIFFERENTIAL FLOAT UNITS AVAILABLE AS SEPARATE ITEMS**

## Input Power Cable Interface Options

### Option No. 1

Sample Part #

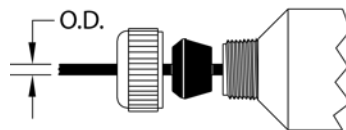
Basic Model # & Body Material

Grommet Size

**L - 21N / 11A / 1 / A**

Switch Capacity

Liquid Level Differential



Grommet Size	Cable OD	Grommet Size	Cable OD
A	0.25"	B	0.37"
AA	0.30"	C	0.50"

### Option No. 2

Sample Part #

Basic Model # & Body Material

1/2" NPT Female Thread

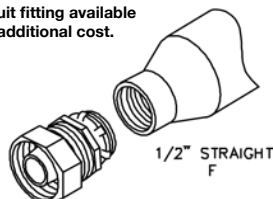
**L - 21N / DRY / 5 / F**

Switch Capacity

Liquid Level Differential

1/2" 90° F90°

Conduit fitting available at additional cost.



- Installation drawing and a numbered parts list is supplied with each unit.
- Current Price Information is Listed on Separate Sheet.
- Special One Day Delivery Available.