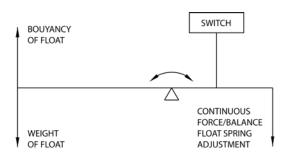
# Model L-5 & L-5SS

#### **Specific Gravity Compensating**

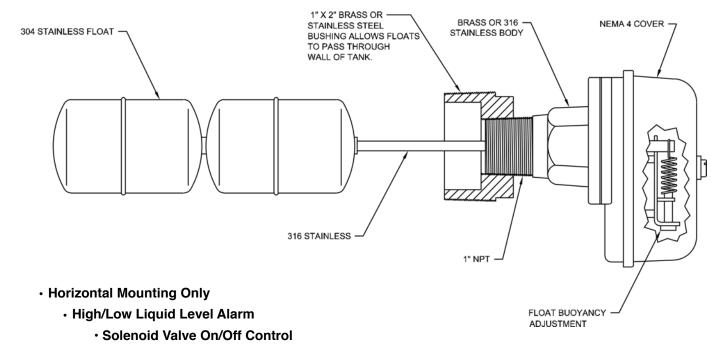
- Featuring continuously adjustable float buoyancy control to allow use in fluids with specific gravity down to 0.6
- · Continuous buoyancy control allows switch activation at oil/water interface
- · Consult factory for other bicomponent fluid interface systems.





- Wetted surfaces of various combinations of brass, 302, 304, 316 stainless, EPDM, Hypalon®, Viton®, and Teflon® allow operation in a wide spectrum of environments such as:
  - · Contaminated ground water
  - · Hydrocarbons
  - · Machine cutting oils
  - · Medium concentrated acids and bases, etc.
- · Rusty coolant water
- · Sea Water
- Sewage
- · Waste water

- 15 amp, 120 or 230 VAC, SPDT or DPDT switch action
- Gold Cross Bar Dry Circuit Computer/PLC Interface SPDT Switch Model also available
- · May be used in hazardous areas when used with intrinsically safe relays.
- Temperature to 180°F
- · Pressure to 300 psig
- Available in single float and double float models
- · For use in particle contaminated fluids.
- · Non-Magnetic





**Limited Warranty Page 7** 

(Same for all models except where shown)

# Model L-5 & L-5SS

#### Single Float

#### Models L-5 and LD-5

Red brass body, phosphor bronze float shaft, 316 stainless screws and washers, 304 stainless float, EPDM seal, cork-chloroprene gasket, and Noryl® cover.

#### Foi

Water, seawater, sewage, waste water, slurries, alcohols, gasolines, oils, glycols and soap solutions.

## Working Fluid Specific Gravity Range - Adjustable between 0.6 and 1.0+

#### **Nominal Working Temperature / Pressure**

180°F max. @ 300 psig

#### **Liquid Level Change to Activate / Deactivate Switch**

≈ 1/4" travel

#### Weight

3 lbs.

#### **Electrical Switch Characteristics**

SPDT UL and CSA listed 15 AMP, 1/2 HP @ 125 or 250 VAC 1/2 AMP @ 125 VDC, 1/4 AMP @ 250 VDC 5 AMP @ 125 VAC (Tungsten lamp load) 10,000,000 mechanical operations median

#### **Double Float**

#### Models L-5SS and LD-5SS

316 stainless steel body, float shaft, screws and washers, 302 stainless float, Viton®, Teflon® gasket, and Noryl® cover.

#### For

All media handled by Models L-5 and LD-5. Also chlorinated organics, hydrocarbons, phenols, medium concentrated acids and bases, compatible with 302 stainless, gasolines, oils.

#### **Working Fluid Specific Gravity Range**

Adjustable between 0.6 and 1.0+

#### **Nominal Working Temperature / Pressure**

180°F max. @ 300 psig

#### **Liquid Level Change to Activate Switch**

≈ 1/4" travel

#### Weight

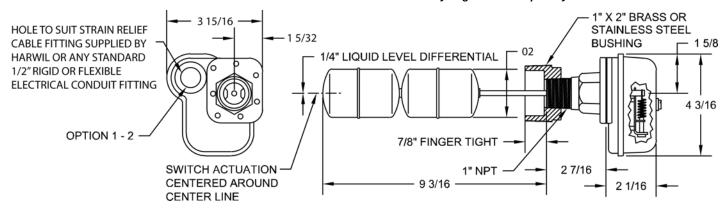
3.5 lbs.

#### **SPDT - Dry Circuit**

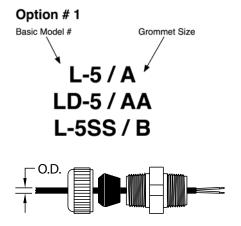
Gold Cross Bar Contacts for Computer/PLC Interface 0.1 amps or less 5-24 VAC/DC UL & CSA listed

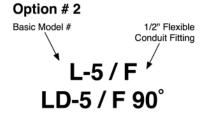
#### Installation Dimensions

Models L-5 and L-5SS employ one SPDT microswitch. Models LD-5 and LD-5SS use two SPDT microswitches which activate simultaneously to give DPDT capability.



#### Input Power Cable Interface Options









Grommet Size	Cable OD	Grommet Size	Cable OD
Α	0.25"	В	0.37"
AA	0.30"	С	0.50"

- 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.

Model L-8N, L-8R & L-8CR

Fortron® (PPS) and Noryl® (PPO)

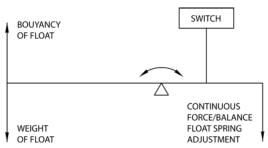
#### Specific Gravity Compensating

COMPONENT RECOGNIZED 91 /c 91 (E85349)

#### Available with Optional Filter Boot For Use in Highly Particle Contaminated Liquids

- Featuring continuously adjustable float buoyancy control to allow use in fluids with specific gravity down to 0.6
- Continuous buoyancy control allows switch activation at oil/ water interface.

Consult factory for other bicomponent fluid interface systems.

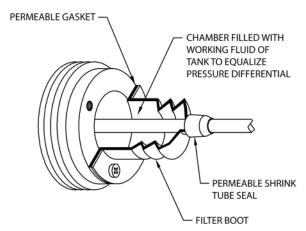


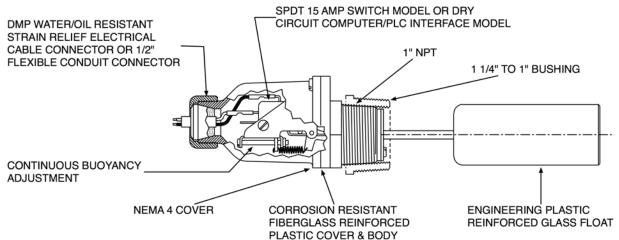


- · Water/Oil Interface switch point
- Foam/Fluid interface switch point
- Wetted surfaces of various combinations of 316 stainless, Hastelloy® C, Teflon®, Fortron® (PPS), Noryl® (PPO), Viton®, EPDM optional and PVC for use in liquids from water, sea water, etc., to low, medium and concentrated acids and bases.
- May be used in hazardous areas when used with intrinsically safe relays.
- 15 amp, 120 or 230 VAC, SPDT switch action
- Gold Cross Bar Dry Circuit Computer/PLC Interface SPDT Switch Model also available.
- · Horizontal Mount only
- Temperature to 180°F
- Pressure to 75 psig operating
- Pressure to 100 psig non-operating
- Solenoid valve control
- · Liquid level alarm
- · Liquid level indication
- Direct pump control
- Extensive Chemical Corrosive List (see page 49)
- Maintenance and checkout is a snap for your present personnel using an uncomplicated standard test meter

- **Typical Working Fluids** 
  - Alcohols
  - Chemical Solutions
  - Contaminated Groundwater
  - · Glycols
  - Machine Cutting Oils
  - Oils

- Pure Water
- Rusty Coolant Water, Etc.
- Sewage
- · Sewage Water
- · Soap Solutions
- Tap Water







**Limited Warranty Page 7** 

(Same for all models except where shown)

#### Model L-8N

Noryl® body, float and bushing, EPDM diaphragm, 316 stainless float shaft and screws (Viton® optional)

#### For

Mild acids and bases, inorganics, some alcohols, water.

#### Model L-8R

Fortron® (PPS) body, float and bushing, Viton® diaphragm, 316 stainless float shaft and screws.

#### For

Medium acids and bases, inorganics, alcohols, most hydrocarbons.

#### Model L-8CR

Fortron® (PPS) body, float and bushing, Viton® diaphragm, Hastelloy® C float shaft and Teflon screws.

#### For

Concentrated acids and bases, inorganics, alcohols, hydrocarbons, chlorinated organics, phenols.

# Model L-8N, L-8R & L-8CR

#### **Electrical Switch Characteristics**

SPDT UL and CSA listed 15 AMP, 1/2 HP @ 125 or 250 VAC 1/2 AMP @ 125 VDC, 1/4 AMP @ 250 VDC 5 AMP @ 125 VAC (Tungsten lamp load) 10,000,000 mechanical operations median

# Working Fluid Specific Gravity Range - Adjustable between 0.6 and 1.5 & up

#### **Nominal Working Temperature / Pressure**

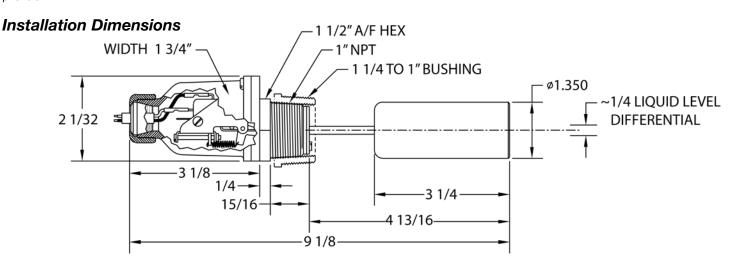
180°F max. @ 75 psig

Liquid Level Change to Activate Switch Weight ≈ 1/4" max. travel 1/2 lb.

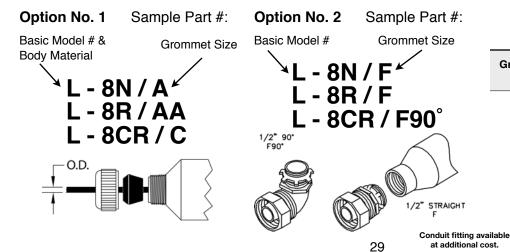
#### SPDT - Dry Circuit UL & CSA listed

Gold Cross Bar Contacts for Computer/PLC Interface 1.0 amps or less 5-24 VAC/DC

Optional filter boot available in EPDM (L-8N) or Viton® (L8CR)



#### Input Power Cable Interface Options



Grommet Size	Cable OD	Grommet Size	Cable OD
Α	0.25"	В	0.37"
AA	0.30"	С	0.50"

- 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.

# Model L-21N **& L-21VCR**

L-21 Employs Magnetic Coupling

COMPONENT RECOGNIZED 91 /c 91 (E85349)

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

#### **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
- Ketones
- Nitrites
- Phenols
- 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

operational tests prior to and during installation and use.

- 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.

- Inorganic solutions

- Waste water
- 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



541 Kinetic Drive, Oxnard, CA 93030 **Limited Warranty Page 7** Tel: (805) 988-6800 Fax: (805) 988-6804 Email: harwil@harwil.com



# Model L-21N & L-21VCR

#### 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)

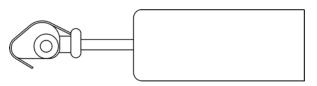
#### · L-21N

- · Nominal working temperature & pressure:
- Temperature (°F)
   75
   100
   150
   180

   Pressure (PSI)
   250
   200
   150
   75

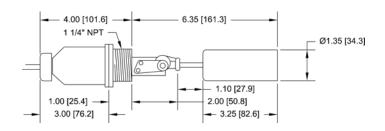
#### · L-21VCR

- Nominal working temperature & pressure:
  Temperature (°F) 75 100 150
- Pressure (PSI)
   Working Fluid Spec. Gravity: 0.7 Min.
- (L-21N and L-21VCR):
- Weight: 5 oz. (142 g)

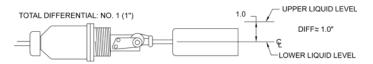


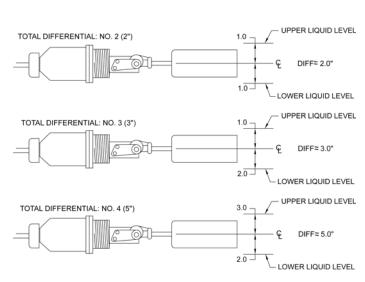
1, 2, 3, and 5 INCH LINE REPLACEABLE DIFFERENTIAL FLOAT UNITS AVAILABLE AS SEPARATE ITEMS

#### **Installation Dimensions**



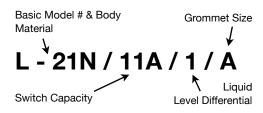
#### **Liquid Level Differential Dimensions**

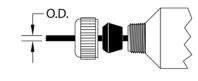




#### Input Power Cable Interface Options

#### Option No. 1 Sample Part #





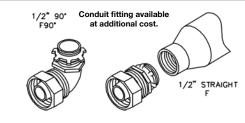
200

150

175

Grommet Size	Cable OD	Grommet Size	Cable OD	
Α	0.25"	В	0.37"	
AA	0.30"	С	0.50"	

# Option No. 2 Basic Model # & Body Material L - 21N / DRY / 5 / F Switch Capacity Sample Part # 1/2" NPT Female Thread Thread Liquid Level Differential



- 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.

# Noryl® (PPO) and Fortron® (PPS) Engineering Plastic Available with Optional Filter Boot

#### For Use in Highly Particle Contaminated Liquids:

Sewage, waste water, contaminated ground water, Machine cutting oils, medium slurries

#### Corrosive Liquids such as:

Acids and bases, sea water, rusty coolant water, various chemicals (see page 49).

#### **Special Features**

- Particle contamination resistance is provided by a single convolute elastomeric flexible seal which is continuously flushed by the working fluid.
- · Models for vertical or horizontal mounting.
- Maintenance and checkout is a snap for your present personnel using an uncomplicated standard test meter.
- Optional Nitrophyl® (Nitrile) Closed Cell Float for mounting switch in 1" NPT fitting.

#### **Features**

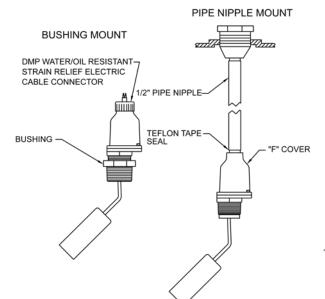
- Wetted surfaces of Fortron® (PPS), Noryl® (PPO), 316 stainless steel, EPDM or Viton® (Hypalon® optional)
- SPDT 15 amp, 120/240 VAC, switching capacity model or Gold Cross Dry Circuit Computer/PLC Interface Model.
- Intrinsically Safe Relay allows Model L-30 to be used in hazardous areas.
- Temperatures to 200°F continuous.
- · Pressures to 75 psig operating
- · Pressures to 100 psig non-operating.

#### For

- · High/Low Liquid level alarm
- Liquid level indication
- Pump Up/ Pump Down Control
- Solenoid Valve control

# Fortron® and Noryl® test strips are available for testing in your particular chemical environment

#### **Extensive Chemical Corrosive List Available**



# Model L-30N (PPO) & L-30R (PPS)

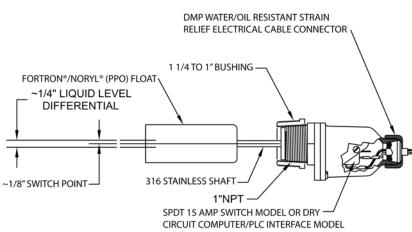
COMPONENT RECOGNIZED 71 /c 71 (E85349)



#### HORIZONTAL MODEL L-30N OR L-30R



Both horizontal and vertical models are available with DMP cable connector or "F" model 1/2" conduit fitting.



1" NPT

**Limited Warranty Page 7** 



#### Model L-30N (Noryl® PPO)

For use in water, acids, bases, inorganic solutions, sewage, contaminated water

#### **Wetted Surfaces**

Noryl® Engineering Plastic (PPO), 316 Stainless Steel, EPDM (Viton® optional)

#### **Nominal Working Temperature & Pressure**

Temperature (°F) 180 Max Pressure (psig) 75 Operating

100 Max Non-operating

#### L-30R (Fortron® PPS) (Broad Chemical Spectrum)

For use in acids, bases, inorganic solutions, alcohols, ketones, chlorinated organics, esters, ether, hydrocarbons, nitrites, phenols.

#### **Wetted Surfaces**

Fortron® Engineering Plastic (PPS), 316 stainless steel, Viton®

#### Nominal working temperature & pressure

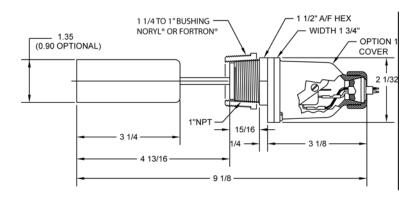
Temperature (°F) 200 Max Pressure (Psig) 75 Operating

100 Max Non-operating

#### Optional filter boot available in EPDM

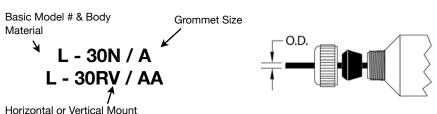
(Viton® Special Order)

#### Installation Dimensions



#### Input Power Cable Interface Options

#### Option No. 1 Sample Part #



Sample Part #

½" NPT Female

Thread

1/2\* 90' Conduit fitting available at additional cost.

1/2\* STRAIGHT

Model L-30N (NORYL®) & L-30R (Fortron®)

#### Specifications for Models L-30N & L-30R

Working Fluid Spec. Gravity - 0.8 min.

#### **Electrical Switch Characteristics**

SPDT UL and CSA listed 15 AMP @ 1/2 HP; 125/250 VAC 1/2 AMP @ 125 VDC, 1/4 AMP @ 250 VDC 5 AMP 125 VAC (Tungsten lamp load) 10,000,000 operations median.

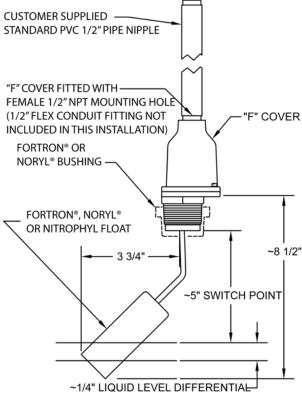
#### **SPDT-Dry Circuit**

Gold Cross Bar Contacts for Computer/PLC Interface 0.1 AMP or less 5-24 VAC/DC (UL & CSA listed)

#### Liquid Level Change to Activate Switch

≈ 1/4" all models

#### Weight: 1/2 lb



Grommet Size	Cable OD	Grommet Size	Cable OD
Α	0.25"	В	0.37"
AA	0.30"	С	0.50"

- Option No. 2
- Basic Model # & Body Material

L - 30NV / F L - 30R / F

- 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.



# **Model L-30CR**

COMPONENT RECOGNIZED 91 /c 91 (E85349)

# Fortron® (PPS) Engineering Plastic Available with Optional Filter Boot

#### For Use in Highly Particle Contaminated Liquids:

- · Contaminated groundwater
- · Machine cutting oils
- Medium slurries
- Sewage
- Waste water

#### **Broad Spectrum Corrosive Liquids such as:**

- Acetic acid
- · Acid & base solutions
- · Acid mine water
- · Aqueous Ammonia
- Benzene
- Crude Oil
- · Ferric Chloride
- · Paper pulp liquor

#### Special Features:

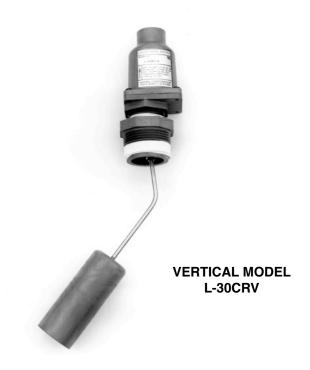
- Corrosion resistance is provided by the wetted surface combination of Fortron® (PPS), Hastelloy® C (Titanium, Tantalum special order) and Viton®.
- Particle contamination resistance is provided by a single convolute elastomeric flexible seal which is continuously flushed by working fluid.
- SPDT 15 amp switching capacity model or Dry Circuit Computer/ PLC interface model.
- Intrinsically Safe Relay allows Model L-30CR to be used in hazardous areas.
- Temperatures to 200°F continuous.
- · Pressures to 75 psig operating
- · Pressures to 100 psig non-operating.
- Maintenance and checkout is a snap for your present personnel using an uncomplicated standard test meter.

#### For -

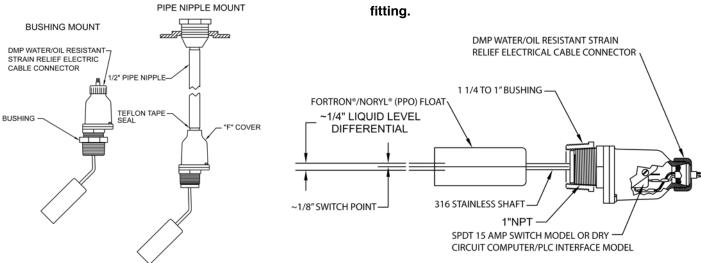
- · High/Low Liquid level alarm
- · Pump Up/ Pump Down Control
- · Liquid level indication
- Solenoid Valve control
- Fortron® PPS test strips are available for testing in your particular chemical environment.
- Extensive Chemical Corrosive List Available



#### HORIZONTAL MODEL L-30CR



Both horizontal and vertical models are available with DMP cable connector or "F" model 1/2" conduit fitting.



HARWIL<sup>®</sup>

**Limited Warranty Page 7** 

1"NPT

# Model L-30CR

#### **Specifications**

#### Model L-30CR

#### Float and Body

Fortron® PPS

#### **Wetted Surfaces**

Fortron® PPS/Viton®/Hastelloy® C/Standard (Titanium/Tantalum special order)

#### **Corrosion Resistance**

Determined by wetted surfaces listed above. An extensive chemical corrosive list is available (see page 49)

#### **Nominal Working Temperature & Pressure**

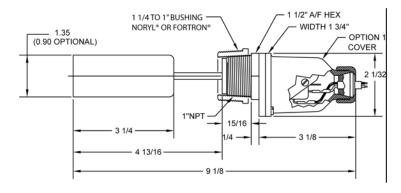
Temperature (°F) 200 Max Pressure (Psig) 100 Max

#### Working Fluid Spec. Gravity

0.7 min.

Weight: 1/2 lb.

#### Installation Dimensions



#### **Electrical Switch Characteristics**

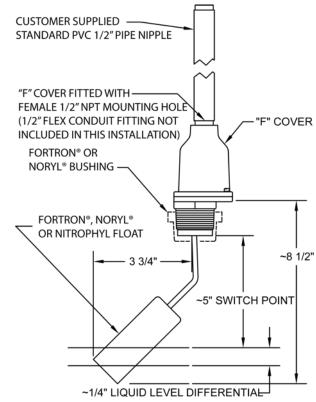
SPDT UL and CSA listed 15 AMP, 1/2 HP @ 125 or 250 VAC 1/2 AMP @ 125 VDC, 1/4 AMP @ 250 VDC 5 AMP @ 125 VAC (Tungsten lamp load) 10,000,000 operations median.

#### SPDT-Dry Circuit UL & CSA Listed

Gold Cross Bar Contacts for Computer/PLC Interface 0.1 AMP or less 5-24 VAC/DC

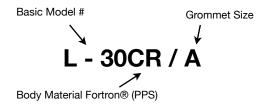
#### **Liquid Level Change to Activate Switch**

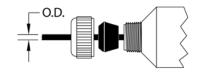
≈ 1/4"



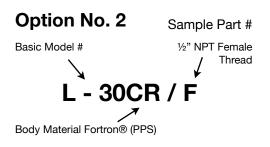
#### Input Power Cable Interface Options

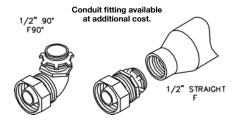
#### Option No. 1 Sample Part #





Grommet Size	Cable OD	<b>Grommet Size</b>	Cable OD
Α	0.25"	В	0.37"
AA	0.30"	С	0.50"





- 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.

# Model L-40N (PPO) & L-40VCR (PPS)

# Side and Top Mount Corrosion Resistant Plastic with Optional Metal Pivot Pin

#### Noryl® Polyphenylene Oxide (PPO) is suitable for acid and base solutions, pure water, process water, sea water, filtered sewage, contaminated groundwater. Noryl® is not suitable for use in hydrocarbons, petroleum, alcohol and related chemicals.

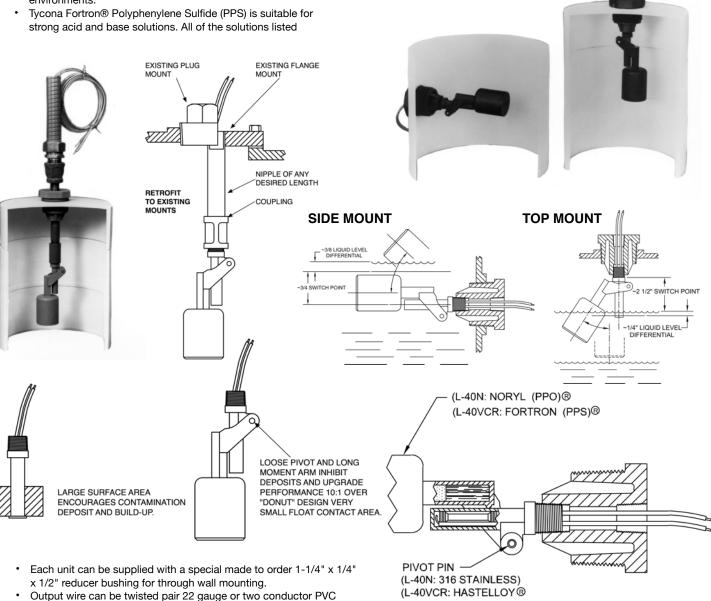
- The wetted surface of Model L-40 is entirely of Noryl® (PPO) or Fortron® (PPS) except for a small float support Pivot Pin.
- Float support pivot pin is supplied in a variety of materials i.e. 316 Stainless Steel, Hast.® C, Titanium, Tantalum and Teflon® to meet special chemical and operations environments.

#### COMPONENT RECOGNIZED 91 /c 91 (E85349)

above including hydrocarbons, petroleum products, alcohols, etc. Fortron® (PPS) is a member of a select class of chemically resistant plastic resins for use in a very broad spectrum of chemicals.

 10 times less sensitive from deposit and build-up of contaminants than sliding float models.

#### LOW COST RELIABLE DESIGN





heavy wall instrument cable.

DC dry circuit for computer/PLC interface.

STANDARD - SPST reed switch for 120/240 VAC 50 Watt power or

**Limited Warranty Page 7** 

STANDARD)

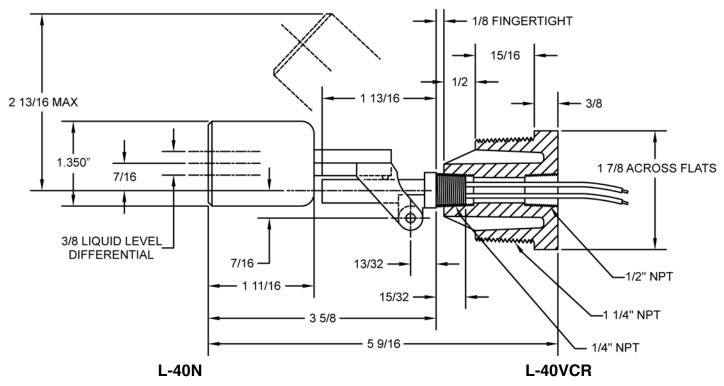
(TITANIUM, TANTALUM

TEFLON, SPECIAL ORDER)

541 Kinetic Drive, Oxnard, CA 93030 Tel: (805) 988-6800 Fax: (805) 988-6804 Email: harwil@harwil.com

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# Model L-40N (NORYL®) & L-40VCR (Forton®)



#### **Wetted Surfaces**

10% Glass reinforced Noryl® (PPO) and 316 stainless steel pivot pin.

#### **Nominal Working Pressure/Temp**

Tested to Failure at 800 psig at room temperature

°F (°C) 0 (-18) 50 (10) 100 (38) 180 (82) Temp. Pressure psig 200 200 175 140

#### Working Fluid Spec. Gravity

0.8 Top Mount Side Mount

#### Common Parameters for Both L-40N & L-40VCR

#### **Liquid Level Switch**

Nominal ON/OFF Differential ≈ 3/8" (0.375")

#### **Electrical Switch Characteristics - STANDARD**

AC voltage (max. switching) 300VAC DC voltage (max. switching) 350VDC Current (max. switching) 0.5amp Current (max. carrying) 2.5amp Contact Rating (VA, W) 50 Capacitance (typical) 0.3pf 1010 ohms Insulation resistance Operation temperature -40°F to 240°F (-40°C to 115°C)

#### SPNC or SPDT, 3 Watt, 100VAC/VDC optional.

PART DESCRIPTION MODEL **SWITCH OPERATION DRY TANK** L-40N/SG NO-NORMALLY OPEN

#### **Wetted Surfaces**

40% Glass re-inforced Fortron® (PPS) and Hastelloy® C pivot pin.

#### **Nominal Working Pressure/Temp**

Tested to Failure at 800 psig at room temperature

°F (°C) 0 (-18) 50 (10) 100 (38) 200 (93) Temp. Pressure psig 250 250 180 150

#### Working Fluid Spec. Gravity

**Top Mount** 0.9 Side Mount 0.7

#### Float Pivot Pin available in:

316 Stainless, Hastelloy® C as standard; Titanium, Tantalum, Teflon as special order.

#### **Corrosion Resistance**

See compatibility table in back of catalog (page 49)

**MOUNTING POSITION** 

HOR. HORIZONTAL

VER. VERTICAL

#### **Dry Circuit Operating**

Switch can interface with microprocessor based controllers and related dry circuits.

#### **Inductive Loads**

Switch contacts have been tested with inductive relay and 30 amp motor contactor drive coils at 120 VAC and 240 VAC to 500,000 operations without failure. Maximum allowable volt amp (VA) rating of relay operating coil -- 8.0 VA or less.

> **PIVOT PIN MATERIAL** 316 SS TANTALUM HAST.® C. TEFLON®

**TITANIUM** 

#### L-40VCR / NO / VER / TITANIUM **SAMPLE PART #** L-40N/NO/HOR/316

L-40VCR/SG NC-NORMALLY CLOSED

NOTE: Model L-40 employs magnetic coupling between float arm 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.

- 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.

# Model L-40N/SG (PPO) & L-40VCR/SG (PPS)

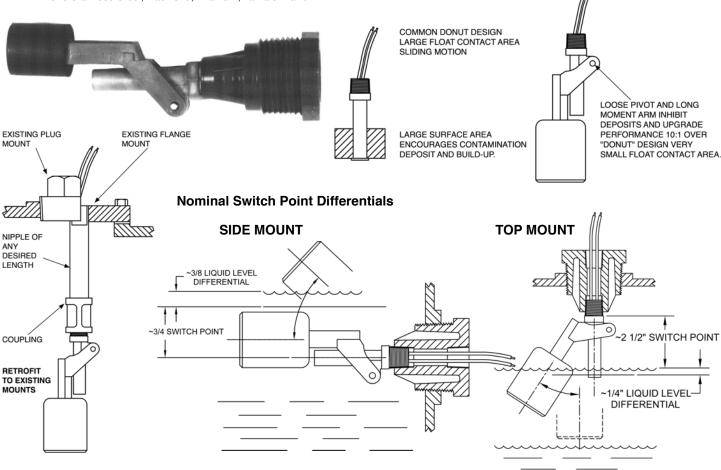
#### Customer Specified Specific Gravity at Factory Side and Top Mount

#### **Corrosion Resistant Plastic with Optional Metal Pivot Pin**

#### LOW COST RELIABLE DESIGN

- · Unique design enhances specific gravity sensitivity.
- Specific gravity features ignores one liquid and detects another with different specific gravity.
- Typical applications include fuel/water detection, peanut oil/ water detection, detection of ground water contamination by underground fuel tanks.
- Noryl® Polyphenylene Oxide (PPO) is suitable for acid and base solutions, pure water, process water, sea water, filtered sewage, contaminated groundwater. Noryl® is not suitable for use in hydrocarbons, petroleum, alcohol and related chemicals.
- The wetted surface of Model L-40N/SG is entirely of Noryl® (PPO) or Fortron® (PPS) except for a small float support Pivot Pin and Nitrophyl float.
- Float support pivot pin is supplied in a variety of materials i.e. 316 Stainless Steel, Hast.® C, Titanium, Tantalum and

- Teflon® to meet special chemical and operations environments.
- Tycona Fortron® Polyphenylene Sulfide (PPS) is suitable for strong acid and base solutions. All of the solutions listed above including hydrocarbons, petroleum products, alcohols, etc. Fortron® (PPS) is a member of a select class of chemically resistant plastic resins for use in a very broad spectrum of chemicals.
- · Float material closed cell Nitrophyl® Nitrile Solid Foam Float
- 10 times less sensitive from deposit and build-up of contaminants than sliding float models.



- Each unit can be supplied with a special made to order 1-1/4" x 1/4" x 1/2" or 1" x 1/4" x 1/2" reducer bushing for through wall mounting.
- Output wire can be twisted pair 22 gauge or two conductor PVC heavy wall instrument cable.
- STANDARD SPST reed switch for 120/240 VAC 50 Watt power or DC dry circuit for computer/PLC interface.

SOLID FOAM BUNA N CLOSE CELL FLOATS CAN BE MACHINED TO PROVIDE SPECIAL FLOAT SIZES AND SHAPES. CONSULT FACTORY.

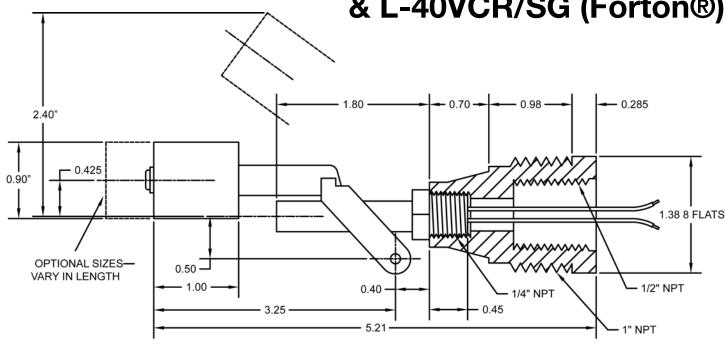


**Limited Warranty Page 7** 

#### Installation Dimensions

# Model L-40N/SG (NORYL®)

& L-40VCR/SG (Forton®)



#### L-40N/SG

#### **Wetted Surfaces**

10% Glass reinforced Noryl® (PPO) and 316 stainless steel pivot pin. Nitrophyl float.

#### **Nominal Working Pressure/Temp**

Tested to Failure at 800 Psig at room temperature

°F(°C) Temp. 0 (-18) 50 (10) 100 (38) 180 (82) Pressure psig 200 175 140

#### Working Fluid Spec. Gravity

0.8 Top Mount Side Mount

#### **Wetted Surfaces**

40% Glass reinforced Fortron® (PPS) and Hastelloy® C pivot pin. Nitrophyl float.

L-40VCR/SG

#### **Nominal Working Pressure/Temp**

Tested to Failure at 800 Psig at room temperature

Temp. °F(°C) 0 (-18) 50 (10) 100 (38) 200 (93) Pressure psig 250 250 180 150

#### Working Fluid Spec. Gravity

0.9 Top Mount Side Mount 0.7

#### Common Parameters for Both L-40N/SG & L-40VCR/SG

#### **Liquid Level Switch**

Nominal ON/OFF Differential  $\approx 3/8" (0.375")$ 

#### **Electrical Switch Characteristics - STANDARD**

300VAC AC voltage (max. switching) DC voltage (max. switching) 350VDC Current (max. switching) 0.5amp Current (max. carrying) 2.5amp Contact Rating (VA, W) 50 Capacitance (typical) 0.3pf Insulation resistance  $10^{10}$  ohms Operation temperature -40°F to 240°F (-40°C to 115°C)

#### Float Pivot Pin available in:

316 Stainless, Hastelloy® C. as standard; Titanium, Tantalum, Teflon as special order.

#### **Corrosion Resistance**

See compatibility table in back of catalog (page 49)

#### **Dry Circuit Operating**

Switch can interface with microprocessor based controllers and related dry circuits.

#### **Inductive Loads**

Switch contacts have been tested with inductive relay and 30 amp motor contactor drive coils at 120 VAC and 240 VAC to 500,000 operations without failure. Maximum allowable volt amp (VA) rating of relay operating coil -- 8.0 VA or less.

#### SPNC or SPDT, 3 Watt, 100VAC/VDC optional.

PART DESCRIPTION **MODEL SWITCH OPERATION DRY TANK MOUNTING POSITION** HOR. HORIZONTAL L-40N/SG NO-NORMALLY OPEN VER. VERTICAL L-40VCR/SG NC-NORMALLY CLOSED

L-40SG / NC / VER / 316

316 SS TANTALUM HAST.®C. TEFLON TITANIUM

**PIVOT PIN MATERIAL** 

#### L-40N/SG/NO/HOR/316 **SAMPLE PART #** L-40VCR / SG / NC / HOR / HAST. C

NOTE: Model L-40 employs magnetic coupling between float arm 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. 39

- 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.